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**KL10 microcode for TOPS-10 and TOPS-20,
1984**

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1 of 3



ULB

NATIONAL INSERTABLE-TAB INDEXES ENABLE YOU TO
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23-280—Colored Tabs
23-281—Clear Tabs

UUU	UUU	BBBBBBBBBBBB	
UUU	UUU	BBBBBBBBBBBB	
UUU	UUU	BBBBBBBBBBBB	
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBBBBBBBBBBB	
UUU	UUU	BBBBBBBBBBBB	
UUU	UUU	BBBBBBBBBBBB	
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUU	UUU	BBB	BBB
UUUUUUUUUUUUUU		BBBBBBBBBBBB	
UUUUUUUUUUUUUU		BBBBBBBBBBBB	
UUUUUUUUUUUUUU		BBBBBBBBBBBB	

MMM	MMM	CCCCCCCCCCCC	RRRRRRRRRRRR	
MMM	MMM	CCCCCCCCCCCC	RRRRRRRRRRRR	
MMM	MMM	CCCCCCCCCCCC	RRRRRRRRRRRR	
MMMMMM	MMMMMM	CCC	RRR	RRR
MMMMMM	MMMMMM	CCC	RRR	RRR
MMMMMM	MMMMMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCC	RRR	RRR
MMM	MMM	CCCCCCCCCCCC	RRR	RRR
MMM	MMM	CCCCCCCCCCCC	RRR	RRR
MMM	MMM	CCCCCCCCCCCC	RRR	RRR

START Job UB Req #16 for TIM LITT [10,1141] Date 28-Mar-84 20:23:24 Monitor: Twinky KL702/24A *START*

File DSKI:UB.MCR[10,1141,U], created: 29-Feb-84 9:16:00, printed: 28-Mar-84 20:23:27

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File parameters: Copy: 1 of 4 Spacing:SINGLE File format:ASCII Print mode:ARROW

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```
; 1 ;PARAMETER CHANGES FOR KL10 TOPS-10 MICROCODE
; 2 ;MODEL B MACHINE EXTENDED ADDRESSING with KL style paging
; 3
; 4 .SET/SNORM.OPT=1
; 5 .SET/XADDR=1
; 6 .SET/EPT540=1
; 7 .SET/LONG.PC=1
; 8 .SET/MODEL.B=1
; 9 .SET/KLPAGE=1
; 10 .SET/FPLONG=0
; 11 .SET/BLT.PXCT=1
; 12 .SET/SMP=1 ;SMP- DOES RPW FOR DPB, IDPB INSTEAD OF READ, WRITE
; 13 .SET/EXTEXP=1
; 14 .SET/MULTI=1 ;DOES NOT CACHE PAGE TABLE DATA
; 15 .SET/NOGST=1 ;DOES NOT DO AGE UPDATES, ETC. WITH CST = 0
; 16 .SET/OWGBP=0 ;No ONE WORD GLOBAL BYTE POINTERS
; 17 .SET/IPA20=0 ;No IPA20-L
; 18 .SET/GFTCNV=0 ;DO NOT DO GFLOAT CONVERSION INSTRUCTIONS [273]
; 19 ;SAVES 75 WORDS. MONITOR WILL TAKE CARE OF THEM.
; 20 .set/cst.write=0 ;No common file system on TOPS-10
; 21
```


UB.MIC[10,5351] 18:39 20-Apr-83

1984 DIGITAL EQUIPMENT CORPORATION" ; 22 .TITLE "KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C)

; 23 .VERSION/MAJOR=1/MINOR=0/EDIT=336/WHO=0

; 24 .NOBIN

; 25

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; 39

; 40

; 41 .TOC "REVISION HISTORY"

; 42

; 43 ; The following collection of people have contributed to the
; 44 ; production and maintenance of this code. In reverse chronological
; 45 ; order:

; 46 ;

; 47 ; QQSV (Dick Wagman) -- beginning with edit 301

; 48 ; Sean Keenan

; 49 ; Don Dossa

; 50 ; Mike Newman

; 51 ; Jud Leonard

; 52 ;

; 53 ;REV WHY

; 54 ;

; 55 ;336 Back off 330 for a bit, since TOPS-10 7.02 must be tested and
; 56 ; OWGs in section 0 fail for string instructions (they get converted
; 57 ; to TWGs, which are illegal in section 0). For now, we will maintain
; 58 ; both sources.

; 59 ;335 Force memory to be released for SMP case of DPB if P > 36 causes no
; 60 ; actual data to be stored. Make an OWG reference to an address >

; 61 ; 37,777777 cause a page fail (GBYTE was stripping the excess bits).

; 62 ;334 Fix conflict generated in CLRPT by 333 by creating new subroutine

; 63 ; ARSWAP which is just AR_AR SWAP. Make several other routines call it,
; 64 ; thus saving a few words.

; 65 ;333 Add new conditional BIG.PT. Under it, add code to implement the "Keep
; 66 ; me" bit for paging as bit 5 of the page table, and to move it to page
; 67 ; map bit 23 during page refill. Also make DATA0 PAG not clear Kept
; 68 ; pages if bit 3 of the word is off.

; 69 ;332 Redefine all bank 7 ACs as R0,....,R17, and all bank 6 ACs as P0,....,

; 70 ; P17. Change all other alias definitions to refer to these. This

; 71 ; gives us a uniform cross reference for all scratch register references.

; 72 ; Put all macro definitions into alphabetical order, making it easier

; 73 ; to look up a macro definition. Split the edit history into its own

; 74 ; file. There are no functional changes from 331.

; 75 ;331 Allow XSFM anywhere. Clean up the code a bit in the process. There

; 76 ; still remain a number of references to XSFM or XPCW distinctions,

; 77 ; and these could almost certainly be cleaned up further.

REVISION HISTORY

; 78 ;330 Allow one word global byte pointers in section zero. This includes
; 79 ; changes in BYTE, EIS, and FP. Change GBYTE and CNV2WD to return 2;
; 80 ; eliminate GTST as obsolete. Also shuffle the calls to these routines
; 81 ; to conform to the new calling conventions, and put the OWG test at
; 82 ; the beginning of IBP, ILDB, IDBP, LDB, DPB, and ADJBP.
; 83 ;327 Add PAGCNT conditional. Under it, include control to count entry
; 84 ; into PFH code and DATA0 PAG with bit 2 set.
; 85 ;326 Change VMA restoration in INC2WD and CNV2WD (see edits 320 and 307)
; 86 ; to use RSTR VMA_MQ in order to keep the global/local sense of the
; 87 ; reference. This was causing ILDBs of OWGs in shadow memory to
; 88 ; save the incremented byte pointer in the ACs instead of memory.
; 89 ;325 Add VMA/LOAD to local indexed EA computation for EXTEND E1 to make
; 90 ; it read the section number from VMA instead of PCS (!) if the index
; 91 ; is section local.
; 92 ;324 Force the XADDR conditional to use RPW type references for DPB and
; 93 ; IDPB if the SMP conditional is on, even if one word.globals are not
; 94 ; active.
; 95 ;323 Add missing constraint near NOT.WR, accidentally broken by 322.
; 96 ;322 Generate the A(ccessible) bit in a page fail word caused by a read
; 97 ; violation if the page is otherwise accessible and if no CST is present.
; 98 ; This could be fixed for the CST present case as well, but has been
; 99 ; deferred since we are tight on space and no one seems to need it
; 100 ; anyway.
; 101 ;321 Prevent statistics microcode from losing traps by forcing NICOND
; 102 ; dispatch 11 to ignore the statistics and take the trap.
; 103 ;320 Restore the VMA again in INC2WD (broken by 307), since the state
; 104 ; register bits may have changed in the interim. This was causing
; 105 ; PXCT to do surprising things (mostly bad).
; 106 ;317 Originally, this was an attempt to uncount multiply counted op
; 107 ; codes which resulted from interrupts during long instructions.
; 108 ; That project has been shelved for now. Instead, the second
; 109 ; NICOND dispatch during op code counting has had its final constraint
; 110 ; fixed.
; 111 ;316 Make counting only version compatible with time and counting by making
; 112 ; counting only version use TRX2 and TRX3, removing physical contiguity
; 113 ; requirement.
; 114 ;315 Op code counting lives again! The setup code activated by DATA0 PI
; 115 ; was attempting to write the TRX registers with data fresh from memory,
; 116 ; resulting in parity checks when it was used (see edit 73, for example).
; 117 ; Juggle code to overlap next address calculation with parity wait.
; 118 ;314 Add CST.WRITE conditional to facilitate assembly of microcode
; 119 ; without the CST writable bit (see edit 303).
; 120 ;313 Put TIME/3T on XFERW, as the assembler was getting the wrong
; 121 ; value with both AR_MEM and ARX_MEM macros present.
; 122 ;312 Fix definition of BYTE RPW to include a write test. This was
; 123 ; causing the SMP version of DPB to hang when memory was readable
; 124 ; but not writable.
; 125 ;311 Make all IOP function 7 style of references look in the cache.
; 126 ;310 Improve the fix in 307 to save the computed E0+1 in FILL during
; 127 ; OWGBP conversion and to restore the VMA from there when done.
; 128 ; Also, make sure that the VMA is initialized to PC for all cases
; 129 ; when doing effective address calculations for two word globals
; 130 ; in string instructions. 307 was not enough to clean up the
; 131 ; CMPSx fill problem, since VMA HELD was never loaded.
; 132 ; Force EXT2WD to prference AC4 and AC5 so that glitch discovered
; 133 ; for second edit 210 will not be activated.


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; 134 ;307 Restore VMA from MQ at end of CNV2WD (and remove it from INC2WD,
; 135 ; saving a word in the process). This was causing CMPSx to load
; 136 ; a random fill word and MOVSLJ to store to a random place when the
; 137 ; source length was zero if one word globals were in use.
; 138 ; Force page fail code to look for ARX as well as AR parity errors
; 139 ; (now possible with BYTE RPW implemented).
; 140 ; Make sign extension of E1 go to right place in EXTEND decoding of
; 141 ; offset instructions (broken in 301).
; 142 ;306 Add University of Essex code to statistics (TRACKS) code to make
; 143 ; it work with address break enabled.
; 144 ;305 Fix CST write bit logic to not test bit 18 when reading.
; 145 ;304 Switch byte read interlock from LDB to DPB (broken in 303).
; 146 ;303 Implement bit 18 of a CST entry as a write enable bit in addition
; 147 ; to all the other write enable functions.
; 148 ; Knock one cycle out of byte deposit where the byte is being
; 149 ; deposited into the high order byte of a word.
; 150 ; Implement the SMP conditional for extended addressing by
; 151 ; replicating all the byte effective address calculation code for
; 152 ; DPB. This is unfortunate, but necessary due to the huge dispatch
; 153 ; table that ends this subroutine.
; 154 ;302 Move XFERW out of EIS (which no longer absolutely requires it
; 155 ; in line) into SKPJMP (more in the heart of things). Also
; 156 ; juggle comment lines and code layout to reduce the listing
; 157 ; size a bit and to force some of the .TOC lines into the table
; 158 ; of contents (even though the code nearby may be suppressed).
; 159 ;301 Fix ADJBP so that instructions which occur at the last word on
; 160 ; a page do not cause a page failure of some random type (one cycle
; 161 ; too many between I FETCH and NICOND).
; 162 ; Fix effective address calculation for EXTEND so that only offset
; 163 ; instructions (and not GSNGL, for example) will have E1 sign
; 164 ; smeared.
; 165 ; Implement XJRST. Also force JSP and JSR to do full 30 bit
; 166 ; effective address calculations.
; 167 ;300 ADD LOAD OF VMA FROM PC IN PUTDST TO GET THE SECTION ADDRESS
; 168 ; CORRECT ON THE STRING INSTRUCTIONS.
; 169 ;277 Add EA CALC table for SMP configurations of extended addressing
; 170 ; for TOPS-10. (TOPS-20 paging)
; 171 ;276 Force global EA CALC for EXTEND instructions in PUTDST.
; 172 ;275 FIX THE ERROR CODE IN STRING COMPARE FOR ILLEGAL BITS IN THE
; 173 ; LENGTH FIELD. WAS CAUSING AR PARITY ERRORS.
; 174 ;274 SAVE THE API FUNCTION WORD ON AN IO PAGE FAIL INSTEAD OF THE
; 175 ; PAGE FAIL WORD. THIS TAKES PLACE IN BOTH THE AC BLK 7 AC 2
; 176 ; AND THE MONITOR.
; 177 ;273 PUT CONDITIONALS AROUND 4 GFLOAT CONVERSION INSTRUCTIONS.
; 178 ; THEY WILL ACT AS MUUO'S AND MONITOR WILL TAKE CARE OF THEM.
; 179 ;272 CONO APR 200000 AT TIMES WAS NOT GENERATING EBUS RESET OF A
; 180 ; SUFFICIENT LENGTH TO CLEAR DTE REGISTERS. ADDED ANOTHER
; 181 ; MICROWORD SO THAT CONO APR IS NOW UP FOR TWO FULL WORDS WHICH
; 182 ; GETS AROUND THE HARDWARE PROBLEM.
; 183 ;271 ILLEGAL INDIRECT PAGE FAIL (24) WAS NOT ALLOWING USER TO BE SET.
; 184 ;270 WHEN IN SECTIONS > 1, AN UPDATED OWGBP WOULD BE WRITTEN INTO
; 185 ; MEMORY INSTEAD OF THE AC'S.
; 186 ;267 CHANGED TESTS FOR OWGBP TO TEST FOR PC SECO FIRST. SAVES 33 NS.
; 187 ;266 CONDITIONALS ON FOR TOPS-20 DEVELOPMENT.
; 188 ;265 REMOVED EDIT 244. SOFTWARE ENGINEERING WILL SUPPLY MONITOR
; 189 ; CODE TO TAKE CARE OF PROBLEM. CODE COSTS TOO MUCH TIME IN
    
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; 190 ; THE INSTRUCTION EXECUTION.
; 191 ;264 ADDED CONDITIONALS TO CODE FOR IPA20, OWGBP AND NO CST UPDATE IF
; 192 ; CBR IS ZERO. THIS IS FOR RELEASE 5 OF TOPS-20.
; 193 ;263 IBP DID NOT CLEAR FPD ON EXIT.
; 194 ;262 ALLOW XBLT TO BE VALID IN SECTION O.
; 195 ;261 FIX CODE AT END OF ADJBP CODE TO CLEAR STATE REG. IF ILDB
; 196 ; WITH 2 WD GLOBAL POINTER POINTING TO ADDRESS NOT IN CORE
; 197 ; CLEAN DISPATCHES TO WRONG CODE BECAUSE SR LEFT OVER FROM
; 198 ; ADJBP.
; 199 ;260 FIX FM PARITY ERRORS AT MVF1: ADDED NULL CALL TO RET2:
; 200 ; AT MVST: TO TAKE CARE OF EXTRA TICK FOR PARITY.
; 201 ;257 MAKE SURE THAT THE UPDATED ONE WORD GLOBAL BYTE POINTER IS
; 202 ; WRITTEN BACK INTO THE CORRECT CONTEXT.
; 203 ;256 MAKE ANOTHER ATTEMPT TO FIX PXCT OF ONE WORD GLOBAL BYTE POINTERS.
; 204 ; THE GIBP CODE GETS THE SAME CHANGES AS EDIT 255.
; 205 ;255 MAKE ONE WORD GLOBAL BYTE POINTERS WORK WITH PXCT. THE STATE
; 206 ; REGISTER BITS ON MCL4 (NOT TO BE CONFUSED WITH CON3), WERE NOT
; 207 ; BEING SET PROPERLY TO ALLOW PREVIOUS ENA AND USER ENA TO BE SET.
; 208 ; GUARANTEE THAT THESE SR BITS ARE SET PRIOR TO THE LOAD OF THE VMA.
; 209 ;254 FIX PROBLEM WITH OWGBP WHERE FPD DOES NOT EFFECT
; 210 ; INC OF POINTER AFTER PAGE FAIL
; 211 ;253 FIXED ADDRESSING FOR SH DISP AT GADJLO:
; 212 ;252 MOVE STRING INSTRUCTIONS DO NOT GET THE CORRECT DATA ON
; 213 ; LOCAL POINTERS IN NON O SECTIONS
; 214 ;251 ADD CODE FOR ONE WORD GLOBAL BYTE POINTERS.
; 215 ; TOOK OUT EDITS 243 AND 250 TO GET ENOUGH SPACE IN CRAM
; 216 ; FOR THIS EDIT. OWGBP WITH EXTEND INSTRUCTIONS WILL NOT
; 217 ; RETURN A OWGBP. THEY WILL RETURN A TWO WORD GLOBAL BP.
; 218 ;250 ALLOW SMP SWITCH TO EFFECT TOPS-20 MODEL B TO DO RPW IN
; 219 ; BYTE INSTRUCTIONS.
; 220 ; DO NOT DO A CST UPDATE OR AGE UPDATE IF THE CBR IS ZERO.
; 221 ;246 EXTEND OP CODE DECODE FOR MODEL A WAS ACCEPTING MODEL B
; 222 ; OP CODES (20-31). ADDED CONDITIONALS TO CODE TO FIX.
; 223 ;245 FIX 2 WORD GLOBAL BYTE POINTER BUG WITH IBP INSTRUCTION
; 224 ; WITH EXTENDED ADDRESSING OUT OF SECTION O
; 225 ;244 FIX MOVST EXTEND INST. SO THAT ILLEGAL (> 36) S FIELD
; 226 ; DOES NOT CAUSE STOP CODE TO CRASH SYSTEM FOR TOPS-10 MODEL B.
; 227 ;243 WRTIME TRIED TO DO MEM WRITE EVEN THOUGH THE INSTRUCTION
; 228 ; DOES NOT DO ANYTHING TO MEMORY. CAUSED PROBLEMS IF THE MEMORY
; 229 ; LOCATION WAS NOT WRITABLE.
; 230 ;242 FIX CODE FROM EDIT 234 TO GET PF CODE OF 24.
; 231 ;241 FIX DFAD AND DFMP FOR ROUNDING OCCURS PROPERLY. ADDED STICKY
; 232 ; BIT FOR LEAST SIGNIFICANT BITS OF THE RESULT.
; 233 ;240 FIX GFLT INSTRUCTIONS GFIX AND DGFIX SO THEY WILL TRUNCATE NEGATIVE
; 234 ; NUMBERS IN THE CORRECT DIRECTION. THE MQ MUST BE ZERO BEFORE
; 235 ; THE ARX 2 MACRO IS INVOKED OR THE ARX MIGHT GET A 3 FROM MQOO.
; 236 ;237 ADD OPTION BIT FOR PV CPU IN THE APRID WORD AS IT IS DOCUMENTED
; 237 ; IN ALL OF THE HARDWARE DOCUMENTATION. SET THE BIT ACCORDING
; 238 ; TO THE MODEL.B OPTION SWITCH. IT WILL BE MAGIC NUMBER BIT 3.
; 239 ;236 ALLOW THE INTEGER DIVIDE OF THE LARGEST NEGATIVE NUMBER BY
; 240 ; PLUS ONE TO SUCCEED. THIS USED TO BE A DOCUMENTED RESTRICTION
; 241 ; THAT THIS OPERATION WOULD CAUSE AN OVERFLOW AND NO DIVIDE.
; 242 ;235 FIX JRA SO IT DOESN'T FALL INTO SECTION ZERO FROM A NON-ZERO
; 243 ; SECTION EVERY TIME BY WRITING THE PC SECTION INTO THE VMAX.
; 244 ;234 BUILD A PAGE FAIL CODE OF 24 WHEN AN ILLEGAL INDIRECT WORD
; 245 ; IS FOUND DURING THE EFFECTIVE ADDRESS CALCULATION IN
    
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; 246 ; A NON-ZERO SECTION. THE PAGE FAIL CODE WAS PREVIOUSLY NOT
; 247 ; BEING REPORTED.
; 248 ;233 SAVE THE IOP FUNCTION WORD THAT APPEARS ON THE EBUS WHEN AN
; 249 ; EXTERNAL DEVICE INTERRUPTS THE CPU. SAVE THIS INFORMATION
; 250 ; ON EVERY INTERRUPT IN AC BLOCK 7, AC 3. THE CONTENTS
; 251 ; OF THIS AC WILL BE PRESERVED UNTIL THE NEXT INTERRUPT.
; 252 ; OPERATING SYSTEMS SHOULD SAVE THIS INFORMATION AS SOON AS POSSIBLE
; 253 ; IF ITS CONTENTS ARE TO BE RELIABLE AND MEANINGFUL.
; 254 ;232 ADDS 13 NEW INSTRUCTIONS FOR SUPPORTING FORTRAN78 ON MODEL
; 255 ; B MACHINES. THESE INSTRUCTIONS ARE:
; 256 ; OPCODE SYMBOL
; 257 ; =====
; 258 ; 102 GFAD AC,E
; 259 ; 103 GFSB AC,E
; 260 ; 106 GFMP AC,E
; 261 ; 107 GFDV AC,E
; 262 ; EXTEND INSTRUCTIONS EXTEND OPCODE
; 263 ; =====
; 264 ; EXTEND AC,[GSNGL O,E] 21
; 265 ; EXTEND AC,[GDBLE O,E] 22
; 266 ; EXTEND AC,[DGFIX O,E] 23
; 267 ; EXTEND AC,[GFIX O,E] 24
; 268 ; EXTEND AC,[DGFIXR O,E] 25
; 269 ; EXTEND AC,[GFIXR O,E] 26
; 270 ; EXTEND AC,[DGFLTR O,E] 27
; 271 ; EXTEND AC,[GFLTR O,E] 30
; 272 ; EXTEND AC,[GFSC O,E] 31
; 273 ;231 FIX IN PROBLEM IN EDIT 215 TO XDPB THAT PREVENTED THE KL
; 274 ; FROM HANDLING INTERRUPTS WHILE EVALUATING AN INDEXED INDIRECT CHAIN.
; 275 ; AN "=O" WAS MISSING BY BYTEIP.
; 276 ;230 TO PRESERVE COMPATABILITY WITH THE KS10 AND BECAUSE OF SPACE
; 277 ; LIMITATIONS IN TOPS20 MODEL A, THE SPECIFICATION FOR THE
; 278 ; CVTDBX INSTRUCTIONS HAVE BEEN CHANGED TO ELIMINATE THE NEED
; 279 ; FOR AN OVERFLOW TEST DURING THE CONVERSION. THIS CHANGE
; 280 ; EFFECTIVELY REMOVES EDIT 221.
; 281 ;227 DELETE EDIT 222 AND RETURN THE CVTDBX INSTRUCTIONS TO THEIR
; 282 ; OLD, BROKEN FUNCTIONALITY SINCE ANY ATTEMPT TO PREVENT THE
; 283 ; FLAGS FROM BEING CHANGED PREMATURELY HAS TO CONTENT WITH
; 284 ; INTERRUPTABILITY PROBLEMS. THE HARDWARE REFERENCE MANUAL
; 285 ; HAS A FOOTNOTE ABOUT THE FLAG PROBLEM SO THE CURRENT FUNCTIONALITY
; 286 ; IS DOCUMENTED FOR USERS.
; 287 ;226 PREVENT AR PARITY ERRORS WHEN INCREMENTING BYTE POINTERS IN THE ACS.
; 288 ;225 THE CODE TO SUPPORT THE MX20 VIA THE SBUS DIAG LOOP MECHANISM
; 289 ; DOES NOT TIME OUT CORRECTLY BECAUSE THE LOOP COUNTER IS BEING
; 290 ; REINITIALIZED EVERY TIME THROUGH THE LOOP. FIX THIS PROBLEM
; 291 ; EVEN THOUGH THE CODE IS NOT ASSEMBLED IN CURRENT RELEASES.
; 292 ;224 FIX BUG IN EDIT 223 THAT CAUSED THE WRONG PAGE FAIL
; 293 ; WORD TO BE WRITTEN WHEN AN I/O PAGE FAIL OCCURS.
; 294 ;223 WHEN A MEMORY PARITY ERROR OCCURS AT PI LEVEL, AS EVIDENCED
; 295 ; BY AN AR DATA PARITY ERROR, THE DTE MAY BE WAITING FOR A
; 296 ; RESPONSE. IF IT IS, A DEX FAILURE WILL OCCUR UNLESS WE CAUSE
; 297 ; DEMAND TO WIGGLE. WE CAN DO THIS BY FORCING THE DATA IN THE
; 298 ; AR OVER THE EBUS.
; 299 ;222 CVTDBX IS NOT SUPPOSED TO CHANGE THE CONTENTS OF THE ACS
; 300 ; OR MEMORY IF THE CONVERTED NUMBER WILL NOT FIT INTO THE
; 301 ; DESTINATION FIELD. IT WAS, HOWEVER, CHANGING THE FLAGS
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; 302 ; BEFORE IT KNEW IF THE NUMBER WOULD FIT.
; 303 ;221 THE CVTDBX WERE FAILING TO SET OV AND TRAP1 WHEN THE
; 304 ; CONVERTED DECIMAL NUMBER WOULD NOT FIT INTO A
; 305 ; DOUBLE WORD.
; 306 ;220 THE TRANSLATE INSTRUCTIONS WERE USING A 15 BIT WIDE
; 307 ; FIELD FOR THE REPLACEMENT BYTE IN THE TRANSLATE TABLE
; 308 ; WHILE THE SPECIFICATION STATED THAT THE TRANSLATE
; 309 ; INSTRUCTIONS WOULD USE ONLY 12 BITS.
; 310 ;217 PREVENT CRAM PARITY ERRORS CAUSED BY DISPATCHING TO LOCATION
; 311 ; 3042 WHEN INDEXING IS SPECIFIED IN THE EFFECTIVE ADDRESS
; 312 ; CALCULATION OF E1 WHEN THE EXTENDED OPCODE IS ZERO (ILLEGAL).
; 313 ; THE FIX IS TO PUT A JUMP TO U00 AT 3042.
; 314 ;216 CHANGE THE DEFAULT VALUE FOR THE SMP SWITCH TO BE ONE. THIS
; 315 ; CAUSES THE MICROCODE TO INCLUDE SMP SUPPORT BY DEFAULT.
; 316 ;215 CHANGES DPB INSTRUCTION TO R-P-W CYCLE ON DATA FETCH PORTION OF
; 317 ; INSTRUCTION TO SOLVE AN INTERACTION PROBLEM IN AN SMP OPERATING
; 318 ; SYSTEM. THIS CHANGE ONLY APPLIES TO MICROCODES FOR TOPS-10
; 319 ; AND TOPS-20, MODEL A.
; 320 ;214 ADDED CHANGES FOR XADR. RELEASE 4 AS FOLLOWS.
; 321 ; STORE PREVIOUS CONTEXT SECTION (PCS) IN FLAGS WORD (BITS 31-35)
; 322 ; IF EXEC MODE AND XFSM OR XPCW INSTRUCTION, MU00 OR PAGE FAIL.
; 323 ; RESTORE PCS FROM FLAGS WORDS (BITS 31-35) WHEN XJRSTF OR XJEN
; 324 ; IS EXECUTED IN EXEC MODE AND THE NEW PC IS ALSO IN EXEC MODE.
; 325 ;213 SET/FPLONG=0 PARAMETER ADDED TO TOPS-10 MICROCODE FOR KL MODEL
; 326 ; A AND MODEL B.
; 327 ;212 CHANGE THE CODE AT LDIND: TO TEST FOR USER MODE IF USER MODE
; 328 ; TURN OFF SPECIAL CYCLE THAT MAY STILL BE ON. THE MICROCODE WILL DEPEND
; 329 ; ON KERNAL PROGRAMS TO NOT GET IN PAGE POINTER
; 330 ; LOOPS. INSTRUCTIONS EXECUTED FROM THE CONSOLE WILL NOT WORK.
; 331 ; PI INSTRUCTIONS GET A RESTRICTION TO NOT GET INDIRECT PAGE POINTERS
; 332 ; IN THEIR PAGING CHAIN AS DO EXAMINES AND DEPOSITS AND BYTE TRANSFERS.
; 333 ;211 CHANGE THE TEST FOR INDIRECT POINTERS TO NOT HAPPEN ON SECTION
; 334 ; POINTERS AND JUST ON INDIRECT PAGE POINTERS. AT LDIND:+1 AND LDIMM:+2
; 335 ;210 MAKE ALL AC+# MICROINSTRUCTIONS HAVE THE # FIELD THE SAME IN THE
; 336 ; PREVIOUS MICROINSTRUCTION TO SOLVE A TIMING GLITCH IN THE HARDWARE.
; 337 ; MAKE EXCHANG MARK AND DESTINATION POINTERS U00 IF THEY DO NOT
; 338 ; HAVE BYTE POINTERS OF EQUAL LENGTH. CHANGES PERVASIVE IN EIS ALSO IN PF
; 339 ; RECOVERY IN IO.
; 340 ; MAKE THE LOAD OF AN INDIRECT POINTER CLEAR PI CYCLE IF SET.
; 341 ; THIS MEANS THAT THE MONITOR CANNOT USE KERNAL CYCLE, INSTR ABORT
; 342 ; INH PC+1 OR HALT IN A PI CYCLE IF AN INDIRECT POINTER CAN
; 343 ; BE A PART OF THE REFILL. ALSO NOTE THE POSSIBILITY OF GETTING AN
; 344 ; INTERRUPT BEFORE THE PI INSTRUCTION COMPLETES. (NEVER CONTINUES PI
; 345 ; INSTRUCTION) CHANGES AT LDIND.
; 346 ;207 CHANGE SBUS DIAG CODE FOR MOS PUT IT IN MOS CONDITIONAL /MOS=1
; 347 ; IF ON SBUS DIAG TRIES AT LEAST 8 TIMES TO GET A RESPONSE
; 348 ; OTHER THAN -1 IF IT GOT -1 ALL THOSE TIMES THE MICROCODE
; 349 ; GIVES UP AND RETURNS 0
; 350 ;206 FINAL FIXES TO PUSHM AND POPM
; 351 ;205 FIX BUG IN INDEX CALCULATION OF E1 FOR EXTENDED ADDRESSING.
; 352 ; INDEXING REQUIRED THAT AN AREAD BE PERFORMED IN ORDER TO LOAD
; 353 ; THE AR WITH A CORRECT FINAL RESULT. THE EFFECTIVE ADDRESS CALCULATION
; 354 ; AROUND EXT1A: GOT A NEW MACRO ADDED FOR INDEXING THAT DOES THE AREAD.
; 355 ; ABSOLUTE LOCATIONS IN THE RANGE 3040 GET USED AS TARGETS FOR THIS
; 356 ; AREAD THEN THE CODE REJOINS THE OLD CODE AT EXT2:
; 357 ; THE AREAD WAS NECESSARY FOR THE HARDWARE MAGIC TO LOAD PARTS OF THE

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; 358 ; AR DEPENDING ON THE INDEX REGISTER AND OTHER EXTENDED ADDRESSING
; 359 ; PARAMETERS.
; 360 ;204 ADD AUTOMATIC VERSION NUMBER
; 361 ; ADD CODE TO DO SBus DIAG TESTING REQUIRED BY MOS
; 362 ;203 PUT THE BLKO PAG, CHANGE IN 201 IN A KLPAGING CONDITIONAL
; 363 ; KIPAGING GETS TANGLED IN AR PARITY ERRORS AND IN GENERAL DOES
; 364 ; THE WRONG THINGS
; 365 ;202 TURN OFF IMULI OPTIMIZATION IT GETS THE SIGN BIT AND THE OVERFLOW
; 366 ; FOULED UP (TURNED OFF FOR MODEL B ONLY WAS OFF IN MODEL A)
; 367 ;201 CHANGE BLKO PAG, TO INVALIDATE ONLY ONE ENTRY BY CLEARING IT
; 368 ; CHANGES AT PAGBO PAGBO+1 AND CLRPT+3 CLRPT+3 GETS SETUP THAT USED
; 369 ; TO BE AT PAGBO+1, PAGBO+1 NOW CLEARS ENTRY AND QUILTS
; 370 ; KLPAGE ERROR CHECK FOR TOPS 10 MODEL A TO CAUSE ERROR
; 371 ; IF SWITCH SETTINGS ARE IN CONFLICT DIDDLED
; 372 ;200 CHANGE ALL EXEC REF TRACKS FEATURES BACK TO PHYS REF
; 373 ; ON SUSPICION THAT PAGE FAULTS ARE NOT HANDLED PROPERLY
; 374 ; MAKE NON TRACKS INSTR STAT FEATURES GET FOUR PHYSICAL
; 375 ; PAGE NUMBERS FROM FIRST FOUR LOCATIONS IN THE PAGE PRESENTED
; 376 ; IN THE DATA0 PI, THE CODE ALSO USES THAT PAGE FIRST
; 377 ; LOCATION TO PUT THE INITIAL JUNK INTO ON STARTUP
; 378 ;177 FIX SOME BUGS IN OPCODE TIMING CODE AT OPTMO: AND BEYOND
; 379 ;176 ADD TO THE TIME COUNTING CODE CODE THAT COUNTS FREQUENCY
; 380 ; OF EACH OPCODE IN PAGE+2 AND PAGE+3
; 381 ;175 FIX TIME COUNTING CODE TO ACCOUNT FOR EACH OPCODE IN THE
; 382 ; USER OR EXEC MODE IT WAS SEEN IN, EDGE COUNTS WERE DONE IN
; 383 ; WRONG MODE CHANGES UNDER OP.TIME CONDITONALS (PERVASIVE)
; 384 ;174 CHANGE TRACKS AND TIME COUNTING TO USE EXEC VIRTUAL SPACE
; 385 ; INSTEAD OF PHYSICAL SPACE
; 386 ;173 SEPERATE OUT THE DISMISS AT 626: BECAUSE OF SUSPECTED BUG
; 387 ;172 THE FACT THAT XJEN DISMISSES BEFORE READING NEW PC WORDS CAUSES
; 388 ; A PROBLEM FOR TOPS 20. REHASH THE CODE AT 600: TO 637: TO MAKE
; 389 ; XJEN READ THE TWO WORDS FIRST AND THEN DISMISS.
; 390 ;171 CAUSE IO PAGE FAIL FIX IN 170 TO SHIFT AT END GETTING CORRECT
; 391 ; PAGE FAIL WORD CHANGE AT IOPGF:
; 392 ;170 MAKE CLRFPD: GO DIRECT TO FINI: INSTEAD OF THROUGH NOP: THIS WAS
; 393 ; COSTING 2 TICS IN BYTE INSTRUCTIONS
; 394 ; CHANGE IO PAGE FAIL TO SAVE A VIRTUAL ADDRESS IN THE AC BLOCK 7
; 395 ; LOCATION 2 INSTEAD OF THE DATA THAT WAS ON THE EBUS CHANGES AT
; 396 ; PGF4:+1 AND IOPGF:
; 397 ;167 CHANGE DEFAULT ON ADB MIXER SELECTS. NO DEFAULT NOW SUBFIELD U23
; 398 ; IS DEFAULTED TO 1 TO AVOID SELECTING FM AND NEEDING TO WAIT FOR PARITY.
; 399 ; THIS LEAVES THE OTHER BIT OF THE FIELD AVAILABLE FOR PARITY
; 400 ; EPT MOVED TO 540 USING SWITCH IN KLX,KLL (KLA,KLB NOW DEFUNCT)
; 401 ;166 CHANGE FIELD DEFINITION FORMAT CHANGE THE WAY THE OPTIONS FIELD
; 402 ; GETS ITS VALUES ASSIGNED. EACH BIT GETS A FIELD DEFINITION.
; 403 ;165 BUG IN 161 TO 164 WAS MISSING ACO AT POP2: PARITY BIT WAS PUT THERE
; 404 ; IN THE NEWER MICROCODES
; 405 ; INSTALL MANY THINGS TO MAKE WORD STRING MOVES WORK START AT
; 406 ; MOVWD1 AND UNTILL BMVWD1 ALSO ASSORTED MACROS ARE ADDED
; 407 ; THESE ARE INSTALLED IN A SEPERATED EIS FILE (WDEIS) FOR THE MOST PART
; 408 ; THERE ARE SOME NEW MACROS AND THE CLEAN+17 LOCATION IS USED FOR
; 409 ; THIS CASE UNDER MODEL B CONDITIONAL INTERRUPTS DO NOT WORK YET
; 410 ; IN THIS CODE BUT ALL DATA TRANSFERS ARE CORRECT. INTERRUPTS ARE
; 411 ; TAKEN SO SUSPECT THE PROBLEM IS IN THE CLEANUP CODE.
; 412 ;164 LEAVE IN ONLY MAP FIX
; 413 ;163 TAKE OUT MAP FIX LEAVING XHLLI IN AND JRSTF IN


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; 414 ;162 PUT XHLLI BACK IN TAKE OUT JRSTF ONLY IN SEC 0 CODE
; 415 ;161 XHLLI OUT TO DEBUG ADD RSTFO: TO MAKE TEST FOR JRSTF IN NON
; 416 ; O SECTIONS TEST IN ALL CASES
; 417 ;157 INSTALL XHLLI MAKE JRSTF UUD ON NON ZERO SECTIONS
; 418 ; ALSO MAKE MAP DOING A REFILL PAGE FAIL RIGHT THIS MEANS THAT AFTER
; 419 ; CLEAN IT CANNOT DO ANYTHING INTERESTING IF AN INTERRUPT IS PENDING
; 420 ; CHANGES AT MAP2:
; 421 ;156 REINSERT A SKP INTRPT IN THE PAGE FAULT HANDLER TO HAVE INDIRECT
; 422 ; POINTER CHAINS INTERRUPTABLE. AT PGRF6:+6
; 423 ;155 ABORTIVE MAP FIX FIX REMOVED PROBLEM MUST BE FIXED IN HARDWARE.
; 424 ;154 ADD TESTS FOR AC'S IN PHYSICAL REFERENCES FOR EXAMINES AND DEPOSITS
; 425 ; PHYS REFS GO TO MEMORY, NOT AC'S AFTER PROBLEM SHEET 1675
; 426 ; CHANGES AT PILD+3 PIFET+2 PSTOR PHYS1 PHYS2 PHYS3
; 427 ; ADD CHANGES IN TRACKS TO MAKE MODEL A WORK AT TRK2+2 AND +3
; 428 ;153 ADD SPECIAL CODE FOR PXCT OF BLT THIS HOPEFULLY CAN GO AWAY
; 429 ; WHEN THE EXTENDED ADDRESSING MONITOR DOES NOT USE PXCT ANYMORE
; 430 ; IT IS UNDER .IF/BLT.PXCT CONDITIONAL AND COSTS 12 WORDS
; 431 ;152 CHANGE WHAT BLT DOES TO MATCH THE SPEC SR_BLT(XXX) IS CHANGED TO
; 432 ; NOT FORCE GLOBAL ADDRESSING THE LOAD VMA(EA) ARX+BR AND
; 433 ; STORE VMA(EA) ARX MACROS ARE ADDED TO FORCE THE GLOBAL/LOCAL PARAMETERS
; 434 ; TO BE THE SAME AS THOSE OF THE EFFECTIVE ADDRESS
; 435 ;151 PUT THE EPT AND UPT AT 540 UNDER SWITCH CONTROL .IF/EPT540
; 436 ;150 VERSION NUMBER BACKED UP TO PRESERVE SPACE IN VERSION NUMBER FIELD
; 437 ;304 EXTEND O WOULD GET A JUMP TO AN UNUSED MICROLOCATION IN MODEL.B
; 438 ; ONLY THIS WAS BECAUSE LOCATION 2002: IN MODEL.A SHOULD BE AT 3002:
; 439 ; IN MODEL.B 3002: AND 3003: PUT IN WHERE 2002: AND 2003: ARE UNDER
; 440 ; CONDITIONALS.
; 441 ;303 CHANGE THE NUMBER FIELD OF THE SR_BLT(XXX) MACROS TO GIVE THE
; 442 ; BIT 0 OFF ALL THE TIME. THIS GIVES BLT MORE THE FORM OF THE OTHER
; 443 ; EXTENDED ADDRESSING STUFF IN HOW IT REFERS TO THE SHADOW AC'S.
; 444 ; IT IS STILL BELIEVED TO BE BROKEN BUT IS BETTER THAN IT WAS.
; 445 ;302 ADD LONGER ADDRESS CONSTRAINTS FOR THE NEW MICROASSEMBLER. EVERY
; 446 ; LOCATION THAT THE DISPATCH RAM CAN JUMP TO IS EFFECTED. THE
; 447 ; CONSTRAINTS THATUSED TO LOOK LIKE =OO**** MUST NOW LOOK LIKE
; 448 ; =O****OO**** THIS IS BECAUSE THE MODEL B MACHINE CAN AND DID
; 449 ; REALLY SET THAT BIT. THE CHANGE MAKES THE MICROCODE INCOMPATIBLE
; 450 ; WITH THE OLD ASSEMBLER.
; 451 ;301 HALT IS CLEARING THE RUN FLOP WITH HARDWARE MUST CHECK FOR
; 452 ; KERNAL MODE BEFOR THE HALT MACRO SO USER IOT MODE WILL
; 453 ; NOT BE ABLE TO HALT. THIS TAKES ONE MICROWORD AT 1017:
; 454 ; THE SENSE OF THE SKIP IS REVERSED AGAIN SO 1016: IS BACK TO
; 455 ; BEING THE UUD AND CHALT: IS NOW A SEPERATE WORD AFTER 1017:.
; 456 ;300 REPLACE HALT CODE AGAIN BUT THIS TIME GET THE SENSE OF THE
; 457 ; SKIP RIGHT BY SWAPPING THE CONTENTS OF LOCATIONS 1016: AND 1017:
; 458 ; PUT THE 1: ADDRESS CONSTRAINT ON CONT:.
; 459 ;277 PUT HALT BACK THE WAY IT WAS SKP USER HAS THE INVERSE SKIP SENSE
; 460 ; AND HENCE DOES THE WRONG THING. HALT TO BE FIXED LATER.
; 461 ;276 YET ANOTHER TRY AT THE BLKO PROBLEM BLK1: SHOULD HAVE HAD A
; 462 ; J/BLK2.
; 463 ;275 THE LONG PC CHANGES HAD XSFM1: BEFOR THE ADDRESS CONSTRAINT THUS
; 464 ; GIVEING THE WRONG ADDRESS. THE =O IS PUT BEFOR THE LABEL.
; 465 ;274 FIX THE DIAG.INST CONDITIONALS TO BEHAVE PROPERLY WITH THE
; 466 ; CONSTRAINTS OF DRAM LOCATIONS MAP DIED BECAUSE IT NEVER WAS
; 467 ; REACHED OUT OF A DISPATCH.
; 468 ;273 INSERT THE DIAG.INST FEATURE FOR THE DIAGNOSTICS PEOPLE.
; 469 ; CHANGES AT DCODE 104:, 106: AND AT XCT: SHOULD NOT EFFECT OTHER
    
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; EDHIS.MIC[10,5351] 22:44 29-Nov-83

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; 470 ; ASSEMBLIES.
; 471 ;272 THE FIX TO THE GARBAGE IN THE LEFT HALF OF VMA IN 265 FORGOT TO
; 472 ; LOAD THE VMA IN BLK3:+1 PUT THAT IN. ALSO ON JUD'S RECOMENDATION
; 473 ; PUT A COPY OF THE NOP MICROINSTRUCTION AFTER CLRFPD: TO MAKE
; 474 ; ENOUGH TIME IN THE SKIP CASE. IT SEEMED TO WORK WITHOUT THIS
; 475 ; AND IF SPACE GETS TIGHT IT SOULD BE REMOVED.
; 476 ;271 FIX IN 267 PGF4:+4 DOES NOT WORK. CANNOT PUT VMA_# THERE. POSSIBLY BECAUSE
; 477 ; VMA_# CONFLICTS IN SOME ESOTERIC WAY WITH STORE? THAT CHANGE
; 478 ; IS TAKEN OUT AND AT PGF1 THE VMA IS GIVEN 500 OR 501. THIS IS SLIGHTLY
; 479 ; LESS DESIREABLE AND FURTHER EFFORT COULD BE SPENT IN THE UCODE TO
; 480 ; MAKE PAGE FAILS LESS UNWEILDY FOR THE SOFTWARE ROUTINE THAT CONVERTS
; 481 ; THEM TO MODEL B FORM.
; 482 ;270 CHANGE HALT TO CHECK FOR USER MODE INSTEAD OF IO LEGAL. A JOB
; 483 ; IN USER IOT SHOULD NOT BE ABLE TO HALT THE MACHINE.
; 484 ;267 ADD NEW CONDITIONAL SHIFT.MUUD TO PROVIDE THE SHIFTED DOWN MUUD
; 485 ; DATA BLOCKS MORE SIMILAR TO THE XADDR TYPES. CONDITIONAL IS USED
; 486 ; AT 1003: AND PGF4:+4 TO PROVIDE A DIFFERENT STARTING ADDRESS.
; 487 ;266 FIX PILD+3 TO LOAD THE VMA AT THE SAME TIME THUS ENABLING
; 488 ; THE MODEL HACK FIX TO LOAD THE LONG VMA.
; 489 ;265 HAIR UP THE ALREADY HAIRY BLKXX CODE TO CLOBBER THE LEFT HALF OF AR
; 490 ; BEFOR USING IT AS AN ADDRESS. CLOBBERED ARL AT BLK2 AND LOADED
; 491 ; VMA AT BLK3.
; 492 ;264 ADD J/CLRFPD AT BFIN TO MAKE IT THE SAME AS IT WAS. BFIN GOT
; 493 ; MOVED TO A DIFFERENT PLACE IN THE LAST EDIT AND THIS J FIELD
; 494 ; WAS NOT FIXED.
; 495 ;263 ADD THE MIT FIXES. IOTEND AND THE BLK1 TO BLK4 GROUP ARE CHANGED
; 496 ; EXTENSIVELY. CLRFPD IS PUT JUST BEFORE FINI CONSTRAINT ON IOFET
; 497 ; IS CHANGED.
; 498 ; ADD THE LONG PC FORMAT UNDER A NEW CONDITIONAL LONG.PC THE
; 499 ; CONDITIONAL IS TURNED ON BY XADDR. CONDITIONALS ARE ADDED TO THE
; 500 ; LONG PC CODE TO MAKE IT SMALLER WHEN ONLY SECTION 0 IS POSSIBLE.
; 501 ; ADD COMMENTS TO THE MICROCODE OPTIONS FIELD.
; 502 ; RESTORE SXCT CODE FROM VERSION 131. TO BE USED ONLY IN MODEL A
; 503 ; NON KLPAGING CODE.
; 504 ;262 PUT WORD AT INDR1+1 UNDER SXCT CONDITIONAL SO WHEN SXCT IS OFF WE
; 505 ; GET AN ADDITIONAL SAVINGS OF ONE WORD.
; 506 ;261 ADD PHYS REFS AT PGRF6+4 AND PIDISP+4 TO MAKE MODEL.A LOAD A LONG
; 507 ; VMA. PART OF THIS CODE IS NOT UNDER CONDITIONAL BECAUSE IT SHOULD NOT MATTER
; 508 ; TO A MODEL.B MACHINE. PIDISP+4 ALSO GETS THE LOAD OF THE SAME DATA
; 509 ; REPEATED SO THE PHYS REF HAS SOMETHING TO WORK ON.
; 510 ; FLUSH THE NOW USELESS CODE AT CHALT TO GENERATE THE LD AR.PHYS
; 511 ; CONSTANTS.
; 512 ; CURRENTLY THERE IS SORT OF A BUG IN THAT THE SBR AND THE CBR
; 513 ; CAN NOT BE ABOVE 256K IN A MODEL.A MACHINE. THIS DOES NOT BOTHER
; 514 ; THE CURRENT MONITORS AT ALL IN THAT THESE TABLES ARE IN VERY LOW CORE.
; 515 ; IF THAT CHANGES THE LOCATIONS SECIMM+3 SECIMM+7, LDIND, PGRF5, LDSHR
; 516 ; AND LDPT1+1 MUST ALL GET FIXED UP. THE GENERAL FIX IS TO GET A PHYS REF
; 517 ; IN THE MICROINSTRUCTION THAT LOADS THE VMA. THIS CAN BE DONE BY
; 518 ; POSTPONING THE LOAD OF THE VMA ONE MICROINSTRUCTION IN ALL OF THESE
; 519 ; PLACES, BUT, SINCE THAT CAUSES A PERFORMANCE DEGRADATION IT WAS NOT
; 520 ; DONE.
; 521 ;260 DIVERGANT CHANGES TO MAKE KLPAGING PHYS REFS THE OLD WAY
; 522 ; CAUSE ALL CASES OF VMA_XXX+LD AR.PHYS TO GO BACK TO THE
; 523 ; OLD PHYS REF WAY
; 524 ;257 IN MODEL B MACHINES AT LDPT+1 THE VMA IS GETTING GARBAGE IN THE
; 525 ; LEFT HALF BECAUSE IT ADDED IN JUNK THAT WAS IN AR LEFT. FIX IS TO

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; 526 ; CLEAR ARL AFTER LDPT AND TO DO THE SHUFFLE PERFORMED THERE ONE
; 527 ; MICROINSTRUCTION LATER.
; 528 ;***** A HACK FIX IS USED HERE THAT TAKES TWO WORDS. THIS WAS DONE BECAUSE
; 529 ; OF EXTREME TIME PRESSURE TO DEBUG >256K MODEL B. THERE OUGHT TO BE
; 530 ; A WAY TO REDUCE THIS FIX TO ONLY ONE WORD IN SPACE AND TIME, OR
; 531 ; EVEN LESS.
; 532 ;256 EDIT JUMPED TO RANDOMNESS WITH AN EXTRA RETURN. THIS HAPPENED
; 533 ; BECAUSE THERE WAS NO CALL AT EDSFLT IN THE MODEL B NON XADDR CODE
; 534 ; ADDED CALL TO EDSFLT.
; 535 ;255 SAVE EDIT FROM GETTING AN EXTRA STORE CYCLE AT EDSSIG BY SENDING
; 536 ; IT ALWAYS TO THE EDFLT1 LOCATION INSTEAD OF EDFLT THIS ONLY
; 537 ; CHANGES WHAT HAPPENS IN MODEL B NON XADDR BECAUSE IN MODEL A
; 538 ; EDFLT AND EDFLT1 ARE THE SAME LOCATION ANYWAY
; 539 ;254 CAUSE THE A INDRCT CHANGE IN 253 TO BE ONLY FOR NON EXTENDED
; 540 ; ADDRESSING MACHINES. THIS THROWS DOUBT ON THE WORD SAVINGS
; 541 ; THAT MIGHT HAVE BEEN POSSIBLE
; 542 ;253 CHANGE A INDRCT TO LOAD BOTH THE AR AND ARX. IN THE EXTENDED
; 543 ; INSTRUCTION SET THIS HAPPENED TO BE DEPENDED ON AT EXT2+2 AND
; 544 ; EXT2+3. THE DEFINITION OF A IND IN EA CALC/ WAS FIXED TO
; 545 ; LOAD THE AR AND THE ARX
; 546 ; I THINK THIS PERMITS THE SAVINGS OF AN EXTRA WORD AND SOME
; 547 ; TIME ON ALL INDIRECTS. CHECK OUT FLUSHING INDR1 AND MAKING INDRCT
; 548 ; DO THE DISPATCH AND GO TO COMPEA
; 549 ; FORCE ADB TO GENERATE AR*4 AS DEFAULT THIS DISABLES PARITY
; 550 ; CHECKING ON THE FM WHEN IT IS NOT BEING READ FIXED IN
; 551 ; DEFINITION OF ADB THIS WILL ALSO SPEED UP THE MACHINE BY SOME
; 552 ; BECAUSE THE ADB FIELD CAN NO LONGER FORCE 3 TICS WITHOUT REALLY
; 553 ; NEEDING THAT LONG
; 554 ;252 SAVE A WORD AT IOPGF+1 BY MAKING IT PILD+3 THIS ADDS THE SET
; 555 ; ACCOUNT ENABLE TO AN UNDEFINED CASE.
; 556 ;251 TURNING ON PAGING CAUSED A HANG THIS WAS BECAUSE OF A MISIMPLIMENTED
; 557 ; FIX IN 250. THE ATTEMPT TO PUT THAT FIX IN NO SPACE FAILED AND IT TOOK
; 558 ; ONE WORD. AT LDPT+1 ADD BR/AR AT GTCST1 RECOVER THE AR FROM THE BR
; 559 ; THIS SEEMS LIKE IT SHOULD BE ABLE TO BE BUMMED BUT I CANNOT
; 560 ; FIGURE OUT HOW
; 561 ; ALSO FIX A PLACE WHERE A PHYS REF WAS LEFT IN THE MODEL A CODE
; 562 ; AT PGRF6+4 MODEL B CONDITIONAL IS AS IT WAS MODEL A IS NEW TO USE
; 563 ; LD AR.PHYS MECHANISM
; 564 ;250 LOADING HIGH ORDER GARBAGE TO THE VMA WITH THE FIX FOR
; 565 ; >256K CAUSES FUNNY THINGS TO HAPPEN. BITS GET CLOBBERED
; 566 ; WITH ARO-8 SCAD 14 LINES AFTER SECIMM. ACTUALLY IS MORE
; 567 ; HAIR BECAUSE OF CONFLICTING FIELDS. CODE ABOVE AND BELOW
; 568 ; THAT GOT REARRANGED TO SIMPLER MODEL A AND MODEL B CONDITIONALS
; 569 ; SINCE NOW ALL LINES ARE DIFFERENT. SHUFFLING OF FE IS DONE
; 570 ; TO PROVIDE ROOM FOR A CONSTANT ON THE CORRECT SIDE OF THE SCAD
; 571 ; AT LDPT A SIMILAR
; 572 ; RECODING IS NEEDED. 4 LINES OF CODE ARE REDONE IN MODEL
; 573 ; A CONDITIONAL AND CONDITIONALS ARE RESHUFFLED TO HAVE
; 574 ; SIMPLER FORMAT
; 575 ; NEW MACROS ARE ADDED GEN ARO-8, GEN FE AND ARO-8
; 576 ; VMA AR+LD AR.PHYS AND ITS FRIENDS ARE TAKEN OUT OF KLPAGING
; 577 ; CONDITIONAL THEY ARE USED TO DO EXAMINES AND DEPOSITS NOW
; 578 ;247 FIX ST AR.PHYS TO GIVE BIT 4 INSTEAD OF BIT 5 AT CHALT
; 579 ; AT PSTORE CHECK FOR AC REF AND IF SO WRITE FM MUST DO THIS
; 580 ; BECAUSE LOAD AD FUNC DOES NOT SET MCL STORE AR
; 581 ;246 FIX MUUO, IN EXTENDED ADDRESSING, TO GET NEW PC BEFORE CLOBBERING

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; 582 ; THE USER AND PUBLIC FLAGS THAT TELL WHERE TO GET IT. FIX CONDITIONAL
; 583 ; ASSEMBLY AT INDRCT TO DO EA TYPE DISP IN MODEL A, NOT MODEL B.
; 584 ;245 ADDITIONAL FIXES FOR THE 256K PROBLEM, TO MAKE EXAMINE AND
; 585 ; DEPOSIT WORK. CHANGES AT CHALT TO CREATE CONSTANT "ST AR.PHYS",
; 586 ; AND EXTENSIVELY NEAR PICYC1, PIDATI, AND PIDATO. CHANGES ARE ALL
; 587 ; UNDER MODEL B CONDITIONAL, BECAUSE MODEL B HARDWARE WORKS OK, AND
; 588 ; THE FIX IS REGARDED AS CROCKISH.
; 589 ;244 WAIT FOR COMPLETION OF INDIRECT REFERENCE AT BYTEI+1 AND EXTI+1
; 590 ; EVEN THOUGH INTERRUPT REQUEST HAS BEEN SEEN, SO AS NOT TO CONFUSE MBOX.
; 591 ;243 VARIOUS FIXES TO MAKE THESE SOURCES WITH MODEL.B SWITCH OFF
; 592 ; EQUIVALENT TO MODEL A SOURCES, SO WE CAN DISCARD MODEL A SOURCES
; 593 ; THE FIXES ARE:
; 594 ; 1) SWITCH SNORM.OPT, TO SAVE SPACE IN SINGLE PRECISION
; 595 ; FLOATING NORMALIZATION.
; 596 ; 2) CREATION OF LD AR.PHYS MAGIC CONSTANT, TO SOLVE HARDWARE
; 597 ; PROBLEMS GENERATING ADDRESSES ABOVE 256K.
; 598 ;242 FIX AT SECPTR+1 TO PRESERVE AR LEFT UNTIL WE CAN CHECK
; 599 ; FOR BITS 12-17 NON ZERO CORRECT ADDRESS CONSTRAINTS AT
; 600 ; SECIMM+1 & +2 TO GET BRANCHING RIGHT FOR SHARED AND INDIRECT
; 601 ; SECTION POINTERS. FIX AT LDIMM+1 TO CLEAR LH OF AR BEFORE
; 602 ; LOADING VMA WITH SPT ADDRESS, TO PREVENT PAGE FAULT ON SPT
; 603 ; REFERENCE.
; 604 ;241 MORE FIXES AT START: AND NEWPC:, FOR SAME PROBLEM AS 240.
; 605 ; MUST LOAD FLAGS AND CLEAR VMAX, THEN LOAD VMA INTO PC TO CLEAR
; 606 ; PCX, THEN RELOAD VMA TO GET EFFECT OF NEW FLAGS AND CLEARED
; 607 ; PCX. (MODEL A ONLY).
; 608 ;240 FIXES AT START: AND NEWPC: TO LOAD 23-BIT ADDRESS RATHER
; 609 ; THAN 30-BIT, SINCE OTHER BITS ARE PC FLAGS. AT SAME TIME AND
; 610 ; PLACE, FIX MODEL A CODE TO CLEAR PC SECTION NUMBER.
; 611 ;237 CHANGE CONDITIONALS AROUND PUSH AND POP CODE FROM XADDR TO
; 612 ; MODEL.B. COULD SIMPLIFY IFNOT XADDR.
; 613 ;236 FIX ADDRESS CONSTRAINTS ON USES OF EA MOD DISP IN MODEL
; 614 ; B MACHINE WITH EXTENDED ADDRESSING OFF. PROBLEMS AT COMPEA,
; 615 ; BFETCH, AND EXT2.
; 616 ;235 SLIGHTLY CLEANER FIXES FOR PROBLEMS IN 234 TO AVOID WASTING TIME
; 617 ; AND SPACE. BYTE READ MACRO NEEDS TO SET VMA/LOAD, AND VMA VMA
; 618 ; HELD MACRO DOESN'T USE MEM FIELD UNLESS MODEL B AND KL PAGING.
; 619 ; ALSO FIX CONDITIONAL ASSEMBLY STUFF TO AVOID SPURIOUS ERRORS.
; 620 ;234 INSTALL FIXES FOR SOME PLACES WHERE MODEL B CODE CAUSES CONFLICT
; 621 ; WITH THE OLD NON KL PAGING NON EXTENDED ADDRESSING CODE
; 622 ; THESE ARE AT BFETCH, PGF3-1, PGF6, EXT1+2
; 623 ;233 FIX THE FOLLOWING PROBLEMS:
; 624 ; KL PAGING SHOULD PRODUCE A PAGE FAILURE WHEN BITS
; 625 ; 12-17 OF A PRIVATE SECTION POINTER ARE NON 0
; 626 ; FIXED AT SECPTR ETC.
; 627 ; EDIT DOES NOT ALLOW INTERRUPTS
; 628 ; FIXED AT EDNXT1 AND AFTER THAT
; 629 ; MAP SHOULD NOT BE LEGAL IN USER MODE
; 630 ; FIXED AT MAP2 AND CLEAN+15
; 631 ; MOVMI IS SHORTENED BY MAKING IT THE SAME AS MOVEI
; 632 ; AT DON LEWINE'S SUGGESTION THIS IS IN DCODE 215
; 633 ;232 MERGE THE SECOND ORDER STATISTICS GATHERING CODE WITH THIS
; 634 ; CODE INTENT IS TO KEEP IT HERE
; 635 ;231 CHANGE THE LOAD CCA DEFINITION TO REFLECT THE NEW HARDWARE
; 636 ; THIS IS ENABLED WHEN THE MODEL.B ASSEMBLY SWITCH IS ON
; 637 ;230 THIS IS THE POINT WHERE MICHAEL NEWMAN TAKES OVER THE MICROCODE

REVISION HISTORY

; 638 ; MAINTENANCE SEVERAL BUG FIXES GET EDITED INTO 126 AT THIS POINT
; 639 ; TWO SETS OF PARALLEL CODE WILL BE MAINTAINED FOR A WHILE.
; 640 ; FIX THE CMPS PARODY ERROR PROBLEM WHEN ILLEGAL BITS ARE FOUND IN
; 641 ; THE LENGTHS.
; 642 ;227 FIX PIBYTE TO GET DTE# CORRECT ON TO-10 TRANSFERS. FIX MTRREQ
; 643 ; CYCLES TO WAIT FOR STORE TO FINISH BEFORE RE-ENABLING ACCOUNT.
; 644 ; FIX ADJSP OF LONG STACK POINTERS TO FETCH NEXT INSTR.
; 645 ;226 FIX EXMD TO LOAD AR, RATHER THAN ARX, WITH MARK POINTER, AS
; 646 ; EXPECTED BY THE HANDLER. FIX EDIT, SEVERAL PLACES, TO IGNORE
; 647 ; LEFT HALF OF MARK & PATTERN ADDRESSES WHEN PC SECTION IS ZERO.
; 648 ; FIX EDIT TO MAKE EXTENDED REFERENCE FOR PATTERN BYTES.
; 649 ; FIX ADJSP TO BE MEANINGFUL WITH LONG STACK POINTERS
; 650 ;225 FIX BYTEA NOT TO CLOBBER FE ON INDIRECTS, FIX EXMD TO BACK
; 651 ; UP VMA AFTER STORING DSTP2 AND BEFORE STORING DSTP. FIX EDIT TO
; 652 ; COUNT THE WHOLE PATTERN ADDRESS IF PC SECTION NOT ZERO.
; 653 ;224 FIX EXTEND ADDRESS CALCULATION TO RECOVER EO FROM MQ, AND
; 654 ; FIX EXTEND OPCODE TEST TO DISALLOW OPS >20.
; 655 ; FIXES TO HANDLE NEW ENCODING OF AC-OP ON APR BOARD.
; 656 ;223 COMPLETE 222. P HAS TO GO TO SC AS WELL AS ARO-5. CREATE
; 657 ; SUBROUTINE RESETP TO DO IT. GET CODE IN SYNC WITH HARDWARE AND
; 658 ; MOST RECENT SPEC FOR MEANING OF PXCT AC BITS IN EXTEND. THUS
; 659 ; UNDO COMMENT IN 221: WE SHOULD LOOK AT PXCT B11. ALSO FIX
; 660 ; EXTEND TO USE CORRECT ENCODING OF BITS 9, 11, AND 12 FOR PXCT
; 661 ; OF STRING OPERATIONS. FIX DATAI PAG SO IT DOESN'T LOSE THE
; 662 ; PREVIOUS CONTEXT AC BLOCK WHEN LOADING PREVIOUS SECTION #.
; 663 ; INSERT CHANGE CLAIMED FOR EDIT 55, TO INHIBIT INTERRUPT DURING
; 664 ; PI CYCLES.
; 665 ;222 FIX BYTE POINTER UPDATE ROUTINES GSRC & IDST IN EIS CODE
; 666 ; TO UPDATE P WHEN INCREMENTING SECOND WORD. JUST FORGOT TO. TRY
; 667 ; AGAIN TO CONTROL EIS REFERENCES OFF EO, FOR EXTENDED OR NOT.
; 668 ;221 COMPLETE FIX OF 220, TO KEEP SR CORRECT THROUGH RELOAD OF IR
; 669 ; IN EXTEND DECODING, AND TO CONTROL SR CORRECTLY FOR XBLT DST
; 670 ; REFERENCES. (WE WERE LOOKING AT PXCT B11, SHOULD BE B12).
; 671 ;220 FIXES SEVERAL PLACES TO USE "EA" IN DRAM A FIELD INSTEAD OF "I",
; 672 ; NOTABLY BLT, WHICH WAS USING WRONG SECTION. FIX EXTEND TO
; 673 ; CONTROL VMA EXTENDED BEFORE FETCHING EXTEND-OP, SO AS NOT TO
; 674 ; LOOK "UNDER" THE AC'S. FIX XBLT FOREWARD TO STOP WHEN AC GOES
; 675 ; TO ZERO, NOT -1. ALSO CONTROL SR BEFORE INITIAL STORE TO GET
; 676 ; CORRECT CONTEXT.
; 677 ;217 CODE CHANGES TO MAKE SECOND WORD OF BYTE POINTER WORK RIGHT
; 678 ; WHETHER EFIW OR IFIW, BY CONTROLLING CRY18 OR CRY6.
; 679 ;216 RECODE EXTENDED INSTRUCTION SET DECODING & EFFECTIVE ADDRESS
; 680 ; CALCULATION. FIX UVO CODE TO INCREMENT VMA AFTER STORING PC.
; 681 ; FIX ADJBP TO GET 36 BIT ADDRESS ADJUSTMENT IF B12 SET.
; 682 ;215 REARRANGE CONDITIONAL ASSEMBLY DEFAULTS TO BE MORE LOGICAL
; 683 ; INSERT FORM FEEDS AND COMMENTS TO HELP BEAUTIFY THE LISTING.
; 684 ; REWORK THE NEW JRST'S, TO MAKE THEM SMALLER, FASTER, AND TEST
; 685 ; IO LEGAL BEFORE DISMISSING. PUT IN XBLT.
; 686 ;214 MODIFY ADJBP AND UVO'S FOR EXTENDED ADDRESSING. REWORK PARITY
; 687 ; ERROR HANDLING, IN A FRUITLESS ATTEMPT TO MAKE IT SMALLER,
; 688 ; BUT SUCCESSFULLY MAKING IT CLEARER. FIX ASSEMBLY ERRORS IN EIS
; 689 ; DUE TO AC4 CHANGES, AND ADD CODE TO HANDLE LONG BYTE POINTERS
; 690 ; IN AC'S. PUT IN CODE TO GIVE PAGE FAIL 24 ON ILLEGAL FORMAT
; 691 ; INDIRECT WORD.
; 692 ;213 FIX LDB & DPB TO TEST POINTER BIT 12 ON CALL TO BYTEA.
; 693 ;212 MODIFY JSP, JSR TO STORE FULL PC WITHOUT FLAGS IN NON-ZERO SEC


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: 694 : SEPARATE CONDITIONALS FOR "MODEL B" MACHINE FROM THOSE FOR
: 695 : EXTENDED ADDRESSING MICROCODE.
: 696 :211 REMOVE UNNECESSARY DIDDLING OF VMA USER BIT DURING PAGE REFILL.
: 697 : AND ELIMINATE SPECIAL CASE FOR MAP INSTRUCTION, WHEN EXTENDED
: 698 : ADDRESSING HARDWARE EXISTS TO SOLVE THESE PROBLEMS.
: 699 : FIX SEVERAL CASES OF SIGNS DISP WITH INADEQUATE CONSTRAINT.
: 700 :210 FIX DEFINITION OF "SKP LOCAL AC REF", WHICH CONFUSED "AC
: 701 : WITH "LOCAL AC REF".
: 702 :207 FIX JRSTF (AND ITS DERIVATIVES) TO LOAD FLAGS INTO AR AFTER
: 703 : DOING EA MOD DISP, WHICH WOULD OTHERWISE CLOBBER THEM. FIX
: 704 : COMPEA CODE TO LET AREAD HARDWARE LOAD AR. OTHERWISE GET SEC #.
: 705 :206 FIX PCTXT ROUTINE TO GET PREVIOUS CONTEXT SECTION.
: 706 :205 FIX POPJ TO LOAD HALFWORD OR FULLWORD PC ACCORDING TO PC SECT
: 707 :204 FIX CONDITIONALS AROUND LOC 47, WRONG IN 202. FIX DEFINITION
: 708 : OF A INDRCT, DOESN'T NEED #07. FIX STACK INSTRUCTIONS FOR
: 709 : EXTENDED ADDRESSING. MUST NOT LOAD VMA FROM FULL AD.
: 710 :203 INCLUDE CODE AT NEXT+2 TO GENERATE ADDRESS MASK (LOW 23 BITS)
: 711 : AT HALT TIME, AND CODE IN PICYCLE TO USE IT TO GET 23 BIT ADDR
: 712 : OUT OF IOP FUNCTION WORD.
: 713 :202 MOVE "40+A" LOCATIONS TO "A" UNDER EXTENDED ADDRESSING. CHANGE
: 714 : ALL CALL MACROS TO GENERATE CALL BIT INSTEAD OF SPECIAL FUNC'S.
: 715 :201 BEGIN EXTENDED ADDRESSING CHANGES IN EARNEST. INTEGRATE NEW
: 716 : EFFECTIVE ADDRESS COMPUTATION CODE, AND REVISE INSTRUCTION
: 717 : ROUTINES AS NECESSARY.
: 718 :126 FIX STRAC3-2, WHERE COMMA GOT LEFT OFF WHEN IFETCH MOVED
: 719 :125 REMOVE NXT INSTR FROM STAC1, STRAC3, & STAC4, MAKING THEM JUMP
: 720 : TO FINI INSTEAD. PROBLEM INVOLVES A RACE IF PAGE FAIL OCCURS
: 721 : WHILE WRITING FM. IF FM ADDRESS CHANGES BEFORE COND/FM WRITE
: 722 : GOES FALSE, APR BOARD MAY GRONK PARITY BIT OF SOME FM LOC'N.
: 723 : THIS RESULTS IN SOME SOME PATHS FROM FETCH TO NICOND BECOMING
: 724 : LONGER THAN 6 TICKS, SO THE FETCHES GOT SHUFFLED IN SOME PLACES.
: 725 : MICROCODE PATCH ELIMINATES MOST PROBABLE CAUSE, WHICH IS PAGE
: 726 : FAIL AT NICOND TIME WHILE WRITING AC OTHER THAN 0. IT DOES NOT
: 727 : TAKE CARE OF THE POSSIBILITY THAT COND/FM WRITE WILL GLITCH AT
: 728 : INSTR 1777 TIME.
: 729 :124 FIXES IN SEVERAL PLACES TO SET AND CLEAR ACCOUNT ENABLE SO AS
: 730 : TO GET REPEATABLE ACCOUNTING MEASURES OF USEFUL WORK DONE. THE
: 731 : ENABLE IS NOW CLEARED FOR METER UPDATE CYCLES AND KL PAGE REFILL
: 732 : CYCLES. THE HARDWARE ALREADY TAKES CARE OF PI CYCLES.
: 733 :123 CORRECT 122 TO CONSTRAIN LOC "UNHALT", AND TO LOAD ARX FROM AR,
: 734 : SO AS TO LET "SKP AR EQ" WORK. PROBLEM AROSE BECAUSE MACRO ALSO
: 735 : TESTS ARX00-01. FIX EDIT, WHEN STORING DEST POINTER ON SELECT
: 736 : SIGNIFICANCE START, TO ELIMINATE AMBIGUITY IN DEST P FIELD.
: 737 :122 SPEC CHANGE TO EXIT FROM HALT LOOP, SO THAT ARO-8=0 WITH AR9-35
: 738 : NON-ZERO LOADS AR INTO PC TO START PROCESSOR. THIS IS DIFFERENT
: 739 : FROM EXECUTING JRST BECAUSE PC FLAGS ARE CLEARED.
: 740 :121 FIX TO 120 TO ALLOW A CYCLE BETWEEN FILLER FROM MEMORY AND
: 741 : WRITING IT INTO FM (THUS PARITY CAN BE COMPUTED). ALSO CLEAR
: 742 : STATE REGISTER IN EDIT BEFORE GETTING NEXT PATTERN BYTE.
: 743 :120 FIX EIS TO TOLERATE PAGE FAIL ON READ OF FILL BYTE IN MOVSRJ
: 744 : OR B2D CONVERSION. REQUIRES GETTING FILLER BEFORE STORING DLEN
: 745 : ALSO INTEGRATE OPCODE COUNTING/TIMING CODE UNDER CONDITIONALS
: 746 :117 FIX PARITY ERROR CODE TO WRITEBACK AR ON RPW ERROR.
: 747 :116 REWRITE OF DDIV, SO THAT THE NO-DIVIDE TEST IS ON THE MOST
: 748 : SIGNIFICANT HALF OF THE MAGNITUDE OF THE DIVIDEND, RATHER THAN
: 749 : THE MAGNITUDE OF THE MOST SIGNIFICANT HALF. IN THE PROCESS,

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; 750 ; SAVE TIME AND SPACE. ALSO PUT IN CONDITIONAL ASSEMBLY VARIABLE
; 751 ; "WRTST" TO INHIBIT WRITE TEST CYCLE FOR INSTRUCTIONS WHICH
; 752 ; APPEAR NOT TO NEED IT, AND THUS TO SPEED THEM UP.
; 753 ;115 FIX SBDIAG TO SET MCL REG FUNC TO INHIBIT EBOX MAY BE PAGED.
; 754 ;114 RECODE STRING COMPARE TO SAVE SPACE AND TIME. CHANGE DEFAULTS
; 755 ; FOR KLPAGING TO INCLUDE EIS, EXCLUDE TRACKS FEATURE. CHANGE
; 756 ; KLPAGING (NEW SPEC) TO KEEP "LOGICALLY WRITABLE" IN SOFTWARE BIT
; 757 ;113 RECODE KL PAGING TO ELIMINATE PROBLEM OF WRITING HARDWARE
; 758 ; PAGE TABLE BEFORE CHECKING FOR AGE TRAP, AND THEREFORE LEAVING
; 759 ; THE PAGE ACCESSIBLE AFTER THE TRAP. THE RECODING ALSO IMPROVES
; 760 ; THE ALGORITHM IN THAT THE HARDWARE ENTRY INCLUDES THE W BIT SET
; 761 ; IF THE CORE TABLES ALLOWED WRITE AND THE CST INDICATES WRITTEN,
; 762 ; EVEN IF THE CURRENT REFERENCE WAS NOT A WRITE.
; 763 ; ALSO FIX CODE WHICH WRITES PT DIR, TO GET WRITE REF BIT FROM
; 764 ; VMA HELD INTO BIT 5 OF SAVED PAGE FAIL WORD.
; 765 ;112 FIX PAGE FAIL CODE FOR USE WITH PROB SHEET 1396, WHICH LOADS
; 766 ; PC IF PAGE FAIL OCCURS ON NICOND. THUS CODE NEEDN'T CHECK FOR
; 767 ; FETCH AT CLEAN, WHICH CAUSED OTHER PROBLEMS ON PARITY ERRORS.
; 768 ; CLEAR FE AND SC IN NXT INSTR MACRO (JUST CLEANLINESS).
; 769 ;111 PATCH SEVERAL ROUTINES WITH THE FOLLOWING MACRO --
; 770 ; FETCH WAIT "MEM/MB WAIT"
; 771 ; TO PREVENT SEQUENCES IN WHICH PAGE FAIL INFO CAN GET LOST
; 772 ; BECAUSE OF LONG TIME FROM REQUEST TO MB WAIT. THESE PATCHES
; 773 ; SHOULD BE REMOVED AFTER AN ECO HAS BEEN INSTALLED TO FIX.
; 774 ; IN ADDITION, EBUSX SUBROUTINE HAS BEEN MODIFIED TO PREVENT RACE
; 775 ; CONDITION WHEN SETTING UP IO FUNCTION WITH COND/EBUS CTL AND
; 776 ; MAGIC # BIT 4. MUST NOT CHANGE #5 THROUGH #8 ON NEXT CYCLE.
; 777 ; FIX KLPAGING CODE TO GO BACK TO AREAD ON MAP REF, BECAUSE
; 778 ; MEM/AD FUNC DOESN'T CORRECTLY RESTORE APR REG FUNC. ALSO MAKE
; 779 ; THE CODE SMARTER ON NO MATCH CONDITION, SO REQUEST DOESN'T HAVE
; 780 ; TO BE RESTARTED AND IMMEDIATELY FAIL AGAIN.
; 781 ;110 GIVE UP ON THE OLD STRING COMPARE CODE, INSTALLING MIKE NEWMAN'S
; 782 ; VERSION. SOMEWHAT SLOWER, BUT GIVES THE RIGHT ANSWERS.
; 783 ; FIX LDB CODE TO WAIT FOR MEM WORD EVEN IF INTERRUPT REQUEST
; 784 ; SEEN, SO AS NOT TO GET CONFUSED WHEN IT ARRIVES OR PAGE FAILS.
; 785 ; ALSO IMPROVE CLRPT ROUTINE USED BY CONO AND DATAO PAG TO START
; 786 ; LOOP WITH VMA CLEARED AND PT WR SELECTION SETUP CORRECTLY.
; 787 ;107 FIX STRING COMPARES TO CHECK FOR INTERRUPT. THIS INVOLVED
; 788 ; CHECKING DURING GSRC ROUTINE, WHICH ELIMINATES NEED FOR CHECK
; 789 ; IN SRCMOD (WHICH CALLS GSRC). IT ALSO REQUIRED CLEARING SFLGS
; 790 ; AT STARTUP, AND ADJUSTING DLEN UPDATE CODE IN DEST FILL TO GET
; 791 ; VALID LENGTH STORED ON INTERRUPT.
; 792 ;106 ELIMINATE RACE IN DECODING OF # FIELD ON MTR BOARD BY HOLDING
; 793 ; LOW 3 BITS THROUGH NEXT MICROINSTRUCTION.
; 794 ; FIX LUUD AND MUUD TO ALLOW INTERRUPTS.
; 795 ; FIX B2D OFFSET TO SIGN-EXTEND E1 AFTER INTERRUPT. FINISH 105,
; 796 ; TO GET ENTIRE AR LOADED WHILE CLEARING MQ (ARL WAS HOLDING).
; 797 ; FIX KL PAGING TO USE VMA/1 INSTEAD OF VMA/AD WHEN RESTORING VMA
; 798 ; FROM VMA HELD OR COPIES THEREOF.
; 799 ; FIX UFA NOT TO ALWAYS GET UNDERFLOW ON NEGATIVE RESULTS.
; 800 ; SAME FIX AS EDIT 103 OF BREADBOARD. WHERE DID IT GET LOST?
; 801 ;105 FIX KL PAGING AS REVISED BY EDIT 103 TO CORRECTLY RESTORE
; 802 ; BR ON NO-MATCH CONDITION
; 803 ; ANOTHER FIX TO B2D, TO CLEAR MQ ON ENTRY. BUG INVOLVED GARBAGE
; 804 ; FROM MQ SHIFTING INTO ARX DURING DEVELOPMENT OF POWER OF TEN.
; 805 ;104 FIX BINARY TO DECIMAL CONVERSION, WHICH WAS NOT GOING TO CLEAN
    
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: EDHIS.MIC[10,5351] 22:44 29-Nov-83

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: 806 :      ON FINDING AN INTERRUPT, AND ON RESTART WITH FPD SET, WAS NOT
: 807 :      SETTING UP SLEN. TSK, TSK. CORRECT CLEANUP FOR DEST FILL IN
: 808 :      MOVSRJ, WHICH WAS INCREMENTING BOTH SLEN AND DLEN, SHOULD
: 809 :      HAVE BEEN NEITHER. FIX JSR, BROKEN BY EDIT 103. JUMP MUST BE
: 810 :      TO E+1, NOT E.
: 811 :103  CREATE CONDITIONAL ASSEMBLY FOR EXTENDED ADDRESSING. UNDER IT,
: 812 :      CREATE MEM FIELD DEFINITIONS, SUPPRESS SXCT.
: 813 :      SAVE A WORD IN JSR BY USING JSTAC IN COMMON WITH PUSHJ.
: 814 :      FORCE TIME FIELD IN CASES WHERE ASSEMBLER DEFAULT SCREWS UP.
: 815 :      ADD INTERRUPT TESTS IN KL PAGING CODE TO PREVENT HANGS, AND
: 816 :      REVISE PAGE FAIL WORD TO ELIMINATE THE NEW FAIL CODES.
: 817 :102  ATTEMPT ANOTHER FIX OF MOVSRJ, CVTBDX FILL. EDIT 71 LOSES
: 818 :      DUE TO INCONSISTENCY -- DLEN UPDATE MUST NOT PRECEED CLEANUP.
: 819 :      CREATE CONDITIONAL ASSEMBLY SWITCHES TO CONTROL EXTENDED
: 820 :      INSTRUCTION SET, DOUBLE INTEGER ARITHMETIC, AND ADJBP. CHANGE
: 821 :      DEFAULT OF IMULI.OPT, WHICH CAN GET SIGN WRONG ON OVERFLOW.
: 822 :101  FIX METER REQUEST CODE TO "ABORT INSTR" EVEN IF NOT SETTING
: 823 :      PI CYCLE. THIS SHOULD FIX OCCASIONAL LOSS OF TRAPS PROBLEM.
: 824 :100  FIXES TO KL PAGING CODE TO PREVENT LOADING VMA FROM AD WHILE
: 825 :      REQUESTING PHYSICAL REF. FIX JSR TO PREVENT FM PARITY STOP
: 826 :      ON STORE TO AC. FIX 1777 TO FORCE RECIRCULATION OF AR/ARX,
: 827 :      EVEN IF MBOX RESP STILL TRUE.
: 828 :77   FIX DDIV TO GET MQ SHIFTED LEFT ONE PLACE, WITHOUT INTRODUCING
: 829 :      AN EXTRA BIT, AT DDVX1. THIS INVOLVES INHIBITING ADA TO PREVENT
: 830 :      AD CRYO FROM COMMING INTO MQ35.
: 831 :76   FIX UFA TO ALLOW AN EBOX CYCLE BETWEEN FETCH AND NICOND WHEN
: 832 :      FRACTION SUM IS ZERO, AT UFA3.
: 833 :75   PUT BACK INSTRUCTION "MBREL" REMOVED BY EDIT 64. NECESSARY TO
: 834 :      ENSURE THAT EBOX REQUEST FOR FETCH DOESN'T COME UP WHILE
: 835 :      REGISTER FUNCTION IS IN PROGRESS, WHICH WOULD CONFUSE MBOX ON
: 836 :      STARTING THE FETCH.
: 837 :74   CHANGES TO EIS FOR NEW-SPEC AC USAGE. CHANGES TO KL PAGING FOR
: 838 :      INDIRECT, IMMEDIATE SECTION POINTERS
: 839 :73   FIX JRA TO PREVENT WRITING AC WITH DATA FRESH FROM MEMORY (ALLOW
: 840 :      A CYCLE FOR PARITY CHECK). FIX DPB CODE TAKE ONLY 3 TICKS ON
: 841 :      RETURN FROM BYTEA, SO THAT CACHE DATA DOESN'T ARRIVE INTO AR
: 842 :      AND ARX UNTIL DPB1, WHEN THE BYTE HAS GOTTEN OUT TO MQ.
: 843 :72   FIX DEFINITION OF SP MEM/UNPAGED TO INHIBIT VMA USER. FIX
: 844 :      PAGE FAIL CODE TO CHECK FOR VMA FETCH BEFORE LOOKING AT
: 845 :      INTERRUPT REQUEST. PROBLEM WAS INTERRUPT CONCURRENT WITH
: 846 :      PAGE FAIL ON JRSTF TO USER. PC FLAGS GOT RESTORED, BUT VMA
: 847 :      NEVER COPIED TO PC BECAUSE PAGE FAIL INHIBITED NICOND, AND
: 848 :      INTERRUPT ABORTED PAGE FAIL HANDLING TO LOAD PC.
: 849 :71   DEFINE FMADR/AC4=6. FIX MOVFIL ROUTINE TO PUT AWAY UPDATED
: 850 :      LENGTH DIFFERENCE WHEN INTERRUPTED, THUS AVOIDING RANDOMNESS
: 851 :      IN MOVSRJ, CVTBDX. FIX CVTBD CALL TO MOVFIL TO PRESERVE SR.
: 852 :      CHANGE STMAC AND PIDONE FROM "FIN XFER" TO "FIN STORE", BECAUSE
: 853 :      STORE WAS IN PROGRESS, WHICH CAUSED FM WRITE IF AC REF, AND
: 854 :      GOT A PARITY ERROR DUE TO ADB/FM.
: 855 :70   FIX PXCT 4,[POP ...], WHICH DIDN'T GET DEST CONTEXT SET FOR
: 856 :      STORE. MUST USE SR_100 TO SET IT.
: 857 :67   FIX PROBLEM IN ADJBP BY WHICH BYTES/WORD WAS GETTING LOST
: 858 :      WHEN DIVIDE ROUTINE LOADED REMAINDER INTO BR. SOLVED BY
: 859 :      SAVING BYTES/WORD IN T1.
: 860 :66   FIX KL PAGING TO RESTORE VMA ON TRAP, SAVE ADDRESS OF POINTER
: 861 :      CAUSING TRAP, AND NOT RESTORE ARX EXCEPT FOR BLT PAGE FAIL.

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; 862 ;      ALSO SET TIME PARAMETER ON ADB/FM TO ALLOW TIME FOR PARITY
; 863 ;      CHECKING OF FM.
; 864 ;65     FIX KL PAGING CODE TO DO MBWAIT AFTER DETERMINING THAT PARITY
; 865 ;      ERROR HAS NOT OCCURRED, SO AS TO GET CORRECT VMA TO SAVE.
; 866 ;      CREATE SYMBOLS FOR KL PAGE FAIL CODES. PUT CONDITIONAL
; 867 ;      ASSEMBLY AROUND IMULI OPTIMIZATION CODE, AND SXCT. CREATE
; 868 ;      SYMBOL "OPTIONS" IN # FIELD FOR MICROCODE OPTIONS.
; 869 ;64     MICROCODE FOR KL10 PAGING (PAGE REFILL, MAP INSTR)...
; 870 ;      REMOVE UNNECESSARY INSTRUCTION MBREL: FROM SWEEP AND APRBO
; 871 ;      COSMETIC CHANGES TO KEEP COMMENTS & MACRO DEFINITIONS FROM
; 872 ;      OVERFLOWING LINE OF LISTING, AND INSERTION OF CONDITIONAL
; 873 ;      ASSEMBLY CONTROL OF LONG FLOATING POINT INSTRUCTIONS.
; 874 ;63     IN MTR REQUEST ROUTINE, DON'T DISMISS WHEN PI CYCLE HASN'T
; 875 ;      BEEN SET.
; 876 ;62     FIX RDMTR CODE TO PUT 35 IN SC BEFORE GOING TO DMOVEM CODE.
; 877 ;61     FIX PIIBP ROUTINE TO USE CALL.M INSTEAD OF SPEC/CALL,
; 878 ;      WHICH GETS OVERRIDDEN BY P_P-S... IN MTR REQUEST SERVICE
; 879 ;      ROUTINE, DON'T SET PI CYCLE UNLESS REQUEST IS FOR VECTOR.
; 880 ;60     FIX DATAO PAG TO DO MB WAIT AFTER STORING EBOX ACCT AND
; 881 ;      BEFORE CHANGING VMA.
; 882 ;57     RE-CODE USES OF A@, B@ TO USE VMA/1, RATHER THAN VMA/AD,
; 883 ;      IN ORDER TO GET CORRECT CONTEXT ON INDIRECT WORD. SEE MCL4
; 884 ;56     FIX SECOND PART OF PICYCLE (TAG NEXT:) TO ENSURE THAT
; 885 ;      PC+1 INH, KERNEL CYCLE, ETC REMAIN UP DURING 2ND PART.
; 886 ;      ALSO CHANGE SPEC/FLAG CTL FOR ECO 1261, WHICH REQUIRES
; 887 ;      #07 TO BE OPPOSITE OF #04 TO GENERATE SCD LEAVE USER.
; 888 ;55     FIX SPEC INSTR/SET PI CYCLE TO INHIBIT INTERRUPTS
; 889 ;      (IN PARTICULAR, METER UPDATE REQUESTS). MAKE SURE VALID
; 890 ;      DATA SAVED ON IO PAGE FAIL AND PARITY ERRORS. REMOVE
; 891 ;      BACKWARDS BLT... IT BROKE TOO MANY PROGRAMS.
; 892 ;54     FIX OVERFLOW CHECK IN IMULI OPTIMIZATION TO INH CRY 18
; 893 ;      UPDATE TO USE CONDITIONAL ASSEMBLY IN MICRO VERS 20.
; 894 ;53     FIX T1,T2 PARAMETERS ON BYTE DISP, SIGNS DISP
; 895 ;52     CORRECT SHIFT AMOUNT FOR IMULI OPTIMIZATION, AND FIX MACRO
; 896 ;      DEFINITIONS FOR SET SR?, WHICH WERE ALWAYS SETTING SRO.
; 897 ;51     OPTIMIZE IMULI OF TWO POSITIVE OPERANDS (TO SPEED UP SUBSCRIPT
; 898 ;      CALCULATIONS) BY TAKING ONLY 9 MULTIPLY STEPS AND STARTING
; 899 ;      NEXT INSTRUCTION FETCH EARLIER. OPTIMIZATION CAN BE REMOVED
; 900 ;      BY COMMENTING OUT TWO INSTRUCTIONS AT IMULI, AND ONE FOLLOWING
; 901 ;      IMUL. ALSO FIX APRBI/UVERS TO KEEP SERIAL # OUT OF LH.
; 902 ;50     INTRODUCE SKIP/FETCH AND CODE IN PAGE FAIL RECOVERY TO LOAD
; 903 ;      PC FROM VMA IF PAGE FAIL OCCURED ON FETCH, BECAUSE NICOND
; 904 ;      CYCLE, WHICH SHOULD HAVE LOADED PC, GETS INHIBITED BY INSTR 1777
; 905 ;      ALSO INCLUDE EXTENDED INSTRUCTION SET.
; 906 ;47     UNDO XCT CHANGES OF EDIT 46, WHICH BROKE XCT DUE TO INSUFFICIENT
; 907 ;      TIME FOR DRAM HOLD BEFORE USING "A READ". ALSO FIX VECTOR
; 908 ;      INTERRUPT CODE TO LOOK AT CORRECT BITS FOR CONTROLLER NUMBER.
; 909 ;46     FOLLOW-ON TO EDIT 45, SAVING 2 WORDS AND A CYCLE
; 910 ;      ALSO MOVE JRST TO 600, JFCL TO 700, UUO'S TO 100X AS PREPARATION
; 911 ;      FOR EXTENDED INSTRUCTION SET
; 912 ;45     FIX SXCT TO LOOK AT AC FIELD OF SXCT, NOT SUBJECT INSTRUCTION,
; 913 ;      WHEN DECIDING WHETHER TO USE BASE-TYPE ADDRESS CALCULATION.
; 914 ;44     FIX PAGE FAIL LOGIC TO WORK FOR EITHER PAGE FAIL OR PARITY
; 915 ;      ERROR. EDITS 42 AND 43 BOTH WRONG. ALSO CORRECT RACE IN
; 916 ;      WRITING PERFORMANCE ANALYSIS ENABLES TO PREVENT SPURIOUS COUNTS.
; 917 ;43     CORRECT USE OF PF DISP BY EDIT 42. LOW BITS ARE INVERTED
    
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REVISION HISTORY

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; 918 ;42    FIX BUGS INTRODUCED BY EDIT 40, WHICH MADE FLTR OF 180 HANG
; 919 ;      TRYING TO NEGATE IT, AND FIX UP EXPONENT CORRECTION ON LONG
; 920 ;      SHIFT LEFT. ALSO PUT IN CODE TO HANDLE PARITY ERROR PAGE
; 921 ;      FAILURES, AND SET TIME CONTROLS ON 43-47.
; 922 ;41    REWRITE OF VECTOR INTERRUPT PROCESSING TO MAKE DTE VECTORS
; 923 ;      GO TO 142+8N, WHERE N IS DTE#. RH20 GO TO PROGRAMMED ADDRESS *
; 924 ;      IN EPT, EXTERNAL DEVICES USE EXEC VIRTUAL ADDRESSES.
; 925 ;40    IMPROVEMENTS TO FLOATING NORMALIZATION TO MAKE LONG SHIFTS
; 926 ;      FASTER, PRIMARILY TO HELP FLTR
; 927 ;37    FIX FLOATING DIVIDE SO THAT THE TRUNCATED FORM OF A NEGATIVE
; 928 ;      QUOTIENT IS EQUAL TO THE HIGH-ORDER PART OF THE INFINITE-
; 929 ;      PRECISION QUOTIENT. SEE COMMENTS IN THE CODE. ALSO BUM
; 930 ;      A CYCLE OUT OF FLOATING DIVIDE BY STARTING THE NORMALIZE
; 931 ;      WHILE MOVING THE QUOTIENT INTO AR.
; 932 ;      SEVERAL CHANGES TO MAKE TRACKS FEATURE WORK
; 933 ;36    FIX CONO MTR TO PUT DATA ON BOTH HALVES, SO PI CAN SEE PIA
; 934 ;35    FIX CONI PI TO READ BACK WRITE EVEN PARITY ENABLES
; 935 ;34    FIX BLT USE OF SR, SO NO CORRECTION OF ARX NECESSARY
; 936 ;33    FIX PAGE TABLE REFERENCES TO FORCE UNPAGED REF. FIX TRAP
; 937 ;      TO SET PC+1 INHIBIT.
; 938 ;32    CORRECT SETTING OF SC FOR SHIFTING METER COUNTERS, TO GET
; 939 ;      12 BITS UNUSED AT RIGHT WHEN IT GETS TO CORE.
; 940 ;31    RECODE ASH AND ASHC TO SAVE SPACE
; 941 ;30    FIX JFFO TO SHIFT AR CORRECTLY AT JFFO2. BUM ADJSP TO USE
; 942 ;      STMAC FOR UPDATING PDL POINTER.
; 943 ;27    FIX CONI PAG TO READ EBUS. CORRECT DEFINITIONS OF MBOX
; 944 ;      REGISTER FUNCTIONS, WHICH HAD BITS 0 AND 3 INVERTED.
; 945 ;26    FIX DEFINITIONS OF DIAG FUNC CONO MTR AND CONO TIM, WHICH
; 946 ;      WERE REVERSED
; 947 ;25    FIX DECODING OF PHYSICAL DEVICE NUMBER IN PI FUNCTION CODE
; 948 ;      AND RE-CODE JFCL FOR FEWER MICROWORDS
; 949 ;24    FIX JFFO TO SHIFT ON FIRST 6-BIT TEST STEP, AND JRSTF TO
; 950 ;      KEEP E AND XR DISTINCT. ALSO SET LOAD-ENABLE BITS IN
; 951 ;      DATAI PAG, WORD.
; 952 ;23    FIX CONO PI, TO HOLD AR ONTO EBUS THRU REL EBUS, BECAUSE
; 953 ;      PI BOARD DELAYS CONO PI TO GET CONO SET EQUIVALENT.
; 954 ;22    MORE JFCL FIXES. MUST USE FLAG CTL/JFCL WHILE CLEARING BITS,
; 955 ;      AS WELL AS WHILE TESTING THEM. BUM A WORD OUT OF JFFO BY
; 956 ;      MAKING THE SIXBIT COUNT NEGATIVE. CHANGES SO SHIFT SUBR
; 957 ;      RETURNS 2, BYTEA 1. FIX SETMB TO STORE BACK AND FETCH.
; 958 ;21    RE-WRITE JFCL TO KEEP LOW OPCODE BITS OUT OF ARO-1, BECAUSE
; 959 ;      PCOO GETS PROPAGATED LEFT TO ADA -1 AND -2.
; 960 ;20    FIX BLT TO LOAD BR WITH SRC-DST ADDR
; 961 ;      ALSO SET TIME PARAMETERS ON CONDITIONAL FETCH FUNCTIONS
; 962 ;17    CHANGE SWEEP ONE PAGE TO PUT PAGE # IN E, RATHER THAN ADDR.
; 963 ;      ALSO CHANGE COND/FM WRITE TO MATCH ECO #1068.
; 964 ;16    FIX JUMP FETCH MACRO TO LOAD VMA FROM PC+1 (TEST SATISFIED
; 965 ;      OVERRIDES THIS TO HOLD VMA). ALSO BUM ONE MICROWORD FROM MUUO.
; 966 ;15    INCLUDE PAGE FAIL DISP IN DISP/ FIELD
; 967 ;      ALSO MAKE MUUO STORE PROCESS CONTEXT WORD AT 426, AND SETUP
; 968 ;      PCS FROM PC EXTENSION, CWSX FROM SXCT
; 969 ;14    FIX DEFINITIONS OF SKIP/IO LEGAL, AC#0, SCO, EVEN PAR
; 970 ;      ALSO FIX DATAO PAG, TO SEND LH DATA ON BOTH HALVES OF EBUS
; 971 ;13    ALIGN SETEBR SO CALL TO SHIFT RETURNS CORRECTLY
; 972 ;12    MAKE SURE AD COPIES AR DURING DATAO, CONO, AND CLEAR AR AT
; 973 ;      SET DATAI TIME.
    
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; KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C) 1984 DIGITAL EQUIPMENT CORPORATION V1(336)
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; EDHIS.MIC[10,5351] 22:44 29-Nov-83

REVISION HISTORY

; 974 ;11 FIXES TO CONTINUE CODE SO CONSOLE WORKS, AND CORRECTIONS TO
; 975 ; PROTECTED DEP/EXAM SO PROTECTION PROTECTS.
; 976 ;10 FIX A READ MACRO TO VMA/PC+1. AD OVERRIDES UNLESS DRAM A=1
; 977 ;07 RE-WRITE OF PI CYCLE CODE TO RECOGNIZE NEW EBUS SPEC.
; 978 ;06 FIX DEFINITIONS OF SKIPS 40-57 BY COMPLEMENTING 3 LOW ORDER BITS
; 979 ; FIX MULSUB TO CORRESPOND TO NEW CRA LOGIC
; 980 ;05 FIX EBUS CTL DEFINITIONS TO GET FO1 CORRECT. CORRECT FLAG CTL
; 981 ; DEFINITIONS TO PREVENT LEAVE USER WHEN NOT WANTED, AND FIX
; 982 ; JRST/JFCL TO HAVE FLAGS IN AR WHEN NEEDED.
; 983 ;04 FIX RETURNS FROM MULSUB. PUT BETTER COMMENTS ON SNORM CODE,
; 984 ; IMPROVE SNORM ALGORITHM TO MINIMIZE WORST-CASE TIME.
; 985 ;03 FIX DISPATCH ADDRESS PROBLEMS, MOSTLY JRST/JFCL AND UUD'S.
; 986 ;02 CHANGES PER INSTRUCTION SET REVIEW -- DELETE USE OF BIT12 OF
; 987 ; BYTE POINTERS, CHANGE BLT TO PUT FINAL SRC,DST ADDRESSES IN AC,
; 988 ; MAKE TRUNCATE FORM FLOATING POINT REALLY TRUNCATE, ELIMINATE
; 989 ; LOCAL JSYS SUPPORT, DELETE PXCT OPCODE (XCT W/ NON-ZERO AC IN
; 990 ; EXEC MODE), LUUD'S GO TO 40/41 OF CURRENT SPACE.
; 991 ;01 UPDATES FOR .TITLE AND .TOC PSEUDO OPS,
; 992 ; AND VARIOUS CHANGES FOR PROTO HARDWARE
; 993 ;00 CREATION, BASED ON BREADBOARD AS OF EDIT 66
; 994 .BIN
; 995

MICR

CONDITIONAL ASSEMBLY VARIABLE DEFINITIONS

; 996 .TOC "CONDITIONAL ASSEMBLY VARIABLE DEFINITIONS"

```
; 997 .NOBIN
; 998
; 999 ; [COST ESTIMATES IN BRACKETS INDICATE NUMBER OF ADDITIONAL
; 1000 ; MICROINSTRUCTIONS REQUIRED BY TURNING ON THE FEATURE SWITCH]
; 1001
; 1002 .DEFAULT/TRACKS=0 ;1 ENABLES STORING PC AFTER EVERY INSTRUCTION,
; 1003 ; & CREATES DATAI/O PI TO READ/SETUP PC BUFFER
; 1004 ; ADDRESS. [COST = 21 WDS]
; 1005
; 1006 .DEFAULT/OP.CNT=0 ;1 ENABLES CODE TO BUILD A HISTOGRAM IN CORE
; 1007 ; COUNTING USES OF EACH OPCODE IN USER & EXEC
; 1008
; 1009 .DEFAULT/OP.TIME=0 ;1 ENABLES CODE TO ACCUMULATE TIME SPENT BY
; 1010 ; EACH OPCODE
; 1011
; 1012 .DEFAULT/SO.CNT=0 ;SECOND ORDER COUNTING IN 128K STARTING AT LOC
; 1013 ; 400000 NOT DEBUGED [COST = 28 WDS]
; 1014
; 1015 .DEFAULT/SO2.CNT=0 ;SECOND ORDER COUNTING IN 128K STARTING AT LOC
; 1016 ; PRESENTED AT START DOES ONE MORE ADD THAN
; 1017 ; SO.CNT AND HENCE AN INSTRUCTION TAKES
; 1018 ; 120 NS LONGER THAN SO.CNT [COST = 28 WDS]
; 1019
; 1020 .DEFAULT/PAGCNT=0 ;Enable code to count entries into the PFH and
; 1021 ; number of DATA0 PAGs with bit 2 set. [Cost =
; 1022 ; 6 words] [327]
; 1023
; 1024 .DEFAULT/FPLONG=1 ;1 ENABLES KA-STYLE DOUBLE PRECISION FLOATING
; 1025 ;POINT INSTRUCTIONS: FADL, FSBL, FMPL, FDVL,
; 1026 ; UFA, DFN. [COST = 49 WDS]
; 1027
; 1028 .DEFAULT/MULTI=0 ;1 IF MULTIPROCESSOR SYSTEM, TO SUPPRESS CACHE
; 1029 ;ON UNPAGED REF'S. PAGED REF'S ARE UP TO EXEC.
; 1030
; 1031 .DEFAULT/KLPAGE=0 ;1 ENABLES KL-MODE PAGING. [COST = 85 WDS]
; 1032
; 1033 .DEFAULT/SHIFT.MUO=0 ;ENABLES A DIFFERENT MUO FORMAT FOR MODEL A
; 1034 ;THAT IS SLIGHTLY CLOSER TO THE XADDR FORMAT
; 1035 ;EXPECTED TO BE USED IN CONJUNCTION WITH LONG.PC
; 1036 ;BUT THEY DO NOT DEPEND ON EACH OTHER
; 1037
; 1038 .DEFAULT/MODEL.B=0 ;1 INDICATES EXTENDED ADDRESSING HARDWARE,
; 1039 ;PRIMARILY 2K (RATHER THAN 1280) CONTROL RAM,
; 1040 ;NEW MCL, CTL, AND APR BOARDS.
; 1041
; 1042 .DEFAULT/BLT.PXCT=0 ;1ENABLES SPECIAL BLT CODE FOR EXTENDED ADDRESSING
; 1043 ;THIS IS SUPPOSED TO GO AWAY IN THE FUTURE
; 1044 ;WHEN PXCT OF BLT IS NO LONGER USED BY TOPS-20
; 1045 ;THIS SHOULD ONLY BE USED BY KLX XADDR MICROCODE
; 1046 ;[COST 12 WORDS]
; 1047
; 1048 .IF/KLPAGE
; 1049 .IFNOT/MODEL.B
; 1050 .SET/XADDR=0 ;CAN'T DO EXTENDED ADDRESSING WITHOUT MODEL B
; 1051 .set/extexp=0 ;No room in TOPS20 Model A machine for extended exp.
```


CONDITIONAL ASSEMBLY VARIABLE DEFINITIONS

```
; 1052 .ENDIF/MODEL.B
; 1053
; 1054 .IFNOT/KLPAGE
; 1055 .SET/XADDR=0 ;CAN'T HAVE EXTENDED ADDRESSING WITHOUT KL PAGE
; 1056 .ENDIF/KLPAGE
; 1057
; 1058 .DEFAULT/IMULI.OPT=0 ;1 ENABLES OPTIMIZATION OF IMULI TO TAKE ONLY
; 1059 ;NINE MULTIPLY STEPS [COST = 3 WDS]
; 1060
; 1061 .IF/MODEL.B ; [COST = 19 WDS]
; 1062 .SET/SXCT=0 ;DONT NEED SXCT WITH EXTENDED ADDRESSING
; 1063 ;CAN'T DO IT IN MODEL B HARDWARE
; 1064 .ENDIF/MODEL.B
; 1065 .DEFAULT/SXCT=0 ;1 ENABLES SPECIAL XCT INSTR, WHICH ALLOWS
; 1066 ; DIAGNOSTICS TO GENERATE LARGE ADDRESSES.
; 1067
; 1068
; 1069 .DEFAULT/SNORM.OPT=0 ;1 ENABLES FASTER NORMALIZATION OF SINGLE-
; 1070 ; PRECISION RESULTS WHICH HAVE SEVERE LOSS OF
; 1071 ; SIGNIFICANCE [COST = 4 WDS]
; 1072
; 1073 .IFNOT/MODEL.B
; 1074 .SET/PUSHM=0 ;CODE ONLY WORKS FOR MODEL B
; 1075 .ENDIF/MODEL.B
; 1076
; 1077 .DEFAULT/PUSHM=0 ;ENABLES THE PUSHM AND POPM INSTRUCTIONS
; 1078 ; [COST = ??? WDS]
; 1079 .DEFAULT/EXTEND=1 ;1 ENABLES EXTENDED INSTRUCTION SET
; 1080 ; [COST = 290 WDS]
; 1081
; 1082 .DEFAULT/DBL.INT=1 ;1 ENABLES DOUBLE INTEGER INSTRUCTIONS
; 1083 ; [COST = 59 WDS]
; 1084
; 1085 .DEFAULT/ADJBP=1 ;1 ENABLES ADJUST BYTE POINTER
; 1086 ; [COST = 24 WDS]
; 1087
; 1088 .DEFAULT/RPW=1 ;1 ENABLES READ-PAUSE-WRITE CYCLES FOR
; 1089 ;NON-CACHED REFERENCES BY CERTAIN INSTRUCTIONS.
; 1090 ; [COST = 0]
; 1091
; 1092 .DEFAULT/WRTST=0 ;1 ENABLES WRITE-TEST CYCLES AT AREAD TIME FOR
; 1093 ;INSTRUCTIONS LIKE MOVEM AND SETZM. [COST = 0]
; 1094
; 1095 .DEFAULT/BACK.BLT=0 ;1 ENABLES BLT TO DECREMENT ADDRESSES ON EACH
; 1096 ;STEP IF E < RH(AC). BREAKS MANY PROGRAMS.
; 1097 ; [COST = 9 WDS]
; 1098
; 1099 .IF/TRACKS ;SETUP CONTROL FOR COMMON CODE
; 1100 .SET/INSTR.STAT=1
; 1101 .ENDIF/TRACKS
; 1102
; 1103 .IF/OP.CNT
; 1104 .SET/INSTR.STAT=1 ;ENABLE COMMON CODE, ERROR IF TRACKS TOO
; 1105 .ENDIF/OP.CNT
; 1106
; 1107 .IF/OP.TIME
```


CONDITIONAL ASSEMBLY VARIABLE DEFINITIONS

```
; 1108 .SET/INSTR.STAT=1 ;ERROR IF TRACKS OR OP.CNT ALSO SET
; 1109 .ENDIF/OP.TIME
; 1110
; 1111 .IF/SO.CNT
; 1112 .SET/INSTR.STAT=1
; 1113 .ENDIF/SO.CNT
; 1114
; 1115 .IF/SO2.CNT
; 1116 .SET/INSTR.STAT=1
; 1117 .ENDIF/SO2.CNT
; 1118
; 1119 .DEFAULT/INSTR.STAT=0 ;IF NO STATISTICS, TURN OFF COMMON CODE
; 1120
; 1121 .IF/INSTR.STAT
; 1122 .SET/NONSTD=1 ;STATISTICS CODE IS NONSTANDARD
; 1123 .SET/TRXDEF=1 ;Make sure TRX registers get defined [327]
; 1124 .ENDIF/INSTR.STAT
; 1125
; 1126 .IF/PAGCNT
; 1127 .SET/NONSTD=1 ;All statistics are nonstandard
; 1128 .SET/TRXDEF=1 ;We need the TRX registers
; 1129 .ENDIF/PAGCNT
; 1130
; 1131 .DEFAULT/TRXDEF=0 ;Normally no TRX registers needed
; 1132
; 1133 .DEFAULT/LONG.PC=0 ;LONG PC FORMAT [COST 9 WORDS 11 WORDS IF XADDR]
; 1134
; 1135 .DEFAULT/EPT540=0 ;PUT EPT AND UPT SECTION TABLES AT 540 IF ON
; 1136 ; 440 IF OFF
; 1137
; 1138 .DEFAULT/DIAG.INST=0 ;UNSUPPORTED DIAGNOSTIC MICROCODE
; 1139
; 1140 .IF/DIAG.INST
; 1141 .SET/NONSTD=1 ;NONSTANDARD MICROCODE
; 1142 .ENDIF/DIAG.INST
; 1143
; 1144 .DEFAULT/NONSTD=0 ;NONSTANDARD MICROCODE IS NORMALLY OFF
; 1145 .DEFAULT/SMP=1 ;[216]1 IF SYMMETRIC MULTIPROCESSOR
; 1146 ;SYSTEM.
; 1147 ;TO ENABLE RPW ON DPB INSTRUCTION.
; 1148 ;[COST=9 WORDS if not XADDR, more if XADDR]
; 1149 .DEFAULT/OWGBP=0 ;[264]
; 1150 .DEFAULT/IPA20=0 ;[264]
; 1151 .DEFAULT/NOCT=0 ;[264]
; 1152 .DEFAULT/CST.WRITE=1 ;[314] Enable CST writable bit
; 1153 .DEFAULT/BIG.PT=0 ;[333] Special code for big page table and Keep bit
; 1154 .DEFAULT/GFTCNV=1 ;[273] GFLOAT CONVERSION INST.
; 1155
```


HOW TO READ THE MICROCODE -- FORMATS & CONSTRUCTS

```
; 1156 .TOC "HOW TO READ THE MICROCODE -- FORMATS & CONSTRUCTS"
; 1157
; 1158 ;(1) FIELD DEFINITIONS
; 1159 ; THESE OCCUR AT THE BEGINNING OF THE LISTING, IN THE SOURCE FILE
; 1160 ; DEFINE.MIC (CONTROL AND DISPATCH RAM DEFINITIONS).
; 1161 ; THEY HAVE THE FORM:
; 1162 ; SYMBOL/=<L:R>M,J
; 1163 ; ANOTHER FORM ACCEPTED BY THE ASSEMBLER (FOR HISTORIC REASONS) IS:
; 1164 ; SYMBOL/=J,K,R,M ;THIS FORM HAS BEEN REMOVED FROM THIS CODE
; 1165 ; THE PARAMETER (J) IS MEANINGFUL ONLY WHEN "D" IS SPECIFIED
; 1166 ; AS THE DEFAULT MECHANISM, AND IN THAT CASE, GIVES THE DEFAULT VALUE OF
; 1167 ; THE FIELD IN OCTAL.
; 1168 ; THE PARAMETER (K) GIVES THE FIELD SIZE IN (DECIMAL) NUMBER
; 1169 ; OF BITS. THIS IS USED ONLY IN THE OUTDATED FORMAT.
; 1170 ; THE PARAMETER (L) GIVES THE BIT POSITION OF THE LEFTMOST BIT
; 1171 ; IN THE FIELD. THE SAME METHOD IS USED AS FOR (R) BELOW.
; 1172 ; THE PARAMETER (R) GIVES THE FIELD POSITION IN DECIMAL
; 1173 ; AS THE BIT NUMBER OF THE RIGHTMOST BIT OF THE FIELD. BITS ARE NUMBERED
; 1174 ; FROM 0 ON THE LEFT. NOTE THAT THE POSITION OF BITS IN THE MICROWORD
; 1175 ; SHOWN IN THE LISTING BEARS NO RELATION TO THE ORDERING OF BITS IN THE
; 1176 ; HARDWARE MICROWORD, WHERE FIELDS ARE OFTEN BROKEN UP AND SCATTERED.
; 1177 ; THE PARAMETER (M) IS OPTIONAL, AND SELECTS A DEFAULT
; 1178 ; MECHANISM FOR THE FIELD. THE LEGAL VALUES OF THIS PARAMETER ARE THE
; 1179 ; CHARACTERS "D", "T", "P", OR "+".
; 1180 ; "D" MEANS (J) IS THE DEFAULT VALUE OF THE FIELD IF NO EXPLICIT
; 1181 ; VALUE IS SPECIFIED.
; 1182 ; "T" IS USED ON THE TIME FIELD TO SPECIFY THAT THE VALUE OF THE
; 1183 ; FIELD DEPENDS ON THE TIME PARAMETERS SELECTED FOR OTHER FIELDS.
; 1184 ; THE VALUE OF A FIELD WITH THIS SPECIFICATION DEFAULTS TO THE
; 1185 ; MAX OF <SUM OF THE T1 PARAMETERS DEFINED FOR FIELD/VALUES
; 1186 ; SPECIFIED IN THIS MICROINSTRUCTION>, <SUM OF THE T2 PARAMETERS
; 1187 ; FOR THIS MICROINSTRUCTION>, <J PARAMETER OF THIS FIELD>.
; 1188 ; WITHIN THE KL10 MICROCODE, T1 PARAMETERS ARE USED TO SPECIFY
; 1189 ; FUNCTIONS WHICH DEPEND ON THE ADDER SETUP TIME, AND T2 PARAMETERS
; 1190 ; ARE USED FOR FUNCTIONS WHICH REQUIRE ADDITIONAL TIME FOR CORRECT
; 1191 ; SELECTION OF THE NEXT MICROINSTRUCTION ADDRESS.
; 1192 ; "P" IS USED ON THE PARITY FIELD TO SPECIFY THAT THE VALUE OF THE
; 1193 ; FIELD SHOULD DEFAULT SUCH THAT PARITY OF THE ENTIRE WORD
; 1194 ; IS ODD. IF THIS OPTION IS SELECTED ON A FIELD WHOSE SIZE (K) IS
; 1195 ; ZERO, THE MICRO ASSEMBLER WILL ATTEMPT TO FIND A BIT SOMEWHERE
; 1196 ; IN THE WORD FOR WHICH NO VALUE IS SPECIFIED OR DEFAULTED.
; 1197 ; "+" IS USED ON THE JUMP ADDRESS FIELD TO SPECIFY THAT THE DEFAULT
; 1198 ; JUMP ADDRESS IS THE ADDRESS OF THE NEXT INSTRUCTION ASSEMBLED (NOT,
; 1199 ; IN GENERAL, THE CURRENT LOCATION +1).
; 1200 ; IN GENERAL, A FIELD CORRESPONDS TO THE SET OF BITS WHICH PROVIDE
; 1201 ; SELECT INPUTS FOR MIXERS OR DECODERS, OR CONTROLS FOR ALU'S.
; 1202 ; EXAMPLES:
; 1203 ; AR/=<24:26>D,0 OR AR/=0,3,26,D
; 1204 ; THE MICROCODE FIELD WHICH CONTROLS THE AR MIXER (AND THEREFORE
; 1205 ; THE DATA TO BE LOADED INTO AR ON EACH EBOX CLOCK) IS THREE BITS WIDE
; 1206 ; AND THE RIGHTMOST BIT IS SHOWN IN THE LISTING AS BIT 26 OF THE
; 1207 ; MICROINSTRUCTION. IF NO VALUE IS SPECIFICALLY REQUESTED FOR THE FIELD,
; 1208 ; THE MICROASSEMBLER WILL ENSURE THAT THE FIELD IS 0.
; 1209 ; AD/=<12:17> OR AD/=0,6,17
; 1210 ; THE FIELD WHICH CONTROLS THE AD IS 6 BITS WIDE, ENDING ON
; 1211 ; BIT 17. THE FOURTH PARAMETER OF THE FIELD IS OMITTED, SO THE FIELD
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HOW TO READ THE MICROCODE -- FORMATS & CONSTRUCTS

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; 1212 ; IS AVAILABLE TO THE MICROASSEMBLER (IF NO VALUE IS EXPLICITLY
; 1213 ; CALLED OUT FOR THE FIELD) FOR MODIFICATION TO ENSURE ODD PARITY IN THE
; 1214 ; ENTIRE WORD.
; 1215 ;
; 1216 ; (2) VALUE DEFINITIONS
; 1217 ; FOLLOWING A FIELD DEFINITION, SYMBOLS MAY BE CREATED IN THAT
; 1218 ; FIELD TO CORRESPOND TO VALUES OF THE FIELD. THE FORM IS:
; 1219 ; SYMBOL=N,T1,T2
; 1220 ; "N" IS, IN OCTAL, THE VALUE OF SYMBOL WHEN USED IN THE FIELD.
; 1221 ; T1 AND T2 ARE OPTIONAL, AND SPECIFY PARAMETERS IN THE TIME FIELD
; 1222 ; CALCULATION FOR MICROINSTRUCTIONS IN WHICH THIS FIELD/SYMBOL IS USED.
; 1223 ; THE MICROASSEMBLER COMPUTES THE SUMS OF ALL THE T1'S AND ALL THE T2'S
; 1224 ; SPECIFIED FOR FIELD/SYMBOL SPECIFICATIONS IN A WORD, AND USES THE MAX
; 1225 ; OF THE TWO SUMS AS THE DEFAULT VALUE FOR THE FIELD WHOSE DEFAULT
; 1226 ; MECHANISM IS "T". EXAMPLES:
; 1227 ; AD/=<12:17> ;FIELD DEFINITION IN WHICH FOLLOWING SYMBOLS EXIST
; 1228 ; XOR=31
; 1229 ; A+B=6,1
; 1230 ; HERE THE SYMBOLS "XOR" AND "A+B" ARE DEFINED FOR THE "AD" FIELD.
; 1231 ; TO THE ASSEMBLER, THEREFORE, WRITING "AD/XOR" MEANS PUT THE VALUE 31
; 1232 ; INTO THE 6-BIT FIELD ENDING ON BIT 17 OF THE MICROWORD. THE SYMBOLS
; 1233 ; ARE CHOSEN FOR MNEMONIC SIGNIFICANCE, OF COURSE, SO ONE READING
; 1234 ; THE MICROCODE WOULD INTERPRET "AD/XOR" AS "THE OUTPUT OF AD SHALL BE THE
; 1235 ; EXCLUSIVE OR OF ITS A AND B INPUTS". SIMILIARLY, "AD/A+B" IS READ AS
; 1236 ; "AD PRODUCES THE SUM OF A AND B". THE SECOND PARAMETER IN THE DEFINITION
; 1237 ; OF "A+B" IS A CONTROL TO THE MICRO ASSEMBLER'S TIME-FIELD CALCULATION,
; 1238 ; WHICH TELLS THE ASSEMBLER THAT THIS OPERATION TAKES LONGER THAN THE
; 1239 ; BASIC CYCLE, AND THEREFORE THAT THE TIME FIELD SHOULD BE INCREASED.
; 1240 ; AR/=<24:26>D,0 ;FIELD DEFINITION FOR FOLLOWING SYMBOLS
; 1241 ; AR=0
; 1242 ; AD=2
; 1243 ; HERE THE SYMBOLS "AR" AND "AD" ARE DEFINED FOR THE FIELD NAMED
; 1244 ; "AR", WHICH CONTROLS THE AR MIXER. WE COULD WRITE AR/AR TO MEAN THAT
; 1245 ; THE AR MIXER SELECT INPUTS WOULD BE 0, WHICH IN THE
; 1246 ; HARDWARE SELECTS THE AR OUTPUT FOR RECIRCULATION TO THE REGISTER. IN
; 1247 ; PRACTICE, HOWEVER, WE WANT THIS TO BE THE DEFAULT CASE, SO THAT AR
; 1248 ; DOES NOT CHANGE UNLESS WE SPECIFICALLY REQUEST IT, SO THE FIELD
; 1249 ; DEFINITION SPECIFIES 0 AS THE DEFAULT VALUE OF THE FIELD. IF WE
; 1250 ; WANT AR LOADED FROM THE AD OUTPUT, WE WRITE "AR/AD" TO SET THE
; 1251 ; MIXER SELECTS TO PASS THE AD OUTPUT INTO THE AR.
; 1252 ;
; 1253 ; (3) LABEL DEFINITIONS
; 1254 ; A MICRO INSTRUCTION MAY BE LABELLED BY A SYMBOL FOLLOWED BY COLON
; 1255 ; PRECEDING THE MICROINSTRUCTION DEFINITION. THE ADDRESS OF THE
; 1256 ; MICROINSTRUCTION BECOMES THE VALUE OF THE SYMBOL IN THE FIELD NAMED "J".
; 1257 ; EXAMPLE:
; 1258 ; FOO: J/FOO
; 1259 ; THIS IS A MICROINSTRUCTION WHOSE "J" FIELD (JUMP ADDRESS) CONTAINS
; 1260 ; THE VALUE "FOO". IT ALSO DEFINES THE SYMBOL "FOO" TO BE THE ADDRESS
; 1261 ; OF ITSELF. THEREFORE, IF EXECUTED BY THE MICROPROCESSOR, IT WOULD *
; 1262 ; LOOP ON ITSELF.
; 1263 ;
; 1264 ; (4) COMMENTS
; 1265 ; A SEMICOLON ANYWHERE ON A LINE CAUSES THE REST OF THE LINE
; 1266 ; TO BE IGNORED BY THE ASSEMBLER. THIS TEXT IS AN EXAMPLE OF COMMENTS.
; 1267 ;
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HOW TO READ THE MICROCODE -- FORMATS & CONSTRUCTS

; 1268 ;(5) MICROINSTRUCTION DEFINITION
; 1269 ; A WORD OF MICROCODE IS DEFINED BY SPECIFYING A FIELD NAME,
; 1270 ; FOLLOWED BY SLASH (/), FOLLOWED BY A VALUE. THE VALUE MAY BE A
; 1271 ; SYMBOL DEFINED FOR THAT FIELD, AN OCTAL DIGIT STRING, OR A DECIMAL
; 1272 ; DIGIT STRING (DISTINGUISHED BY THE FACT THAT IT CONTAINS "8" AND/OR
; 1273 ; "9" AND/OR IS TERMINATED BY A PERIOD). SEVERAL FIELDS MAY BE SPECIFIED
; 1274 ; IN ONE MICROINSTRUCTION BY SEPARATING FIELD/VALUE SPECIFICATIONS WITH
; 1275 ; COMMAS. EXAMPLE:
; 1276 ; ADB/BR,ADA/AR,AD/A+B,AR/AD
; 1277 ; THE FIELD NAMED "ADB" IS GIVEN THE VALUE NAMED "BR" (TO
; 1278 ; CAUSE THE MIXER ON THE B SIDE OF AD TO SELECT BR), FIELD "ADA" HAS VALUE
; 1279 ; "AR", FIELD "AD" HAS VALUE "A+B", AND FIELD "AR" HAS VALUE "AD".
; 1280 ;
; 1281 ;(6) CONTINUATION
; 1282 ; THE DEFINITION OF A MICROINSTRUCTION MAY CONTINUED ONTO TWO OR
; 1283 ; MORE LINES BY BREAKING IT AFTER ANY COMMA. IN OTHER WORDS, IF THE
; 1284 ; LAST NON-BLANK, NON-COMMENT CHARACTER ON A LINE IS A COMMA, THE
; 1285 ; INSTRUCTION SPECIFICATION IS CONTINUED ON THE FOLLOWING LINE.
; 1286 ; EXAMPLE:
; 1287 ; ADB/BR,ADA/AR, ;SELECT AR & BR AS AD INPUTS
; 1288 ; AD/A+B,AR/AD ;TAKE THE SUM INTO AR
; 1289 ; BY CONVENTION, CONTINUATION LINES ARE INDENTED AN EXTRA TAB.
; 1290 ;
; 1291 ;(7) MACROS
; 1292 ; A MACRO IS A SYMBOL WHOSE VALUE IS ONE OR MORE FIELD/VALUE
; 1293 ; SPECIFICATIONS AND/OR MACROS. A MACRO DEFINITION IS A LINE CONTAINING
; 1294 ; THE MACRO NAME FOLLOWED BY A QUOTED STRING WHICH IS THE VALUE OF THE
; 1295 ; MACRO. EXAMPLE:
; 1296 ; AR_AR+BR "ADB/BR,ADA/AR,AD/A+B,AR/AD"
; 1297 ; THE APPEARANCE OF A MACRO IN A MICROINSTRUCTION DEFINITION IS EQUIVALENT
; 1298 ; TO THE APPEARANCE OF ITS VALUE. MACROS FOR VARIOUS FUNCTIONS
; 1299 ; ARE DEFINED IN "MACRO.MIC".
; 1300 ;
; 1301 ;(8) PSEUDO OPS
; 1302 ; THE MICRO ASSEMBLER HAS 10 PSEUDO-OPERATORS:
; 1303 ; .DCODE AND .UCODE SELECT THE RAM INTO WHICH SUBSEQUENT MICROCODE WILL
; 1304 ; BE LOADED, AND THEREFORE THE FIELD DEFINITIONS AND MACROS WHICH ARE
; 1305 ; MEANINGFUL IN SUBSEQUENT MICROCODE
; 1306 ; .TITLE DEFINES A STRING OF TEXT TO APPEAR IN THE PAGE HEADER, AND
; 1307 ; .TOC DEFINES AN ENTRY FOR THE TABLE OF CONTENTS AT THE BEGINNING.
; 1308 ; .SET DEFINES THE VALUE OF A CONDITIONAL ASSEMBLY PARAMETER,
; 1309 ; .CHANGE REDEFINES A CONDITIONAL ASSEMBLY PARAMETER,
; 1310 ; .DEFAULT ASSIGNS A VALUE TO AN UNDEFINED PARAMETER.
; 1311 ; .IF ENABLES ASSEMBLY IF THE VALUE OF THE PARAMETER IS NOT ZERO,
; 1312 ; .IFNOT ENABLES ASSEMBLY IF THE PARAMETER VALUE IS ZERO, AND
; 1313 ; .ENDIF RE-ENABLES ASSEMBLY IF SUPPRESSED BY THE PARAMETER NAMED.
; 1314 ;
; 1315 ;(9) LOCATION CONTROL
; 1316 ; A MICROINSTRUCTION "LABELLED" WITH A NUMBER IS ASSIGNED TO THAT
; 1317 ; ADDRESS.
; 1318 ; THE CHARACTER "=" AT THE BEGINNING OF A LINE, FOLLOWED BY
; 1319 ; A STRING OF O'S, 1'S, AND/OR *'S, SPECIFIES A CONSTRAINT ON THE
; 1320 ; ADDRESS OF FOLLOWING MICROINSTRUCTIONS. THE NUMBER OF CHARACTERS
; 1321 ; IN THE CONSTRAINT STRING (EXCLUDING THE "=") IS THE NUMBER OF LOW-ORDER
; 1322 ; BITS CONSTRAINED IN THE ADDRESS. THE MICROASSEMBLER ATTEMPTS TO FIND
; 1323 ; AN UNUSED LOCATION WHOSE ADDRESS HAS 0 BITS IN THE POSITIONS

HOW TO READ THE MICROCODE -- FORMATS & CONSTRUCTS

; 1324 ; CORRESPONDING TO O'S IN THE CONSTRAINT STRING AND 1 BITS WHERE THE
; 1325 ; CONSTRAINT HAS 1'S. ASTERISKS DENOTE "DON'T CARE" BIT POSITIONS.
; 1326 ; IF THERE ARE ANY O'S IN THE CONSTRAINT STRING, THE CONSTRAINT
; 1327 ; IMPLIES A BLOCK OF <2**N> MICROWORDS, WHERE N IS THE NUMBER OF O'S
; 1328 ; IN THE STRING. ALL LOCATIONS IN THE BLOCK WILL HAVE 1'S IN THE ADDRESS
; 1329 ; BITS CORRESPONDING TO 1'S IN THE STRING, AND BIT POSITIONS DENOTED BY *'S
; 1330 ; WILL BE THE SAME IN ALL LOCATIONS OF THE BLOCK.
; 1331 ; IN SUCH A CONSTRAINT BLOCK, THE DEFAULT ADDRESS PROGRESSION IS
; 1332 ; COUNTING IN THE "O" POSITIONS OF THE CONSTRAINT STRING, BUT A NEW
; 1333 ; CONSTRAINT STRING OCCURRING WITHIN A BLOCK MAY FORCE SKIPPING OVER
; 1334 ; SOME LOCATIONS OF THE BLOCK. WITHIN A BLOCK, A NEW CONSTRAINT
; 1335 ; STRING DOES NOT CHANGE THE PATTERN OF DEFAULT ADDRESS PROGRESSION, IT
; 1336 ; MERELY ADVANCES THE LOCATION COUNTER OVER THOSE LOCATIONS. THE
; 1337 ; MICROASSEMBLER WILL LATER FILL THEM IN.
; 1338 ; A NULL CONSTRAINT STRING ("=" FOLLOWED BY ANYTHING BUT "O",
; 1339 ; "1", OR "**") SERVES TO TERMINATE A CONSTRAINT BLOCK.
; 1340 ; EXAMPLES:
; 1341 ; =O
; 1342 ; THIS SPECIFIES THAT THE LOW-ORDER ADDRESS BIT MUST BE ZERO--
; 1343 ; THE MICROASSEMBLER FINDS AN EVEN-ODD PAIR OF LOCATIONS, AND PUTS
; 1344 ; THE NEXT TWO MICROINSTRUCTIONS INTO THEM.
; 1345 ; =11
; 1346 ; THIS SPECIFIES THAT THE TWO LOW-ORDER BITS OF THE ADDRESS MUST
; 1347 ; BOTH BE ONES. SINCE THERE ARE NO O'S IN THIS CONSTRAINT, THE
; 1348 ; ASSEMBLER FINDS ONLY ONE LOCATION MEETING THE CONSTRAINT.
; 1349 ; =O*****
; 1350 ; THIS SPECIFIES AN ADDRESS IN WHICH THE "40" BIT IS ZERO. DUE
; 1351 ; TO THE IMPLEMENTATION OF THIS FEATURE IN THE ASSEMBLER, THE DEFAULT
; 1352 ; ADDRESS PROGRESSION APPLIES ONLY TO THE LOW-ORDER 5 BITS, SO THIS
; 1353 ; CONSTRAINT FINDS ONE WORD IN WHICH THE "40" BIT IS ZERO, AND DOES
; 1354 ; NOT ATTEMPT TO FIND ONE IN WHICH THAT BIT IS A ONE.
; 1355 ; THIS LIMITATION HAS BEEN CHANGED WITH NEWER ASSEMBLER VERSIONS.
; 1356 ; HOWEVER NONE OF THE LOCATIONS IN THE MICROCODE REQUIRE ANYTHING BUT THE
; 1357 ; CONSTRAINT MENTIONED ABOVE.
; 1358


```

; 1359 .TOC "MICROCODE LISTING TEMPLATE"
; 1360 ;HERE IS A TEMPLATE WHICH CAN BE USED WITH THE MICROCODE
; 1361 ; LISTING TO IDENTIFY FIELDS IN THE OUTPUT --
; 1362
; 1363
; 1364 ; -----
; 1365 ; [--] [--] []!! !!!!! !!!!! !![] [][] ![-]
; 1366 ; ! ! !!!!! !!!!! !!!!! ! ! ! ! + # = MAGIC NUMBERS
; 1367 ; ! ! !!!!! !!!!! !!!!! ! ! ! ! + MARK = SCOPE SYNC
; 1368 ; ! ! !!!!! !!!!! !!!!! ! ! ! !
; 1369 ; ! ! !!!!! !!!!! !!!!! ! ! ! ! + CALL, DISP/SPEC = SPEC FUNCTIONS
; 1370 ; ! ! !!!!! !!!!! !!!!! ! ! ! ! + SKIP/COND = SPECIAL FUNCTIONS
; 1371 ; ! ! !!!!! !!!!! !!!!! ! ! ! !
; 1372 ; ! ! !!!!! !!!!! !!!!! ! ! + TIME, MEM = UINST TIME & MEM FUNCTION
; 1373 ; ! ! !!!!! !!!!! !!!!! ! + VMA = VMA INPUT SELECT
; 1374 ; ! ! !!!!! !!!!! !!!!! ! + SH/ARMM = SH FUNCTION / ARMM SELECT
; 1375 ; ! ! !!!!! !!!!! !!!!! !
; 1376 ; ! ! !!!!! !!!!! !!!!! + SC, FE = SC INPUT SELECT & FE LOAD
; 1377 ; ! ! !!!!! !!!!! !!!!! + SCADB = SELECT FOR SCAD "B" INPUT
; 1378 ; ! ! !!!!! !!!!! !!!!! + SCADA = ENABLE AND SELECT FOR SCAD "A" INPUT
; 1379 ; ! ! !!!!! !!!!! + SCAD = SC/FE ADDER FUNCTION
; 1380 ; ! ! !!!!! !!!!!
; 1381 ; ! ! !!!!! + FM ADR = FAST MEMORY ADDRESS SELECT
; 1382 ; ! ! !!!!! + BR, BRX, MQ = LOAD BR & BRX, SEL FOR MQ
; 1383 ; ! ! !!!!! + ARX = SELECT FOR ARX INPUT
; 1384 ; ! ! !!!!! + AR = SELECT FOR AR INPUT
; 1385 ; ! ! !!!!!
; 1386 ; ! ! !!!!! + ADB = SELECT FOR ADDER "B" INPUT
; 1387 ; ! ! !!!!! + ADA = SELECT AND ENABLE FOR ADDER "A" INPUT
; 1388 ; ! ! !!!!! + AD = OPERATION IN ADDER AND ADDER EXTENSION
; 1389 ; ! !
; 1390 ; ! + J = BASE ADDRESS TO WHICH THIS MICROINSTRUCTION JUMPS
; 1391 ; !
; 1392 ; + LOCATION IN CRAM INTO WHICH THIS WORD IS LOADED
; 1393 ;
; 1394 ; U/V = MICRO INSTRUCTION FOR CRAM
; 1395
; 1396 ; *****
; 1397
; 1398 ; D = WORD FOR DRAM
; 1399 ;
; 1400 ; + LOCATION IN DRAM INTO WHICH THIS WORD IS LOADED
; 1401 ; !
; 1402 ; ! + A = OPERAND ACCESS CONTROL
; 1403 ; ! ! + B = INSTRUCTION "MODE"
; 1404 ; ! ! ! + P = PARITY FOR THIS WORD
; 1405 ; ! ! !
; 1406 ; ! ! ! + J = ADDRESS OF HANDLER FOR THIS INSTRUCTION
; 1407 ; [--] !! ! [--]
; 1408 ; -----
; 1409

```


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; DEFINE.MIC[10,5351] 23:19 23-Nov-83

KL10 INSTRUCTION OPCODE MAP

```

; 1410 .TOC      "KL10 INSTRUCTION OPCODE MAP"
; 1411
; 1412 ;          0          1          2          3          4          5          6          7
; 1413 ;100      UUO        UUO        EFAD        EFSB        JSYS        ADJSP        EFMP        EFDV
; 1414 ;110      DFAD        DFSB        DFMP        DFDV        DADD        DSUB        DMUL        DDIV
; 1415 ;120      DMOVE      DMOVN      FIX        EXTEND      DMOVEM      DMOVNM      FIXR        FLTR
; 1416 ;130      UFA        DFN        FSC        IBP        ILDB        LDB        IDPB        DPB
; 1417 ;140      FAD        FADL        FADM        FADB        FADR        FADRI        FADRM        FADRB
; 1418 ;150      FSB        FSBL        FSBM        FSBB        FSBR        FSBRI        FSBRM        FSBRB
; 1419 ;160      FMP        FMPL        FMPM        FMPB        FMPR        FMPRI        FMPRM        FMPRB
; 1420 ;170      FDV        FDVL        FDVM        FDVB        FDVR        FDVRI        FDVRM        FDVRB
; 1421 ;          0          1          2          3          4          5          6          7
; 1422 ;200      MOVE      MOVEI      MOVEM      MOVES      MOVSI      MOVSM      MOVSS
; 1423 ;210      MOVN      MOVNI      MOVNM      MOVNS      MOVMI      MOVMM      MOVMS
; 1424 ;220      IMUL      IMULI      IMULM      IMULB      MUL        MULI      MULM      MULB
; 1425 ;230      IDIV      IDIVI      IDIVM      IDIVB      DIV        DIVI      DIVM      DIVB
; 1426 ;240      ASH        ROT        LSH        JFFO        ASHC        ROTC        LSHC        UUO
; 1427 ;250      EXCH      BLT        AOBJP      AOBJN      JRST      JFCL        XCT        MAP
; 1428 ;260      PUSHJ     PUSH      POP        POPJ      JSR        JSP        JSA        JRA
; 1429 ;270      ADD        ADDI      ADDM      ADBB      SUB        SUBI      SUBM      SUBB
; 1430 ;          0          1          2          3          4          5          6          7
; 1431 ;300      CAI        CAIL      CAIE      CAILE      CAIA      CAIGE      CAIN      CAIG
; 1432 ;310      CAM        CAML      CAME      CAMLE      CAMA      CAMGE      CAMN      CAMG
; 1433 ;320      JUMP      JUMPL     JUMPE     JUMPLE     JUMPA     JUMPGE     JUMPN     JUMPG
; 1434 ;330      SKIP      SKIPL     SKIPE     SKIPLE     SKIPA     SKIPGE     SKIPN     SKIPG
; 1435 ;340      AOJ        AOJL      AOJE      AOJLE     AOJA      AOJGE     AOJN      AOJG
; 1436 ;350      AOS        AOSL      AOSE      AOSLE     AOSA      AOSGE     AOSN      AOSG
; 1437 ;360      SOJ        SOJL      SOJE      SOJLE     SOJA      SOJGE     SOJN      SOJG
; 1438 ;370      SOS        SOSL      SOSE      SOSLE     SOSA      SOSGE     SOSN      SOSG
; 1439 ;          0          1          2          3          4          5          6          7
; 1440 ;400      SETZ      SETZI     SETZM     SETZB     AND        ANDI      ANDM      ANDB
; 1441 ;410      ANDCA      ANDCAI    ANDCAM    ANDCAB     SETM      SETMI     SETMM     SETMB
; 1442 ;420      ANDCM      ANDCMI    ANDCMM    ANDCMB     SETA      SETAI     SETAM     SETAB
; 1443 ;430      XOR        XORI      XORM      XORB      IOR        IORI     IORM      IORB
; 1444 ;440      ANDCB      ANDCBI    ANDCBM    ANDCBB     EQV      EQVI     EQVM      EQVB
; 1445 ;450      SETCA      SETCAI    SETCAM    SETCAB     ORCA      ORCAI     ORCAM     ORCAB
; 1446 ;460      SETCM      SETCMI    SETCMM    SETCMB     ORCM      ORCMI     ORCMM     ORCMB
; 1447 ;470      ORCB      ORCBI    ORCBM    ORCBB     SETO      SETOI     SETOM     SETOB
; 1448 ;          0          1          2          3          4          5          6          7
; 1449 ;500      HLL        HLLI      HLLM      HLLS      HRL        HRLI     HRLM      HRLS
; 1450 ;510      HLLZ      HLLZI     HLLZM     HLLZS     HRLZ      HRLZI     HRLZM     HRLZS
; 1451 ;520      HLLO      HLLOI     HLLOM     HLLOS     HRLO      HRLOI     HRLOM     HRLOS
; 1452 ;530      HLLE      HLLEI     HLLEM     HLLES     HRLE      HRLEI     HRLEM     HRLES
; 1453 ;540      HRR        HRRI      HRRM      HRRS      HLR        HLRI     HLRM      HLRS
; 1454 ;550      HRRZ      HRRZI     HRRZM     HRRZS     HLRZ      HLRZI     HLRZM     HLRZS
; 1455 ;560      HRRO      HRROI     HRROM     HRROS     HLRO      HLROI     HLROM     HLROS
; 1456 ;570      HRRE      HRREI     HRREM     HRRES     HLRE      HLREI     HLREM     HLRES
; 1457 ;          0          1          2          3          4          5          6          7
; 1458 ;600      TRN        TLN        TRNE      TLNE      TRNA      TLNA     TRNN      TLNN
; 1459 ;610      TDN        TSN        TDNE      TSNE      TDNA      TSNA     TDNN      TSNN
; 1460 ;620      TRZ        TLZ        TRZE      TLZE      TRZA      TLZA     TRZN      TLZN
; 1461 ;630      TDZ        TSZ        TDZE      TSZE      TDZA      TSZA     TDZN      TSZN
; 1462 ;640      TRC        TLC        TRCE      TLCE      TRCA      TLCA     TRCN      TLCN
; 1463 ;650      TDC        TSC        TDCE      TSCE      TDCA      TSCA     TDCN      TSCN
; 1464 ;660      TRO        TLO        TROE      TLOE      TROA      TLOA     TRON      TLON
; 1465 ;670      TDO        TSO        TDOE      TSOE      TDOA      TSOA     TDON      TSON

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; KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C) 1984 DIGITAL EQUIPMENT CORPORATION V1(336)
%34(270) Page 5
; DEFINE.MIC[10,5351] 23:19 23-Nov-83 CONTROL RAM DEFINITIONS -- J, AD

MICR

```
; 1466 .TOC "CONTROL RAM DEFINITIONS -- J, AD"
; 1467 ;FIELDS ARRANGED FOR READABILITY, NOT COMPACTNESS
; 1468 ; IN THE PROCESSOR, BITS ARE SCATTERED IN ANOTHER ORDER
; 1469
; 1470 UO/=<0:0>D,0 ;BIT 0 UNUSED
; 1471 J/=<1:11>+ ;SYMBOLS WILL BE DEFINED BY TAGS (CRA1&CRA2)
; 1472
; 1473 ;MAIN ADDER CONTROLS. Bit 0 = carry in, bit 1 = boolean operation
; 1474 ; Bits 2-5 are S8-S1 of the 10181 ALU chip. For normal arithmetic,
; 1475 ; the AD and ADX are separated unless SPEC/AD LONG or equivalent is given.
; 1476
; 1477
; 1478 AD/=<12:17> ; (EDP3, EXCEPT CARRY IN, ON CTL1)
; 1479 A+1=40,1
; 1480 A+XCRY=00,1
; 1481 ; A+ANDCB=01,1
; 1482 ; A+AND=02,1
; 1483 A*2=03,1
; 1484 A*2+1=43,1
; 1485 ; OR+1=44,1
; 1486 ; OR+ANDCB=05,1
; 1487 A+B=06,1
; 1488 A+B+1=46,1
; 1489 ; A+OR=07,1
; 1490 ORCB+1=50,1
; 1491 A-B-1=11,1
; 1492 A-B=51,1
; 1493 ; AND+ORCB=52,1
; 1494 ; A+ORCB=53,1
; 1495 XCRY-1=54,1
; 1496 ; ANDCB-1=15,1
; 1497 ; AND-1=16,1
; 1498 A-1=17,1
; 1499 ;ADDER LOGICAL FUNCTIONS
; 1500 SETCA=20
; 1501 ORC=21 ;NAND
; 1502 ORCA=22
; 1503 1S=23
; 1504 ANDC=24 ;NOR
; 1505 NOR=24
; 1506 SETCB=25
; 1507 EQV=26
; 1508 ORCB=27
; 1509 ANDCA=30
; 1510 XOR=31
; 1511 B=32
; 1512 OR=33
; 1513 OS=34
; 1514 ANDCB=35
; 1515 AND=36
; 1516 A=37
; 1517 ;BOOLEAN FUNCTIONS FOR WHICH CRYO IS INTERESTING
; 1518 CRY A EQ -1=60,1 ;GENERATE CRYO IF A=1S, AD=SETCA
; 1519 CRY A.B#0=36,1 ;CRY O IF A&B NON-ZERO, AD=AND
; 1520 CRY A#0=37,1 ;GENERATE CRYO IF A .NE. .O. AD=A
; 1521 CRY A GE B=71,1 ;CRYO IF A .GE. B, UNSIGNED; AD=XOR
```



```
; 1522 .TOC "CONTROL RAM DEFINITIONS -- DATA PATH MIXERS"
; 1523
; 1524 ADA/=<18:20> ; (EDP3)
; 1525 AR=0
; 1526 ARX=1
; 1527 MQ=2
; 1528 PC=3
; 1529 ADA EN/=<18:18> ;ADA ENABLE ALSO ENABLES ADXA (EDP3)
; 1530 EN=0
; 1531 OS=1
; 1532 U21/=<21:21>D,0 ;BIT 21 UNUSED
; 1533 ADB/=<22:23> ;CONTROLS ADB AND ADXB (EDP3)
; 1534 FM=0,,1 ;MUST HAVE TIME FOR PARITY CHECK
; 1535 BR*2=1
; 1536 BR=2
; 1537 AR*4=3
; 1538 U23/=<23:23>D,1 ;PREVENT DEFAULT SELECTION OF FM
; 1539 ;FORCE IT TO TAKE ONE OF THE SHORTER
; 1540 ;PATHS IF FM NOT NEEDED ALSO DISABLES
; 1541 ;PARITY CHECKING LOGIC
; 1542
; 1543 ;REGISTER INPUTS
; 1544
; 1545 AR/=<24:26>D,0 ; (EDP1)
; 1546 AR=0
; 1547 ARMM=0 ;REQUIRES SPECIAL FUNCTION
; 1548 CACHE=1 ;ORDINARILY SELECTED BY HWARE
; 1549 AD=2
; 1550 EBUS=3
; 1551 SH=4
; 1552 AD*2=5
; 1553 ADX=6
; 1554 AD*.25=7
; 1555 ARX/=<27:29>D,0 ; (EDP2)
; 1556 ; ARX=0 ;BY DEFAULT
; 1557 CACHE=1 ;ORDINARILY BY MBOX RESP
; 1558 AD=2
; 1559 MQ=3
; 1560 SH=4
; 1561 ADX*2=5
; 1562 ADX=6
; 1563 ADX*.25=7
; 1564 BR/=<30:30>D,0 ;DEFAULT TO RECIRCULATE (EDP4)
; 1565 AR=1
; 1566 BRX/=<31:31>D,0 ;DEFAULT TO RECIRCULATE (EDP4)
; 1567 ARX=1
; 1568 MQ/=<32:32>D,0 ;DEFAULT TO RECIRCULATE (EDP2)
; 1569 SH=1 ;LOAD FROM SHIFT MATRIX
; 1570 MQ*2=0 ;WITH SPEC/MQ SHIFT
; 1571 MQ*.25=1 ;WITH SPEC/MQ SHIFT
; 1572 MQ SEL=0 ;WITH COND/REG CTL
; 1573 MQM SEL=1 ;WITH COND/REG CTL
; 1574
```


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CONTROL RAM DEFINITIONS -- DATA PATH MIXERS

```
; 1575 ;FMADR SELECTS THE SOURCE OF THE FAST MEMORY ADDRESS,
; 1576 ; RATHER THAN PROVIDING THE ADDRESS ITSELF
; 1577
; 1578 FMADR/=<33:35> ; (APR4&APR5)
; 1579 ACO=0 ;IR 9-12
; 1580 AC1=1 ;<IR 9-12>+1 MOD 16
; 1581 XR=2 ;ARX 14-17
; 1582 VMA=3 ;VMA 32-35
; 1583 AC2=4 ;<IR 9-12>+2 MOD 16
; 1584 AC3=5 ;<IR 9-12>+3 MOD 16
; 1585 .IFNOT/MODEL.B
; 1586 AC4=6 ;CURRENT BLOCK, AC+4
; 1587 ac5=7 ;current block, ac+5
; 1588 .IF/MODEL.B
; 1589 AC+=6 ;CURRENT BLOCK, AC+ MAGIC #
; 1590 .ENDIF/MODEL.B
; 1591 #B#=7 ;BLOCK AND AC SELECTED BY # FIELD
; 1592
; 1593 .TOC "CONTROL RAM DEFINITIONS -- 10-BIT LOGIC"
; 1594
; 1595 SCAD/=<36:38> ; (SCD1)
; 1596 A=0
; 1597 A-B-1=1
; 1598 A+B=2
; 1599 A-1=3
; 1600 A+1=4
; 1601 A-B=5
; 1602 OR=6
; 1603 AND=7
; 1604 SCADA/=<39:41> ; (SCD1)
; 1605 FE=0
; 1606 ARO-5=1 ;BYTE POINTER P FIELD
; 1607 AR EXP=2 ;<AR 01-08> XOR <AR 00>
; 1608 #=3 ;SIGN EXTENDED WITH #00
; 1609 SCADA EN/=<39:39> ; (SCD1)
; 1610 OS=1
; 1611 U42/=<42:42>D,0 ;BIT 42 UNUSED
; 1612 SCADB/=<43:44> ; (SCD1)
; 1613 SC=0
; 1614 AR6-11=1 ;BYTE POINTER S FIELD
; 1615 ARO-8=2
; 1616 #=3 ;NO SIGN EXTENSION
; 1617 U45/=<45:45>D,0 ;BIT 45 UNUSED
; 1618 SC/=<46:46>D,0 ;RECIRCULATE BY DEFAULT (SCD2)
; 1619 FE=0 ;WITH SCM ALT
; 1620 SCAD=1
; 1621 AR SHIFT=1 ;WITH SCM ALT ;AR 18, 28-35
; 1622 FE/=<47:47>D,0 ;RECIRCULATE BY DEFAULT (SCD2)
; 1623 SCAD=1
; 1624 U48/=<48:48>D,0 ;BIT 48 UNUSED
; 1625
```



```
; 1626 .TOC "CONTROL RAM DEFINITIONS -- SHIFT, ARMM, VMA, TIME"
; 1627
; 1628 SH/=<49:50> ; (SH1)
; 1629 SHIFT AR1ARX=0 ; LEFT BY (SC)
; 1630 AR=1
; 1631 ARX=2
; 1632 AR SWAP=3 ; HALVES SWAPPED
; 1633 ARMM/=<49:50> ; SAME BITS AS SH CONTROL (SCD3)
; 1634 #=0 ; MAGIC # 0-8 TO AR 0-8
; 1635 EXP_SIGN=1 ; AR1-8 _ARO
; 1636 SCAD EXP=2 ; ARO-8 _SCAD
; 1637 SCAD POS=3 ; ARO-5 _SCAD
; 1638 .IF/MODEL.B
; 1639 VMAX/=<49:50> ; SAME BITS AS SH CONTROL (VMA4)
; 1640 VMAX=0 ; VMA SECTION #
; 1641 PC SEC=1 ; PC SECTION #
; 1642 PREV SEC=2 ; PREVIOUS CONTEXT SECT
; 1643 AD12-17=3
; 1644 .ENDIF/MODEL.B
; 1645 U51/=<51:51>D.O ; BIT 51 UNUSED
; 1646 VMA/=<52:53>D.O ; ALSO CONTROLLED BY SPECIAL FUNCTIONS
; 1647 VMA=0 ; BY DEFAULT
; 1648 PC=1 ; MAY BE OVERRIDDEN BY MCL LOGIC TO LOAD FROM AD
; 1649 LOAD=1 ; IF WE KNOW IT WILL BE OVERRIDDEN, USE THIS
; 1650 PC+1=2
; 1651 AD=3 ; ENTIRE VMA, INCLUDING SECTION
; 1652 TIME/=<54:55>T ; CONTROLS MINIMUM MICROINSTRUCTION EXECUTION
; 1653 ; TIME, COUNTING MBOX CLOCK TICKS (CLK)
; 1654 ; ASSEMBLER GENERALLY TAKES CARE OF THIS
; 1655 2T=0 ; 2 TICKS
; 1656 3T=1 ; 3 TICKS
; 1657 4T=2 ; 4 TICKS
; 1658 5T=3 ; 5 TICKS (COND/DIAG FUNC & #00, --> .5 USEC)
; 1659
```

*Same field
redesign*


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; KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C) 1984 DIGITAL EQUIPMENT CORPORATION V1(336)
%34(270)      Page 9
; DEFINE.MIC[10,5351] 23:19 23-Nov-83      CONTROL RAM DEFINITIONS -- MEM SPECIAL FUNCTIONS
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MICR

```
; 1660 .TOC      "CONTROL RAM DEFINITIONS -- MEM SPECIAL FUNCTIONS"
; 1661
; 1662 MEM/= <56:59>D,0      ; (MCL1)
; 1663 ;      NOP=0      ;DEFAULT
; 1664      ARL IND=1      ;CONTROL AR LEFT MUX FROM # FIELD
; 1665      MB WAIT=2      ;WAIT FOR MBOX RESP IF PENDING
; 1666      A RD=4      ;OPERAND READ
; 1667      B WRITE=5      ;CONDITIONAL WRITE ON DRAM B O1
; 1668      FETCH=6      ;LOAD NEXT INSTR TO ARX (CONTROL BY #)
; 1669      REG FUNC=7      ;MBOX REGISTER FUNCTIONS
; 1670      LOAD AR=12
; 1671      LOAD ARX=13
; 1672      WRITE=16      ;FROM AR TO MEMORY
; 1673 .IF/MODEL.B
; 1674      RESTORE VMA=3      ;AD FUNC WITHOUT GENERATING A REQUEST
; 1675      AD FUNC=10      ;FUNCTION LOADED FROM AD LEFT
; 1676      EA CALC=11      ;FUNCTION DECODED FROM # FIELD
; 1677      RW=14      ;READ, TEST WRITABILITY
; 1678      RPW=15      ;READ-PAUSE-WRITE
; 1679      IFET=17      ;UNCONDITIONAL FETCH
; 1680 .IFNOT/MODEL.B      ;OLD-STYLE MCL BOARD
; 1681      SEC O=3      ;CLEAR VMAX
; 1682      A IND=10      ;A-TYPE INDIRECT
; 1683      BYTE IND=11      ;BYTE-TYPE INDIRECT
; 1684      AD FUNC=14      ;FUNCTION FROM AD LEFT
; 1685      BYTE RD=15      ;BYTE READ TO BOTH AR AND ARX
; 1686      RPW=17      ;LOAD AR WITH RPW CYCLE
; 1687 .ENDIF/MODEL.B
; 1688
```



```
; 1689 .TOC "CONTROL RAM DEFINITIONS -- SKIP/COND SPECIAL FUNCTIONS"
; 1690
; 1691 SKIP/= <60:65>D,0 ;MICRO-PROGRAM SKIPS
; 1692 ; 40-57 DECODED ON (CRA2)
; 1693 ; SPARE=40
; 1694 EVEN PAR=41,,1 ;AR PARITY IS EVEN
; 1695 BRO=42 ;BR BIT 00
; 1696 ARXO=43 ;ARX BIT 00
; 1697 AR18=44 ;AR BIT 18
; 1698 ARO=45 ;AR BIT 00
; 1699 AC#O=46 ;IR9-12 .EQ. 0
; 1700 SCO=47 ;SC BIT 00
; 1701 .IFNOT/MODEL.B
; 1702 SC .LT. 36=50
; 1703 .IF/MODEL.B
; 1704 PC SECO=50
; 1705 .ENDIF/MODEL.B
; 1706 SCADO=51,,1 ;SIGN OF SCAD OUTPUT
; 1707 SCAD#O=52,,1 ;SCAD OUTPUT IS NON-ZERO
; 1708 ADXO=53,1 ;ADDER EXTENSION BIT 00
; 1709 AD CRYO=54,1 ;CARRY OUT OF AD BIT -2 (BOOLE IGNORED)
; 1710 ADO=55,1 ;ADDER BIT 00
; 1711 AD#O=56,1 ;AD BITS 00-35 CONTAIN SOME ONES
; 1712 .IF/MODEL.B
; 1713 -LOCAL AC ADDR=57 ;VMA18-31 =0 ON LOCAL REF IN SEC >1
; 1714 .ENDIF/MODEL.B
; 1715 ; 60-77 DECODED ON (CON2)
; 1716 FETCH=60 ;VMA FETCH (LAST CYCLE WAS A FETCH)
; 1717 KERNEL=61 ;PC IS IN KERNEL MODE
; 1718 USER=62 ;PC IS IN USER MODE
; 1719 PUBLIC=63 ;PC IS PUBLIC (INCLUDING SUPER)
; 1720 RPW REF=64 ;MIDDLE OF READ-PAUSE-WRITE CYCLE
; 1721 PI CYCLE=65 ;PI CYCLE IN PROGRESS
; 1722 -EBUS GRANT=66 ;PI HASN'T RELEASED BUS FOR CPU USE
; 1723 -EBUS XFER=67 ;NO TRANSFER RECIEVED FROM DEVICE
; 1724 INTRPT=70 ;AN INTERRUPT REQUEST WAITING FOR SERVICE
; 1725 -START=71 ;NO CONTINUE BUTTON
; 1726 RUN=72 ;PROCESSOR NOT HALTED
; 1727 IO LEGAL=73 ;KERNEL, PI CYCLE, USER IOT, OR DEVICE .GE. 740
; 1728 PIS XCT=74 ;PXCT OR SXCT
; 1729 .IF/MODEL.B
; 1730 -VMA SECO=75 ;VMA SECTION NUMBER (13-17) IS NOT ZERO
; 1731 .ENDIF/MODEL.B
; 1732 AC REF=76,,1 ;VMA .LT.20 ON READ OR WRITE
; 1733 -MTR REQ=77 ;INTERRUPT REQUEST NOT DUE TO METER
; 1734
```



```

; 1735 ;SKIP/COND FIELD CONTINUED
; 1736
; 1737 COND/= <60:65>D,0 ;NON-SKIP SPECIAL FUNCTIONS
; 1738 ;O-7 DECODED ON (CTL2)
; 1739 ; NOP=0 ;BY DEFAULT
; 1740 LD ARO-8=1
; 1741 LD AR9-17=2
; 1742 LD AR18-35=3
; 1743 AR CLR=4
; 1744 ARX CLR=5
; 1745 ARL IND=6 ;CONTROL AR LEFT, CALL, AND CLEAR BITS FROM #
; 1746 REG CTL=7 ;CONTROL AR LOAD, EXP TST, AND MQ FROM #
; 1747 ; 10-37 DECODED ON (CON1)
; 1748 FM WRITE=10 ;WRITE AR INTO CURRENTLY ADDRESSED FM LOC
; 1749 PCF #=11 ;SET PC FLAGS FROM # FIELD
; 1750 FE SHRT=12 ;SHIFT FE RIGHT 1
; 1751 AD FLAGS=13 ;SET PC CRYO, CRY1, OVRFLD, TRAP1 AS APPROPRIATE
; 1752 LOAD IR=14 ;LATCH AD OR CACHE DATA INTO IR
; 1753 SPEC INSTR=15 ;SET/CLR SXCT, PXCT, PICYC, TRAP INSTR FLAGS
; 1754 SR #=16 ;CONTROL FOR STATE REGISTER
; 1755 SEL VMA=17 ;READ VMA THROUGH ADA/PC
; 1756 DIAG FUNC=20 ;SELECT DIAGNOSTIC INFO ONTO EBUS
; 1757 EBOX STATE=21 ;SET STATE FLOPS
; 1758 EBUS CTL=22 ;I/O FUNCTIONS
; 1759 MBOX CTL=23
; 1760 SPARE=24
; 1761 .IF/MODEL.B
; 1762 LONG EN=25 ;THIS WORD CAN BE INTERPRETED AS LONG INDIRECT
; 1763 .ENDIF/MODEL.B
; 1764 ; SPARE=26
; 1765 ; SPARE=27
; 1766 VMA_#=30
; 1767 VMA_#+TRAP=31
; 1768 VMA_#+MODE=32
; 1769 VMA_#+AR32-35=33
; 1770 VMA_#+PI*2=34
; 1771 VMA DEC=35 ;VMA_VMA-1
; 1772 VMA INC=36 ;VMA_VMA+1
; 1773 LD VMA HELD=37 ;HOLD VMA ON SIDE
; 1774 .IFNOT/MODEL.B
; 1775 U66/= <66:66>D,0 ;BIT 66 UNUSED
; 1776 .IF/MODEL.B
; 1777 CALL/= <66:66>D,0 ;CALL FUNCTION
; 1778 CALL=1 ;GOOD TO 15 LEVELS IN MODEL B
; 1779 .ENDIF/MODEL.B
; 1780

```



```

; 1781 .TOC      "CONTROL RAM DEFINITIONS -- DISP/SPEC SPECIAL FUNCTIONS"
; 1782
; 1783 DISP/= <67:71>D,10      ;O-7 AND 30-37 ARE DISPATCHES (CRA1&CRA2)
; 1784     DIAG=0
; 1785     DRAM J=1
; 1786     DRAM A RD=2      ;IMPLIES INH CRY18
; 1787     RETURN=3      ;POPJ RETURN
; 1788     PG FAIL=4      ;PAGE FAIL TYPE DISP
; 1789     SR=5      ;16 WAYS ON STATE REGISTER
; 1790     NICOND=6      ;NEXT INSTRUCTION CONDITION (see NEXT for detail)
; 1791     SHO=3=7,,2      ;16 WAYS ON HIGH-ORDER BITS OF SHIFTER
; 1792     MUL=30      ;FE0*4 + MQ34*2 + MQ35; implies MQ SHIFT, AD LONG
; 1793     DIV=31,,1      ;FE0*4 + BRO*2 + AD CRYO; implies MQ SHIFT, AD LONG
; 1794     SIGNS=32,1      ;ARX0*8 + ARO*4 + BRO*2 + ADO
; 1795     DRAM B=33      ;8 WAYS ON DRAM B FIELD
; 1796     BYTE=34,,1      ;FPD*4 + AR12*2 + SCADO
; 1797     NORM=35,2      ;See normalization for details. Implies AD LONG
; 1798     EA MOD=36      ;(ARX0 or -LONG EN)*8 + -(LONG EN and ARX1)*4 +
; 1799                      ;ARX13*2 + (ARX2-5) or (ARX14-17) non zero; enable
; 1800                      ;is (ARX0 or -LONG EN) for second case. If ARX18
; 1801                      ;is 0, clear AR left; otherwise, poke ARL select
; 1802                      ;to set bit 2 (usually gates AD left into ARL)
; 1803 .IFNOT/MODEL.B
; 1804     EA TYPE=37
; 1805 .ENDIF/MODEL.B
; 1806
; 1807 SPEC/= <67:71>D,10      ;NON-DISPATCH SPECIAL FUNCTIONS (CTL1)
; 1808     ; NOP=10      ;DEFAULT
; 1809     INH CRY18=11
; 1810     MQ SHIFT=12      ;ENABLE MQ*2, MQ SHRT2
; 1811     SCM ALT=13      ;ENABLE FE, ARSHIFT
; 1812     CLR FPD=14
; 1813     LOAD PC=15
; 1814     XCRY ARO=16      ;CARRY INTO AD IS XOR'D WITH AROO
; 1815     GEN CRY18=17
; 1816 .IFNOT/MODEL.B
; 1817     SEC HOLD=20      ;INHIBIT LOADING VMAX
; 1818     CALL=21      ;MAX DEPTH 4, INCLUDING PAGE REFILL
; 1819 .IF/MODEL.B
; 1820     STACK UPDATE=20 ;CONTROL CRY18 IF LOCAL STACK
; 1821 .ENDIF/MODEL.B
; 1822     ARL IND=22      ;# SPECIFIES ARL MIX, ENABLES, & CALL
; 1823     MTR CTL=23      ;# CONTROLS METERS
; 1824     FLAG CTL=24      ;FUNCTION ENCODED IN # FIELD
; 1825     SAVE FLAGS=25      ;TELLS PI CYCLE TO HOLD INTRPT
; 1826     SP MEM CYCLE=26 ;MEM REQUEST IS MODIFIED BY #
; 1827     AD LONG=27      ;AD BECOMES 72 BIT ALU
; 1828
; 1829 U73/= <72:73>D,0      ;BITS 72-73 UNUSED
; 1830
; 1831 MARK/= <74:74>D,0      ;FIELD SERVICE "MARK" BIT
; 1832
    
```


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MICR

```
: 1833 .TOC "CONTROL RAM DEFINITIONS -- MAGIC NUMBER FIELD"
: 1834
: 1835 #/= <75:83>D,0 ;THE INFAMOUS "MAGIC NUMBERS"
: 1836
: 1837 ;THE OPTIONS DESIGNATE CERTAIN ASSEMBLIES FROM THE SAME
: 1838 ;MICROCODE SOURCES
: 1839 ;# BIT 0 INDICATES KLPAGING
: 1840 ;# BIT 1 INDICATES EXTENDED ADDRESSING
: 1841 ;# BIT 2 INDICATES NONSTANDARD MICROCODE
: 1842 ;# BIT 3 INDICATES A CPU WITH THE PV KIT. (MODEL B)
: 1843 ;# BIT 8 INDICATES INSTRUCTION STATISTICS GATHERING
: 1844 ;(I.E. TRACKS)
: 1845 ;EACH OPTION BIT IS GIVEN A SEPERATE FIELD DEFINITION
: 1846
: 1847 KLPAGE/= <75:75> ;KLPAGING
: 1848
: 1849 .IF/KLPAGE
: 1850 OPTIONS=1
: 1851 .IFNOT/KLPAGE
: 1852 OPTIONS=0
: 1853 .ENDIF/KLPAGE
: 1854
: 1855
: 1856 LONGPC/= <76:76> ;LONG PC FORMAT AS IN EXTENDED ADDRESSING
: 1857 ; THIS IS A SLIGHTLY BASTARDIZED FORMAT IN
: 1858 .IF/LONG.PC ; MODEL A MACHINES DUE TO SPACE LIMITATIONS
: 1859 OPTIONS=1
: 1860 .IFNOT/LONG.PC
: 1861 OPTIONS=0
: 1862 .ENDIF/LONG.PC
: 1863
: 1864
: 1865 NONSTD/= <77:77> ;NONSTANDARD MICROCODE (IE DIAGNOSTIC MICROCODE)
: 1866
: 1867 .IF/NONSTD
: 1868 OPTIONS=1
: 1869 .IFNOT/NONSTD
: 1870 OPTIONS=0
: 1871 .ENDIF/NONSTD
: 1872
: 1873 PV/= <78:78> ;MODEL B - PV CPU
: 1874
: 1875 .IF/MODEL.B
: 1876 OPTIONS=1
: 1877 .IFNOT/MODEL.B
: 1878 OPTIONS=0
: 1879 .ENDIF/MODEL.B
: 1880
: 1881 ISTAT/= <83:83> ;STATISTICS GATHERING CODE (IE TRACKS)
: 1882
: 1883 .IF/INSTR.STAT
: 1884 OPTIONS=1
: 1885 .IFNOT/INSTR.STAT
: 1886 OPTIONS=0
: 1887 .ENDIF/INSTR.STAT
: 1888
```


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MICR

```
; 1889 ACB/= <77:79> ;AC block number. Used with FMADR/#B#
; 1890 PAGB=6 ;AC block used for KL paging registers
; 1891 MICROB=7 ;AC block for general microcode scratch
; 1892
; 1893 AC#/= <80:83> ;AC number used with ACB or AC-OP (below)
; 1894
; 1895 .IF/MODEL.B
; 1896 ;
; 1897 ; WARNING !!! BECAUSE OF A TIMING PROBLEM IN THE HARDWARE ALL AC-OPS
; 1898 ; MUST HAVE THE NUMBER FIELD THE SAME IN THE PREVIOUS
; 1899 ; MICROINSTRUCTION. THE SYMPTOM WILL BE GARBAGE WRITTEN IN A
; 1900 ; DIFFERENT AC AS THE ADDRESS LINES DON'T MAKE IT IN TIME
; 1901 ; FOR THE WRITE PULSE.
; 1902 ;
; 1903 AC-OP/= <75:79> ;CONTROLS OPERATION ON AC AND AC#
; 1904 AC+=6
; 1905 #=32 ;JUST AC#
; 1906 OR=33 ;AC <OR> AC#
; 1907 ;ALL AD/ FUNCTIONS <40 WORK
; 1908 .ENDIF/MODEL.B
; 1909
```



```
; 1910 ;VARIOUS SPECIAL FUNCTIONS ENABLE SPECIAL DECODING OF THE
; 1911 ; "MAGIC #" FIELD, AS FOLLOWS:
; 1912
; 1913 ;SPECIAL DATA PATH CONTROLS
; 1914
; 1915 .IFNOT/MODEL.B
; 1916 CALL/= <75:75> ;ENABLED BY ARL IND (CTL2)
; 1917 CALL=1
; 1918 .ENDIF/MODEL.B
; 1919 ARO-8/= <76:76> ;ENABLED BY ARL IND (CTL2)
; 1920 LOAD=1
; 1921 CLR/= <77:80> ;ENABLED BY ARL IND (CTL2)
; 1922 MQ=10
; 1923 ARX=4
; 1924 ARL=2
; 1925 ARR=1
; 1926 AR=3
; 1927 AR+ARX=7
; 1928 AR+MQ=13
; 1929 ARX+MQ=14
; 1930 AR+ARX+MQ=17
; 1931 ARL+ARX=6
; 1932 ARL+ARX+MQ=16
; 1933 ARR+MQ=11
; 1934 ARL/= <81:83> ;ENABLED BY ARL IND (CTL2)
; 1935 ARL=0
; 1936 ARMM=0 ;REQUIRES SPECIAL FUNCTION
; 1937 CACHE=1 ;ORDINARILY SELECTED BY HWARE
; 1938 AD=2
; 1939 EBUS=3
; 1940 SH=4
; 1941 AD*2=5
; 1942 ADX=6
; 1943 AD*.25=7
; 1944 AR CTL/= <75:77> ;ENABLED BY COND/REG CTL (CTL2)
; 1945 ARO-8 LOAD=4
; 1946 AR9-17 LOAD=2
; 1947 ARR LOAD=1
; 1948 ARL LOAD=6
; 1949 EXP TST/= <80:80> ;ENABLED BY COND/REG CTL (CTL1)
; 1950 AR EXP=1
; 1951 MQ CTL/= <82:83> ;ENABLED BY COND/REG CTL (CTL2)
; 1952 ; MQ=0 ;WITH MQ/MQ SEL
; 1953 ; MQ*2=1 ; "
; 1954 ; MQ*.5=2 ; " (DROPS BITS 0,6,12,18,24,30)
; 1955 ; OS=3 ; "
; 1956 ; SH=0 ;WITH MQ/MQM SEL
; 1957 ; MQ*.25=1 ; "
; 1958 ; 1S=2 ; "
; 1959 ; AD=3 ; "
; 1960
```



```
; 1961 ;SPECIAL CONTROL OF EBOX FLAGS & FUNCTIONS
; 1962
; 1963 PC FLAGS/= <75:83> ;ENABLED BY COND/PCF_# (SCD4)
; 1964 AROV=420 ;SET ARITH OVFL0 & TRAP1
; 1965 FLOV=620 ;SAME, PLUS FLOATING OVFL0
; 1966 FPD=100 ;SET FIRST PART DONE
; 1967 TRAP2=40 ;SET TRAP2 (PDL OVFL0)
; 1968 TRAP1=20 ;SET TRAP1 (ARITH OVFL0)
; 1969 FXU=630 ;FLOV + EXP UNDERFLOW
; 1970 DIV CHK=424 ;NO DIVIDE + AROV
; 1971 FDV CHK=624 ;FLOATING NO DIVIDE
; 1972 FLAG CTL/= <75:83> ;ENABLED BY SPEC/FLAG CTL (SCD5)
; 1973 RSTR FLAGS=420 ;AS IN JRSTF
; 1974 JFCL=602 ;FORCE PC 00 = AROV
; 1975 JFCL+LD=622 ;SECOND PART OF JFCL -- CLEAR TESTED FLAGS
; 1976 DISMISS=502 ;CLEAR PI CYCLE IF SET (CON5)
; 1977 ; ELSE DISMISS HIGHEST PI HOLD
; 1978 DISMISS+LD=522 ;LOAD FLAGS AND DISMISS
; 1979 HALT=442 ;STOP PROCESSOR IF LEGAL (CON2)
; 1980 SET FLAGS=20 ;AS IN MU00
; 1981 PORTAL=412 ;CLEAR PUBLIC IF PRIVATE INSTR
; 1982 SPEC INSTR/= <75:83> ;ENABLED BY COND/SPEC INSTR
; 1983 SET PI CYCLE=714; (CON5)
; 1984 KERNEL CYCLE=200;MAKE IO LEGAL, EXEC ADDR SPACE (CON4)
; 1985 INH PC+1=100 ;TO MAKE JSR WORK IN TRAP, INTRPT (CON4)
; 1986 SXCT=40 ;START SECTION XCT (MCL4)
; 1987 PXCT=20 ;START PREV CONXTX XCT (MCL4)
; 1988 INTRPT INH=10 ;INHIBIT INTERRUPTS (CON4)
; 1989 INSTR ABORT=4 ; (CON2)
; 1990 HALTED=302 ;TELL CONSOLE WE'RE HALTED (CON4)
; 1991 CONS XCT=310 ;FLAGS FOR INSTR XCT'D FROM CONSOLE
; 1992 CONT=0 ;RESTORE NORMAL STATE FOR CONTINUE
; 1993 FETCH/= <75:83> ;ENABLED BY MEM/FETCH
; 1994 UNCOND=400
; 1995 ;LOW 2 BITS DECODED ON (IR3)
; 1996 COMP=201,2 ;DEPENDING ON AD AND DRAM B
; 1997 SKIP=202,2
; 1998 TEST=203,1
; 1999 JUMP=502,2 ;AS IN JUMPX, ON AD AND DRAM B
; 2000 JFCL=503,1 ;JUMP ON TEST CONDITION
; 2001
```



```
; 2002 ;SPECIAL MEMORY REQUEST FUNCTIONS
; 2003
; 2004 .IF/MODEL.B
; 2005 EA CALC/= <75:83> ;SPECIFIC CONTROLS FOR MEM/EA CALC
; 2006 ; LOAD AR=400
; 2007 ; LOAD ARX=200
; 2008 ; PAUSE=100 ;Freeze memory--always use with 040
; 2009 ; WRITE=040 ;SET VMA WRITE
; 2010 ; PREV EN=20 ;PREV CONTEXT SELECTED BY SR AND PXCT
; 2011 ; INDIRECT=10 ;PREV CONTEXT FOR EA CALC
; 2012 ; EA=2 ;RESTORATION OF ORIGINAL EA CONDITIONS
; 2013 ; STACK=1 ;PREV CONTEXT SELECTED BY PXCT B12
; 2014 .IF/XADDR ;JUST TO ARX FOR EXTENDED ADDRESSING
; 2015 A IND=230 ;INDIRECT AT FIRST EA CALC TIME
; 2016 .IFNOT/XADDR ;TO BOTH AR AND ARX AS IN MODEL A
; 2017 A IND=630 ;INDIRECT AT FIRST EA CALC TIME
; 2018 .ENDIF/XADDR
; 2019 BYTE LD=420 ;Read byte data to AR only [337]
; 2020 BYTE RD=620 ;READ BYTE DATA TO AR & ARX
; 2021 BYTE RD PC=621 ;READ BYTE DATA TO AR & ARX WITH PC SECTION
; 2022 BYTE RPW=760 ;Read byte data to AR, ARX, write test, pause [312]
; 2023 BYTE IND=610 ;INDIRECT AT BYTE EA CALC TIME
; 2024 PUSH=041 ;STORE TO STACK
; 2025 POP AR=421 ;READ FROM STACK TO AR
; 2026 POP ARX=221 ;READ FROM STACK TO ARX
; 2027 POP AR-ARX=621 ;POP TO BOTH
; 2028 WRITE(E)=042
; 2029 LD AR(EA)=402 ;LOAD AR GLOBAL/LOCAL AS IN EA
; 2030 LD AR+WR=440 ;LOAD AR, TEST WRITABILITY
; 2031 LD ARX+WR=240 ;LOAD ARX, TEST WRITABILITY
; 2032 .ENDIF/MODEL.B
; 2033
; 2034 SP MEM/= <75:83> ;ENABLED BY SPEC/SP MEM CYCLE
; 2035 FETCH=400 ;LOAD IR WHEN DATA ARRIVES (MCL5)
; 2036 USER=200 ;FORCE USER OR UPT (MCL2)
; 2037 EXEC=100 ;FORCE EXEC OR EPT (MCL3)
; 2038 SEC 0=40 ;CLEAR VMAX (MCL4)
; 2039 UPT EN=20 ;UPT IF USER EN (MCL3)
; 2040 EPT EN=10 ;EPT IF NOT USER EN (MCL3)
; 2041 CACHE INH=2 ; (MCL6)
; 2042 UNCSH+UNPAGE=103;UNCACHED AND UNPAGED
; 2043 UNPAGED+CACHED=101 ;physical reference with cache enabled.
; 2044 .IFNOT/MULTI
; 2045 UNPAGED=101 ; (MCL6)
; 2046 EPT=111
; 2047 EPT CACHE=111 ;[260]
; 2048 EPT FETCH=511
; 2049 UPT=221
; 2050 UPT FETCH=621
; 2051 PT=31
; 2052 PT FETCH=431
; 2053 .IF/MULTI
; 2054 UNPAGED=103 ; (MCL6)
; 2055 EPT=113
; 2056 EPT CACHE=111 ;[260]
; 2057 EPT FETCH=513
```


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MICR

CONTROL RAM DEFINITIONS -- MAGIC NUMBER FIELD

; 2058 UPT=223
; 2059 UPT FETCH=623
; 2060 PT=33
; 2061 PT FETCH=433
; 2062 .ENDIF/MULTI
; 2063


```
; 2064 ;MBOX CONTROLS
; 2065
; 2066 MREG FNC/= <75:83> ;ENABLED BY MEM/REG FUNC (APR6)
; 2067 SBUS DIAG=407 ;PERFORM SBUS DIAGNOSTIC CYCLE
; 2068 READ UBR=502 ;ASK MBOX TO LOAD UBR INTO EBUS REG
; 2069 READ EBR=503 ;PUT EBR INTO EBUS REG
; 2070 READ ERA=504
; 2071 WR REFILL RAM=505 ;DISGUISED AS A "READ REG" FUNCTION
; 2072 .IF/MODEL.B ;THIS GOT CHANGED IN THE GENERAL SPEEDUP (APR6)
; 2073 LOAD CCA=606 ;START A SWEEP
; 2074 .IFNOT/MODEL.B ;HERE IS WHAT IT USED TO BE
; 2075 LOAD CCA=601 ;START A SWEEP
; 2076 .ENDIF/MODEL.B
; 2077 LOAD UBR=602 ;SETUP UBR FROM VMA
; 2078 LOAD EBR=603 ;SETUP EBR FROM VMA
; 2079 MAP=140 ;GET PHYS ADDR CORRESPONDING TO VMA (MCL6)
; 2080 MBOX CTL/= <75:83> ;ENABLED BY COND/MBOX CTL (APR5)
; 2081 SET PAGE FAIL=200
; 2082 SET IO PF ERR=100
; 2083 CLR PT LINE(NK)=61,,1;[333] Clear valid if no Keep bit set
; 2084 PT DIR CLR(NK)=41;Enable clear of PT DIR for non keep entries
; 2085 CLR PT LINE=21,,1;CLEAR VALID FOR 8 ENTRIES
; 2086 PT DIR WR=20,1 ;WRITE PAGE TABLE DIRECTORY
; 2087 PT WR=10,1 ;WRITE PAGE TABLE ENTRY SELECTED BY VMA
; 2088 PT DIR CLR=1 ;SELECT FOR CLEARING PT DIR (PAG3)
; 2089 NORMAL=0 ;RESET PT WR SELECTION
; 2090 MTR CTL/= <81:83> ;FUNCTION DECODING FOR METERS (MTR3)
; 2091 CLR TIME=0 ; USUALLY USED WITH DIAG FUNC
; 2092 CLR PERF=1
; 2093 CLR E CNT=2
; 2094 CLR M CNT=3
; 2095 LD PA LH=4
; 2096 LD PA RH=5
; 2097 CONO MTR=6
; 2098 CONO TIM=7
; 2099
```

```
; 2100 ;I/O FUNCTIONS
; 2101
; 2102 EBUS CTL/= <75:83> ;ENABLED BY COND/EBUS CTL (APR3)
; 2103 GRAB EEBUS=400 ;"EBUS RETURN" TAKES ECL EBUS FOR EBOX
; 2104 REQ EBUS=200
; 2105 REL EBUS=100 ; (CON3)
; 2106 EBUS DEMAND=60 ;ASSERT DEMAND, KEEP CS, FUNC
; 2107 EBUS NODEMAND=20;DROP DEMAND, KEEP CS, FUNC
; 2108 ; CTL_IR=10 ;SELECT FO1 & FO2 FROM IR
; 2109 ; DISABLE CS=4 ;TURN OFF CONTROLLER SELECT
; 2110 ; DATAIO=2 ;O FOR CON1/O
; 2111 ; INPUT=1 ;O FOR OUTPUT
; 2112 IO INIT=30 ;ENABLE IR3-9 TO EBUS CONTROLLER SELECT,
; 2113 ; IR10-12 (DECODED) TO FUNCTION
; 2114 ; AND AR ONTO EBUS IF FUNCTION IS OUTPUT
; 2115 DATAO=26 ;O'S TO CS, DATAO TO FCN, AND AR TO EBUS
; 2116 DATAI=27 ;O'S TO CS, DATAI TO FCN
; 2117 REL EEBUS=0 ;LEGGO
; 2118 DIAG FUNC/= <75:83> ;ENABLED BY COND/DIAG FUNC (CTL3)
; 2119 .5 USEC=400,3 ;STRETCH CLOCK TO LET EBUS SETTLE (CON?)
; 2120 LD PA LEFT=404,3 ;LH PERF ANAL CONTROLS FROM RH (MTR) .
; 2121 LD PA RIGHT=405,3 ;RH PA CONTROLS FROM RH (MTR)
; 2122 CONO MTR=406,3 ;ACCOUNTING CONTROLS (MTR)
; 2123 CONO TIM=407,3 ;INTERVAL TIMER CONTROLS (MTR)
; 2124 CONO APR=414,3 ; (CON3)
; 2125 CONO PI=415,3 ; (CON3)
; 2126 CONO PAG=416,3 ;CACHE & PAGING CTL (CON3)
; 2127 DATAO APR=417,3 ;ADDRESS BREAK (CON3)
; 2128 DATAO PAG=620,3 ;AC BLOCKS & PREV CONTXT (CON3)
; 2129 LD AC BLKS=425,3 ;FORCE LOADING AC BLOCKS
; 2130 LD PCS+CWSX=426,3 ;FORCE LOADING PREV CONTXT SEC, CWSX
; 2131 CONI PI(R)=500,3 ;PI HOLD & ACTIVE TO LH (PI)
; 2132 CONI PI(L)=501,3 ;PI GEN TO LH (PI)
; 2133 CONI APR(R)=510,3 ;APR INTERRUPT & PIA TO LH (APR6)
; 2134 RD TIME=510,3 ;TIME BASE TO RH (MTR5)
; 2135 DATAI PAG(L)=511,3 ;AC BLOCKS, PREV CONTXT TO LH (APR6)
; 2136 RD PERF CNT=511,3 ;PERFORMANCE COUNT TO RH (MTR5)
; 2137 CONI APR(L)=512,3 ;APR INTERRUPT ENABLES TO LH (APR6)
; 2138 RD EBOX CNT=512,3 ;EBOX COUNT TO RH (MTR5)
; 2139 DATAI APR=513,3 ;ADDR BREAK CONDITIONS TO LH (APR6)
; 2140 RD CACHE CNT=513,3 ;CACHE COUNT TO RH (MTR5)
; 2141 RD INTRVL=514,3 ;INTERVAL TIMER TO RH (MTR5)
; 2142 RD PERIOD=515,3 ;PERIOD REGISTER TO RH (MTR5)
; 2143 CONI MTR=516,3 ;CONTROLS & PIA TO RH (MTR5)
; 2144 RD MTR REQ=517,3 ;ENCODED UPDATE REQUEST TO 20-22 (MTR5)
; 2145 CONI PI(PAR)=530,3 ;WRITE EVEN PARITY ENABLES TO RH (CON1)
; 2146 CONI PAG=531,3 ;CACHE & TRAP CTL TO RH (CON1)
; 2147 RD EBUS REG=567,3 ;EBUS REGISTER IN MBOX (MBZ1 & MBC1)
; 2148
; 2149 PARITY/=0,0,0,P ;USE ANY AVAILABLE FIELD FOR PARITY
; 2150
```


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DISPATCH RAM DEFINITIONS

```

; 2151 .TOC "DISPATCH RAM DEFINITIONS"
; 2152 ;FIELDS ARE ARRANGED FOR EASY READING, NOT COMPACTNESS
; 2153
; 2154 .DCODE
; 2155 A/=<0:2> ;OPERAND FETCH MODE
; 2156 IMMED=0 ;IMMEDIATE
; 2157 IMMED-PF=1 ;IMMEDIATE, START PREFETCH
; 2158 .IF/MODEL.B
; 2159 ADDR=2 ;FULL EFFECTIVE ADDRESS
; 2160 .ENDIF/MODEL.B
; 2161 WR-TST=3 ;TEST WRITABILITY
; 2162 READ=4 ;READ ONLY
; 2163 READ-PF=5 ;READ, THEN PREFETCH
; 2164 RD-WR=6 ;READ WRITE (SEPARATE CYCLES)
; 2165 RD-P-WR=7 ;READ PAUSE WRITE
; 2166
; 2167 B/=<3:5> ;STORE RESULTS AT--
; 2168 DBL AC=1 ;DOUBLE RESULT TO AC & AC+1
; 2169 DBL BOTH=2 ;MULB, DIVB, ETC
; 2170 SELF=3 ;SELF MODE INSTRUCTIONS
; 2171 AC=5 ;SINGLE RESULT TO AC, PREFETCH IN PROG
; 2172 MEM=6 ;RESULT TO MEMORY
; 2173 BOTH=7 ;SINGLE RESULT TO MEMORY AND AC
; 2174
; 2175 SJC-=3 ;SKIP JUMP COMPARE CONTROLS
; 2176 SJCL=2
; 2177 SJCE=1
; 2178 SJCLE=0
; 2179 SJCA=7
; 2180 SJCGE=6
; 2181 SJCN=5
; 2182 SJCG=4
; 2183 BO/=<3:3> ;INVERTS VARIOUS TEST, SKIP, AND JUMP CONTROLS
; 2184 CRYO(0)=0 ;TEST TST CAUSES PC SKIP IF CRYO=0
; 2185 CRYO(1)=1 ; SAME IF CRYO=1
; 2186 B1-2/=<4:5> ;FLOATING RESULT STORE MODE
; 2187 AC=1 ;RESULT TO AC
; 2188 MEM=2 ;RESULT JUST TO MEM
; 2189 BOTH=3 ;RESULT TO BOTH
; 2190
; 2191 PARITY/=<11:11>P
; 2192
; 2193 J/=<14:23> ;EXECUTOR (40&20-BITS ALWAYS 0)
; 2194 .UCODE
; 2195
; 2196 .BIN
; 2197

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CRAM Macros--Miscellaneous and A

; 2198 .TOC "CRAM Macros--Miscellaneous and A"

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; 2199 .NOBIN
; 2200 ;
; 2201 ; All the CRAM macros have been alphabetized for easy reference. We have
; 2202 ; defined "_" to be alphabetically lower than the alphabet (although its
; 2203 ; ASCII representation makes it higher) so that macros such as AR_AR+1
; 2204 ; will precede ARX_AR+1, for example (this seems more intuitive).
; 2205 ;
; 2206 []_[]*[] "01/AD, ADA/02, ADB/03"
; 2207 []_[]*FM[] "03, ADA/02, ADB/FM, 01/AD"
; 2208 []_[]-FM[] "03, ADA/02, ADB/FM, 01/AD, AD/A-B"
; 2209 []_#[] "01_#,#/02"
; 2210 []_ADA[] "01/AD, ADA/02, AD/A"
; 2211 []_ADB[] "01/AD, ADA EN/OS, ADB/02, AD/B"
; 2212 []_FM[] "01/AD, ADA EN/OS, ADB/FM, 02, AD/B"
; 2213
; 2214 (AR+ARX+MQ)*.25 "ADA/AR,AD/A,AR/AD*.25,ARX/ADX*.25,(MQ)*.25"
; 2215 (AR+ARX+MQ)*2 "ADA/AR,AD/A,AR/AD*2,ARX/ADX*2,(MQ)*2"
; 2216 (MQ)*.25 "COND/REG CTL,MQ/MQM SEL,MQ CTL/MQ*.25"
; 2217 (MQ)*2 "COND/REG CTL,MQ/MQ SEL,MQ CTL/MQ*2"
; 2218
; 2219 .IF/MODEL.B
; 2220 A INDRCT "MEM/EA CALC,EA CALC/A IND,VMA/LOAD"
; 2221 A READ "VMA/PC+1,DISP/DRAM A RD,MEM/A RD,#/300,J/O"
; 2222 .IFNOT/MODEL.B
; 2223 A INDRCT "MEM/A IND,VMA/LOAD"
; 2224 A READ "VMA/PC+1,DISP/DRAM A RD,MEM/A RD,#/O,J/O"
; 2225 .ENDIF/MODEL.B
; 2226 ABORT INSTR "COND/SPEC INSTR,SPEC INSTR/INSTR ABORT"
; 2227 ACO "FMADR/ACO"
; 2228 ACO_AR "FMADR/ACO,COND/FM WRITE"
; 2229 AC1_AR "FMADR/AC1,COND/FM WRITE"
; 2230 AC2_AR "FMADR/AC2,COND/FM WRITE"
; 2231 AC3_AR "FMADR/AC3,COND/FM WRITE"
; 2232 .IF/MODEL.B
; 2233 AC4 "FMADR/AC+#,AC-OP/AC+#,AC#/4"
; 2234 .IFNOT/MODEL.B
; 2235 AC4 "FMADR/AC4"
; 2236 .ENDIF/MODEL.B
; 2237 AC4_AR "AC4,COND/FM WRITE"
; 2238 .IF/MODEL.B
; 2239 AC5 "FMADR/AC+#,AC-OP/AC+#,AC#/5"
; 2240 .IFNOT/MODEL.B
; 2241 AC5 "FMADR/AC5"
; 2242 .ENDIF/MODEL.B
; 2243 AC5_AR "AC5,COND/FM WRITE"
; 2244 AD_FLAGS "COND/AD FLAGS"
; 2245 AD_LONG "SPEC/AD LONG"
; 2246 ADMSK "R15" ;23 ONES
; 2247
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; 2248 .TOC "CRAM Macros--AR"
; 2249
; 2250 AR_[ ] AND FM[ ] "ADA/@1,ADB/FM,@2,AD/AND,AR/AD"
; 2251
; 2252 AR_(AR+2BR)*.25 "ADA/AR,ADB/BR*2,AD/A+B,AR/AD*.25"
; 2253 AR_(AR+BR)*.25 "ADA/AR,ADB/BR,AD/A+B,AR/AD*.25"
; 2254 AR_(AR-2BR)*.25 "ADA/AR,ADB/BR*2,AD/A-B,AR/AD*.25"
; 2255 AR_(AR-BR)*.25 "ADA/AR,ADB/BR,AD/A-B,AR/AD*.25"
; 2256 AR_(ARX OR AR*4)*.25 "ADA/ARX,ADB/AR*4,AD/OR,AR/AD*.25"
; 2257 AR_-ACO "FMADR/ACO,ADB/FM,ADA EN/OS,AD/A-B,AR/AD"
; 2258 AR_-AR "ADA EN/OS,ADB/AR*4,AD/A-B,AR/AD*.25"
; 2259 AR_-AR LONG "GEN -AR LONG,AR AD*.25 LONG"
; 2260 AR_-BR "ADB/BR,ADA EN/OS,AD/A-B,AR/AD"
; 2261 AR_-BR LONG "ADA EN/OS,ADB/BR,AD/A-B,AR/AD,ARX/ADX,SPEC/AD LONG"
; 2262 AR_-BR*2 LONG "ADA EN/OS,ADB/BR*2,AD/A-B,AR/AD,ARX/ADX,SPEC/AD LONG"
; 2263 AR_-BRX "ADB/BR,ADA EN/OS,AD/A-B,AR/ADX"
; 2264 AR_-DLEN "DLEN,ADB/FM,ADA EN/OS,AD/A-B,AR/AD"
; 2265 AR_-SLEN "SLEN,ADB/FM,ADA EN/OS,AD/A-B,AR/AD"
; 2266 AR_O.C "COND/ARL IND,CLR/AR"
; 2267 AR_O.M "MEM/ARL IND,CLR/AR"
; 2268 AR_O.S "SPEC/ARL IND,CLR/AR"
; 2269 AR_OS "AD/OS,AR/AD"
; 2270 AR_1 "ADA EN/OS,AD/A+1,AR/AD"
; 2271 AR_1 LONG "ADA EN/OS,AD/A+1,AR/AD*.25,ARX/ADX"
; 2272 AR_1S "AD/1S,AR/AD"
; 2273 AR_2 "ADA EN/OS,AD/A+1,AR/AD*2"
; 2274 AR_2(AR*BR) "ADA/AR,ADB/BR,AR/AD*2"
; 2275 AR_2(AR+1) "ADA/AR,AD/A+1,AR/AD*2"
; 2276 AR_2(AR+BR) "AR_2(AR*BR),AD/A+B"
; 2277 AR_2(AR+BR) LONG "AR_2(AR*BR),AD/A+B,ARX/ADX*2,SPEC/AD LONG"
; 2278 AR_2(AR-BR) "AR_2(AR*BR),AD/A-B"
; 2279
; 2280 AR_ACO "FMADR/ACO,ADB/FM,AD/B,AR/AD"
; 2281 AR_ACO COMP "FMADR/ACO,ADB/FM,AD/SETCB,AR/AD"
; 2282 AR_ACO+1 "ADA EN/OS,ADB/FM,FMADR/ACO,AD/A+B+1,AR/AD"
; 2283 AR_AC1 "FMADR/AC1,ADB/FM,AD/B,AR/AD"
; 2284 AR_AC1 COMP "FMADR/AC1,ADB/FM,AD/SETCB,AR/AD"
; 2285 AR_AC1*2 "FMADR/AC1,ADB/FM,AD/B,AR/AD*2"
; 2286 AR_AC2 "FMADR/AC2,ADB/FM,AD/B,AR/AD"
; 2287 AR_AC3 "FMADR/AC3,ADB/FM,AD/B,AR/AD"
; 2288 AR_AC3*2 "FMADR/AC3,ADB/FM,AD/B,AR/AD*2"
; 2289 AR_AC4 "AC4,ADB/FM,AD/B,AR/AD"
; 2290 AR_AD*.25 LONG "AR/AD*.25,ARX/ADX*.25,SPEC/AD LONG"
; 2291 AR_ADMSK AND VMA HELD "COND/SEL VMA,ADA/PC,ADB/FM,ADMSK,AD/AND,AR/AD"
; 2292
; 2293 AR_AR AND ADMSK "ADMSK,ADB/FM,ADA/AR,AD/AND,AR/AD"
; 2294 .IF/KLPAGE
; 2295 AR_AR AND CSMSK "CSMSK,ADB/FM,ADA/AR,AD/AND,AR/AD"
; 2296 AR_AR OR PUR "PUR,ADB/FM,ADA/AR,AD/OR,AR/AD"
; 2297 .ENDIF/KLPAGE
; 2298 AR_AR SWAP "SH/AR SWAP,AR/SH"
; 2299
; 2300 AR_AR*.25 "ADA/AR,AD/A,AR/AD*.25"
; 2301 AR_AR*.25 LONG "ADA/AR,AD/A,AR/AD*.25,ARX/ADX*.25"
; 2302 AR_AR*.5 "ADA/AR,AD/A*2,AR/AD*.25"
; 2303 AR_AR*.5 LONG "ADA/AR,AD/A*2,SPEC/AD LONG,AR/AD*.25,ARX/ADX*.25"
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; MACRO.MIC[10,5351]

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CRAM Macros--AR

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; 2304 AR_AR*1.25 LONG "ADA/AR,ADB/AR*4,AD/A+B,AR_AD*.25 LONG"
; 2305 AR_AR*10 "ADA/AR,ADB/AR*4,AD/A+B,AR_AD*2"
; 2306 AR_AR*10 LONG "ADA/AR,ADB/AR*4,AD/A+B,AR_AD*2,ARX/ADX*2,SPEC/AD LONG"
; 2307 AR_AR*2 "ADA/AR,AD/A,AR_AD*2"
; 2308 AR_AR*2 LONG "ADA/AR,AD/A,AR_AD*2,ARX/ADX*2"
; 2309 AR_AR*4 "ADB/AR*4,AD/B,AR/AD"
; 2310 AR_AR*4 LONG "ADB/AR*4,AD/B,AR/AD,ARX/ADX"
; 2311 AR_AR*5 LONG "ADA/AR,ADB/AR*4,AD/A+B,AR/AD,ARX/ADX,SPEC/AD LONG"
; 2312 AR_AR*8 "ADB/AR*4,AD/B,AR_AD*2"
; 2313 AR_AR*8 LONG "ADB/AR*4,AD/B,AR_AD*2,ARX/ADX*2"
; 2314 AR_AR*ACO "FMADR/ACO,ADB/FM,ADA/AR,AR/AD" ;GENERAL BINARY OPERATION
; 2315 AR_AR*AC1 "FMADR/AC1,ADB/FM,ADA/AR,AR/AD"
; 2316 AR_AR*BR "ADA/AR,ADB/BR,AR/AD"
; 2317 AR_AR*EXPMSK "EXPMSK,ADB/FM,ADA/AR,AR/AD" ;[224]
; 2318 AR_AR*MSK "MSK,ADB/FM,ADA/AR,AR/AD"
; 2319 AR_AR*SFLGS "SFLGS,ADB/FM,ADA/AR,AR/AD"
; 2320 AR_AR*SLEN "SLEN,ADB/FM,ADA/AR,AR/AD"
; 2321 AR_AR*TO "TO,ADB/FM,ADA/AR,AR/AD"
; 2322
; 2323 AR_AR+1 "ADA/AR,AD/A+1,AR/AD"
; 2324 AR_AR+1 LONG "AR_AR+1,ARX/ADX,SPEC/AD LONG"
; 2325 AR_AR+1-ARO "ADA/AR,AD/A+1,AR/AD,SPEC/XCRY ARO"
; 2326 AR_AR+BR "ADA/AR,ADB/BR,AD/A+B,AR/AD"
; 2327 AR_AR+BR LONG "AR_AR+BR,ARX/ADX,SPEC/AD LONG"
; 2328 AR_AR+E1 "E1,ADB/FM,ADA/AR,AD/A+B,AR/AD"
; 2329 .IF/KLPAGE
; 2330 AR_AR+SBR "SBR,ADB/FM,ADA/AR,AD/A+B,AR/AD"
; 2331 .ENDIF/KLPAGE
; 2332 AR_AR+TO "TO,ADB/FM,ADA/AR,AD/A+B,AR/AD"
; 2333 AR_AR+T1 "T1,ADB/FM,ADA/AR,AD/A+B,AR/AD"
; 2334 .IF/TRXDEF
; 2335 AR_AR+TRB "TRB,ADB/FM,ADA/AR,AD/A+B,AR/AD"
; 2336 AR_AR+TRX "TRX,ADB/FM,ADA/AR,AD/A+B,AR/AD"
; 2337 .ENDIF/TRXDEF
; 2338 AR_AR+XR "GEN AR+XR,AR/AD"
; 2339
; 2340 AR_AR-1 "ADA/AR,AD/A-1,AR/AD"
; 2341 AR_AR-BR "ADA/AR,ADB/BR,AD/A-B,AR/AD"
; 2342 AR_AR-BR LONG "AR_AR-BR,ARX/ADX,SPEC/AD LONG"
; 2343 AR_AR-BR-1 "GEN AR*BR,AD/A-B-1,AR/AD"
; 2344 AR_AR-TO "TO,ADB/FM,ADA/AR,AD/A-B,AR/AD"
; 2345
; 2346 AR_ARX "SH/ARX,AR/SH"
; 2347 AR_ARX (AD) "ADA/ARX,AD/A,AR/AD"
; 2348 AR_ARX (ADX) "ADA EN/EN,AD/A,AR/ADX"
; 2349 AR_ARX AND ADMSK "ADMSK,ADB/FM,ADA/ARX,AD/AND,AR/AD"
; 2350 AR_ARX ANDC ADMSK "ADMSK,ADB/FM,ADA/ARX,AD/ANDCB,AR/AD"
; 2351 AR_ARX COMP "ADA EN/EN,AD/SETCA,AR/ADX"
; 2352 .IF/KLPAGE
; 2353 AR_ARX OR PUR "PUR,ADB/FM,ADA/ARX,AD/OR,AR/AD"
; 2354 .ENDIF/KLPAGE
; 2355 AR_ARX*.25 "ADA/ARX,AD/A,AR/AD*.25"
; 2356 AR_ARX*.25-AR-1 "ADB/AR*4,ADA/ARX,AD/A-B-1,AR/AD*.25"
; 2357 AR_ARX*2 "ADA/ARX,AD/A,AR/AD*2"
; 2358 AR_ARX*4 "ADB/AR*4,AD/B,AR/ADX"
; 2359 AR_ARX*4 COMP "ADB/AR*4,AD/SETCB,AR/ADX"

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; 2360 AR_ARX*AC1 "FMADR/AC1,ADB/FM,ADA/ARX,AR/AD"
; 2361 AR_ARX*BR "ADA/ARX,ADB/BR,AR/AD"
; 2362 AR_ARX*BRX "ADA/AR,ADB/BR,AR/ADX"
; 2363 AR_ARX*E1 "E1,ADB/FM,ADA/ARX,AR/AD"
; 2364 AR_ARX+1 (AD) "ADA/ARX,AD/A+1,AR/AD"
; 2365 AR_ARX+AR*4 "ADA/ARX,ADB/AR*4,AD/A+B,AR/AD"
; 2366 AR_ARX+BR "ADA/ARX,ADB/BR,AD/A+B,AR/AD"
; 2367 AR_ARX+XR "GEN ARX+XR,AR/AD"
; 2368 AR_ARX-1 "ADA EN/EN,AD/A-1,AR/ADX"
; 2369 AR_ARX-BR "ADA/ARX,ADB/BR,AD/A-B,AR/AD"
; 2370
; 2371 AR_BR "ADB/BR,AD/B,AR/AD"
; 2372 AR_BR COMP "ADB/BR,AD/SETCB,AR/AD"
; 2373 AR_BR COMP LONG "ADB/BR,AD/SETCB,AR/AD,ARX/ADX"
; 2374 AR_BR LONG "ADB/BR,AD/B,AR/AD,ARX/ADX"
; 2375 AR_BR OR ARX "ADA/ARX,ADB/BR,AD/OR,AR/AD"
; 2376 AR_BR*.5 "ADB/BR*2,AD/B,AR/AD*.25"
; 2377 AR_BR*.5 LONG "ADB/BR*2,AD/B,AR/AD*.25,ARX/ADX*.25"
; 2378 AR_BR*2 "ADB/BR*2,AD/B,AR/AD"
; 2379 AR_BR*2 LONG "ADB/BR*2,AD/B,AR/AD,ARX/ADX"
; 2380 AR_BR*4 "ADB/BR*2,AD/B,AR/AD*2" ;[230]
; 2381 AR_BR*4 LONG "ADB/BR*2,AD/B,AR/AD*2,ARX/ADX*2"
; 2382 AR_BR+1 "ADB/BR,ADA EN/OS,AD/A+B+1,AR/AD"
; 2383 AR_BR+1 LONG "ADA EN/OS,ADB/BR,AD/A+B+1,AR/AD,ARX/ADX,SPEC/AD LONG"
; 2384 AR_BRX "ADB/BR,AD/B,AR/ADX"
; 2385 AR_BRX+1 "ADA EN/OS,ADB/BR,AD/A+B+1,AR/ADX"
; 2386
; 2387 AR_CACHE CNT "DIAG IN,DIAG FUNC/RD CACHE CNT"
; 2388 AR_DLEN "DLEN,AR_FM"
; 2389 AR_DLEN COMP "DLEN,ADB/FM,AD/SETCB,AR/AD"
; 2390 AR_DLEN+1 "DLEN,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2391 AR_DSTP "DSTP,AR_FM"
; 2392 AR_DSTP+1 "DSTP,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2393 AR_DSTP2 "DSTP2,AR_FM"
; 2394 AR_DSTP2+1 "DSTP2,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2395 AR_DSTW "DSTW,AR_FM"
; 2396 AR_EO "EO,AR_FM"
; 2397 AR_E1 "E1,AR_FM"
; 2398 AR_EBOX CNT "DIAG IN,DIAG FUNC/RD EBOX CNT"
; 2399 AR_EBUS "AR/EBUS,TIME/5T"
; 2400 AR_EBUS REG "DIAG IN,DIAG FUNC/RD EBUS REG"
; 2401 AR_FILL "FILL,AR_FM"
; 2402 AR_FM "ADB/FM,AD/B,AR/AD"
; 2403 AR_FM[] "AR/AD,AD/B,ADB/FM,@1" ;[274]
; 2404 .IF/MODEL.B
; 2405 AR_FM( # ) "FMADR/AC+ # ,AC-OP/AC+ # ,ADB/FM,AD/B,AR/AD"
; 2406 .ENDIF/MODEL.B
; 2407 AR_FM(VMA) "FMADR/VMA,ADB/FM,AD/B,AR/AD"
; 2408 AR_INTERVAL "DIAG IN,DIAG FUNC/RD INTRVL"
; 2409
; 2410 AR_MEM "MEM/MB WAIT,FMADR/VMA,ADB/FM,AD/B"
; 2411 AR_MQ "ADA/MQ,AD/A,AR/AD"
; 2412 AR_MQ COMP "ADA/MQ,AD/SETCA,AR/AD"
; 2413 AR_MQ*.25 "ADA/MQ,AD/A,AR/AD*.25"
; 2414 AR_MQ*2 "ADA/MQ,AD/A,AR/AD*2"
; 2415 AR_MQ*4 "ADA/MQ,AD/A*2,AR/AD*2"
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; MACRO.MIC[10,5351]

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GRAM Macros--AR

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; 2416 AR_MQ*AC1      "FMADR/AC1,ADB/FM,ADA/MQ,AR/AD"
; 2417 AR_MQ*AC2      "FMADR/AC2,ADB/FM,ADA/MQ,AR/AD"
; 2418 AR_MQ*AC3      "FMADR/AC3,ADB/FM,ADA/MQ,AR/AD"
; 2419 AR_MQ+1        "ADA/MQ,AD/A+1,AR/AD"
; 2420 AR_MQ+AC0      "FMADR/ACO,ADB/FM,ADA/MQ,AD/A+B,AR/AD"
; 2421 AR_MQ-1        "ADA/MQ,AD/A-1,AR/AD"
; 2422 AR_MQ-BR       "ADA/MQ,ADB/BR,AD/A-B,AR/AD"
; 2423 AR_MTR REQ     "DIAG IN,DIAG FUNC/RD MTR REQ"
; 2424 AR_PC          "ADA/PC,AD/A,AR/AD"
; 2425 AR_PC FLAGS    "ADMSK,ADB/FM,ADA/PC,AD/ANDCB,AR/AD"
; 2426 AR_PC+1        "ADA/PC,AD/A+1,AR/AD,SPEC/SAVE FLAGS"
; 2427 AR_PERF CNT    "DIAG IN,DIAG FUNC/RD PERF CNT"
; 2428 AR_PERIOD      "DIAG IN,DIAG FUNC/RD PERIOD"
; 2429 .IF/KLPAGE
; 2430 AR_PUR+ARO      "PUR,ADB/FM,ADA EN/OS,AD/A+B,SPEC/XCRY ARO,AR/AD"
; 2431 .ENDIF/KLPAGE
; 2432
; 2433 AR_SERIAL      "AR/ARMM,COND/REG CTL,AR CTL/ARR LOAD"
; 2434 AR_SFLGS        "SFLGS,AR_FM"
; 2435 AR_SHIFT        "SH/SHIFT AR!ARX,AR/SH"
; 2436 AR_SIGN         "AD/XCRY-1,SPEC/XCRY ARO,AR/AD"
; 2437 AR_SLEN         "SLEN,AR_FM"
; 2438 AR_SLEN COMP    "SLEN,ADB/FM,AD/SETCB,AR/AD"
; 2439 AR_SLEN+1       "SLEN,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2440 AR_SRCF         "SRCF,AR_FM"
; 2441 AR_SRCF+1       "SRCF,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2442 AR_SRCF2        "SRCF2,AR_FM"
; 2443 AR_SRCF2+1      "SRCF2,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2444 AR_SV.AR        "SV.AR,AR_FM"
; 2445 .IF/KLPAGE
; 2446 AR_SV.ARX        "SV.ARX,AR_FM"
; 2447 AR_SV.BR        "SV.BR,AR_FM"
; 2448 AR_SV.PFW       "SV.PFW,AR_FM"
; 2449 AR_SV.SC        "SV.SC,AR_FM"
; 2450 AR_SV.VMA        "SV.VMA,AR_FM"
; 2451 .ENDIF/KLPAGE
; 2452 AR_SWF          "SWF,AR_FM"
; 2453
; 2454 AR_TO            "TO,AR_FM"
; 2455 AR_T1            "T1,AR_FM"
; 2456 AR_T2            "T2,AR_FM"
; 2457 AR_TIME BASE    "DIAG IN,DIAG FUNC/RD TIME"
; 2458 .IF/TRXDEF
; 2459 AR_TRB           "TRB,AR_FM"
; 2460 AR_TRX           "TRX,AR_FM"
; 2461 AR_TRX+1        "TRX,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2462 AR_TRX1         "TRX1,AR_FM"
; 2463 AR_TRX2         "TRX2,AR_FM"
; 2464 AR_TRX2+1       "TRX2,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2465 AR_TRX3         "TRX3,AR_FM"
; 2466 AR_TRX3+1       "TRX3,ADB/FM,ADA EN/OS,AD/A+B+1,AR/AD"
; 2467 .ENDIF/TRXDEF
; 2468 AR_VMA HELD     "COND/SEL VMA,AR_PC"
; 2469 AR_XR          "FMADR/XR,ADB/FM,AD/B,AR/AD"
; 2470

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; 2471 .TOC "CRAM Macros--AR Miscellaneous, ARL, and ARR"
; 2472
; 2473 AR+ARX+MQ_O.M "MEM/ARL IND,CLR/AR+ARX+MQ"
; 2474 AR+MQ_O.M "MEM/ARL IND,CLR/AR+MQ"
; 2475 AR+MQ_O.S "SPEC/ARL IND,CLR/AR+MQ"
; 2476
; 2477 ARO-3 DISP "SH/AR,DISP/SHO-3"
; 2478 ARO-8_# "COND/LD ARO-8,AR/ARMM,ARMM/#"
; 2479 ARO-8_# AND ARO-8 "SCADA/#,SCADB/ARO-8,SCAD/AND,ARO-8_SCAD#"
; 2480 ARO-8_# OR ARO-8 "SCADA/#,SCADB/ARO-8,SCAD/OR,ARO-8_SCAD#"
; 2481 ARO-8_# +SC "SCADA/#,SCADB/SC,SCAD/A+B,ARO-8_SCAD#"
; 2482 ARO-8_-SC-1 "SCADA EN/OS,SCADB/SC,SCAD/A-B-1,ARO-8_SCAD"
; 2483 ARO-8_FE "SCADA/FE,SCAD/A,ARO-8_SCAD"
; 2484 ARO-8_FE OR # "SCADA/FE,SCADB/#,SCAD/OR,ARO-8_SCAD#"
; 2485 ARO-8_FE OR SC "SCADA/FE,SCADB/SC,SCAD/OR,ARO-8_SCAD.M"
; 2486 ARO-8_FE# "SCADA/FE,SCAD/A,ARMM/SCAD EXP,AR/ARMM,COND/LD ARO-8"
; 2487 ARO-8_FE+# "SCADA/FE,SCADB/#,SCAD/A+B,ARO-8_SCAD#"
; 2488 ARO-8_FE+1 "SCADA/FE,SCAD/A+1,ARO-8_SCAD"
; 2489 ARO-8_FE+SC "SCADA/FE,SCADB/SC,SCAD/A+B,ARO-8_SCAD.M"
; 2490 ARO-8_FE-SC "SCADA/FE,SCADB/SC,SCAD/A-B,ARO-8_SCAD.M"
; 2491 ARO-8_FE.M "SCADA/FE,SCAD/A,ARO-8_SCAD.M"
; 2492 ARO-8_FE.R "GEN FE,ARO-8_SCAD.R"
; 2493 ARO-8_SC "SCADA EN/OS,SCADB/SC,SCAD/A+B,ARO-8_SCAD"
; 2494 ARO-8_SCAD "SPEC/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/SCAD EXP"
; 2495 ARO-8_SCAD# "ARMM/SCAD EXP,AR/ARMM,COND/LD ARO-8"
; 2496 ARO-8_SCAD.M "MEM/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/SCAD EXP"
; 2497 ARO-8_SCAD.R "ARMM/SCAD EXP,AR/ARMM,COND/REG CTL,AR CTL/ARO-8 LOAD"
; 2498 AR12-17_PC SEC "AR/ARMM,VMAX/PC SEC,COND/LD AR9-17"
; 2499 AR12-17_PREV SEC "AR/ARMM,VMAX/PC SEC,COND/LD AR9-17"
; 2500 AR18-21 DISP "SH/AR SWAP,DISP/SHO-3"
; 2501
; 2502 ARL_O.C "COND/ARL IND,CLR/ARL"
; 2503 ARL_O.M "MEM/ARL IND,CLR/ARL"
; 2504 ARL_O.S "SPEC/ARL IND,CLR/ARL"
; 2505 ARL_OS "COND/ARL IND,CLR/ARL"
; 2506 ARL_1.M "ADA EN/OS,AD/A+1,SPEC/GEN CRY18,MEM/ARL IND,ARL/AD"
; 2507 ARL_1S "AD/1S,COND/ARL IND,ARL/AD"
; 2508 ARL_1S.M "AD/1S,MEM/ARL IND,ARL/AD"
; 2509 ARL_ACO "FMADR/ACO,ADB/FM,AD/B,COND/ARL IND,ARL/AD"
; 2510 ARL_ARL "COND/ARL IND,ARL/ARL"
; 2511 ARL_ARL.M "MEM/ARL IND,ARL/ARL"
; 2512 ARL_ARL.S "SPEC/ARL IND,ARL/ARL"
; 2513 ARL_ARR "COND/ARL IND,ARL/SH,SH/AR SWAP"
; 2514 ARL_ARR.M "MEM/ARL IND,ARL/SH,SH/AR SWAP"
; 2515 ARL_ARR.S "SPEC/ARL IND,ARL/SH,SH/AR SWAP"
; 2516 ARL_ARX (ADX) "ADA EN/EN,AD/A,MEM/ARL IND,ARL/ADX"
; 2517 ARL_ARXL "SPEC/ARL IND,SH/ARX,ARL/SH"
; 2518 ARL_ARXL.M "MEM/ARL IND,SH/ARX,ARL/SH"
; 2519 ARL_BRL "ADB/BR,AD/B,COND/ARL IND,ARL/AD"
; 2520 ARL_BRL.M "ADB/BR,AD/B,MEM/ARL IND,ARL/AD"
; 2521 ARL_BRL.S "ADB/BR,AD/B,SPEC/ARL IND,ARL/AD"
; 2522 ARL_SHIFT "MEM/ARL IND,SH/SHIFT AR!ARX,ARL/SH"
; 2523 ARL_SIGN "AD/XCRY-1,SPEC/XCRY ARO,COND/ARL IND,ARL/AD"
; 2524 ARL+ARX+MQ_O.M "MEM/ARL IND,CLR/ARL+ARX+MQ"
; 2525 ARL+ARX_O.M "MEM/ARL IND,CLR/ARL+ARX"
; 2526
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; KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C) 1984 DIGITAL EQUIPMENT CORPORATION V1(336)
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; MACRO.MIC[10,5351] 21:14 28-Nov-83 CRAM Macros--AR Miscellaneous, ARL, and ARR

MICR

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; 2527 ARR_O.C      "COND/ARL IND,CLR/ARR"
; 2528 ARR_O.M      "MEM/ARL IND,CLR/ARR"
; 2529 ARR_O.S      "SPEC/ARL IND,CLR/ARR"
; 2530 ARR_OS       "AR_OS"
; 2531 ARR_1S       "AR_1S"
; 2532 ARR_ACO      "AR_ACO"
; 2533 ARR_ACO.S    "SPEC/ARL IND,FMADR/ACO,ADB/FM,AD/B,AR/AD"
; 2534 ARR_ARL      "SH/AR SWAP,AR/SH"
; 2535 ARR_ARR      "AR/AR"
; 2536 ARR_BR       "ADB/BR,AD/B,COND/ARL IND,AR/AD"      :[252]
; 2537 ARR_PC+1     "ADA/PC,AD/A+1,AR/AD"
; 2538 ARR+MQ_O.S   "SPEC/ARL IND,CLR/ARR+MQ"
; 2539
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; MACRO.MIC[10,5351]

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GRAM Macros--ARX

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; 2540 .TOC "GRAM Macros--ARX"
; 2541
; 2542 ARX_-ACO "ADA EN/OS,ADB/FM,FMADR/ACO,AD/A-B,ARX/AD"
; 2543 ARX_-BRX "ADB/BR,ADA EN/OS,AD/A-B,ARX/ADX"
; 2544 ARX_-SLEN "SLEN,ADB/FM,ADA EN/OS,AD/A-B,ARX/AD"
; 2545 ARX_O.C "COND/ARL IND,CLR/ARX"
; 2546 ARX_O.M "MEM/ARL IND,CLR/ARX"
; 2547 ARX_O.S "SPEC/ARL IND,CLR/ARX"
; 2548 ARX_OS "AD/OS,ARX/AD"
; 2549 ARX_1 "ADA EN/OS,AD/A+1,ARX/AD"
; 2550 ARX_1B1 "ADA EN/OS,AD/A+1,ARX/ADX*.25"
; 2551 ARX_1B17-1 "ADA EN/OS,AD/A-1,SPEC/GEN CRY18,ARX/AD"
; 2552 ARX_1S "AD/1S,ARX/AD"
; 2553 ARX_2 "ADA EN/OS,AD/A+1,ARX/ADX*2"
; 2554
; 2555 ARX_ACO "FMADR/ACO,ADB/FM,AD/B,ARX/AD"
; 2556 ARX_ACO COMP "ADB/FM,FMADR/ACO,AD/SETCB,ARX/AD"
; 2557 ARX_ACO+1 "ADA EN/OS,ADB/FM,FMADR/ACO,AD/A+B+1,ARX/AD"
; 2558 ARX_AC1 "FMADR/AC1,ADB/FM,AD/B,ARX/AD"
; 2559 ARX_AC2 "FMADR/AC2,ADB/FM,AD/B,ARX/AD"
; 2560 ARX_AC3 "FMADR/AC3,ADB/FM,AD/B,ARX/AD"
; 2561 ARX_AC4 "AC4,ADB/FM,AD/B,ARX/AD"
; 2562
; 2563 ARX_AR "SH/AR,ARX/SH"
; 2564 ARX_AR (AD) "ADA/AR,AD/A,ARX/AD"
; 2565 ARX_AR AND ADMSK "ADMSK,ADB/FM,ADA/AR,AD/AND,ARX/AD"
; 2566 ARX_AR ANDCA BR "ADA/AR,ADB/BR,AD/ANDCA,ARX/AD"
; 2567 ARX_AR SIGN "AD/XCRY-1,SPEC/XCRY ARO,ARX/AD"
; 2568 ARX_AR SWAP "SH/AR SWAP,ARX/SH"
; 2569 ARX_AR*4 COMP "ADB/AR*4,AD/SETCB,ARX/AD"
; 2570 ARX_AR*MSK "MSK,ADB/FM,ADA/AR,ARX/AD"
; 2571 ARX_AR+1 "ADA/AR,AD/A+1,ARX/AD"
; 2572 .IF/KLPAGE
; 2573 ARX_AR+CBR "CBR,ADB/FM,ADA/AR,AD/A+B,ARX/AD"
; 2574 .ENDIF/KLPAGE
; 2575 ARX_AR-1 "ADA/AR,AD/A-1,ARX/AD"
; 2576 ARX_AR-BR "ADA/AR,ADB/BR,AD/A-B,ARX/AD" ;[224]
; 2577
; 2578 ARX_ARX AND ADMSK "ADMSK,ADB/FM,ADA/ARX,AD/AND,ARX/AD"
; 2579 ARX_ARX ANDC ADMSK "ADMSK,ADB/FM,ADA/ARX,AD/ANDCB,ARX/AD"
; 2580 ARX_ARX*-6 "ADA EN/EN,ADB/AR*4,AD/A-B,ARX/ADX*2"
; 2581 ARX_ARX*.25 "ADA EN/EN,AD/A,ARX/ADX*.25"
; 2582 ARX_ARX*.5 "ADA EN/EN,AD/A*2,ARX/ADX*.25"
; 2583 ARX_ARX*2 "ADA EN/EN,AD/A,ARX/ADX*2"
; 2584 ARX_ARX*2 COMP "ADA EN/EN,AD/SETCA,ARX/ADX*2"
; 2585 ARX_ARX*4 "ADB/AR*4,AD/B,ARX/ADX"
; 2586 ARX_ARX*4 COMP "ADB/AR*4,AD/SETCB,ARX/ADX"
; 2587 ARX_ARX*8 "ADB/AR*4,AD/B,ARX/ADX*2"
; 2588 ARX_ARX*BRX "ADA/AR,ADB/BR,ARX/ADX"
; 2589 ARX_ARX*EXPMSK "EXPMSK,ADB/FM,ADA/ARX,ARX/AD" ;[224]
; 2590 ARX_ARX+1 "ADA EN/EN,AD/A+1,ARX/ADX"
; 2591 .IF/KLPAGE
; 2592 ARX_ARX+CBR "CBR,ADB/FM,ADA/ARX,AD/A+B,ARX/AD"
; 2593 .ENDIF/KLPAGE
; 2594 ARX_ARX-1 "ADA EN/EN,AD/A-1,ARX/ADX"
; 2595 ARX_ARX-1 (AD) "ADA/ARX,AD/A-1,ARX/AD"

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; 2596
; 2597 ARX_BR "ADB/BR,AD/B,ARX/AD"
; 2598 ARX_BR*2 "ADB/BR*2,AD/B,ARX/AD"
; 2599 ARX_BR+1 "ADB/BR,ADA EN/OS,AD/A+B+1,ARX/AD"
; 2600 ARX_BRX "ADB/BR,AD/B,ARX/ADX"
; 2601 ARX_BRX COMP "ADB/BR,AD/SETCB,ARX/ADX"
; 2602 ARX_BRX+1 "ADA EN/OS,ADB/BR,AD/A+B+1,ARX/ADX"
; 2603 ARX_DSTP "DSTP,ARX_FM"
; 2604 ARX_DSTP2 "DSTP2,ARX_FM"
; 2605 ARX_E1 "E1,ARX_FM"
; 2606 ARX_FILL "FILL,ARX_FM"
; 2607 ARX_FM "ADB/FM,AD/B,ARX/AD"
; 2608 ARX_FM(VMA) "FMADR/VMA,ADB/FM,AD/B,ARX/AD"
; 2609 ARX_MEM "MEM/MB WAIT,FMADR/VMA,ADB/FM,AD/B"
; 2610
; 2611 ARX_PC "ADA/PC,AD/A,ARX/AD"
; 2612 ARX_PC+1 "ADA/PC,AD/A+1,ARX/AD,SPEC/SAVE FLAGS"
; 2613 ARX_SHIFT "SH/SHIFT AR!ARX,ARX/SH"
; 2614 ARX_SRCF "SRCF,ARX_FM"
; 2615 ARX_SRCF2 "SRCF2,ARX_FM"
; 2616 .IF/KLPAGE
; 2617 ARX_SV.AR "SV.AR,ARX_FM"
; 2618 ARX_SV.ARX "SV.ARX,ARX_FM"
; 2619 ARX_SV.BR "SV.BR,ARX_FM"
; 2620 ARX_SV.VMA "SV.VMA,ARX_FM"
; 2621 .ENDIF/KLPAGE
; 2622 ARX_TO "TO,ARX_FM"
; 2623 ARX_T2 "T2,ARX_FM"
; 2624 .IF/TRXDEF
; 2625 ARX_TRB "TRB,ARX_FM"
; 2626 .ENDIF/TRXDEF
; 2627 ARX_VMA HELD "COND/SEL VMA,ARX_PC"
; 2628 ARX+MQ_O.M "MEM/ARL IND,CLR/ARX+MQ"
; 2629 ARX+MQ_O.S "SPEC/ARL IND,CLR/ARX+MQ"
; 2630 ARXO_MQ35 "ADA/MQ,AD/A*2+1,ARX/ADX*.25"
; 2631 ARXO-3 DISP "SH/ARX,DISP/SHO-3"
; 2632
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;[310]


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; 2633 .TOC "CRAM Macros--B, C, D"
; 2634
; 2635 B DISP "DISP/DRAM B"
; 2636 B WRITE "DISP/DRAM B, MEM/B WRITE"
; 2637 BLKO TIM(L) "SPEC/MTR CTL, DIAG OUT, DIAG FUNC/LD PA LEFT"
; 2638 BLKO TIM(R) "SPEC/MTR CTL, DIAG OUT, DIAG FUNC/LD PA RIGHT"
; 2639 BR_AR LONG "BR/AR, BRX/ARX"
; 2640 BYTE DISP "DISP/BYTE"
; 2641 .IFNOT/MODEL.B
; 2642 BYTE INDRCT "MEM/BYTE IND, VMA/LOAD"
; 2643 .IF/MODEL.B
; 2644 BYTE INDRCT "MEM/EA CALC, EA CALC/BYTE IND, VMA/LOAD"
; 2645 .ENDIF/MODEL.B
; 2646 BYTE PREV & CLR SR3 "COND/SR_#, #/640"
; 2647 BYTE PREV & SET SR2 "COND/SR_#, #/622"
; 2648 BYTE PREV & SET SR3 "COND/SR_#, #/641"
; 2649 .IF/MODEL.B
; 2650 BYTE READ "MEM/EA CALC, EA CALC/BYTE RD, VMA/LOAD"
; 2651 BYTE READ PC "MEM/EA CALC, EA CALC/BYTE RD PC, VMA/LOAD"
; 2652 BYTE RPW "MEM/EA CALC, EA CALC/BYTE RPW, VMA/LOAD"
; 2653 .IFNOT/MODEL.B
; 2654 BYTE READ "MEM/BYTE RD, VMA/LOAD"
; 2655 BYTE RPW "MEM/RPW, VMA/AD"
; 2656 .ENDIF/MODEL.B
; 2657
; 2658 .IF/MODEL.B
; 2659 CALL "CALL/CALL"
; 2660 .IFNOT/MODEL.B
; 2661 CALL "SPEC/CALL"
; 2662 .ENDIF/MODEL.B
; 2663 CALL [ ] "CALL, J/@1"
; 2664 CALL [ ] "CALL, J/@1"
; 2665 .IF/MODEL.B
; 2666 CALL.C "CALL/CALL"
; 2667 CALL.M "CALL/CALL"
; 2668 CALL.S "CALL/CALL"
; 2669 .IFNOT/MODEL.B
; 2670 CALL.C "COND/ARL IND, CALL/CALL"
; 2671 CALL.M "MEM/ARL IND, CALL/CALL"
; 2672 CALL.S "SPEC/ARL IND, CALL/CALL"
; 2673 .ENDIF/MODEL.B
; 2674 .IF/KLPAGE
; 2675 CBR "P2"
; 2676 .ENDIF/KLPAGE
; 2677 CLR ACC+SET UCODE "COND/EBOX STATE, #/245"
; 2678 CLR ACCOUNT EN "COND/EBOX STATE, #/145"
; 2679 CLR AR "COND/AR CLR"
; 2680 CLR ARX "COND/ARX CLR"
; 2681 CLR EBUS DEMAND "COND/EBUS CTL, EBUS CTL/EBUS NODEMAND"
; 2682 CLR EXP "SCADA EN/OS, SCAD/A, EXP_SCAD"
; 2683 CLR FE "SCADA EN/OS, SCAD/A, FE/SCAD"
; 2684 CLR FPD "SPEC/CLR FPD"
; 2685 CLR MQ "COND/REG CTL, MQ/MQ SEL, MQ CTL/OS"
; 2686 CLR MTR PA EN "COND/EBOX STATE, #/025"
; 2687 CLR P "SCADA EN/OS, SCAD/A, P_SCAD"
; 2688 CLR PT LINE "COND/MBOX CTL, MBOX CTL/CLR PT LINE"
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; 2689 CLR PT LINE (KEEP) "COND/MBOX CTL,MBOX CTL/CLR PT LINE(NK)"
; 2690 CLR SC "SCADA EN/OS,SCAD/A,SC/SCAD"
; 2691 CLR SPECIAL CYCLE "COND/SPEC INSTR,SPEC INSTR/O"
; 2692 CLR SR2 "COND/SR_#,#/20"
; 2693 CLR SR3 "COND/SR_#,#/40"
; 2694 CLR TRACKS EN "COND/EBOX STATE,#/121"
; 2695 CLR TRK+PA EN "COND/EBOX STATE,#/021"
; 2696 CMS FETCH "VMA/PC+1,MEM/FETCH,FETCH/SKIP"
; 2697 COMP FETCH "AD/XOR,VMA/PC+1,MEM/FETCH,FETCH/COMP"
; 2698 CONI APR(L) "DIAG IN,DIAG FUNC/CONI APR(L)"
; 2699 CONI APR(R) "DIAG IN,DIAG FUNC/CONI APR(R)"
; 2700 CONI MTR "DIAG IN,DIAG FUNC/CONI MTR"
; 2701 CONI PAG "DIAG IN,DIAG FUNC/CONI PAG"
; 2702 CONI PI(L) "DIAG IN,DIAG FUNC/CONI PI(L)"
; 2703 CONI PI(PAR) "DIAG IN,DIAG FUNC/CONI PI(PAR)"
; 2704 CONI PI(R) "DIAG IN,DIAG FUNC/CONI PI(R)"
; 2705 CONO APR "DIAG OUT,DIAG FUNC/CONO APR"
; 2706 CONO MTR "SPEC/MTR CTL,DIAG OUT,DIAG FUNC/CONO MTR"
; 2707 CONO PAG "DIAG OUT,DIAG FUNC/CONO PAG"
; 2708 CONO PI "DIAG OUT,DIAG FUNC/CONO PI"
; 2709 CONO TIM "SPEC/MTR CTL,DIAG OUT,DIAG FUNC/CONO TIM"
; 2710 CONTINUE "COND/SPEC INSTR,SPEC INSTR/CONT"
; 2711 .IF/KLPAGE
; 2712 CSMSK "PO"
; 2713 .ENDIF/KLPAGE
; 2714
; 2715 DATAI APR(L) "DIAG IN,DIAG FUNC/DATAI APR"
; 2716 DATAI PAG(L) "DIAG IN,DIAG FUNC/DATAI PAG(L)"
; 2717 DATAO APR "DIAG OUT,DIAG FUNC/DATAO APR"
; 2718 DATAO PAG(L) "DIAG OUT,DIAG FUNC/DATAO PAG"
; 2719 DIAG IN "COND/DIAG FUNC,TIME/5T,AR/EBUS"
; 2720 DIAG OUT "COND/DIAG FUNC,TIME/5T,ADA/AR,AD/A"
; 2721 DISMISS "SPEC/FLAG CTL,FLAG CTL/DISMISS"
; 2722 DIVIDE "FE_FE-1,DISP/DIV,MQ/MQ*2"
; 2723 DLEN "FMADR/AC3"
; 2724 DLEN_AR "DLEN,FM_AR"
; 2725 DROP_EBUS REQ "COND/EBUS CTL,EBUS CTL/O"
; 2726 .IF/MODEL.B
; 2727 DSTP "FMADR/AC+#,AC-OP/AC+#,AC#/4"
; 2728 .IFNOT/MODEL.B
; 2729 DSTP "FMADR/AC4"
; 2730 .ENDIF/MODEL.B
; 2731 DSTP_AR "DSTP,FM_AR"
; 2732 .IF/MODEL.B
; 2733 DSTP2 "FMADR/AC+#,AC-OP/AC+#,AC#/5"
; 2734 .ENDIF/MODEL.B
; 2735 DSTP2_AR "DSTP2,FM_AR"
; 2736 DSTW "R14"
; 2737 DSTW_AR "DSTW,FM_AR"
; 2738
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; 2739 .TUC "CRAM Macros--E, F"
; 2740
; 2741 EO "R16"
; 2742 EO_AR "EO,FM_AR"
; 2743 E1 "R5"
; 2744 E1_AR "E1,FM_AR"
; 2745 .IF/XADDR
; 2746 EA MOD DISP "DISP/EA MOD,AD/1S"
; 2747 .IFNOT/XADDR
; 2748 EA MOD DISP "DISP/EA MOD"
; 2749 EA TYPE DISP "DISP/EA TYPE"
; 2750 .ENDIF/XADDR
; 2751 EPT FETCH "MEM/LOAD ARX,SPEC/SP MEM CYCLE,SP MEM/EPT FETCH"
; 2752 EPT REF "SPEC/SP MEM CYCLE,SP MEM/EPT"
; 2753 EPT REF CACHE "SPEC/SP MEM CYCLE,SP MEM/EPT CACHE"
; 2754 EXEC REF "SPEC/SP MEM CYCLE,SP MEM/EXEC"
; 2755 EXIT "DISP/DRAM B, MEM/B WRITE,J/STO"
; 2756 EXIT DBL "MB WAIT,J/ST2AC" ; "I FETCH,J/DSTAC" WHEN TIMING FIXED
; 2757 EXP TEST "COND/REG CTL,EXP TST/AR_EXP"
; 2758 EXP TST "COND/REG CTL,EXP TST/AR_EXP"
; 2759 EXPMSK "R4" ; [224][233]
; 2760 EXP_SC-1 "SCADA EN/OS,SCADB/SC,SCAD/A-B-1,EXP_SCAD"
; 2761 EXP_SC-1 TST "SCADA EN/OS,SCADB/SC,SCAD/A-B-1,EXP_SCAD.C,EXP TST"
; 2762 EXP_1 "SCADA EN/OS,SCAD/A+1,EXP_SCAD"
; 2763 EXP_FE TST "SCADA/FE,SCAD/A,EXP_SCAD.C,EXP TST"
; 2764 EXP_SC "SCADA EN/OS,SCADB/SC,SCAD/A+B,EXP_SCAD"
; 2765 EXP_SC.MS "MEM/ARL IND,ARL/ARMM,COND/LD ARO-8,ARMM/SCAD EXP,EXP_SCAD.MS"; [224]
; 2766 EXP_SCAD "MEM/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/SCAD EXP"
; 2767 EXP_SCAD.C "COND/REG CTL,AR CTL/ARO-8 LOAD,AR/ARMM,ARMM/SCAD EXP"
; 2768 EXP_SCAD.MS "SCADA EN/OS,SCADB/SC,SCAD/A+B"
; 2769 EXP_SIGN "SPEC/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/EXP_SIGN"
; 2770 EXP_SIGN.C "COND/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/EXP_SIGN"
; 2771 EXP_SIGN.M "MEM/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/EXP_SIGN"
; 2772 EXP_SIGN.MS "MEM/ARL IND,ARL/ARMM,COND/LD ARO-8,ARMM/EXP_SIGN"; [224]
; 2773 .IF/MODEL.B
; 2774 EXT ADDR "MEM/A RD,#/400,DISP/DRAM B"
; 2775 EXT BYTE READ "MEM/EA CALC,EA CALC/BYTE RD,VMA/LOAD,GLOBAL"
; 2776 EXT INDEX "MEM/A RD,#/400,DISP/DRAM A RD"
; 2777 EXT INDRCT "MEM/EA CALC,EA CALC/A IND,VMA/LOAD"
; 2778 .ENDIF/MODEL.B
; 2779
; 2780 FE_# "SCADA/#,SCAD/A,FE/SCAD"
; 2781 FE_# AND S "SCADA/#,SCADB/AR6-11,SCAD/AND,FE/SCAD"
; 2782 FE_# + ARO-8 "SCADA/#,SCADB/ARO-8,SCAD/A+B,FE/SCAD"
; 2783 FE_# + SC "SCADA/#,SCADB/SC,SCAD/A+B,FE/SCAD"
; 2784 FE_# - SC "SCADA/#,SCADB/SC,SCAD/A-B,FE/SCAD"
; 2785 FE_# + # "SCADA EN/OS,SCADB/#,SCAD/A+B,FE/SCAD"
; 2786 FE_-1 "SCADA EN/OS,SCAD/A-1,FE/SCAD"
; 2787 FE_-SC-1 "SCADA EN/OS,SCADB/SC,SCAD/A-B-1,FE/SCAD"
; 2788 FE_1 "SCADA EN/OS,SCAD/A+1,FE/SCAD"
; 2789 FE_ARO-8 "SCADA EN/OS,SCADB/ARO-8,SCAD/A+B,FE/SCAD"
; 2790 FE_ARO-8 AND # "SCADA/#,SCADB/ARO-8,SCAD/AND,FE/SCAD"
; 2791 FE_ARO-8 COMP "SCADA EN/OS,SCADB/ARO-8,SCAD/A-B-1,FE/SCAD"
; 2792 FE_EXP "SCADA/AR EXP,SCAD/A,FE/SCAD"
; 2793 FE_EXP+1 "SCADA/AR EXP,SCAD/A+1,FE/SCAD"
; 2794 FE_EXP+SC "SCADA/AR EXP,SCADB/SC,SCAD/A+B,FE/SCAD"
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; 2795 FE_EXP-# "SCADA/AR EXP,SCADB/#,SCAD/A-B,FE/SCAD"
; 2796 FE_EXP-1 "SCADA/AR EXP,SCAD/A-1,FE/SCAD"
; 2797 FE_FE AND # "SCADA/FE,SCADB/#,SCAD/AND,FE/SCAD"
; 2798 FE_FE AND ARO-8 "SCADA/FE,SCADB/ARO-8,SCAD/AND,FE/SCAD"
; 2799 FE_FE OR # "SCADA/FE,SCADB/#,SCAD/OR,FE/SCAD"
; 2800 FE_FE OR ARO-8 "SCADA/FE,SCADB/ARO-8,SCAD/OR,FE/SCAD"
; 2801 FE_FE SHRT "COND/FE SHRT,FE/O"
; 2802 FE_FE+# "SCADA/FE,SCADB/#,SCAD/A+B,FE/SCAD"
; 2803 FE_FE+1 "SCADA/FE,SCAD/A+1,FE/SCAD"
; 2804 FE_FE+S "SCADA/FE,SCADB/AR6-11,SCAD/A+B,FE/SCAD"
; 2805 FE_FE+SC "SCADA/FE,SCADB/SC,SCAD/A+B,FE/SCAD"
; 2806 FE_FE-# "SCADA/FE,SCADB/#,SCAD/A-B,FE/SCAD"
; 2807 FE_FE-1 "SCADA/FE,SCAD/A-1,FE/SCAD"
; 2808 FE_FE-S "SCADA/FE,SCADB/AR6-11,SCAD/A-B,FE/SCAD"
; 2809 FE_FE-SC "SCADA/FE,SCADB/SC,SCAD/A-B,FE/SCAD"
; 2810 FE_P "SCADA/ARO-5,SCAD/A,FE/SCAD"
; 2811 FE_P AND # "SCADA/ARO-5,SCADB/#,SCAD/AND,FE/SCAD"
; 2812 FE_P AND SC "SCADA/ARO-5,SCADB/SC,SCAD/AND,FE/SCAD"
; 2813 FE_P OR # "SCADA/ARO-5,SCADB/#,SCAD/OR,FE/SCAD"
; 2814 FE_P+SC "SCADA/ARO-5,SCADB/SC,SCAD/A+B,FE/SCAD"
; 2815 FE_S "SCADA EN/OS,SCADB/AR6-11,SCAD/A+B,FE/SCAD"
; 2816 FE_S+# "SCADA/#,SCADB/AR6-11,SCAD/A+B,FE/SCAD"
; 2817 FE_SC "SCADA EN/OS,SCADB/SC,SCAD/A+B,FE/SCAD"
; 2818
; 2819 .IF/MODEL.B
; 2820 FETCH "MEM/IFET"
; 2821 FETCH+1 "COND/VMA INC,MEM/IFET"
; 2822 .IFNOT/MODEL.B
; 2823 FETCH "MEM/FETCH,FETCH/UNCOND"
; 2824 FETCH+1 "COND/VMA INC,MEM/FETCH,FETCH/UNCOND"
; 2825 .ENDIF/MODEL.B
; 2826 FETCH WAIT "MEM/MB WAIT" ;See edit 111
; 2827 FILL "R13"
; 2828 FILL_AR "FILL,FM_AR"
; 2829 FIN STORE "FMADR/VMA" ;FINISH STOREING
; 2830 FIN XFER "FMADR/VMA,ADB/FM,AD/B" ;FINISH XFER WHILE STARTING ANOTHER
; 2831 FINISH "J/FINI" ;USE INSTEAD OF NXT INSTR IF FM WRITE
; 2832 FM_AR "COND/FM WRITE"
; 2833 FM[]_AR "@1, FM_AR"
; 2834 .IF/MODEL.B
; 2835 FM(#) AR "FMADR/AC+#,AC-OP/AC+#,COND/FM WRITE"
; 2836 .ENDIF/MODEL.B
; 2837 FORCE AR-ARX "ADB/AR+4,AD/B,AR/AD*.25,ARX/ADX*.25"
; 2838
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; 2839 .TOC "CRAM Macros--G, H, I, J, L"
; 2840
; 2841 GEN # AND ARO-8 "SCADA/#,SCADB/ARO-8,SCAD/AND"
; 2842 GEN #+ARO-8 "SCADA/#,SCADB/ARO-8,SCAD/A+B"
; 2843 GEN #+SC "SCADA/#,SCADB/SC,SCAD/A+B"
; 2844 GEN #-SC "SCADA/#,SCADB/SC,SCAD/A-B"
; 2845 GEN -AR LONG "ADB/AR*4,ADA EN/OS,AD/A-B,SPEC/AD LONG"
; 2846 GEN -SC "SCADB/SC,SCADA EN/OS,SCAD/A-B"
; 2847 GEN -SC-1 "SCADB/SC,SCADA EN/OS,SCAD/A-B-1"
; 2848 GEN OS "AD/OS"
; 2849 GEN 2AR "ADA/AR, AD/A*2"
; 2850
; 2851 GEN ACO "FMADR/ACO,ADB/FM,AD/B"
; 2852 GEN ACO+1 "FMADR/ACO,ADB/FM,ADA EN/OS,AD/A+B+1"
; 2853 GEN AR "ADA/AR,AD/A"
; 2854 GEN AR*ACO "FMADR/ACO,ADB/FM,ADA/AR"
; 2855 GEN AR*BR "ADA/AR,ADB/BR"
; 2856 GEN AR*TO "TO,ADB/FM,ADA/AR"
; 2857 GEN AR+1 "ADA/AR,AD/A+1"
; 2858 GEN AR+2BR "ADA/AR,ADB/BR*2,AD/A+B"
; 2859 GEN AR+BR "ADA/AR,ADB/BR,AD/A+B"
; 2860 GEN AR+E1 "E1,ADB/FM,ADA/AR,AD/A+B"
; 2861 GEN AR+XR "FMADR/XR,ADB/FM,ADA/AR,AD/A+B"
; 2862 GEN AR-2BR "ADA/AR,ADB/BR*2,AD/A-B"
; 2863 GEN AR-AC3 "FMADR/AC3,ADB/FM,ADA/AR,AD/A-B"
; 2864 GEN AR-BR "ADA/AR,ADB/BR,AD/A-B"
; 2865 GEN AR-BR-1 "GEN AR*BR,AD/A-B-1"
; 2866 GEN ARO-8 "SCADA EN/OS,SCADB/ARO-8,SCAD/OR"
; 2867 GEN ARX "ADA/ARX,AD/A"
; 2868 GEN ARX COMP "ADA/ARX,AD/SETCA"
; 2869 GEN ARX*BR "ADA/ARX,ADB/BR" ;[224]
; 2870 GEN ARX*BRX "ADA EN/EN,ADB/BR"
; 2871 GEN ARX+1 "ADA/ARX,AD/A+1"
; 2872 GEN ARX+XR "FMADR/XR,ADB/FM,ADA/ARX,AD/A+B"
; 2873 GEN ARX-1 "ADA/ARX,AD/A-1"
; 2874
; 2875 GEN BR "ADB/BR,AD/B"
; 2876 GEN BR*2 "ADB/BR*2,AD/B"
; 2877 GEN BR+ARX "ADA/ARX,ADB/BR,AD/A+B" ;[230]
; 2878 GEN BRX+1 "ADA EN/OS,ADB/BR,AD/A+B+1"
; 2879 GEN CRY18 "SPEC/GEN CRY18"
; 2880 GEN E1 "E1, ADB/FM, AD/B"
; 2881 GEN FE "SCADA/FE,SCAD/A"
; 2882 GEN FE AND # "SCADA/FE,SCADB/#,SCAD/AND"
; 2883 GEN FE AND ARO-8 "SCADA/FE,SCADB/ARO-8,SCAD/AND"
; 2884 GEN FE AND S "SCADA/FE,SCADB/AR6-11,SCAD/AND"
; 2885 GEN FE AND SC "SCADA/FE,SCADB/SC,SCAD/AND"
; 2886 GEN FE+# "SCADA/FE,SCADB/#,SCAD/A+B"
; 2887 GEN FE-# "SCADA/FE,SCADB/#,SCAD/A-B"
; 2888 GEN FE-1 "SCADA/FE,SCAD/A-1"
; 2889 GEN FE-S "SCADA/FE,SCADB/AR6-11,SCAD/A-B"
; 2890 GEN FE-SC "SCADA/FE,SCADB/SC,SCAD/A-B"
; 2891 GEN FE-SC-1 "SCADA/FE,SCADB/SC,SCAD/A-B-1" ; [303] For DPB to top byte
; 2892
; 2893 GEN MQ "ADA/MQ,AD/A"
; 2894 GEN MQ-AR "ADA/MQ,ADB/AR,AD/A-B"
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; MACRO.MIC[10,5351] 21:14 28-Nov-83

GRAM Macros--G, H, I, J, L

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; 2895 GEN P AND # "SCADA/ARO-5,SCADB/#,SCAD/AND"
; 2896 GEN P AND SC "SCADA/ARO-5,SCADB/SC,SCAD/AND"
; 2897 GEN P+SC "SCADA/ARO-5,SCADB/SC,SCAD/A+B"
; 2898 GEN P-S "SCADA/ARO-5,SCADB/AR6-11,SCAD/A-B"
; 2899 GEN P-SC "SCADA/ARO-5,SCADB/SC,SCAD/A-B"
; 2900 GEN SC "SCADB/SC,SCADA EN/OS,SCAD/A+B"
; 2901 GEN SCAD OS "SCADA EN/OS,SCAD/A"
; 2902 GEN T1 "T1,ADB/FM,AD/B"
; 2903 GEN T2 "T2,ADB/FM,AD/B"
; 2904 GET ECL EBUS "COND/EBUS CTL,EBUS CTL/GRAB EEBUS"
; 2905 GLOBAL "SH/1"
; 2906
; 2907 HALT "SPEC/FLAG CTL,FLAG CTL/HALT"
; 2908
; 2909 .IF/MODEL.B
; 2910 I FETCH "VMA/PC+1,MEM/IFET"
; 2911 .IFNOT/MODEL.B
; 2912 I FETCH "VMA/PC+1,MEM/FETCH,FETCH/UNCOND"
; 2913 .ENDIF/MODEL.B
; 2914 INDEXED "SH/2"
; 2915 INH CRY18 "SPEC/INH CRY18"
; 2916 IO INIT "COND/EBUS CTL,EBUS CTL/IO INIT"
; 2917 IR DISP "DISP/DRAM J"
; 2918
; 2919 JFCL FETCH "VMA/PC+1,MEM/FETCH,FETCH/JFCL"
; 2920 JFCL S "SPEC/FLAG CTL,FLAG CTL/JFCL+LD"
; 2921 JFCL T "SPEC/FLAG CTL,FLAG CTL/JFCL"
; 2922 JUMP FETCH "VMA/PC+1,MEM/FETCH,FETCH/JUMP"
; 2923
; 2924 LD PCS "COND/DIAG FUNC,TIME/5T,DIAG FUNC/LD PCS+CWSX,ADA/ARX,AD/A"
; 2925 LD PREV CTXT "COND/DIAG FUNC,TIME/5T,DIAG FUNC/LD PCS+CWSX,ADA/PC,AD/A"
; 2926 LOAD AR "MEM/LOAD AR"
; 2927 .IF/MODEL.B
; 2928 LOAD AR (WR TST) "MEM/EA CALC,EA CALC/LD AR+WR"
; 2929 .ENDIF/MODEL.B
; 2930 LOAD ARX "MEM/LOAD ARX"
; 2931 .IF/MODEL.B
; 2932 LOAD ARX (WR TST) "MEM/EA CALC,EA CALC/LD ARX+WR"
; 2933 .ENDIF/MODEL.B
; 2934 LOAD EBR "MEM/REG FUNC,MREG FNC/LOAD EBR"
; 2935 .IF/MODEL.B
; 2936 LOAD IR "COND/LOAD IR,#/O"
; 2937 .IFNOT/MODEL.B
; 2938 LOAD IR "COND/LOAD IR"
; 2939 .ENDIF/MODEL.B
; 2940 LOAD UBR "MEM/REG FUNC,MREG FNC/LOAD UBR"
; 2941 .IF/BLT.PXCT
; 2942 LOAD VMA(EA)_ARX+BR "VMA/LOAD,MEM/EA CALC,EA CALC/LD AR(EA),ADA/ARX,ADB/BR,AD/A+B"
; 2943 .IFNOT/BLT.PXCT
; 2944 LOAD VMA(EA)_ARX+BR "ADA/ARX,ADB/BR,AD/A+B,VMA/AD,LOAD AR"
; 2945 .ENDIF/BLT.PXCT
; 2946 .IF/MODEL.B
; 2947 LONG EN "COND/LONG EN"
; 2948 .ENDIF/MODEL.B
; 2949

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; 2950 .TOC "CRAM Macros--M, N, O, P"
; 2951
; 2952 MAP "MEM/REG FUNC,MREG FNC/MAP"
; 2953 MB WAIT "MEM/MB WAIT"
; 2954 MEM_AR "FMADR/VMA, MEM/MB WAIT"
; 2955
; 2956 MQ_O.C "COND/ARL IND,CLR/MQ"
; 2957 MQ_O.M "MEM/ARL IND,CLR/MQ"
; 2958 MQ_O.S "SPEC/ARL IND,CLR/MQ"
; 2959 MQ_1 "ADA EN/OS,AD/A+1,MQ_AD"
; 2960 MQ_1S "COND/REG CTL,MQ/MQM SEL,MQ CTL/1S"
; 2961 MQ_AD "COND/REG CTL,MQ/MQM SEL,MQ CTL/AD"
; 2962 MQ_AR "SH/AR,MQ/SH"
; 2963 MQ_AR (AD) "ADA/AR,AD/A,MQ_AD"
; 2964 MQ_AR COMP "ADA/AR,AD/SETCA,MQ_AD"
; 2965 MQ_AR SWAP "SH/AR SWAP,MQ/SH"
; 2966 MQ_ARX "SH/ARX,MQ/SH"
; 2967 MQ_ARX COMP "ADA/ARX,AD/SETCA,MQ_AD"
; 2968 MQ_BR "ADB/BR,AD/B,MQ_AD"
; 2969 MQ_BR COMP "ADB/BR,AD/SETCB,MQ_AD"
; 2970 MQ_MQ*.25 "SPEC/MQ SHIFT,MQ/MQ*.25"
; 2971 MQ_MQ*2 "SPEC/MQ SHIFT,MQ/MQ*2"
; 2972 MQ_MQ*BR "ADA/MQ, ADB/BR, MQ_AD"
; 2973 MQ_SHIFT "SH/SHIFT AR!ARX,MQ/SH"
; 2974
; 2975 MSK "R7"
; 2976 MSK_AR "MSK,FM_AR"
; 2977 MUL "FE_FE+1,DISP/MUL,MQ/MQ*.25"
; 2978
; 2979
; 2980 NO CRY "AD/SETCA"
; 2981 NORM "DISP/NORM"
; 2982 NORM -AR "ADA EN/OS,ADB/AR*4,AD/A-B,AR/AD*.25,ARX/ADX*.25,DISP/NORM"
; 2983 NORM AR "ADB/AR*4,AD/B,DISP/NORM"
; 2984 NXT INSTR "MEM/MB WAIT,DISP/NICOND,#/O,CLR SC,CLR FE,J/NEXT"
; 2985
; 2986 OPTIONS "ISTAT/OPTIONS,KLPAGE/OPTIONS, LONGPC/OPTIONS, NONSTD/OPTIONS, PV/OPTIONS"
; 2987
; 2988 P_# "SCADA/#,SCAD/A,P_SCAD#"
; 2989 P_#-S "SCADA/#,SCADB/AR6-11,SCAD/A-B,P_SCAD#"
; 2990 P_-SC "SCADA EN/OS,SCADB/SC,SCAD/A-B,P_SCAD.M"
; 2991 P_1S "SCADA EN/OS,SCAD/A-1,P_SCAD"
; 2992 P_FE "SCADA/FE,SCAD/A,P_SCAD"
; 2993 P_FE OR SC "SCADA/FE,SCADB/SC,SCAD/OR,P_SCAD"
; 2994 P_FE+SC "SCADA/FE,SCADB/SC,SCAD/A+B,P_SCAD.C"
; 2995 P_FE-S "SCADA/FE,SCADB/AR6-11,SCAD/A-B,P_SCAD.C"
; 2996 P_FE-S.S "SCADA/FE,SCADB/AR6-11,SCAD/A-B,P_SCAD"
; 2997 P_FE.C "SCADA/FE,SCAD/A,P_SCAD#"
; 2998 P_P AND # "SCADA/ARO-5,SCADB/#,SCAD/AND,P_SCAD#"
; 2999 P_P AND SC "SCADA/ARO-5,SCADB/SC,SCAD/AND,P_SCAD.M"
; 3000 P_P OR # "SCADA/ARO-5,SCADB/#,SCAD/OR,P_SCAD#"
; 3001 P_P OR SC "SCADA/ARO-5,SCADB/SC,SCAD/OR,P_SCAD.M"
; 3002 P_P OR SC# "SCADA/ARO-5,SCADB/SC,SCAD/OR,P_SCAD#"
; 3003 P_P+# "SCADA/ARO-5,SCADB/#,SCAD/A+B,P_SCAD#"
; 3004 P_P+1 "SCADA/ARO-5,SCAD/A+1,P_SCAD"
; 3005 P_P+S "SCADA/ARO-5,SCADB/AR6-11,SCAD/A+B,P_SCAD"
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; MACRO.MIC[10,5351]

21:14 28-Nov-83

GRAM Macros--M, N, O, P

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; 3006 P_P+S.C      "SCADA/ARO-5,SCADB/AR6-11,SCAD/A+B,P_SCAD#"
; 3007 P_P-S        "SCADA/ARO-5,SCADB/AR6-11,SCAD/A-B,P_SCAD.M"
; 3008 P_SC         "SCADA EN/OS,SCADB/SC,SCAD/A+B,P_SCAD.M"
; 3009 P_SC#        "SCADA EN/OS,SCADB/SC,SCAD/A+B,P_SCAD#"
; 3010 P_SCAD       "SPEC/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/SCAD POS"
; 3011 P_SCAD#      "COND/LD ARO-8,AR/ARMM,ARMM/SCAD POS"
; 3012 P_SCAD.C     "COND/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/SCAD POS"
; 3013 P_SCAD.M     "MEM/ARL IND,ARL/ARMM,ARO-8/LOAD,ARMM/SCAD POS"
; 3014
; 3015 PO           "FMADR/#B#,ACB/PAGB,AC#/O"      Paging AC O
; 3016 P1           "FMADR/#B#,ACB/PAGB,AC#/1"
; 3017 P10          "FMADR/#B#,ACB/PAGB,AC#/10"
; 3018 P11          "FMADR/#B#,ACB/PAGB,AC#/11"
; 3019 P12          "FMADR/#B#,ACB/PAGB,AC#/12"
; 3020 P13          "FMADR/#B#,ACB/PAGB,AC#/13"
; 3021 P14          "FMADR/#B#,ACB/PAGB,AC#/14"
; 3022 P15          "FMADR/#B#,ACB/PAGB,AC#/15"
; 3023 P16          "FMADR/#B#,ACB/PAGB,AC#/16"
; 3024 P17          "FMADR/#B#,ACB/PAGB,AC#/17"
; 3025 P2           "FMADR/#B#,ACB/PAGB,AC#/2"
; 3026 P3           "FMADR/#B#,ACB/PAGB,AC#/3"
; 3027 P4           "FMADR/#B#,ACB/PAGB,AC#/4"
; 3028 P5           "FMADR/#B#,ACB/PAGB,AC#/5"
; 3029 P6           "FMADR/#B#,ACB/PAGB,AC#/6"
; 3030 P7           "FMADR/#B#,ACB/PAGB,AC#/7"
; 3031
; 3032 PC_VMA       "SPEC/LOAD PC"
; 3033 PF_DISP      "DISP/PG FAIL"
; 3034 .IF/KLPAGE
; 3035 PFA           "P4"
; 3036 PFA_AR        "PFA,COND/FM WRITE"
; 3037 .ENDIF/KLPAGE
; 3038 PHYS REF      "SPEC/SP MEM CYCLE,SP MEM/UNPAGED"
; 3039 PHYS REF CACHE "SPEC/SP MEM CYCLE,SP MEM/UNPAGED+CACHED"
; 3040 .IF/MODEL.B
; 3041 POP AR        "MEM/EA CALC,EA CALC/POP AR,VMA/LOAD"
; 3042 POP AR-ARX    "MEM/EA CALC,EA CALC/POP AR-ARX,VMA/LOAD"
; 3043 POP ARX       "MEM/EA CALC,EA CALC/POP ARX,VMA/LOAD"
; 3044 .ENDIF/MODEL.B
; 3045 PORTAL        "SPEC/FLAG CTL,FLAG CTL/PORTAL"
; 3046 PT FETCH      "MEM/LOAD ARX,SPEC/SP MEM CYCLE,SP MEM/PT FETCH"
; 3047 PT REF        "SPEC/SP MEM CYCLE,SP MEM/PT"
; 3048 PT_SEL_INVAL   "COND/MBOX CTL,MBOX CTL/PT DIR CLR"
; 3049 PT_SEL_INVAL (KEEP) "COND/MBOX CTL,MBOX CTL/PT DIR CLR(NK)"
; 3050 PT_SEL_NORMAL  "COND/MBOX CTL,MBOX CTL/NORMAL"
; 3051 .IF/KLPAGE
; 3052 PUR           "P1"
; 3053 .ENDIF/KLPAGE
; 3054 .IF/MODEL.B
; 3055 PUSH          "MEM/EA CALC,EA CALC/PUSH,VMA/LOAD,SPEC/STACK UPDATE"
; 3056 .ENDIF/MODEL.B
; 3057

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; 3058 .TOC "GRAM Macros--R"
; 3059
; 3060 R0 "FMADR/#B#,ACB/MICROB,AC#/0" Scratch register 0
; 3061 R1 "FMADR/#B#,ACB/MICROB,AC#/1" Scratch register 1
; 3062 R10 "FMADR/#B#,ACB/MICROB,AC#/10" Scratch register 10
; 3063 R11 "FMADR/#B#,ACB/MICROB,AC#/11" Scratch register 11
; 3064 R12 "FMADR/#B#,ACB/MICROB,AC#/12" Scratch register 12
; 3065 R13 "FMADR/#B#,ACB/MICROB,AC#/13" Scratch register 13
; 3066 R14 "FMADR/#B#,ACB/MICROB,AC#/14" Scratch register 14
; 3067 R15 "FMADR/#B#,ACB/MICROB,AC#/15" Scratch register 15
; 3068 R16 "FMADR/#B#,ACB/MICROB,AC#/16" Scratch register 16
; 3069 R17 "FMADR/#B#,ACB/MICROB,AC#/17" Scratch register 17
; 3070 R2 "FMADR/#B#,ACB/MICROB,AC#/2" Scratch register 2
; 3071 R3 "FMADR/#B#,ACB/MICROB,AC#/3" Scratch register 3
; 3072 R4 "FMADR/#B#,ACB/MICROB,AC#/4" Scratch register 4
; 3073 R5 "FMADR/#B#,ACB/MICROB,AC#/5" Scratch register 5
; 3074 R6 "FMADR/#B#,ACB/MICROB,AC#/6" Scratch register 6
; 3075 R7 "FMADR/#B#,ACB/MICROB,AC#/7" Scratch register 7
; 3076
; 3077 RD+CLR C CNT "SPEC/MTR CTL,AR_CACHE CNT"
; 3078 RD+CLR E CNT "SPEC/MTR CTL,AR_EBOX CNT"
; 3079 RD+CLR PA "SPEC/MTR CTL,AR_PERF CNT"
; 3080 RD+CLR TB "SPEC/MTR CTL,AR_TIME BASE"
; 3081 .IF/MODEL.B
; 3082 READ BP2 "MEM/EA CALC,EA CALC/BYTE IND,VMA/VMA,COND/VMA INC"
; 3083 .ENDIF/MODEL.B
; 3084 READ EBR "MEM/REG FUNC,MREG FNC/READ EBR"
; 3085 READ ERA "MEM/REG FUNC,MREG FNC/READ ERA"
; 3086 READ UBR "MEM/REG FUNC,MREG FNC/READ UBR"
; 3087 REL EBUS "COND/EBUS CTL,EBUS CTL/REL EBUS"
; 3088 REL ECL EBUS "COND/EBUS CTL,EBUS CTL/REL EEBUS"
; 3089 REQ EBUS "COND/EBUS CTL,EBUS CTL/REQ EBUS"
; 3090 .IF/KLPAGE
; 3091 REQ SV.VMA "SV.VMA,ADB/FM,AD/B,VMA/1,MEM/AD FUNC"
; 3092 REQ VMA HELD "COND/SEL VMA,ADA/PC,AD/A,VMA/1,MEM/AD FUNC"
; 3093 .ENDIF/KLPAGE
; 3094
; 3095 RET[] "DISP/RETURN,J/@1"
; 3096 RETURN0 "DISP/RETURN,J/0"
; 3097 RETURN1 "DISP/RETURN,J/1"
; 3098 RETURN10 "DISP/RETURN,J/10"
; 3099 RETURN12 "DISP/RETURN,J/12"
; 3100 RETURN2 "DISP/RETURN,J/2"
; 3101 RETURN20 "DISP/RETURN,J/20"
; 3102 RETURN3 "DISP/RETURN,J/3"
; 3103 RETURN30 "DISP/RETURN,J/30"
; 3104 RETURN37 "DISP/RETURN,J/37"
; 3105 RETURN4 "DISP/RETURN,J/4"
; 3106 RETURN5 "DISP/RETURN,J/5"
; 3107 RETURN6 "DISP/RETURN,J/6"
; 3108 RETURN7 "DISP/RETURN,J/7"
; 3109 RSTR FLAGS_AR "SPEC/FLAG CTL,FLAG CTL/RSTR FLAGS"
; 3110 .IF/KLPAGE
; 3111 RSTR VMA_ARX "ADA/ARX,AD/A,VMA/LOAD,MEM/RESTORE VMA"
; 3112 RSTR VMA_MQ "ADA/MQ,AD/A,VMA/LOAD,MEM/RESTORE VMA"
; 3113 RSTR VMA_SV.VMA "SV.VMA,ADB/FM,AD/B,VMA/LOAD,MEM/RESTORE VMA"
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; KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C) 1984 DIGITAL EQUIPMENT CORPORATION V1(336)

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; MACRO.MIC[10,5351] 21:14 28-Nov-83

CRAM Macros--R

MICR

; 3114 .ENDIF/KLPAGE


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; 3115 .TOC "CRAM Macros--S"
; 3116
; 3117 .IF/KLPAGE
; 3118 SBR "P3"
; 3119 .ENDIF/KLPAGE
; 3120 SBUS DIAG "MEM/REG FUNC,MREG FNC/SBUS DIAG"
; 3121
; 3122 SC_# "SCADA/#,SCAD/A,SC/SCAD"
; 3123 SC_# AND ARO-8 "SCADA/#,SCADB/ARO-8,SCAD/AND,SC/SCAD"
; 3124 SC_# AND S "SCADA/#,SCADB/AR6-11,SCAD/AND,SC/SCAD"
; 3125 SC_# OR SC "SCADA/#,SCADB/SC,SCAD/OR,SC/SCAD"
; 3126 SC_#+ARO-8 "SCADA/#,SCADB/ARO-8,SCAD/A+B,SC/SCAD"
; 3127 SC_#+SC "SCADA/#,SCADB/SC,SCAD/A+B,SC/SCAD"
; 3128 SC_#-SC "SCADA/#,SCADB/SC,SCAD/A-B,SC/SCAD"
; 3129 SC_#-SC-1 "SCADA/#,SCADB/SC,SCAD/A-B-1,SC/SCAD"
; 3130 SC_-SC "SCADA EN/OS,SCADB/SC,SCAD/A-B,SC/SCAD"
; 3131 SC_-SC-1 "SCADA EN/OS,SCADB/SC,SCAD/A-B-1,SC/SCAD"
; 3132 SC_O "SCADA EN/OS,SCAD/A,SC/SCAD"
; 3133 SC_1 "SCADA EN/OS,SCAD/A+1,SC/SCAD"
; 3134 SC_1S "SCADA EN/OS,SCAD/A-1,SC/SCAD"
; 3135 SC_ARO-8 "SCADA EN/OS,SCADB/ARO-8,SCAD/A+B,SC/SCAD" ;[231]
; 3136 SC_EA "SPEC/SCM ALT,SC/AR SHIFT"
; 3137 SC_EXP "SCADA/AR EXP,SCAD/A,SC/SCAD"
; 3138 SC_EXP+1 "SCADA/AR EXP,SCAD/A+1,SC/SCAD"
; 3139 SC_EXP+SC "SCADA/AR EXP,SCADB/SC,SCAD/A+B,SC/SCAD"
; 3140 SC_EXP-# "SCADA/AR EXP,SCADB/#,SCAD/A-B,SC/SCAD"
; 3141 SC_EXP-1 "SCADA/AR EXP,SCAD/A-1,SC/SCAD"
; 3142 SC_EXP-SC "SCADA/AR EXP,SCADB/SC,SCAD/A-B,SC/SCAD"
; 3143 SC_FE "SPEC/SCM ALT,SC/FE"
; 3144 SC_FE AND # "SCADA/FE,SCADB/#,SCAD/AND,SC/SCAD"
; 3145 SC_FE+# "SCADA/FE,SCADB/#,SCAD/A+B,SC/SCAD"
; 3146 SC_FE+1 "SCADA/FE,SCAD/A+1,SC/SCAD"
; 3147 SC_FE+SC "SCADA/FE,SCADB/SC,SCAD/A+B,SC/SCAD"
; 3148 SC_FE-# "SCADA/FE,SCADB/#,SCAD/A-B,SC/SCAD"
; 3149 SC_FE-1 "SCADA/FE,SCAD/A-1,SC/SCAD"
; 3150 SC_FE-SC "SCADA/FE,SCADB/SC,SCAD/A-B,SC/SCAD"
; 3151 SC_FE-SC-1 "SCADA/FE,SCADB/SC,SCAD/A-B-1,SC/SCAD"
; 3152 SC_P "SCADA/ARO-5,SCAD/A,SC/SCAD"
; 3153 SC_P AND # "SCADA/ARO-5,SCADB/#,SCAD/AND,SC/SCAD"
; 3154 SC_P AND SC "SCADA/ARO-5,SCADB/SC,SCAD/AND,SC/SCAD"
; 3155 SC_P-# "SCADA/ARO-5,SCADB/#,SCAD/A-B,SC/SCAD"
; 3156 SC_S "SCADB/AR6-11,SCADA EN/OS,SCAD/A+B,SC/SCAD"
; 3157 SC_SC AND # "SCADA/#,SCADB/SC,SCAD/AND,SC/SCAD"
; 3158
; 3159 .IF/MODEL.B
; 3160 SEL AC4 "AC-OP/AC+#,AC#/4"
; 3161 SEL DSTP "AC-OP/AC+#,AC#/4"
; 3162 SEL DSTP2 "AC-OP/AC+#,AC#/5"
; 3163 .ENDIF/MODEL.B
; 3164 SET ACC+CLR UCODE "COND/EBOX STATE,#/005"
; 3165 SET ACCOUNT EN "COND/EBOX STATE,#/105"
; 3166 SET AROV "COND/PCF #,PC FLAGS/AROV"
; 3167 SET CONS XCT "COND/SPEC INSTR,SPEC INSTR/CONS XCT"
; 3168 SET DATAI "COND/EBUS CTL,EBUS CTL/DATAI,AD/OS,AR/AD"
; 3169 SET DATAO "COND/EBUS CTL,EBUS CTL/DATAO"
; 3170 SET EBUS DEMAND "COND/EBUS CTL,EBUS CTL/EBUS DEMAND"
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; 3171 SET FL NO DIV "COND/PCF #,PC FLAGS/FDV CHK"
; 3172 SET FLAGS_AR "SPEC/FLAG CTL,FLAG CTL/SET FLAGS"
; 3173 SET FLOV "COND/PCF #,PC FLAGS/FLOV"
; 3174 SET FPD "COND/PCF #,PC FLAGS/FPD"
; 3175 SET FXU "COND/PCF #,PC FLAGS/FXU" ;[224]
; 3176 SET HALTED "COND/SPEC INSTR,SPEC INSTR/HALTED"
; 3177 SET IO PF "COND/MBOX CTL,MBOX CTL/SET IO PF ERR"
; 3178 SET MTR PA EN "COND/EBOX STATE,#/225"
; 3179 SET NO DIVIDE "COND/PCF #,PC FLAGS/DIV CHK"
; 3180 SET PC+1 INH "COND/SPEC INSTR,SPEC INSTR/INH PC+1"
; 3181 SET PI CYCLE "COND/SPEC INSTR,SPEC INSTR/SET PI CYCLE"
; 3182 SET PXCT "COND/SPEC INSTR,SPEC INSTR/PXCT"
; 3183 SET SR1 "COND/SR #,#/64"
; 3184 SET SR2 "COND/SR #,#/62"
; 3185 SET SR3 "COND/SR #,#/61"
; 3186 SET SXCT "COND/SPEC INSTR,SPEC INSTR/SXCT"
; 3187 SET TRACKS EN "COND/EBOX STATE,#/131"
; 3188 SET TRK+PA EN "COND/EBOX STATE,#/231"
; 3189 SFLGS "FMADR/ACO"
; 3190 SFLGS_AR "SFLGS,FM_AR"
; 3191 SH DISP "SH/SHIFT AR!ARX,DISP/SHO-3"
; 3192 SIGNS DISP "DISP/SIGNS"
; 3193 SKIP FETCH "ADA/AR,AD/A,VMA/PC+1,MEM/FETCH,FETCH/SKIP"
; 3194
; 3195 SKP -EBUS GRANT "SKIP/-EBUS GRANT"
; 3196 SKP -EBUS XFER "SKIP/-EBUS XFER"
; 3197 .IF/MODEL.B
; 3198 SKP -LOCAL AC ADDR "SKIP/-LOCAL AC ADDR"
; 3199 .ENDIF/MODEL.B
; 3200 SKP -START "SKIP/-START"
; 3201 .IF/MODEL.B
; 3202 SKP -VMA SECO "SKIP/-VMA SECO"
; 3203 .ENDIF/MODEL.B
; 3204 SKP AC REF "SKIP/AC REF"
; 3205 SKP AC#O "SKIP/AC#O"
; 3206 SKP ACO+ "FMADR/ACO,ADB/FM,AD/SETCB,SKIP/ADO"
; 3207 SKP ACO- "FMADR/ACO,ADB/FM,AD/B,SKIP/ADO"
; 3208 SKP AD NE "SKIP/AD#O"
; 3209 SKP ADO "SKIP/ADO"
; 3210 SKP ADXO "SKIP/ADXO"
; 3211 SKP AR EQ "ADA EN/OS,ADB/AR*4,AD/ORCB+1,SKIP/AD CRYO"
; 3212 SKP AR EQ -1 "ADA/AR,AD/CRY A EQ -1,SKIP/AD CRYO"
; 3213 SKP AR GT BR "ADA/AR,ADB/BR,AD/XOR,SKIP/AD CRYO"
; 3214 SKP AR NE "ADA/AR,AD/CRY A#O,SKIP/AD CRYO"
; 3215 SKP AR NE BR "ADA/AR,ADB/BR,AD/XOR,SKIP/AD#O"
; 3216 SKP AR SIG "ADA/AR,AD/A+XCXY,SPEC/XCRY ARO,SKIP/AD#O"
; 3217 SKP ARO "SKIP/ARO"
; 3218 SKP AR1 "ADA/AR,AD/A*2,SKIP/ADO"
; 3219 SKP AR18 "SKIP/AR18"
; 3220 SKP AR2 "ADB/AR*4,AD/B,SKIP/ADO"
; 3221 SKP AR6 "SCADB/AR6-11,SCADA/#,#/40,SCAD/AND,SKIP/SCAD#O"
; 3222 SKP ARX LE BRX "ADA EN/EN,ADB/BR,AD/A-B-1,SKIP/ADXO"
; 3223 SKP ARX LT BRX "ADA EN/EN,ADB/BR,AD/A-B,SKIP/ADXO"
; 3224 SKP ARX NE "ADA/ARX,AD/CRY A#O,SKIP/AD CRYO"
; 3225 SKP ARX+MQ NE "ADA/MQ,AD/CRY A#O,SPEC/AD LONG,SKIP/AD CRYO"
; 3226 SKP ARXO "SKIP/ARXO"

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```
; 3227 SKP ARX2      "ADB/AR+4,AD/B,SKIP/ADX0"
; 3228
; 3229 SKP BR EQ      "ADA EN/OS,ADB/BR,AD/CRY A GE B,SKIP/AD CRYO"
; 3230 SKP BR EQ -1   "ADA EN/OS,ADB/BR,AD/A+B+1,SKIP/AD CRYO"
; 3231 SKP BRO        "SKIP/BRO"
; 3232 SKP CRYO       "SKIP/AD CRYO"
; 3233 SKP EVEN PAR   "SKIP/EVEN PAR"
; 3234 SKP EXP NE     "SCADA/AR EXP,SCAD/A,SKIP/SCAD#O"
; 3235 SKP FEO        "SCADA/FE,SCAD/A,SKIP/SCADO"
; 3236 SKP FETCH      "SKIP/FETCH"
; 3237 SKP INTRPT     "SKIP/INTRPT"
; 3238 SKP IO LEGAL   "SKIP/IO LEGAL"
; 3239 SKP KERNEL     "SKIP/KERNEL"
; 3240 SKP MQ EQ -1   "ADA/MQ,AD/CRY A EQ -1,SKIP/AD CRYO"
; 3241 SKP MQ NE      "ADA/MQ,AD/CRY A#O,SKIP/AD CRYO"
; 3242 SKP P NE       "SCADA/ARO-5,SCAD/A,SKIP/SCAD#O"
; 3243 SKP PIS XCT    "SKIP/PIS XCT"
; 3244 .IF/MODEL.B
; 3245 SKP PC SECO     "SKIP/PC SECO"
; 3246 .ENDIF/MODEL.B
; 3247 SKP PI CYCLE   "SKIP/PI CYCLE"
; 3248 SKP RPW        "SKIP/RPW REF"
; 3249 SKP RUN        "SKIP/RUN"
; 3250 .IFNOT/MODEL.B
; 3251 SKP SC LE 36    "SCADB/SC,SCADA/#,#/-36.,SCAD/A+B,SKIP/SCADO"
; 3252 .ENDIF/MODEL.B
; 3253 SKP SC NE       "SCADB/SC,SCADA EN/OS,SCAD/A+B,SKIP/SCAD#O"
; 3254 SKP SCO         "SKIP/SCO"
; 3255 SKP SCAD NE     "SKIP/SCAD#O"
; 3256 SKP SCADO       "SKIP/SCADO"
; 3257 SKP USER       "SKIP/USER"
; 3258
; 3259 SLEN           "R10"          ;MUST BE 170
; 3260 SLEN_AR        "SLEN,FM_AR"
; 3261 SR_DISP        "DISP/SR"
; 3262 SR_#           "COND/SR_#"      ;USED FOR NON-PAGE-FAIL APPLICATIONS
; 3263 SR_0           "COND/SR_#,#/0"
; 3264 SR_1           "COND/SR_#,#/1"
; 3265 SR_2           "COND/SR_#,#/2"      ;[224]
; 3266 .IF/MODEL.B
; 3267 SR_BDD         "COND/SR_#,#/206"    ;B2D AFTER UPDATING DST PTR
; 3268 SR_BDF         "COND/SR_#,#/203"    ;B2D STORING FILLERS
; 3269 SR_BDT         "COND/SR_#,#/010"    ;B2D IN TRANSLATION
; 3270 SR_BLT(DST)    "COND/SR_#,#/507"
; 3271 .IF/BLT.PXCT
; 3272 SR_BLT(PXCT DST) "COND/SR_#,#/107"
; 3273 SR_BLT(PXCT SRC) "COND/SR_#,#/307"    ;SPECIAL FOR PXCT
; 3274 .ENDIF/BLT.PXCT
; 3275 SR_BLT(SRC)     "COND/SR_#,#/707"
; 3276 SR_DB          "COND/SR_#,#/102"    ;D2B ANYWHERE
; 3277 SR_DST         "COND/SR_#,#/212"
; 3278 SR_DSTF        "COND/SR_#,#/214"
; 3279 SR_ED(+D)       "COND/SR_#,#/224"
; 3280 SR_ED(PAT)      "COND/SR_#,#/0" ;PATTERN REF IS EXTENDED
; 3281 SR_ED(S)       "COND/SR_#,#/101"
; 3282 .IFNOT/MODEL.B
```

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;;3283 SR_BDD "COND/SR_#,#/6" ;B2D AFTER UPDATING DST PTR
;;3284 SR_BDF "COND/SR_#,#/3" ;B2D STORING FILLERS
;;3285 SR_BDT "COND/SR_#,#/10" ;B2D IN TRANSLATION
;;3286 SR_BLT(DST) "COND/SR_#,#/107" ; BY PXCT 10,4
;;3287 SR_BLT(SRC) "COND/SR_#,#/607" ;CONTEXT CONTROLLED BY PXCT 2,1
;;3288 SR_DB "COND/SR_#,#/2" ;D2B ANYWHERE
;;3289 SR_DST "COND/SR_#,#/12"
;;3290 SR_DSTF "COND/SR_#,#/14"
;;3291 SR_ED(+D) "COND/SR_#,#/24"
;;3292 SR_ED(PAT) "COND/SR_#,#/0"
;;3293 SR_ED(S) "COND/SR_#,#/1"
;;3294 .ENDIF/MODEL.B
;;3295 .IF/KLPAGE
;;3296 SR_MAP "COND/SR_#,#/15" ;CATCH MAP PAGE FAILURES
;;3297 .ENDIF/KLPAGE
;;3298 .IF/MODEL.B
;;3299 SR_SRC "COND/SR_#,#/111"
;;3300 SR_SRC+DST "COND/SR_#,#/213"
;;3301 .IFNOT/MODEL.B
;;3302 SR_SRC "COND/SR_#,#/11"
;;3303 SR_SRC+DST "COND/SR_#,#/13"
;;3304 .ENDIF/MODEL.B
;;3305 SR_WORD "COND/SR_#,#/17" ;WORD MOVES OF STRING INSTRS
;;3306 .IF/MODEL.B
;;3307 .IF/XADDR
;;3308 SR_XBLT(DST) "COND/SR_#,#/316"
;;3309 SR_XBLT(SRC) "COND/SR_#,#/216"
;;3310 .ENDIF/XADDR
;;3311 .ENDIF/MODEL.B
;;3312 SRCP "FMADR/AC1"
;;3313 SRCP_AR "SRCP,FM_AR"
;;3314 SRCP2 "FMADR/AC2"
;;3315 SRCP2_AR "SRCP2,FM_AR"
;;3316
;;3317 .IF/MODEL.B
;;3318 STACK_UPDATE "SPEC/STACK UPDATE"
;;3319 .ENDIF/MODEL.B
;;3320 STORE "MEM/WRITE"
;;3321 .IF/BLT.PXCT
;;3322 STORE VMA(EA)_ARX "VMA/LOAD, MEM/EA CALC, EA CALC/WRITE(E), ADA/ARX, AD/A"
;;3323 .IFNOT/BLT.PXCT
;;3324 STORE VMA(EA)_ARX "ADA/ARX, AD/A, VMA/AD, STORE"
;;3325 .ENDIF/BLT.PXCT
;;3326 .IF/KLPAGE
;;3327 SV.AR "P16" ;156 REQUIRED FOR PF.PAR HACK
;;3328 .IFNOT/KLPAGE
;;3329 SV.AR "RO"
;;3330 .ENDIF/KLPAGE
;;3331 SV.AR_AR "SV.AR, COND/FM WRITE"
;;3332 .IF/KLPAGE
;;3333 SV.ARX "P17" ;157 REQUIRED FOR PF.PAR HACK
;;3334 .IFNOT/KLPAGE
;;3335 SV.ARX "R1"
;;3336 .ENDIF/KLPAGE
;;3337 SV.ARX_AR "SV.ARX, COND/FM WRITE"
;;3338 .IF/KLPAGE

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; MACRO.MIC[10,5351] 21:14 28-Nov-83 CRAM Macros--S

MICR

```
; 3339 SV.BR "P10"
; 3340 SV.BR_AR "SV.BR,COND/FM WRITE"
; 3341 .ENDIF/KLPAGE
; 3342 SV.IOP "R3" ;[233]
; 3343 SV.IOPF "R2"
; 3344 SV.IOPF_AR "SV.IOPF,COND/FM WRITE" ;IO PAGE FAIL WORD
; 3345 .IF/KLPAGE
; 3346 SV.PAR "R0" ;Note not in PAGB block
; 3347 SV.PAR_AR "SV.PAR,COND/FM WRITE"
; 3348 SV.PFW "P12"
; 3349 SV.PFW_AR "SV.PFW,COND/FM WRITE"
; 3350 SV.SC "P11"
; 3351 SV.SC_AR "SV.SC,COND/FM WRITE"
; 3352 SV.VMA "P5"
; 3353 SV.VMA_AR "SV.VMA,COND/FM WRITE"
; 3354 .ENDIF/KLPAGE
; 3355 SWD "R1" ;BUFFER FOR SOURCE BYTE WORD
; 3356 SWD_AR "SWD,FM_AR"
; 3357 SWEEP CACHE "MEM/REG FUNC,MREG FNC/LOAD CCA"
; 3358
```

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GRAM Macros--T, U, V, W, X

```

; 3359 .TOC      "GRAM Macros--T, U, V, W, X"
; 3360
; 3361 TO          "R6"
; 3362 TO_AR       "TO,FM_AR"
; 3363 T1          "R11"
; 3364 T1_AR       "T1,FM_AR"
; 3365 T2          "R12"
; 3366 T2_AR       "T2,FM_AR"
; 3367 TAKE INTRPT "SKIP/-MTR REQ,J/MTRINT"
; 3368 TEST AR      "ADA/AR,AD/CRY A#O"
; 3369 TEST AR.ACO  "FMADR/ACO,ADB/FM,ADA/AR,AD/CRY A.B#O"
; 3370 TEST AR.BR   "ADB/BR,ADA/AR,AD/CRY A.B#O"
; 3371 TEST AR.MSK  "MSK,ADB/FM,ADA/AR,AD/CRY A.B#O"
; 3372 TEST ARX     "ADA/ARX,AD/CRY A#O"
; 3373 TEST ARX.AR*4 "ADA/ARX,ADB/AR*4,AD/CRY A.B#O"
; 3374 TEST BRL     "ADA EN/OS,ADB/BR,AD/ORCB+1,GEN CRY18"
; 3375 .IF/KLPAGE
; 3376 TEST CBR     "CBR,ADB/FM,AD/B,SKP AD NE"      ;[247]
; 3377 .ENDIF/KLPAGE
; 3378 TEST FETCH   "VMA/PC+1,MEM/FETCH,FETCH/TEST"
; 3379 TRAP1        "COND/PCF_#,PC FLAGS/TRAP1"
; 3380 TRAP2        "COND/PCF_#,PC FLAGS/TRAP2"
; 3381 TRAP3        "COND/PCF_#,PC FLAGS/TRAP3"
; 3382 .IF/TRXDEF
; 3383 TRB           "EO"                ;same as EO.
; 3384 TRB_AR       "TRB,FM_AR"
; 3385 TRX          "R17"
; 3386 TRX_AR       "TRX,FM_AR"
; 3387 TRX1         "R2"
; 3388 TRX1_AR      "TRX1,FM_AR"
; 3389 TRX2         "R1"
; 3390 TRX2_AR      "TRX2,FM_AR"
; 3391 TRX3         "R14"
; 3392 TRX3_AR      "TRX3,FM_AR"
; 3393 .ENDIF/TRXDEF
; 3394
; 3395 UNCSH PHYS REF "SPEC/SP MEM CYCLE,SP MEM/UNCSH+UNPAGE"
; 3396 UPT FETCH     "MEM/LOAD ARX,SPEC/SP MEM CYCLE,SP MEM/UPT FETCH"
; 3397 UPT REF       "SPEC/SP MEM CYCLE,SP MEM/UPT"
; 3398 USER REF      "SPEC/SP MEM CYCLE,SP MEM/USER"
; 3399
; 3400 VMA_#         "VMA/LOAD,COND/VMA_#"
; 3401 VMA_#+AR32-35 "VMA/LOAD,COND/VMA_#+AR32-35"
; 3402 VMA_40       "VMA/LOAD,COND/VMA_#,#/40"
; 3403 VMA_40+PI*2   "VMA/LOAD,COND/VMA_#+PI*2,#/40"
; 3404 VMA_41       "VMA/LOAD,COND/VMA_#,#/41"
; 3405 VMA_41+PI*2   "VMA/LOAD,COND/VMA_#+PI*2,#/41"
; 3406 VMA_420+TRAP  "VMA/LOAD,COND/VMA_#+TRAP,#/420"
; 3407 VMA_430+MODE  "VMA/LOAD,COND/VMA_#+MODE,#/430"
; 3408 VMA_AC3      "FMADR/AC3,ADB/FM,AD/B,VMA/AD"
; 3409 VMA_AR       "ADA/AR,AD/A,VMA/AD"
; 3410 VMA_AR AND ADMSK "ADMSK,ADB/FM,ADA/AR,AD/AND,VMA/AD"
; 3411 VMA_AR+1     "ADA/AR,AD/A+1,VMA/AD"
; 3412 VMA_AR+BR    "ADA/AR,ADB/BR,AD/A+B,VMA/AD"
; 3413 .IF/KLPAGE
; 3414 VMA_AR+CBR    "CBR,ADB/FM,ADA/AR,AD/A+B,VMA/AD"

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MICR

```
; 3415 .ENDIF/KLPAGE
; 3416 VMA_AR+EO "EO,ADB/FM,ADA/AR,AD/A+B,VMA/AD"
; 3417 VMA_AR+EO+1 "EO,ADB/FM,ADA/AR,AD/A+B+1,VMA/AD"
; 3418 VMA_AR+E1 "E1,ADB/FM,ADA/AR,AD/A+B,VMA/AD"
; 3419 .IF/KLPAGE
; 3420 VMA_AR+SBR "SBR,ADB/FM,ADA/AR,AD/A+B,VMA/AD"
; 3421 .ENDIF/KLPAGE
; 3422 .IF/TRXDEF
; 3423 VMA_AR+TRB "TRB,ADB/FM,ADA/AR,AD/A+B,VMA/AD"
; 3424 .ENDIF/TRXDEF
; 3425 VMA_AR+XR "GEN AR+XR,VMA/AD"
; 3426 VMA_AR-1 "ADA/AR,AD/A-1,VMA/AD"
; 3427 VMA_ARX "ADA/ARX,AD/A,VMA/AD"
; 3428 VMA_ARX AND ADMSK "ADMSK,ADB/FM,ADA/ARX,AD/AND,VMA/AD"
; 3429 VMA_ARX+1 "ADA/ARX,AD/A+1,VMA/AD"
; 3430 VMA_ARX+BR "ADA/ARX,ADB/BR,AD/A+B,VMA/AD"
; 3431 .IF/KLPAGE
; 3432 VMA_ARX+CBR "CBR,ADB/FM,ADA/ARX,AD/A+B,VMA/AD"
; 3433 .ENDIF/KLPAGE
; 3434 VMA_ARX+XR "GEN ARX+XR,VMA/AD"
; 3435
; 3436 VMA_BR "ADB/BR,AD/B,VMA/AD"
; 3437 VMA_EO+1 "EO,ADB/FM,ADA EN/OS,AD/A+B+1,VMA/AD"
; 3438 VMA_MQ "ADA/MQ,AD/A,VMA/AD"
; 3439 VMA_MQ+1 "ADA/MQ,AD/A+1,VMA/AD" ;[310]
; 3440 VMA_PC "VMA/PC" ;[252]
; 3441 VMA_PC+1 "VMA/PC+1"
; 3442 .IF/KLPAGE
; 3443 VMA_SV.VMA "SV.VMA,ADB/FM,AD/B,VMA/AD"
; 3444 .ENDIF/KLPAGE
; 3445 .IF/TRXDEF
; 3446 VMA_TRB "TRB,ADB/FM,AD/B,VMA/AD"
; 3447 .ENDIF/TRXDEF
; 3448 .IFNOT/MODEL.B
; 3449 VMA_VMA_HELD "COND/SEL VMA,ADA/PC,AD/A,VMA/AD"
; 3450 .IF/MODEL.B
; 3451 .IFNOT/KLPAGE
; 3452 VMA_VMA_HELD "COND/SEL VMA,ADA/PC,AD/A,VMA/AD"
; 3453 .IF/KLPAGE
; 3454 VMA_VMA_HELD "COND/SEL VMA,ADA/PC,AD/A,VMA/AD,MEM/RESTORE VMA"
; 3455 .ENDIF/KLPAGE
; 3456 .ENDIF/MODEL.B
; 3457 VMA_VMA+1 "VMA/VMA,COND/VMA INC"
; 3458 VMA_VMA-1 "VMA/VMA,COND/VMA DEC"
; 3459
; 3460 WR_PT_ENTRY "COND/MBOX CTL,MBOX CTL/PT WR"
; 3461 WR_REFILL_RAM "MEM/REG FUNC,MREG FNC/WR REFILL RAM"
; 3462 .IF/MODEL.B
; 3463 WRITE (E) "MEM/EA CALC,EA CALC/WRITE(E),VMA/LOAD"
; 3464 .ENDIF/MODEL.B
; 3465
; 3466 XR "FMADR/XR"
; 3467
```

```
; 3468 .TOC      "DRAM Macros"
; 3469
; 3470      .DCODE
; 3471 ;
; 3472 ;      These macros have not been sorted alphabetically, as (1) there are
; 3473 ;      too few to bother, and (2) no one ever looks at the DRAM anyway!
; 3474 ;
; 3475 ;"A FIELD" MACROS
; 3476 ; DECODED TO TELL WHAT TO DO WITH EFFECTIVE ADDRESS
; 3477 ; AND WHETHER TO PREFETCH FROM PC+1
; 3478
; 3479 I      "A/IMMED"
; 3480 I-PF    "A/IMMED-PF"
; 3481 .IFNOT/XADDR
; 3482 EA      "A/IMMED"
; 3483 .IF/XADDR
; 3484 EA      "A/ADDR"
; 3485 .ENDIF/XADDR
; 3486 W      "A/WR-TST"
; 3487 R      "A/READ"
; 3488 R-PF    "A/READ-PF"
; 3489 RW      "A/RD-WR"
; 3490 .IF/RPW
; 3491 RPW      "A/RD-P-WR"
; 3492 .IFNOT/RPW
; 3493 RPW      "A/RD-WR"
; 3494 .ENDIF/RPW
; 3495 .IF/WRTST
; 3496 IW      "A/WR-TST"
; 3497 .IFNOT/WRTST
; 3498 IW      "A/IMMED"
; 3499 .ENDIF/WRTST
; 3500
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MICR

; 3501 ; "B FIELD" MACROS
; 3502 ; DECODED BY MOST INSTRUCTIONS TO TELL WHERE TO STORE RESULTS,
; 3503 ; BUT USED BY OTHERS TO HOLD VARIOUS "MODE" INFORMATION
; 3504
; 3505 AC "B/AC"
; 3506 M "B/MEM"
; 3507 S "B/SELF"
; 3508 B "B/BOTH"
; 3509 DBL AC "B/DBL AC"
; 3510 DBL B "B/DBL BOTH"
; 3511 FL-AC "B1-2/AC"
; 3512 FL-MEM "B1-2/MEM"
; 3513 FL-BOTH "B1-2/BOTH"
; 3514
; 3515 TN- "BO/CRYO(1),B1-2/O"
; 3516 TNE "BO/CRYO(0),B1-2/O"
; 3517 TNA "BO/CRYO(0),B1-2/O"
; 3518 TNN "BO/CRYO(1),B1-2/O"
; 3519 TZ- "BO/CRYO(1),B1-2/1"
; 3520 TZE "BO/CRYO(0),B1-2/1"
; 3521 TZA "BO/CRYO(0),B1-2/1"
; 3522 TZN "BO/CRYO(1),B1-2/1"
; 3523 TC- "BO/CRYO(1),B1-2/2"
; 3524 TCE "BO/CRYO(0),B1-2/2"
; 3525 TCA "BO/CRYO(0),B1-2/2"
; 3526 TCN "BO/CRYO(1),B1-2/2"
; 3527 TO- "BO/CRYO(1),B1-2/3"
; 3528 TOE "BO/CRYO(0),B1-2/3"
; 3529 TOA "BO/CRYO(0),B1-2/3"
; 3530 TON "BO/CRYO(1),B1-2/3"
; 3531
; 3532 SJC- "B/SJC-"
; 3533 SJCL "B/SJCL"
; 3534 SJCE "B/SJCE"
; 3535 SJCLE "B/SJCLE"
; 3536 SJCA "B/SJCA"
; 3537 SJCGE "B/SJCGE"
; 3538 SJCN "B/SJCN"
; 3539 SJCG "B/SJCG"
; 3540
; 3541 BLKI "BO/CRYO(0),B1-2/2"
; 3542 BLKO "BO/CRYO(0),B1-2/O"
; 3543 DATAI "B/6"
; 3544 DATAO "B/4"
; 3545 CONI "B/6"
; 3546 CONO "B/4"
; 3547 CONSO "BO/CRYO(1),B1-2/1"
; 3548 CONSZ "BO/CRYO(0),B1-2/1"
; 3549

; 3550 .BIN
; 3551 .UCODE
; 3552

THE INSTRUCTION LOOP

```
; 3553 .TOC "THE INSTRUCTION LOOP"
; 3554
; 3555 ; Comments updated [302]
; 3556 ;
; 3557 ; INSTRUCTION DECODE, EA COMPUTATION, AND OPERAND FETCH
; 3558 ;
; 3559 ; IN GENERAL, AN INSTRUCTION IS STARTED AT XCTGO.
; 3560 ; AT THIS TIME THE INSTRUCTION IS IN ARX AND IR, AND PC HAS ITS ADDRESS.
; 3561 ; THE DRAM OUTPUTS AND "AC" BITS WILL SETTLE DURING THIS
; 3562 ; MICROINSTRUCTION, AND WILL BE LATCHED BY THE CLOCK WHICH ENDS
; 3563 ; THE CYCLE. XCTGO DISPATCHES ON THE STATE OF THE
; 3564 ; INDIRECT AND INDEX BITS OF THE ARX (EA MOD DISP) TO COMPEA OR
; 3565 ; ONE OF THE THREE LOCATIONS FOLLOWING IT.
; 3566 ; IF INDIRECT IS SPECIFIED, THE INDIRECT POINTER IS FETCHED (AT
; 3567 ; COMPEA+2 OR +3 DEPENDING ON WHETHER INDEXING IS ALSO SPECIFIED).
; 3568 ; WE WAIT FOR IT AT INDRCT, AND THEN LOOP BACK TO COMPEA. WHEN NO
; 3569 ; INDIRECT IS CALLED FOR, WE COMPUTE THE INSTRUCTION'S EFFECTIVE ADDRESS
; 3570 ; (EA) AT COMPEA OR COMPEA+1 (DEPENDING ON WHETHER INDEXING IS CALLED
; 3571 ; FOR), AND PERFORM THE FUNCTION "A READ", WHOSE OPERATION DEPENDS
; 3572 ; ON THE DRAM A FIELD, AS FOLLOWS:
; 3573 ;
; 3574 ; MACRO A-FLD MEM FUNCTION VMA DISPATCH
; 3575 ; I 0 NONE AD(=EA) DRAM J
; 3576 ; I-PF 1 FETCH PC+1 DRAM J
; 3577 ; EA 2 30 BIT EA CALC AD DRAM J
; 3578 ; W 3 WR TST AD 3 (MODEL B) 43 (MODEL A)
; 3579 ; R 4 READ AD 4 44
; 3580 ; R-PF 5 READ AD 5 45
; 3581 ; RW 6 READ/WR TST AD 6 46
; 3582 ; RPW 7 RD-PSE/WR TST AD 7 47
; 3583 ;
; 3584 ; A FIELD VALUES 0 AND 1 ARE USED FOR INSTRUCTIONS WHICH NEITHER
; 3585 ; READ NOR WRITE THE CONTENTS OF EA (IMMEDIATE-MODE INSTRUCTIONS,
; 3586 ; JUMPS, ETC). THESE DISPATCH FROM "A READ" DIRECTLY TO THE MICROCODE
; 3587 ; WHICH HANDLES THE INSTRUCTION. IF THE A FIELD CONTAINS 1, "A READ"
; 3588 ; CAUSES A PREFETCH (FROM PC+1), SO THAT THE MBOX CAN WORK ON GETTING
; 3589 ; THE NEXT INSTRUCTION INTO ARX WHILE THE EBOX PERFORMS THIS ONE.
; 3590 ; IF THE A FIELD CONTAINS A 2, THE EA CALCULATION WILL PROVIDE
; 3591 ; A FULL 30 BIT EFFECTIVE ADDRESS AT THE END. THIS WAS INTRODUCED
; 3592 ; WITH EXTENDED ADDRESSING, TO ALLOW SUCH INSTRUCTIONS AS XMOVEI,
; 3593 ; PUSHJ, AND JSP TO COMPUTE A COMPLETE ADDRESS WITHOUT ACTUALLY
; 3594 ; REFERENCING IT. OTHERWISE, THIS IS SIMILAR TO AN A FIELD OF 0.
; 3595 ; IF THE A FIELD CONTAINS 3, THE MBOX PERFORMS A PAGING CHECK ON
; 3596 ; EA, AND CAUSES A PAGE FAIL IF THAT LOCATION IS NOT WRITABLE.
; 3597 ; THE MICROCODE GOES TO 3 TO WAIT FOR COMPLETION OF THE PAGE CHECK,
; 3598 ; AND AT THAT LOCATION LOADS AC INTO AR. THE WRITABILITY OF EA IS
; 3599 ; VERIFIED AT THIS TIME TO PREVENT INCORRECTLY SETTING FLAGS OR
; 3600 ; THE PROCESSOR STATE IF THE INSTRUCTION WILL BE ABORTED BY PAGE
; 3601 ; FAILURE. LOCATION 3 THEN DISPATCHES TO THE HANDLER FOR THE
; 3602 ; CURRENT INSTRUCTION.
; 3603 ; A FIELD VALUES 4 TO 7 PERFORM READS FROM EA. 6 AND 7 ALSO TEST
; 3604 ; THE WRITABILITY OF THE LOCATION, AND 7 PERFORMS THE FIRST HALF OF
; 3605 ; A READ-PAUSE-WRITE CYCLE IF EA IS AN UN-CACHED ADDRESS. THE DISPATCH
; 3606 ; IS TO A, WHERE WE WAIT FOR MEMORY DATA TO ARRIVE IN AR. IF THE A
; 3607 ; FIELD WAS 5, WE PREFETCH FROM PC+1 AS SOON AS THE DATA ARRIVES.
; 3608 ; IN ANY CASE, WE DISPATCH ACCORDING TO THE DRAM J FIELD TO THE
```


THE INSTRUCTION LOOP

```
; 3609 ; HANDLER FOR THE INSTRUCTION.
; 3610 ; IF A PAGE FAIL OCCURS AT ANY TIME (EITHER IN THIS CODE OR DURING
; 3611 ; INSTRUCTION EXECUTION) THE MICROPROCESSOR TRAPS TO CRAM LOCATION
; 3612 ; 1777 OR 3777, WHERE IT CAUSES A PAGE FAIL TRAP.
; 3613 ;
; 3614 ; MOST INSTRUCTIONS (THE MOVE, HALFWORD, AND BOOLEAN GROUPS,
; 3615 ; PLUS ADD AND SUB) ARE PERFORMED BY HANDLERS CONSISTING OF ONE OR
; 3616 ; TWO MICROINSTRUCTIONS WHICH LEAVE THE RESULT IN AR, AND COMPLETE
; 3617 ; BY INVOKING THE "EXIT" MACRO. EXIT USES THE MEM/B WRITE FUNCTION
; 3618 ; TO BEGIN A STORE TO MEMORY FOR THOSE MODES IN WHICH THE RESULT
; 3619 ; GOES TO MEMORY, AND DISP/DRAM B TO GET TO ONE OF THE MICROINSTRUCTIONS
; 3620 ; FOLLOWING STO. THIS CODE DEPENDS ON A CERTAIN AMOUNT OF CORRELATION
; 3621 ; BETWEEN THE DRAM A AND B FIELDS. IN PARTICULAR, STAC (STORE AC)
; 3622 ; ASSUMES THAT A PREFETCH HAS OCCURRED, WHILE THE OTHERS ASSUME THAT
; 3623 ; NO PREFETCH HAS OCCURED. THUS NORMAL AND IMMEDIATE MODES, WHOSE
; 3624 ; RESULTS GO ONLY TO AC, MUST PREFETCH IN THE DRAM A FIELD, WHILE
; 3625 ; MEM, BOTH, AND SELF MODES, WHOSE RESULTS GO TO MEMORY, MUST NOT.
; 3626 ; (THIS RESTRICTION IS AVOIDED FOR THOSE INSTRUCTIONS WHICH NEVER
; 3627 ; PREFETCH -- IN MUL, DIV, AND IDIV BY USE OF THE EXIT TO ST2AC,
; 3628 ; AND IN IMUL AND THE SINGLE PRECISION FLOATING POINT
; 3629 ; INSTRUCTIONS BY A RESTRICTED EXIT TO ST6.)
; 3630 ; ANOTHER LARGE SET OF INSTRUCTIONS (SKIP, AOS, SOS, JUMP, AOJ,
; 3631 ; SOJ, AOBJ, CAI, CAM, AND THE TEST GROUP) KNOWS WHERE TO PUT THE
; 3632 ; RESULTS WITHOUT MODE INFORMATION, AND THEY USE THE DRAM B FIELD TO
; 3633 ; DETERMINE WHETHER TO SKIP OR JUMP, AS A FUNCTION OF THEIR OPERANDS.
; 3634 ; SKIP, AOS, AND SOS ARE CONSIDERED SELF-MODE INSTRUCTIONS,
; 3635 ; AND AFTER MAKING THE FETCH DECISION (AND RE-WRITING MEMORY, IN
; 3636 ; THE CASE OF AOS OR SOS), JUMP TO STSELF TO DECIDE WHETHER OR NOT
; 3637 ; TO PUT THE RESULT ALSO IN AC. THE OTHER INSTRUCTIONS OF THIS SET
; 3638 ; JUMP TO STORAC OR NOP AFTER MAKING THE FETCH DECISION, DEPENDING
; 3639 ; ON WHETHER OR NOT THE OPCODE DEFINITION REQUIRES MODIFICATION OF AC.
; 3640 ; (NOTE THE DIFFERENCE BETWEEN STAC AND FINI ON THE ONE HAND,
; 3641 ; AND STORAC AND NOP ON THE OTHER -- STORAC AND NOP MUST BE USED WHEN
; 3642 ; THE NEXT INSTRUCTION FETCH OCCURS ON THE PRECEDING EBOX CYCLE, BECAUSE
; 3643 ; NICOND MUST NOT IMMEDIATELY FOLLOW A FETCH (ONE CYCLE REQUIRED FOR
; 3644 ; VMA AC REF TO MAKE IT THROUGH THE NICOND LOGIC), STAC AND FINI ARE
; 3645 ; USED WHEN THERE HAS BEEN AN INTERVENING CYCLE.)
; 3646
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NEXT INSTRUCTION DISPATCH

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; 3647 .TOC "NEXT INSTRUCTION DISPATCH"
; 3648
; 3649 ;START BY PUTTING PC WORD IN AR, JUMP HERE
; 3650 O:
; 3651 .IFNOT/MODEL.B
; 3652 START: SET FLAGS_AR,VMA_AR,MEM/SEC O, ;LOAD FLAGS, CLEAR VMAX
; 3653 BR/AR,J/SETPC ;THEN JUMP TO ADDR IN AR
; 3654 .IF/MODEL.B
; 3655 START: SET FLAGS_AR,J/SETPC ;LOAD FLAGS, USE REST AS ADDR
; 3656 .ENDIF/MODEL.B
; 3657 1: ;MUST BE AT START+1
; 3658 CONT: VMA/PC,FETCH,J/XCTW ;HERE TO CONTINUE FROM PC
; 3659 ;
; 3660 ; Comments updated [321].
; 3661 ;
; 3662 ; DISP/NICOND (THE "NXT INSTR" MACRO) BRINGS US TO ONE OF THE
; 3663 ; LOCATIONS FOLLOWING "NEXT". PC HAS BEEN UPDATED TO ADDRESS THE NEXT
; 3664 ; INSTRUCTION IN THE NORMAL FLOW, AND IF IT IS FROM MEMORY
; 3665 ; (AS OPPOSED TO AC'S), THE INSTRUCTION IS IN ARX AND IR.
; 3666 ; THE NICOND DISPATCH IS PRIORITY ENCODED, AS FOLLOWS:
; 3667 ; [FOR FULL DETAILS, SEE PRINT CON2]
; 3668 ; (1) IF PI CYCLE IS TRUE, GO TO NEXT FOR SECOND HALF
; 3669 ; OF STANDARD OR VECTOR INTERRUPT.
; 3670 ; (2) IF THE RUN FLOP (CON RUN) IS OFF, GO TO NEXT+2, FROM WHICH THE
; 3671 ; MICROCODE WILL ENTER THE HALT LOOP TO WAIT FOR THE CONSOLE TO RESTART
; 3672 ; INSTRUCTION PROCESSING.
; 3673 ; (3) IF THE METER HAS A REQUEST, GO TO NEXT+4 (MTRINT) TO SERVE IT.
; 3674 ; (4) IF THE PI SYSTEM HAS A REQUEST READY, GO TO NEXT+6 (INTRPT)
; 3675 ; TO START A PI CYCLE.
; 3676 ; (5) IF CON UCODE STATE 05 (TRACK EN) IS SET, GO TO NEXT+10 OR 11.
; 3677 ; Normally NEXT+10 will be used; if a trap flag was set by the previous
; 3678 ; instruction, however, NEXT+11 will be reached. This is the only
; 3679 ; way the trap will ever be detected, so be cautious of ignoring it.
; 3680 ; THIS FLOP IS ENTIRELY UNDER CONTROL OF THE MICROCODE, AND IS ONLY
; 3681 ; USED FOR THE SPECIAL STATISTICS-GATHERING MICROCODE.
; 3682 ; (6) IF THE LAST INSTRUCTION SET A TRAP FLAG, GO TO NEXT+13 OR +17,
; 3683 ; IT DOESN'T MATTER WHICH. (NEXT+17 will be reached if VMA contains
; 3684 ; an AC address, probably irrelevant when a trap flag was set.)
; 3685 ; (7) IF VMA CONTAINS AN AC ADDRESS, IMPLYING THAT THE NEXT
; 3686 ; INSTRUCTION IS TO COME OUT OF FAST MEMORY, GO TO NEXT+16 TO GET IT.
; 3687 ; (10) --NORMAL CASE-- THE INSTRUCTION IS IN ARX, READY TO GO, GO
; 3688 ; TO NEXT+12 (XCTGO).
; 3689 ;
; 3690 ; The NICOND dispatch yields the following:
; 3691 ;
; 3692 ; +0 CON PI CYCLE
; 3693 ; +1 Unused
; 3694 ; +2 -CON RUN (i.e. halt)
; 3695 ; +3 Unused
; 3696 ; +4 CON MTR INT REQ (meter interrupt)
; 3697 ; +5 Unused
; 3698 ; +6 CON INT REQ (interrupt)
; 3699 ; +7 Unused
; 3700 ; +10 CON UCODE STATE 05 (tracks enable)
; 3701 ; +11 CON UCODE STATE 05+TRAP REQ (tracks enable+trap)
; 3702 ; +12 -VM AC REF (normal instruction)
    
```

U 0000, 1125,0001,0000,0000,0000,0024,0020

U 0001, 0270,0001,0000,0000,0117,0010,0000

; KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C) 1984 DIGITAL EQUIPMENT CORPORATION V1(336)
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; BASIC.MIC[10,5351] 19:05 28-Nov-83

MICR

NEXT INSTRUCTION DISPATCH

; 3703	;	+13	-VM AC REF+TRAP REQ (normal instruction+trap)
; 3704	;	+14	Unused
; 3705	;	+15	Unused
; 3706	;	+16	-CON PI CYCLE (AC ref)
; 3707	;	+17	-CON PI CYCLE+TRAP REQ (AC ref+trap)
; 3708			

NEXT INSTRUCTION DISPATCH

```
; 3709 ;NICOND (NXT INSTR) DISPATCH BLOCK
; 3710
; 3711 =11*0000 ;USE LOC'NS INACCESSIBLE TO DRAM
; 3712 NEXT: AR_MQ+1,VMA/AD, ;2ND PART OF INTERRUPT
; 3713 SET PI CYCLE,J/PICYC2 ;CONTINUE WITH 41+2N
; 3714 =0010 CLR AR,ARX_1S,SC_#,#/23., ;HERE IF RUN FLOP OFF
; 3715 CALL,J/ROTS ;BUILD ADDR MASK
; 3716 .IFNOT/EXTEXP ;[230]
; 3717 ADMSK,FM_AR,AR_AR+1,J/CHALT ;SAVE MASK, GO HALT
; 3718 .IF/EXTEXP ;[230]
; 3719 FM[ADMSK]_AR,AR_AR+2,J/EXMSK ;[230] AR HAS 77.,777776
; 3720 .ENDIF/EXTEXP ;[230]
; 3721 =0100
; 3722 MTRINT: CLR ACCOUNT EN,J/MTRREQ ;HERE IF METER REQUEST UP
; 3723 AR_EBUS,SC_#,#/2,J/PICYC1 ;HERE IF TAKE INTRPT DOESNT FIND
; 3724 =0110 ; A METER REQUEST
; 3725 INTRPT: AR_EBUS,SC_#,#/2,J/PICYC1 ;HERE IF INTERRUPT PENDING
; 3726 ;
; 3727 ; [321] Even if statistics are enabled, traps should not be lost,
; 3728 ; so override TRACKS and friends when TRAP is set.
; 3729 ;
; 3730 .IF/TRACKS
; 3731 =1000 AR_TRX+1,GEN CRY18,SKP CRYO,J/TRK1;STORE PC BEFORE EXECUTING INSTR
; 3732 VMA_420+TRAP,J/TRAPX ;[321] Don't lose traps!
; 3733 .ENDIF/TRACKS
; 3734 .IF/OP.CNT
; 3735 =1000 SC_#,#/9.,SKP USER,J/OPCT1 ;COUNT THIS INSTR
; 3736 VMA_420+TRAP,J/TRAPX ;[321] Don't lose traps!
; 3737 .ENDIF/OP.CNT
; 3738 .IF/OP.TIME
; 3739 =1000 AR_2,CLR TRK+PA EN,J/OPTMO ;TIME THIS INSTR
; 3740 VMA_420+TRAP,J/TRAPX ;[321] Don't lose traps!
; 3741 .ENDIF/OP.TIME
; 3742 .IF/SO.CNT
; 3743 =1000
; 3744 TRKO: ARX_TRB,BRX/ARX,SKP AC REF,J/TRK1;GET PREV INSTR HOLD THIS INSTR
; 3745 VMA_420+TRAP,J/TRAPX ;[321] Don't lose traps!
; 3746 .ENDIF/SO.CNT
; 3747 .IF/SO2.CNT
; 3748 =1000
; 3749 TRKO: ARX_TRB,BRX/ARX,SKP AC REF,J/TRK1;GET PREV INSTR HOLD THIS INSTR
; 3750 VMA_420+TRAP,J/TRAPX ;[321] Don't lose traps!
; 3751 .ENDIF/SO2.CNT
; 3752 =1010
; 3753 XCTGO: BRX/ARX,AR_ARX,SET ACCOUNT EN, ;SAVE INSTR, SIGN EXTEND Y,
; 3754 XR,EA MOD DISP,J/COMPEA ; GO CALCULATE EA
; 3755 TRAP: VMA_420+TRAP,J/TRAPX ;HERE IF TRAP BITS SET
; 3756 =1110 ARX_FM(VMA),TIME/3T,LOAD IR,J/XCTGO ;HERE IF INSTR IS IN FM
; 3757 VMA_420+TRAP,J/TRAPX ;HERE IF TRAP BITS SET
; 3758
; 3759 ;HERE ON TRAPS, VMA SETUP WITH 420+TRAP CODE
; 3760 =11****
; 3761 TRAPX: LOAD ARX,PT REF ;GET AND XCT TRAP INSTR
; 3762 =11**** SET PC+1 INH ;DON'T INCREMENT PC FOR THIS INSTR
; 3763
; 3764 ;HERE AFTER FETCHING INSTR TO BE EXECUTED
```

U 0140, 3152,4023,2000,0000,0320,1510,0714

U 0142, 1630,2341,0200,0302,0000,0450,0027

U 0143, 0032,3703,5007,0000,0000,1010,0175

U 0144, 3130,0001,0000,0000,0000,2110,0145

U 0145, 3147,0001,3000,0302,0060,0010,0002

U 0146, 3147,0001,3000,0302,0060,0010,0002

U 0152, 0174,2341,4022,0000,2000,2136,0105

U 0153, 0060,4001,0000,0000,0100,3110,0420

U 0156, 0152,3240,0203,0000,0020,1410,0000

U 0157, 0060,4001,0000,0000,0100,3110,0420

U 0060, 0064,4001,0000,0000,0013,0026,0033

U 0064, 0270,4001,0000,0000,0000,1510,0100

; KL10 Microcode for TOPS-10 and TOPS-20 -- 18 Nov 1983 COPYRIGHT (C) 1984 DIGITAL EQUIPMENT CORPORATION V1(336)
%34(270) Page 3-1
; BASIC.MIC[10,5351] 19:05 28-Nov-83

MICR

NEXT INSTRUCTION DISPATCH

U 0270, 0152,3240,0003,0000,0022,1410,0000	; 3765		
	; 3766	=11****	
U 0032, 0117,4003,2000,0000,0020,0010,0000	; 3767	XCTW: ARX_MEM,LOAD IR,J/XCTGO	;GET INSTR TO XCT
U 0117, 0661,0001,0007,0000,0000,1010,0164	; 3768	.IF/EXTEXP	;[230]
	; 3769	EXMSK: AR AR+1	;[230] GIVES 77,,777777
	; 3770	FM[EXPSK]_AR,J/CHALT	;[230] MASK FOR FORTRAN EXT EXP
	; 3771	.ENDIF/EXTEXP	;[230]
	; 3772		

A Remd VMA (Act 1, 2) p/1000000
mem / A RD #10, 5/6 (in 4 or 18)

NI COND
in, ITRK / IWSTR → XCTGO
BRK & AR ← IWSTR, FM AR / AR,
Z of ARK

Move 1, (6)

R-P f, AC, 5/Move
A/5 B/5
Move: EXIT (same in ARK)

Component

Get AR + X R, Avenel
IMMED: SH/Z

SH1 → L ARK: NO VMAX / prev
SEC
CTK

ARL → 5: BR/AR, Fw 1m. 1f 1ch
12113P.

A = 1 - (Shift) Immediate

XR, @WD

BZL

BARBQ4

00100

9154

LOW DAVIS

'tullant Trop'

Chickadee

305

428 2850 - 817

Also find

Brown

11/16

PA, Dm

NO SPARS, etc

11/16 Draw

40 MS

11/60 Pay

[illegible]

```
*START* Job UB Req #2637 for TIM LITT [10,1141] Date 26-Jul-84 13:16:42 Monitor: Double Twinky KL702/30B *START*
File DSKI:QDVJRT.SPL[3,3], created: 26-Jul-84 7:56:59, printed: 26-Jul-84 13:16:46
Job parameters: Request created:26-Jul-84 8:04:51 Page limit:1299 Forms:LANDSD Account:84F.684310
Distribution: PK01, slot C2 (TIM LITT@SFTGRP)
File parameters: Copy: 1 of 4 Spacing:SINGLE File format:ASCII Print mode:ARROW /DISPOSE:RENAME
Xerox parameters: Type:STANDARD TS:COMMON
```


DECSYSTEM KL10 MICRO-CODE LIST
UB.MCR 09:16 29-FEB-84

CONVRT VER 00.11 26-JUL-84 07:57 PAGE 01

DECSYSTEM KL10 MICRO-CODE LIST

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MARLBORO, MASS. 01752

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0000/001125	000000	120000	000000	000000	24	; 3655	0000/1125	0	00	1000	0	0	0	000	0	0	0	0	020	0	00	00	24	0
0001/000270	000000	100000	170000	000200	10	; 3658	0001/0270	0	00	1000	0	0	0	000	0	0	0	0	000	1	17	00	10	0
0002/000060	000000	100007	050000	000040	33	; 3987	0002/0060	0	04	1040	0	0	0	000	0	0	3	000	0	05	00	33	0	
0003/000000	005300	000000	024000	100002	01	; 3861	0003/0000	1	02	0432	1	0	0	000	0	0	0	000	0	02	00	01	0	
0004/000000	005200	000000	024140	000002	01	; 3872	0004/0000	1	00	0032	1	0	3	000	0	0	0	000	0	02	00	01	0	
0005/000000	005200	000010	174140	000002	01	; 3883	0005/0000	1	00	0032	1	0	3	000	0	0	0	000	2	17	00	01	0	
0006/000000	005200	000000	024140	000002	01	; 3894	0006/0000	1	00	0032	1	0	3	000	0	0	0	000	0	02	00	01	0	
0007/000000	005200	000000	024140	000002	01	; 3905	0007/0000	1	00	0032	1	0	3	000	0	0	0	000	0	02	00	01	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0010/000014	000202	101410	060000	000002	33	; 4470	0010/0014	1	00	1020	0	0	0	000	0	0	0	0	203	2	06	00	33	0
0011/000014	000302	101417	060000	000002	33	; 4473	0011/0014	1	04	1420	0	0	0	000	0	0	3	203	2	06	00	33	0	
0012/000013	000000	100007	000000	000040	10	; 4475	0012/0013	0	04	1040	0	0	0	000	0	0	3	000	0	00	00	10	0	
0013/000014	007202	001410	060000	000010	33	; 4477	0013/0014	2	00	0036	0	0	0	000	0	0	0	203	2	06	00	33	0	
0014/000222	000000	100000	000000	000000	10	; 4479	0014/0222	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	10	0	
0015/040065	004200	000000	000000	100000	10	; 4480	0015/0065	0	02	0030	0	0	0	004	0	0	0	000	0	00	00	10	0	
0016/000065	004600	000000	000000	100000	10	; 4481	0016/0065	0	02	0031	0	0	0	000	0	0	0	000	0	00	00	10	0	
0017/040065	005600	000000	000000	100000	10	; 4482	0017/0065	0	02	0033	0	0	0	004	0	0	0	000	0	00	00	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0020/000222	000000	100000	000000	000040	14	; 3936	0020/0222	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	14	0	
0021/000222	010000	100000	002400	000040	10	; 3937	0021/0222	0	00	1040	0	0	0	000	0	0	0	000	0	00	16	10	0	
0022/003056	000000	100000	020140	000000	10	; 8021	0022/3056	0	00	1000	0	0	3	000	0	0	0	000	0	02	00	10	0	
0023/000075	007212	001410	060200	000010	10	; 8022	0023/0075	2	00	2036	0	0	4	000	0	0	0	203	2	06	00	10	0	
0024/000135	006200	100000	005000	100000	10	; 6317	0024/0135	0	02	1034	3	0	0	000	0	0	0	000	0	00	00	10	0	
0025/000131	001700	100000	007000	004000	05	; 6321	0025/0131	0	20	1423	3	0	0	000	0	0	0	000	0	00	04	05	0	
0026/000344	060000	100000	022160	000000	10	; 8023	0026/0344	0	00	1000	0	0	3	000	0	0	0	000	0	02	65	10	0	
0027/000075	007212	001410	060200	000010	10	; 8024	0027/0075	2	00	2036	0	0	4	000	0	0	0	203	2	06	00	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0030/002023	005300	000000	020140	000002	10	; 4191	0030/2023	1	00	0432	0	0	3	000	0	0	0	000	0	02	00	10	0	
0031/000274	005301	000000	020140	000002	62	; 4192	0031/0274	1	00	0432	0	0	3	000	0	0	0	100	0	02	00	62	0	
0032/000117	000010	100000	000000	100042	10	; 3769	0032/0117	1	02	3040	0	0	0	000	0	0	0	000	0	00	00	10	0	
0033/000255	014510	045700	000422	104042	27	; 4194	0033/0255	1	62	2451	0	0	0	030	1	0	0	043	0	00	13	27	0	
0034/044035	001410	100004	000000	120002	10	; 6340	0034/0035	1	07	3003	0	0	0	004	0	1	0	000	0	00	00	10	0	
0035/000151	006614	014002	002420	004000	05	; 6342	0035/0151	0	60	2035	0	0	0	000	0	0	2	410	0	00	07	05	0	
0036/000354	050000	100006	000000	000000	10	; 4663	0036/0354	0	04	1000	0	0	0	000	0	0	2	000	0	00	50	10	0	
0037/000354	055300	000000	000100	100002	10	; 4664	0037/0354	1	02	0432	0	0	2	000	0	0	0	000	0	00	50	10	0	

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0040/006470 070000 133700 000000 000040 10	;	9255	0040/2470	0	00	1040	0	0	0	030	0	1	0	037	0	00	70	10	0
0041/003272 015200 000000 002440 100002 10	;	9259	0041/3272	1	02	0032	0	0	1	000	0	0	0	000	0	00	16	10	0
0042/003277 015210 004400 002400 104000 10	;	9263	0042/3277	0	62	2032	0	0	0	000	0	0	0	001	0	00	16	10	0
0043/003303 012700 002000 002640 100002 10	;	9267	0043/3303	1	02	0425	0	0	5	000	0	0	0	004	0	00	16	10	0
0044/003274 010000 100000 002400 000040 10	;	9271	0044/3274	0	00	1040	0	0	0	000	0	0	0	000	0	00	16	10	0
0045/003274 010000 100400 002400 000000 10	;	9275	0045/3274	0	00	1000	0	0	0	000	0	0	0	001	0	00	16	10	0
0046/003274 010000 110000 002400 000000 10	;	9279	0046/3274	0	00	1000	0	0	0	000	0	0	0	010	0	00	16	10	0
0047/003265 005301 053400 000340 004002 10	;	9283	0047/3265	1	20	0432	0	0	7	000	0	0	0	157	0	00	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0050/003304 015310 004000 002400 104000 10	;	9290	0050/3304	0	62	2432	0	0	0	000	0	0	0	000	0	00	16	10	0
0051/003310 015200 000400 002640 100002 10	;	9294	0051/3310	1	02	0032	0	0	5	000	0	0	0	001	0	00	16	10	0
0052/003310 015200 002000 002640 100002 10	;	9298	0052/3310	1	02	0032	0	0	5	000	0	0	0	004	0	00	16	10	0
0053/003274 010001 110400 002400 000000 10	;	9302	0053/3274	0	00	1000	0	0	0	000	0	0	0	111	0	00	16	10	0
0054/003314 015300 002000 002640 100002 10	;	9306	0054/3314	1	02	0432	0	0	5	000	0	0	0	004	0	00	16	10	0
0055/001274 075301 051000 000760 100002 10	;	9310	0055/1274	1	02	0432	0	0	7	000	0	0	0	152	0	00	73	10	0
0056/003270 015210 004000 002400 104000 10	;	9315	0056/3270	0	62	2032	0	0	0	000	0	0	0	000	0	00	16	10	0
0057/003314 015200 000000 002640 100002 10	;	9320	0057/3314	1	02	0032	0	0	5	000	0	0	0	000	0	00	16	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0060/000064 000000 131400 130000 000040 26	;	3761	0060/0064	0	00	1040	0	0	0	000	0	0	0	033	0	13	00	26	0
0061/000246 016000 100010 170000 100042 16	;	3915	0061/0246	1	02	1054	0	0	0	000	0	0	0	000	2	17	10	16	0
0062/000061 000000 100000 020140 000040 10	;	3916	0062/0061	0	00	1040	0	0	3	000	0	0	0	000	0	02	00	10	0
0063/000074 040000 100010 172540 000040 10	;	3918	0063/0074	0	00	1040	0	0	3	000	0	0	0	000	2	17	46	10	0
0064/000270 010001 100000 002020 000040 10	;	3762	0064/0270	0	00	1040	0	0	0	000	0	0	0	100	0	00	15	10	0
0065/104140 010000 100000 020002 000040 06	;	3920	0065/0140	0	00	1040	0	0	0	040	1	1	0	000	0	02	10	06	0
0066/000075 000000 100010 170140 000040 10	;	3923	0066/0075	0	00	1040	0	0	3	000	0	0	0	000	2	17	00	10	0
0067/000074 000000 100010 170140 000000 10	;	3925	0067/0074	0	00	1000	0	0	3	000	0	0	0	000	2	17	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0070/000271 025300 000000 022160 000002 10	;	3826	0070/0271	1	00	0432	0	0	3	000	0	0	0	000	0	02	25	10	0
0071/000144 075200 000000 022560 000002 10	;	3827	0071/0144	1	00	0032	0	0	3	000	0	0	0	000	0	02	77	10	0
0072/002407 000000 120000 000000 000000 24	;	5189	0072/2407	0	00	1000	0	0	0	000	0	0	0	020	0	00	00	24	0
0073/000072 000004 100000 000020 000040 10	;	5190	0073/0072	0	00	1040	0	0	0	000	0	0	0	400	0	00	01	10	0
0074/000065 010000 100000 002400 000000 10	;	3932	0074/0065	0	00	1000	0	0	0	000	0	0	0	000	0	00	16	10	0
0075/000222 010000 100000 002400 000040 10	;	3933	0075/0222	0	00	1040	0	0	0	000	0	0	0	000	0	00	16	10	0
0076/000072 000000 102000 000020 000040 10	;	5191	0076/0072	0	00	1040	0	0	0	000	0	0	0	004	0	00	01	10	0
0077/000072 000004 102000 000020 000000 10	;	5192	0077/0072	0	00	1000	0	0	0	000	0	0	0	404	0	00	01	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0100/000060	000000	100000	050000	000000	33	; 3996	0100/0060	0	00	1000	0	0	0	000	0	0	0	0 000	0	05	00	33	0	
0101/000100	014510	000000	020420	100042	10	; 3998	0101/0100	1	02	2451	0	0	0	000	0	0	0 000	0	02	13	10	0		
0102/000334	050000	100010	172420	000000	10	; 4006	0102/0334	0	00	1000	0	0	0	000	0	0	0 000	2	17	57	10	0		
0103/001334	005200	004001	160000	100002	10	; 4026	0103/1334	1	42	0032	0	0	0	000	0	0	1 000	0	16	00	10	0		
0104/003462	105200	004001	002400	100002	10	; 4029	0104/3462	1	42	0032	0	1	0	000	0	0	1 000	0	00	06	10	0		
0105/000060	005200	001000	052400	000002	33	; 4128	0105/0060	1	00	0032	0	0	0	000	0	0	0 002	0	05	06	33	0		
0106/000060	005200	000000	052400	100002	33	; 4130	0106/0060	1	02	0032	0	0	0	000	0	0	0 000	0	05	06	33	0		
0107/000334	055300	000010	172420	100002	22	; 4014	0107/0334	1	02	0432	0	0	0	000	0	0	0 000	2	17	57	22	0		
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0110/000256	005300	042300	160042	004002	10	; 4207	0110/0256	1	20	0432	0	0	1	030	1	0	0 044	0	16	00	10	0		
0111/000274	005201	000000	000040	004002	62	; 4208	0111/0274	1	20	0032	0	0	1	000	0	0	0 100	0	00	00	62	0		
0112/005431	105307	053301	002020	100002	50	; 5498	0112/1431	1	02	0432	0	1	0	030	0	1	1 756	0	00	05	50	0		
0113/000256	014550	045700	160422	104042	27	; 4210	0113/0256	1	62	2651	0	0	0	030	1	0	0 043	0	16	13	27	0		
0114/000002	005300	002003	002400	100002	10	; 4139	0114/0002	1	02	0432	0	0	0	000	0	0	3 004	0	00	06	10	0		
0115/000060	000000	102003	052400	000040	33	; 4140	0115/0060	0	00	1040	0	0	0	000	0	0	3 004	0	05	06	33	0		
0116/002072	050010	141700	002402	000010	16	; 5503	0116/2072	2	00	3000	0	0	0	030	1	0	0 043	0	00	56	16	0		
0117/000661	010001	162000	000340	000000	10	; 3770	0117/0661	0	00	1000	0	0	7	000	0	0	0 164	0	00	10	10	0		
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0120/000736	007610	100010	130000	000200	50	; 4845	0120/0736	0	00	3037	0	0	0	000	0	0	0 000	3	13	00	50	0		
0121/004141	017660	122310	032420	000200	10	; 3832	0121/0141	0	00	1337	0	0	0	030	0	1	0 024	3	03	17	10	0		
0122/000074	005210	000016	170140	000200	10	; 4848	0122/0074	0	04	2032	0	0	3	000	0	0	2 000	3	17	00	10	0		
0123/000122	010000	140000	020160	000000	10	; 4849	0123/0122	0	00	1000	0	0	3	000	0	0	0 040	0	02	11	10	0		
0124/002264	006200	140304	000002	004000	50	; 4750	0124/2264	0	24	1034	0	0	0	030	1	0	0 040	0	00	00	50	0		
0125/000416	017611	100010	120020	000200	10	; 8037	0125/0416	0	00	3037	0	0	0	000	0	0	0 100	3	12	11	10	0		
0126/000641	007666	101000	004000	100000	24	; 4751	0126/0641	0	02	1337	1	0	0	000	0	0	0 602	0	00	00	24	0		
0127/000416	017611	100010	000020	000200	10	; 8038	0127/0416	0	00	3037	0	0	0	000	0	0	0 100	3	00	11	10	0		
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0130/000736	000000	131400	130000	000000	66	; 5093	0130/0736	0	00	1000	0	0	0	000	0	0	0 033	0	13	00	66	0		
0131/000035	005310	000000	002020	100000	10	; 6336	0131/0035	0	02	2432	0	0	0	000	0	0	0 000	0	00	05	10	0		
0132/001161	007620	100010	160000	000200	50	; 5094	0132/1161	0	00	1137	0	0	0	000	0	0	0 000	3	16	00	50	0		
0133/000534	030000	100000	122540	000000	10	; 5096	0133/0534	0	00	1000	0	0	3	000	0	0	0 000	0	12	36	10	0		
0134/002264	005210	004001	001000	100000	50	; 5427	0134/2264	0	42	2032	2	0	0	000	0	0	1 000	0	00	00	50	0		
0135/000034	003010	000000	002020	100012	35	; 6337	0135/0034	3	02	2006	0	0	0	000	0	0	0 000	0	00	05	35	0		
0136/002054	054610	000000	002600	000002	10	; 5428	0136/2054	1	00	2031	0	0	4	000	0	0	0 000	0	00	56	10	0		
0137/003157	000003	133000	004020	000040	10	; 3955	0137/3157	0	00	1040	1	0	0	000	0	0	0 336	0	00	01	10	0		

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0140/003152	010057	112010	002020	100242	10	; 3713	0140/3152	1	02	3240	0	0	0	000	0	0	0	0	714	3	00	15	10	0
0141/000147	000001	140300	000002	000040	10	; 3833	0141/0147	0	00	1040	0	0	0	030	1	0	0	0	140	0	00	00	10	0
0142/001630	001700	123700	002002	004000	50	; 3715	0142/1630	0	20	1423	0	0	0	030	1	0	0	0	027	0	00	04	50	0
0143/000032	017611	172404	000340	020000	10	; 3719	0143/0032	0	05	3037	0	0	7	000	0	0	0	0	175	0	00	10	10	0
0144/003130	020001	142400	000020	000000	10	; 3722	0144/3130	0	00	1000	0	0	0	000	0	0	0	0	145	0	00	21	10	0
0145/003147	000000	101300	000002	120012	10	; 3723	0145/3147	3	03	1000	0	0	0	030	1	0	0	0	002	0	00	00	10	0
0146/003147	000000	101300	000002	120012	10	; 3725	0146/3147	3	03	1000	0	0	0	030	1	0	0	0	002	0	00	00	10	0
0147/003172	000001	140000	070000	000040	10	; 3835	0147/3172	0	00	1040	0	0	0	000	0	0	0	0	140	0	07	00	10	0

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0150/003406	007400	100000	000000	100002	10	; 10186	0150/3406	1	02	1017	0	0	0	000	0	0	0	0	000	0	00	00	10	0
0151/000066	010000	100000	052400	000040	33	; 6351	0151/0066	0	00	1040	0	0	0	000	0	0	0	0	000	0	05	16	33	0
0152/000174	021701	102406	001120	000000	36	; 3754	0152/0174	0	04	1423	2	0	2	000	0	0	2	105	0	00	21	36	0	
0153/000060	030004	120000	000020	000240	10	; 3755	0153/0060	0	00	1040	0	0	0	000	0	0	0	0	420	1	00	31	10	0
0154/002120	003101	070000	000340	100042	10	; 10187	0154/2120	1	02	0446	0	0	7	000	0	0	0	0	170	0	00	00	10	0
0155/000066	014510	100004	052400	120042	33	; 6355	0155/0066	1	07	3451	0	0	0	000	0	0	0	0	000	0	05	16	33	0
0156/000152	015300	000000	002140	004002	10	; 3756	0156/0152	1	20	0432	0	0	3	000	0	0	0	0	000	0	00	14	10	0
0157/000060	030004	120000	000020	000240	10	; 3757	0157/0060	0	00	1040	0	0	0	000	0	0	0	0	420	1	00	31	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0160/000070	077632	130001	110000	100200	10	; 3778	0160/0070	0	02	3137	0	0	0	000	0	0	1	230	1	11	70	10	0	
0161/040070	073022	030001	110100	100202	10	; 3780	0161/0070	1	02	0106	0	0	2	004	0	0	1	230	1	11	70	10	0	
0162/000070	077632	130001	110000	100200	10	; 3782	0162/0070	0	02	3137	0	0	0	000	0	0	1	230	1	11	70	10	0	
0163/040070	073022	030001	110100	100202	10	; 3784	0163/0070	1	02	0106	0	0	2	004	0	0	1	230	1	11	70	10	0	
0164/000000	007633	100011	040000	100000	02	; 3786	0164/0000	0	02	3137	0	0	0	000	0	0	1	300	2	04	00	02	0	
0165/040000	003023	000011	040100	100002	02	; 3787	0165/0000	1	02	0106	0	0	2	004	0	0	1	300	2	04	00	02	0	
0166/000000	007633	100011	040000	100000	02	; 3788	0166/0000	0	02	3137	0	0	0	000	0	0	1	300	2	04	00	02	0	
0167/040000	003023	000011	040100	100002	02	; 3789	0167/0000	1	02	0106	0	0	2	004	0	0	1	300	2	04	00	02	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0170/000121	020004	100000	000400	000040	10	; 3791	0170/0121	0	00	1040	0	0	0	000	0	0	0	0	400	0	00	22	10	0
0171/000121	020004	100000	000400	000040	10	; 3792	0171/0121	0	00	1040	0	0	0	000	0	0	0	0	400	0	00	22	10	0
0172/000121	020004	100000	000400	000040	10	; 3793	0172/0121	0	00	1040	0	0	0	000	0	0	0	0	400	0	00	22	10	0
0173/000121	020004	100000	000400	000040	10	; 3794	0173/0121	0	00	1040	0	0	0	000	0	0	0	0	400	0	00	22	10	0
0174/000000	007603	100010	040000	000000	02	; 3799	0174/0000	0	00	1037	0	0	0	000	0	0	0	0	300	2	04	00	02	0
0175/040000	003003	000012	040100	000002	02	; 3800	0175/0000	1	00	0006	0	0	2	004	0	0	2	300	2	04	00	02	0	
0176/000070	077602	130000	110000	000200	10	; 3802	0176/0070	0	00	1037	0	0	0	000	0	0	0	230	1	11	70	10	0	
0177/040070	073002	030002	110100	000202	10	; 3804	0177/0070	1	00	0006	0	0	2	004	0	0	2	230	1	11	70	10	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0200/005431	105307	053301	002020	100002	50	:	5520	0200/1431	1	02	0432	0	1	0	030	0	1	1	756	0	00	05	50	0
0201/000100	040000	100000	006020	000000	10	:	3990	0201/0100	0	00	1000	1	0	0	000	0	0	0	000	0	00	45	10	0
0202/000002	005300	001007	002400	000002	10	:	4143	0202/0002	1	04	0432	0	0	0	000	0	0	3	002	0	00	06	10	0
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0206/000060	000000	141700	050002	000000	33	:	5523	0206/0060	0	00	1000	0	0	0	030	1	0	0	043	0	05	00	33	0
0207/000206	010004	120000	000020	000000	10	:	5524	0207/0206	0	00	1000	0	0	0	000	0	0	0	420	0	00	11	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0211/001452	000140	100000	004000	100042	10	:	5600	0211/1452	1	02	1640	1	0	0	000	0	0	0	000	0	00	00	10	0
0212/142106	045301	041000	016022	100002	50	:	5603	0212/2106	1	02	0432	1	0	0	044	1	0	0	142	0	01	45	50	0
0213/000075	010004	122000	000020	000040	10	:	5611	0213/0075	0	00	1040	0	0	0	000	0	0	0	424	0	00	11	10	0
0214/000060	000000	120000	052400	000040	33	:	4153	0214/0060	0	00	1040	0	0	0	000	0	0	0	020	0	05	06	33	0
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0216/000060	004510	046305	050002	100042	33	:	5614	0216/0060	1	46	2451	0	0	0	030	1	0	1	044	0	05	00	33	0
0217/000060	005210	046305	050002	100000	33	:	5616	0217/0060	0	46	2032	0	0	0	030	1	0	1	044	0	05	00	33	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0221/003101	027505	110400	000000	124012	57	:	5164	0221/3101	3	23	1417	0	0	0	000	0	0	0	511	0	00	20	57	0
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0223/001117	027674	123000	000000	000012	10	:	5165	0223/1117	3	00	3337	0	0	0	000	0	0	0	426	0	00	20	10	0
0224/000225	003010	000000	000200	100002	10	:	7159	0224/0225	1	02	2006	0	0	4	000	0	0	0	000	0	00	00	10	0
0225/004002	007650	146301	000000	100000	03	:	7161	0225/0002	0	42	3237	0	0	0	030	0	1	1	044	0	00	00	03	0
0226/105775	010003	110000	002020	000000	10	:	4781	0226/1775	0	00	1000	0	0	0	040	0	1	0	310	0	00	15	10	0
0227/000000	054150	100000	002000	000050	10	:	4782	0227/0000	2	00	3650	0	0	0	000	0	0	0	000	0	00	54	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0231/020230	057610	142304	000022	104002	33	:	5362	0231/0230	1	26	3037	0	0	0	032	1	0	0	044	0	00	51	33	0
0232/020232	050007	132304	000022	000002	10	:	5364	0232/0232	1	04	1000	0	0	0	032	1	0	0	734	0	00	51	10	0
0233/000075	010000	100010	170000	000000	10	:	5365	0233/0075	0	00	1000	0	0	0	000	0	0	0	000	2	17	10	10	0
0234/034342	004410	004004	000000	021042	31	:	5657	0234/0342	1	55	2051	0	0	0	003	0	1	0	000	0	00	00	31	0
0235/000234	004510	104004	000000	125042	27	:	5658	0235/0234	1	77	3451	0	0	0	000	0	0	0	000	0	00	00	27	0
0236/034362	003010	004004	000000	021002	31	:	5660	0236/0362	1	55	2006	0	0	0	003	0	1	0	000	0	00	00	31	0
0237/000236	004550	104004	000000	125042	27	:	5661	0237/0236	1	77	3651	0	0	0	000	0	0	0	000	0	00	00	27	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0241/000246	016100	100000	000000	100042	16	:	3948	0241/0246	1	02	1454	0	0	0	000	0	0	0	000	0	00	10	16	0
0242/000125	000000	120000	026540	000040	33	:	8033	0242/0125	0	00	1040	1	0	3	000	0	0	0	020	0	02	06	33	0
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0245/022220	056000	146301	000022	100042	16	:	6413	0245/2220	1	42	1054	0	0	0	032	1	0	1	044	0	00	51	16	0
0246/000251	010000	100004	002400	000040	10	:	3949	0246/0251	0	04	1040	0	0	0	000	0	0	0	000	0	00	16	10	0
0247/000242	060000	100000	002020	000000	10	:	8035	0247/0242	0	00	1000	0	0	0	000	0	0	0	000	0	00	65	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0250/000061	013010	004000	020620	104002	27	:	5760	0250/0061	1	62	2006	0	0	4	000	0	0	0	000	0	02	13	27	0
0251/000222	010000	100000	000040	000000	10	:	3950	0251/0222	0	00	1000	0	0	1	000	0	0	0	000	0	00	10	10	0
0252/000061	014410	004000	020420	104042	27	:	5762	0252/0061	1	62	2051	0	0	0	000	0	0	0	000	0	02	13	27	0
0253/001140	054410	004004	002000	021050	12	:	5832	0253/1140	2	55	2051	0	0	0	000	0	0	0	000	0	00	54	12	0
0254/004370	106207	153300	000000	104000	10	:	5765	0254/0370	0	22	1034	0	1	0	030	0	1	0	756	0	00	00	10	0
0255/000246	016300	100010	170000	100000	10	:	4195	0255/0246	0	02	1434	0	0	0	000	0	0	0	000	2	17	10	10	0
0256/000273	036200	100000	022540	100000	10	:	4212	0256/0273	0	02	1034	0	0	3	000	0	0	0	000	0	02	36	10	0
0257/001140	053010	004004	002200	021010	12	:	5833	0257/1140	2	55	2006	0	0	4	000	0	0	0	000	0	00	54	12	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0263/124006	007600	104404	002420	021000	03	:	5549	0263/0006	0	55	1037	0	0	0	042	0	1	0	001	0	00	07	03	0
0264/044260	107610	104004	000000	125000	30	:	5551	0264/0260	0	77	3037	0	1	0	004	0	1	0	000	0	00	00	30	0
0265/044260	103010	004004	000200	125002	30	:	5553	0265/0260	1	77	2006	0	1	4	004	0	1	0	000	0	00	00	30	0
0266/044320	104400	104004	000000	125042	30	:	5555	0266/0320	1	77	1051	0	1	0	004	0	1	0	000	0	00	00	30	0
0267/044320	104410	004004	000000	125042	30	:	5557	0267/0320	1	77	2051	0	1	0	004	0	1	0	000	0	00	00	30	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0271/004160	001700	122306	000100	000002	36	:	3830	0271/0160	1	04	1423	0	0	2	030	0	1	2	024	0	00	00	36	0
0272/021431	000002	100201	000002	000040	62	:	5958	0272/1431	0	00	1040	0	0	0	022	1	0	1	200	0	00	00	62	0
0273/000066	000000	100004	160000	000040	10	:	4213	0273/0066	0	04	1040	0	0	0	000	0	0	0	000	0	16	00	10	0
0274/000331	007640	104000	000000	001000	10	:	4215	0274/0331	0	50	1237	0	0	0	000	0	0	0	000	0	00	00	10	0
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0276/025240	005216	100300	000000	000010	35	:	5959	0276/1240	2	00	3032	0	0	0	032	0	1	0	600	0	00	00	35	0
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ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0303/005601 006302 100201 000002 004000 22	; 5904	0303/1601	0	20	1434	0	0	0	0	020	1	1	1	200	0	00	00	22	0
0304/000060 000000 120007 052400 000000 33	; 4167	0304/0060	0	04	1000	0	0	0	0	000	0	0	3	020	0	05	06	33	0
0305/000060 001700 101007 052400 000000 33	; 4168	0305/0060	0	04	1423	0	0	0	0	000	0	0	3	002	0	05	06	33	0
0306/000060 005300 002003 052400 100002 33	; 4133	0306/0060	1	02	0432	0	0	0	0	000	0	0	3	004	0	05	06	33	0
0307/005576 006302 100201 000002 004000 22	; 5906	0307/1576	0	20	1434	0	0	0	0	020	1	1	1	200	0	00	00	22	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0310/051420 000002 100103 014010 000042 74	; 6606	0310/1420	1	00	1040	1	0	0	0	115	0	0	3	200	0	01	00	74	0
0311/000060 005300 001007 052400 000002 33	; 4136	0311/0060	1	04	0432	0	0	0	0	000	0	0	3	002	0	05	06	33	0
0312/000060 006200 100000 052400 100000 33	; 4174	0312/0060	0	02	1034	0	0	0	0	000	0	0	0	000	0	05	06	33	0
0313/000060 001600 100000 052400 100000 33	; 4175	0313/0060	0	02	1023	0	0	0	0	000	0	0	0	000	0	05	06	33	0
0314/001444 000000 104101 000002 000042 74	; 6612	0314/1444	1	40	1040	0	0	0	0	010	1	0	1	000	0	00	00	74	0
0315/022260 000000 100000 000002 000000 50	; 6614	0315/2260	0	00	1000	0	0	0	0	002	1	0	0	000	0	00	00	50	0
0316/000214 040000 100000 002000 000000 10	; 4150	0316/0214	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	44	10	0
0317/000075 010000 100010 170000 000040 14	; 6615	0317/0075	0	00	1040	0	0	0	0	000	0	0	0	000	2	17	10	14	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0320/124004 007610 104404 002420 021000 03	; 5562	0320/0004	0	55	3037	0	0	0	0	042	0	1	0	001	0	00	07	03	0
0321/124004 007610 104404 002420 021000 03	; 5563	0321/0004	0	55	3037	0	0	0	0	042	0	1	0	001	0	00	07	03	0
0322/124004 007610 104404 002420 021000 03	; 5564	0322/0004	0	55	3037	0	0	0	0	042	0	1	0	001	0	00	07	03	0
0323/124004 007610 104404 002420 021000 03	; 5566	0323/0004	0	55	3037	0	0	0	0	042	0	1	0	001	0	00	07	03	0
0324/044260 103010 004004 000200 125002 30	; 5569	0324/0260	1	77	2006	0	1	4	0	004	0	1	0	000	0	00	00	30	0
0325/044260 103000 104004 000200 125002 30	; 5571	0325/0260	1	77	1006	0	1	4	0	004	0	1	0	000	0	00	00	30	0
0326/044320 104410 004004 000000 125042 30	; 5573	0326/0320	1	77	2051	0	1	0	0	004	0	1	0	000	0	00	00	30	0
0327/044320 107610 104004 000000 125000 30	; 5574	0327/0320	0	77	3037	0	1	0	0	004	0	1	0	000	0	00	00	30	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0330/006150 055200 035301 002020 100002 50	; 6517	0330/2150	1	42	0032	0	0	0	0	030	0	1	1	032	0	00	55	50	0
0331/000003 000000 100000 005000 000000 03	; 4216	0331/0003	0	00	1000	3	0	0	0	000	0	0	0	000	0	00	00	03	0
0332/001062 040000 100000 000400 000040 10	; 6518	0332/1062	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	42	10	0
0333/000066 010006 122000 000020 000040 10	; 6519	0333/0066	0	00	1040	0	0	0	0	000	0	0	0	624	0	00	11	10	0
0334/000065 000140 101000 010000 000042 17	; 4008	0334/0065	1	00	1640	0	0	0	0	000	0	0	0	002	0	01	00	17	0
0335/100065 000002 100003 000000 000000 22	; 4009	0335/0065	0	00	1000	0	0	0	0	040	0	0	3	200	0	00	00	22	0
0336/000061 015210 004000 020240 101000 10	; 5850	0336/0061	0	52	2032	0	0	5	0	000	0	0	0	000	0	02	10	10	0
0337/000061 014550 004000 020240 101042 27	; 5852	0337/0061	1	52	2651	0	0	5	0	000	0	0	0	000	0	02	10	27	0

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0341/041614	076621	072400	004340	100002	10	:	5090	0341/1614	1	02	0135	1	0	7	004	0	0	0	175	0	00	70	10	0
0342/034520	003010	006404	000200	021002	71	:	5665	0342/0520	1	55	2006	0	0	4	003	0	1	0	005	0	00	00	71	0
0343/000003	000000	100010	170000	000040	03	:	5666	0343/0003	0	00	1040	0	0	0	000	0	0	0	000	2	17	00	03	0
0344/000075	000000	100010	170000	000040	10	:	8029	0344/0075	0	00	1040	0	0	0	000	0	0	0	000	2	17	00	10	0
0345/000724	000005	101000	000000	000000	24	:	8030	0345/0724	0	00	1000	0	0	0	000	0	0	0	502	0	00	00	24	0
0346/000006	004550	000000	001000	100042	03	:	5668	0346/0006	1	02	2651	2	0	0	000	0	0	0	000	0	00	00	03	0
0347/000007	000000	100000	001000	000000	03	:	5669	0347/0007	0	00	1000	2	0	0	000	0	0	0	000	0	00	00	03	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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0351/000067	005201	063000	000340	100002	10	:	6981	0351/0067	1	02	0032	0	0	7	000	0	0	0	166	0	00	00	10	0
0352/050674	016201	170400	000342	104000	10	:	6983	0352/0674	0	22	1034	0	0	7	005	1	0	0	171	0	00	10	10	0
0353/000074	017415	101010	060420	100012	10	:	4605	0353/0074	3	02	3017	0	0	0	000	0	0	0	502	2	06	13	10	0
0354/001002	000000	100000	000000	000040	10	:	4666	0354/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0
0355/000630	000004	120000	000000	000000	24	:	4668	0355/0630	0	00	1000	0	0	0	000	0	0	0	420	0	00	00	24	0
0356/002244	050010	100000	002000	100050	10	:	6549	0356/2244	2	02	3040	0	0	0	000	0	0	0	000	0	00	54	10	0
0357/001360	102610	004001	000000	104010	35	:	6551	0357/1360	2	62	2025	0	1	0	000	0	0	1	000	0	00	00	35	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0360/000130	030004	120000	000000	000240	10	:	5091	0360/0130	0	00	1040	0	0	0	000	0	0	0	420	1	00	30	10	0
0361/000020	000000	100000	000000	000000	01	:	4673	0361/0020	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	01	0
0362/034520	004410	006404	000000	021042	71	:	5674	0362/0520	1	55	2051	0	0	0	003	0	1	0	005	0	00	00	71	0
0363/000003	000000	100010	170000	000040	03	:	5675	0363/0003	0	00	1040	0	0	0	000	0	0	0	000	2	17	00	03	0
0364/001002	000000	100000	000000	000040	10	:	4671	0364/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0
0365/000361	000005	101000	004000	000040	24	:	4672	0365/0361	0	00	1040	1	0	0	000	0	0	0	502	0	00	00	24	0
0366/000006	000000	100000	001000	000040	03	:	5677	0366/0006	0	00	1040	2	0	0	000	0	0	0	000	0	00	00	03	0
0367/000007	004510	000000	001000	100042	03	:	5678	0367/0007	1	02	2451	2	0	0	000	0	0	0	000	0	00	00	03	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0370/044260	106200	100000	000000	000000	70	:	5771	0370/0260	0	00	1034	0	1	0	004	0	1	0	000	0	00	00	70	0
0371/002710	005310	004000	005000	104000	50	:	7312	0371/2710	0	62	2432	3	0	0	000	0	0	0	000	0	00	00	50	0
0372/040644	066621	072400	000740	004002	10	:	4679	0372/0644	1	20	0135	0	0	7	004	0	0	0	175	0	00	62	10	0
0373/002700	010001	162400	000340	000000	10	:	7313	0373/2700	0	00	1000	0	0	7	000	0	0	0	165	0	00	10	10	0
0374/000376	003010	004000	000200	104002	27	:	5772	0374/0376	1	62	2006	0	0	4	000	0	0	0	000	0	00	00	27	0
0375/000246	015310	004014	170000	004000	10	:	6580	0375/0246	0	64	2432	0	0	0	000	0	0	0	000	2	17	10	10	0
0376/001472	107640	100001	000000	100000	10	:	5773	0376/1472	0	02	1237	0	1	0	000	0	0	1	000	0	00	00	10	0
0377/002761	014210	004000	002600	004000	10	:	6583	0377/2761	0	60	2030	0	0	4	000	0	0	0	000	0	00	16	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0400/051420	000002	100103	014010	000042	74	:	6661	0400/1420	1	00	1040	1	0	0	115	0	0	3	200	0	01	00	74	0
0401/000300	040000	100000	002000	000040	10	:	4157	0401/0300	0	00	1040	0	0	0	000	0	0	0	000	0	00	44	10	0
0402/001762	070000	100000	000000	000040	10	:	4793	0402/1762	0	00	1040	0	0	0	000	0	0	0	000	0	00	70	10	0
0403/000671	000001	140000	074000	000040	10	:	4795	0403/0671	0	00	1040	1	0	0	000	0	0	0	140	0	07	00	10	0
0404/001464	000000	104101	000002	000002	74	:	6675	0404/1464	1	40	1000	0	0	0	010	1	0	1	000	0	00	00	74	0
0405/052266	055200	042300	000022	100002	50	:	6680	0405/2266	1	02	0032	0	0	0	035	1	0	0	044	0	00	51	50	0
0406/000304	040000	100000	002020	000040	10	:	4164	0406/0304	0	00	1040	0	0	0	000	0	0	0	000	0	00	45	10	0
0407/000020	000000	100010	170140	000040	10	:	6682	0407/0020	0	00	1040	0	0	3	000	0	0	0	000	2	17	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0410/003002	070000	100000	000420	000000	50	:	8011	0410/3002	0	00	1000	0	0	0	000	0	0	0	000	0	00	73	50	0
0411/000243	000000	100000	000000	000002	34	:	8012	0411/0243	1	00	1000	0	0	0	000	0	0	0	000	0	00	00	34	0
0412/000416	000000	102003	006400	000040	10	:	8015	0412/0416	0	00	1040	1	0	0	000	0	0	3	004	0	00	06	10	0
0413/000312	040000	100000	002020	000000	10	:	4171	0413/0312	0	00	1000	0	0	0	000	0	0	0	000	0	00	45	10	0
0414/001334	053100	040400	112000	004250	20	:	4837	0414/1334	2	20	0446	0	0	0	000	0	0	0	041	1	11	54	20	0
0415/001330	050060	100000	004000	100042	25	:	4839	0415/1330	1	02	1340	1	0	0	000	0	0	0	000	0	00	50	25	0
0416/000750	075200	000000	020560	000002	50	:	8017	0416/0750	1	00	0032	0	0	3	000	0	0	0	000	0	02	73	50	0
0417/000022	020000	100000	050400	000000	33	:	8018	0417/0022	0	00	1000	0	0	0	000	0	0	0	000	0	05	22	33	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0420/002254	077626	110001	110000	000200	10	:	6808	0420/2254	0	00	1137	0	0	0	000	0	0	1	610	1	11	70	10	0
0421/002254	073026	010001	110100	000202	10	:	6810	0421/2254	1	00	0106	0	0	2	000	0	0	1	610	1	11	70	10	0
0422/002254	077626	110001	110000	000200	10	:	6812	0422/2254	0	00	1137	0	0	0	000	0	0	1	610	1	11	70	10	0
0423/002254	073026	010001	110100	000202	10	:	6814	0423/2254	1	00	0106	0	0	2	000	0	0	1	610	1	11	70	10	0
0424/000001	007626	120001	110000	000200	03	:	6816	0424/0001	0	00	1137	0	0	0	000	0	0	1	620	1	11	00	03	0
0425/000001	003026	020001	110100	000202	03	:	6817	0425/0001	1	00	0106	0	0	2	000	0	0	1	620	1	11	00	03	0
0426/000001	007626	120001	110000	000200	03	:	6818	0426/0001	0	00	1137	0	0	0	000	0	0	1	620	1	11	00	03	0
0427/000001	003026	020001	110100	000202	03	:	6819	0427/0001	1	00	0106	0	0	2	000	0	0	1	620	1	11	00	03	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0430/004170	000000	122300	000000	000000	10	:	6821	0430/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0
0431/004170	000000	122300	000000	000000	10	:	6822	0431/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0
0432/004170	000000	122300	000000	000000	10	:	6823	0432/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0
0433/004170	000000	122300	000000	000000	10	:	6824	0433/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0
0434/000001	007606	120000	110000	000200	03	:	6827	0434/0001	0	00	1037	0	0	0	000	0	0	0	620	1	11	00	03	0
0435/040001	003006	020002	110100	000202	03	:	6828	0435/0001	1	00	0006	0	0	2	004	0	0	2	620	1	11	00	03	0
0436/002254	077606	110000	110000	000200	10	:	6830	0436/2254	0	00	1037	0	0	0	000	0	0	0	610	1	11	70	10	0
0437/042254	073006	010002	110100	000202	10	:	6832	0437/2254	1	00	0006	0	0	2	004	0	0	2	610	1	11	70	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0440/002256 077636 110001 110000 000200 10	; 6858	0440/2256	0	00	3137	0	0	0	000	0	0	1	610	1	11	70	10	0	
0441/042256 073026 010001 110100 000202 10	; 6860	0441/2256	1	00	0106	0	0	2	004	0	0	1	610	1	11	70	10	0	
0442/002256 077636 110001 110000 000200 10	; 6862	0442/2256	0	00	3137	0	0	0	000	0	0	1	610	1	11	70	10	0	
0443/042256 073026 010001 110100 000202 10	; 6864	0443/2256	1	00	0106	0	0	2	004	0	0	1	610	1	11	70	10	0	
0444/000001 007627 160001 110000 000200 03	; 6866	0444/0001	0	00	1137	0	0	0	000	0	0	1	760	1	11	00	03	0	
0445/000001 003027 060001 110100 000202 03	; 6867	0445/0001	1	00	0106	0	0	2	000	0	0	1	760	1	11	00	03	0	
0446/000001 007627 160001 110000 000200 03	; 6868	0446/0001	0	00	1137	0	0	0	000	0	0	1	760	1	11	00	03	0	
0447/000001 003027 060001 110100 000202 03	; 6869	0447/0001	1	00	0106	0	0	2	000	0	0	1	760	1	11	00	03	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0450/004170 000000 122300 000000 000000 10	; 6871	0450/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0	
0451/004170 000000 122300 000000 000000 10	; 6872	0451/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0	
0452/004170 000000 122300 000000 000000 10	; 6873	0452/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0	
0453/004170 000000 122300 000000 000000 10	; 6874	0453/0170	0	00	1000	0	0	0	030	0	1	0	024	0	00	00	10	0	
0454/000001 007607 160000 110000 000200 03	; 6876	0454/0001	0	00	1037	0	0	0	000	0	0	0	760	1	11	00	03	0	
0455/040001 003007 060002 110100 000202 03	; 6877	0455/0001	1	00	0006	0	0	2	004	0	0	2	760	1	11	00	03	0	
0456/002256 077616 110000 110000 000200 10	; 6879	0456/2256	0	00	3037	0	0	0	000	0	0	0	610	1	11	70	10	0	
0457/002256 073006 010002 110100 000202 10	; 6881	0457/2256	1	00	0006	0	0	2	000	0	0	2	610	1	11	70	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0460/000240 005300 000004 005040 020002 10	; 6386	0460/0240	1	05	0432	3	0	1	000	0	0	0	000	0	00	00	10	0	
0461/000734 060000 130000 004400 000000 22	; 4696	0461/0734	0	00	1000	1	0	0	000	0	0	0	030	0	00	62	22	0	
0462/000460 004550 104004 000000 125042 27	; 6388	0462/0460	1	77	3651	0	0	0	000	0	0	0	000	0	00	00	27	0	
0463/002757 000000 145701 000002 000000 10	; 7536	0463/2757	0	40	1000	0	0	0	030	1	0	1	043	0	00	00	10	0	
0464/006240 057637 153300 007400 000002 10	; 6392	0464/2240	1	00	3137	3	0	0	030	0	1	0	756	0	00	56	10	0	
0465/000020 035300 000000 122540 000002 01	; 4707	0465/0020	1	00	0432	0	0	3	000	0	0	0	000	0	12	36	01	0	
0466/031340 054600 000040 007022 000002 10	; 6400	0466/1340	1	00	0031	3	0	0	203	1	0	0	000	0	00	55	10	0	
0467/002757 000000 145701 000002 000000 10	; 7538	0467/2757	0	40	1000	0	0	0	030	1	0	1	043	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0470/021442 106306 100301 000002 104000 50	; 6471	0470/1442	0	22	1434	0	1	0	032	1	0	1	600	0	00	00	50	0	
0471/000472 030000 100000 122540 000000 10	; 4716	0471/0472	0	00	1000	0	0	3	000	0	0	0	000	0	12	36	10	0	
0472/000475 035200 000000 122540 000002 10	; 4717	0472/0475	1	00	0032	0	0	3	000	0	0	0	000	0	12	36	10	0	
0473/002756 010006 120000 000020 000000 10	; 7539	0473/2756	0	00	1000	0	0	0	000	0	0	0	620	0	00	11	10	0	
0474/000476 003010 004000 000000 104002 27	; 6478	0474/0476	1	62	2006	0	0	0	000	0	0	0	000	0	00	00	27	0	
0475/001045 005204 020000 020140 000002 24	; 4718	0475/1045	1	00	0032	0	0	3	000	0	0	0	420	0	02	00	24	0	
0476/005745 105307 061301 000000 100002 10	; 6479	0476/1745	1	02	0432	0	1	0	030	0	1	1	762	0	00	00	10	0	
0477/000535 000000 100000 000000 000000 05	; 7541	0477/0535	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	05	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0500/002406	070000	100000	000420	000040	50	:	8120	0500/2406	0	00	1040	0	0	0	000	0	0	0	000	0	00	73	50	0
0501/000417	020005	111400	000000	120012	10	:	8121	0501/0417	3	03	1000	0	0	0	000	0	0	0	513	0	00	20	10	0
0502/003002	070000	100000	000420	000000	50	:	8123	0502/3002	0	00	1000	0	0	0	000	0	0	0	000	0	00	73	50	0
0503/000137	000001	100000	002420	000042	50	:	8125	0503/0137	1	00	1040	0	0	0	000	0	0	0	100	0	00	07	50	0
0504/001003	005304	020400	114000	100202	10	:	4883	0504/1003	1	02	0432	1	0	0	000	0	0	0	421	1	11	00	10	0
0505/000752	005206	020400	110000	100202	10	:	4885	0505/0752	1	02	0032	0	0	0	000	0	0	0	621	1	11	00	10	0
0506/000030	030000	100000	132400	000040	33	:	4189	0506/0030	0	00	1040	0	0	0	000	0	0	0	000	0	13	36	33	0
0507/003065	005310	002003	000000	100000	22	:	8126	0507/3065	0	02	2432	0	0	0	000	0	0	3	004	0	00	00	22	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0510/001002	005310	000000	000000	100000	10	:	8146	0510/1002	0	02	2432	0	0	0	000	0	0	0	000	0	00	00	10	0
0511/001254	000005	102000	070000	000000	10	:	8158	0511/1254	0	00	1000	0	0	0	000	0	0	0	504	0	07	00	10	0
0512/007002	070000	103700	000420	000000	50	:	8161	0512/3002	0	00	1000	0	0	0	030	0	1	0	007	0	00	73	50	0
0513/003071	000004	103400	074000	000040	10	:	8162	0513/3071	0	00	1040	1	0	0	000	0	0	0	407	0	07	00	10	0
0514/001546	005200	001400	002660	004002	10	:	5748	0514/1546	1	20	0032	0	0	5	000	0	0	0	003	0	00	07	10	0
0515/000736	035301	002404	136440	020002	62	:	5752	0515/0736	1	05	0432	1	0	1	000	0	0	0	105	0	13	36	62	0
0516/000060	006200	100000	050000	100000	33	:	4227	0516/0060	0	02	1034	0	0	0	000	0	0	0	000	0	05	00	33	0
0517/001467	007640	104000	000000	001000	10	:	5753	0517/1467	0	50	1237	0	0	0	000	0	0	0	000	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0520/034520	003010	004004	000000	021002	31	:	5689	0520/0520	1	55	2006	0	0	0	003	0	1	0	000	0	00	00	31	0
0521/034520	004410	004004	000200	021042	31	:	5690	0521/0520	1	55	2051	0	0	4	003	0	1	0	000	0	00	00	31	0
0522/034520	004410	004004	000200	021042	31	:	5691	0522/0520	1	55	2051	0	0	4	003	0	1	0	000	0	00	00	31	0
0523/034520	003010	004004	000000	021002	31	:	5692	0523/0520	1	55	2006	0	0	0	003	0	1	0	000	0	00	00	31	0
0524/034564	003010	004000	000200	104002	31	:	5693	0524/0564	1	62	2006	0	0	4	003	0	1	0	000	0	00	00	31	0
0525/034564	004410	004000	000000	104042	31	:	5694	0525/0564	1	62	2051	0	0	0	003	0	1	0	000	0	00	00	31	0
0526/034564	004410	004000	000000	104042	31	:	5695	0526/0564	1	62	2051	0	0	0	003	0	1	0	000	0	00	00	31	0
0527/034564	003010	004000	000200	104002	31	:	5696	0527/0564	1	62	2006	0	0	4	003	0	1	0	000	0	00	00	31	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0530/121325	016300	100000	000012	100000	50	:	7060	0530/1325	0	02	1434	0	0	0	142	1	0	0	000	0	00	10	50	0
0531/002710	000000	100000	003020	000000	50	:	7318	0531/2710	0	00	1000	2	0	0	000	0	0	0	000	0	00	05	50	0
0532/001442	105201	071001	002360	100002	50	:	7062	0532/1442	1	02	0032	0	1	7	000	0	0	1	172	0	00	05	50	0
0533/002704	010001	162400	000340	000040	10	:	7319	0533/2704	0	00	1040	0	0	7	000	0	0	0	165	0	00	10	10	0
0534/001045	015200	000000	022540	000002	10	:	4734	0534/1045	1	00	0032	0	0	3	000	0	0	0	000	0	02	16	10	0
0535/002756	010006	130000	000020	000040	10	:	7543	0535/2756	0	00	1040	0	0	0	000	0	0	0	630	0	00	11	10	0
0536/002647	017620	100014	172400	020000	10	:	7072	0536/2647	0	05	1137	0	0	0	000	0	0	0	000	2	17	16	10	0
0537/002756	010006	120000	000020	000000	10	:	7544	0537/2756	0	00	1000	0	0	0	000	0	0	0	620	0	00	11	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0540/034540	003010	004004	000000	021002	31	:	7154	0540/0540	1	55	2006	0	0	0	003	0	1	0	000	0	00	00	31	0
0541/034540	004410	004004	000200	021042	31	:	7155	0541/0540	1	55	2051	0	0	4	003	0	1	0	000	0	00	00	31	0
0542/001450	005301	071400	000340	100002	50	:	9789	0542/1450	1	02	0432	0	0	7	000	0	0	0	173	0	00	00	50	0
0543/043055	006601	062000	000340	100002	10	:	7894	0543/3055	1	02	0035	0	0	7	004	0	0	0	164	0	00	00	10	0
0544/034224	003010	000000	000200	100002	31	:	7156	0544/0224	1	02	2006	0	0	4	003	0	1	0	000	0	00	00	31	0
0545/034224	004410	000000	000000	100042	31	:	7157	0545/0224	1	02	2051	0	0	0	003	0	1	0	000	0	00	00	31	0
0546/002520	073140	000000	000240	100042	10	:	9790	0546/2520	1	02	0646	0	0	5	000	0	0	0	000	0	00	70	10	0
0547/043055	006601	062000	000340	100002	10	:	7897	0547/3055	1	02	0035	0	0	7	004	0	0	0	164	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0550/002414	000001	100000	000020	000000	50	:	8477	0550/2414	0	00	1000	0	0	0	000	0	0	0	100	0	00	01	50	0
0551/003120	007646	101010	070000	000200	50	:	8478	0551/3120	0	00	1237	0	0	0	000	0	0	0	602	3	07	00	50	0
0552/000562	020004	100000	000400	000040	10	:	4736	0552/0562	0	00	1040	0	0	0	000	0	0	0	400	0	00	22	10	0
0553/000543	010006	120000	000020	000040	10	:	7898	0553/0543	0	00	1040	0	0	0	000	0	0	0	620	0	00	11	10	0
0554/002264	005310	004010	170000	100000	50	:	5796	0554/2264	0	42	2432	0	0	0	000	0	0	0	000	2	17	00	50	0
0555/001736	020000	100400	000420	000040	10	:	8482	0555/1736	0	00	1040	0	0	0	000	0	0	0	001	0	00	23	10	0
0556/000222	010000	100000	000240	000040	10	:	5797	0556/0222	0	00	1040	0	0	5	000	0	0	0	000	0	00	10	10	0
0557/000543	010006	130000	000020	000000	10	:	7899	0557/0543	0	00	1000	0	0	0	000	0	0	0	630	0	00	11	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0560/002264	000000	114701	000002	000040	10	:	7132	0560/2264	0	40	1040	0	0	0	030	1	0	1	011	0	00	00	10	0
0561/000736	030000	110700	132402	000040	50	:	7135	0561/0736	0	00	1040	0	0	0	030	1	0	0	011	0	13	36	50	0
0562/000624	027624	123000	000000	000012	10	:	4737	0562/0624	3	00	1137	0	0	0	000	0	0	0	426	0	00	20	10	0
0563/002651	017610	101006	002400	004000	10	:	7136	0563/2651	0	24	3037	0	0	0	000	0	0	2	002	0	00	16	10	0
0564/000565	003010	004000	000000	104002	27	:	5706	0564/0565	1	62	2006	0	0	0	000	0	0	0	000	0	00	00	27	0
0565/124006	052600	000000	007020	005002	03	:	5708	0565/0006	1	30	0025	3	0	0	042	0	1	0	000	0	00	55	03	0
0566/000567	004410	004000	000000	104042	27	:	5709	0566/0567	1	62	2051	0	0	0	000	0	0	0	000	0	00	00	27	0
0567/124006	055200	000000	007020	005002	03	:	5711	0567/0006	1	30	0032	3	0	0	042	0	1	0	000	0	00	55	03	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0570/000643	030000	140000	002000	000240	10	:	8704	0570/0643	0	00	1040	0	0	0	000	0	0	0	040	1	00	34	10	0
0571/000643	030000	140000	002000	000240	10	:	8705	0571/0643	0	00	1040	0	0	0	000	0	0	0	040	1	00	34	10	0
0572/003153	005210	102700	000002	100000	10	:	8706	0572/3153	0	02	3032	0	0	0	030	1	0	0	005	0	00	00	10	0
0573/000677	000000	100000	120000	000040	10	:	8707	0573/0677	0	00	1040	0	0	0	000	0	0	0	000	0	12	00	10	0
0574/070720	050000	140300	000410	000002	10	:	8708	0574/0720	1	00	1000	0	0	0	137	0	0	0	040	0	00	52	10	0
0575/000742	000000	100000	001000	000052	10	:	8709	0575/0742	3	00	1040	2	0	0	000	0	0	0	000	0	00	00	10	0
0576/071750	055310	140300	000410	100002	10	:	8710	0576/1750	1	02	3432	0	0	0	137	0	0	0	040	0	00	52	10	0
0577/000643	030000	140000	002000	000240	10	:	8712	0577/0643	0	00	1040	0	0	0	000	0	0	0	040	1	00	34	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0600/000222	000000	100000	000000	000000	10	:	4626	0600/0222	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	10	0
0601/000630	000004	111000	004000	000000	24	:	4627	0601/0630	0	00	1000	1	0	0	000	0	0	0	412	0	00	00	24	0
0602/000036	001600	100000	004000	000000	36	:	4629	0602/0036	0	00	1023	1	0	0	000	0	0	0	000	0	00	00	36	0
0603/001002	000000	100000	000000	000040	10	:	4630	0603/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0
0604/001016	060000	100000	000020	000000	10	:	4631	0604/1016	0	00	1000	0	0	0	000	0	0	0	000	0	00	61	10	0
0605/000465	000000	100000	120000	000000	10	:	4633	0605/0465	0	00	1000	0	0	0	000	0	0	0	000	0	12	00	10	0
0606/000604	070000	100000	000420	000040	10	:	4634	0606/0604	0	00	1040	0	0	0	000	0	0	0	000	0	00	73	10	0
0607/000730	070060	100000	000420	004042	25	:	4635	0607/0730	1	20	1340	0	0	0	000	0	0	0	000	0	00	73	25	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0610/000364	070000	100000	000420	000040	10	:	4641	0610/0364	0	00	1040	0	0	0	000	0	0	0	000	0	00	73	10	0
0611/001002	000000	100000	000000	000040	10	:	4642	0611/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0
0612/000364	070000	100000	000420	000040	10	:	4643	0612/0364	0	00	1040	0	0	0	000	0	0	0	000	0	00	73	10	0
0613/001002	000000	100000	000000	000040	10	:	4644	0613/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0
0614/000372	000060	130000	002400	004042	25	:	4646	0614/0372	1	20	1340	0	0	0	000	0	0	0	030	0	00	06	25	0
0615/000534	000000	100000	120000	000000	10	:	4647	0615/0534	0	00	1000	0	0	0	000	0	0	0	000	0	12	00	10	0
0616/001002	000000	100000	000000	000040	10	:	4652	0616/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0
0617/001002	000000	100000	000000	000040	10	:	4653	0617/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0620/002667	000000	101700	000002	000040	50	:	7250	0620/2667	0	00	1040	0	0	0	030	1	0	0	003	0	00	00	50	0
0621/000660	000000	100000	004000	000000	10	:	7251	0621/0660	0	00	1000	1	0	0	000	0	0	0	000	0	00	00	10	0
0622/002661	005310	000000	000000	100000	10	:	7252	0622/2661	0	02	2432	0	0	0	000	0	0	0	000	0	00	00	10	0
0623/106730	005301	062400	000340	100002	10	:	7253	0623/2730	1	02	0432	0	0	7	040	0	1	0	165	0	00	00	10	0
0624/000001	020000	101000	000400	000000	03	:	4739	0624/0001	0	00	1000	0	0	0	000	0	0	0	002	0	00	22	03	0
0625/001020	065204	024003	020540	000002	24	:	4721	0625/1020	1	40	0032	0	0	3	000	0	0	3	420	0	02	62	24	0
0626/000754	065204	024003	020540	000002	24	:	4723	0626/0754	1	40	0032	0	0	3	000	0	0	3	420	0	02	62	24	0
0627/040471	034210	000004	162540	100000	10	:	4702	0627/0471	0	06	2030	0	0	3	004	0	0	0	000	0	16	36	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0630/000075	005310	000010	170000	000200	10	:	4675	0630/0075	0	00	2432	0	0	0	000	0	0	0	000	3	17	00	10	0
0631/002264	000000	111300	000002	000000	50	:	7370	0631/2264	0	00	1000	0	0	0	030	1	0	0	012	0	00	00	50	0
0632/000036	001700	100000	000000	000000	36	:	4676	0632/0036	0	00	1423	0	0	0	000	0	0	0	000	0	00	00	36	0
0633/002717	005310	004000	005000	104000	10	:	7371	0633/2717	0	62	2432	3	0	0	000	0	0	0	000	0	00	00	10	0
0634/000075	000000	100010	170140	000040	10	:	4704	0634/0075	0	00	1040	0	0	3	000	0	0	0	000	2	17	00	10	0
0635/000001	000000	100007	000000	000000	03	:	4745	0635/0001	0	04	1000	0	0	0	000	0	0	3	000	0	00	00	03	0
0636/001075	010001	146407	000340	000000	36	:	8954	0636/1075	0	44	1000	0	0	7	000	0	0	3	145	0	00	10	36	0
0637/077204	026300	101140	000432	100000	10	:	8962	0637/3204	0	02	1434	0	0	0	317	1	1	0	002	0	00	23	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0640/000665	000000	100000	000000	000000	50	; 8854	0640/0665	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	50	0
0641/000652	007215	001410	060000	000010	10	; 4752	0641/0652	2	00	2036	0	0	0	000	0	0	0	0	503	2	06	00	10	0
0642/051420	050002	100103	010030	000042	50	; 8855	0642/1420	1	00	1040	0	0	0	115	0	0	3	200	0	01	51	50	0	0
0643/000270	000005	111400	130000	000040	26	; 8721	0643/0270	0	00	1040	0	0	0	000	0	0	0	513	0	13	00	26	0	0
0644/000635	000000	100002	000400	000000	50	; 4680	0644/0635	0	00	1000	0	0	0	000	0	0	2	000	0	00	02	50	0	0
0645/000634	000000	102002	160000	000000	22	; 4682	0645/0634	0	00	1000	0	0	0	000	0	0	2	004	0	16	00	22	0	0
0646/001444	000000	104101	000002	000040	10	; 8856	0646/1444	0	40	1040	0	0	0	010	1	0	1	000	0	00	00	10	0	0
0647/000270	000005	111400	130000	000040	26	; 8722	0647/0270	0	00	1040	0	0	0	000	0	0	0	513	0	13	00	26	0	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0650/002120	003141	070000	005340	100042	50	; 9907	0650/2120	1	02	0646	3	0	7	000	0	0	0	170	0	00	00	50	0	0
0651/002536	055210	100010	002020	000002	10	; 9908	0651/2536	1	00	3032	0	0	0	000	0	0	0	000	2	00	55	10	0	0
0652/000656	006610	000000	000000	100000	10	; 4753	0652/0656	0	02	2035	0	0	0	000	0	0	0	000	0	00	00	10	0	0
0653/021134	000001	141042	000030	000000	10	; 8723	0653/1134	0	00	1000	0	0	0	302	0	0	2	142	0	00	01	10	0	0
0654/042534	054401	034001	012240	000050	10	; 9910	0654/2534	2	40	0051	0	0	5	004	0	0	1	130	0	01	54	10	0	0
0655/003356	002601	070000	000340	100002	10	; 9911	0655/3356	1	02	0025	0	0	7	000	0	0	0	170	0	00	00	10	0	0
0656/000222	000006	121000	000000	000040	24	; 4754	0656/0222	0	00	1040	0	0	0	000	0	0	0	622	0	00	00	24	0	0
0657/000270	000000	100000	130000	000000	10	; 8724	0657/0270	0	00	1000	0	0	0	000	0	0	0	000	0	13	00	10	0	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0660/002667	004550	001700	000002	100042	50	; 7255	0660/2667	1	02	2651	0	0	0	030	1	0	0	003	0	00	00	50	0	0
0661/105054	016303	101000	002022	100200	15	; 4765	0661/1054	0	02	1434	0	0	0	040	1	1	0	302	1	00	15	15	0	0
0662/002654	005310	000000	000000	100000	10	; 7256	0662/2654	0	02	2432	0	0	0	000	0	0	0	000	0	00	00	10	0	0
0663/106726	005341	071000	000340	100002	10	; 7257	0663/2726	1	02	0632	0	0	7	040	0	1	0	172	0	00	00	10	0	0
0664/000736	116201	170402	000340	004000	50	; 5819	0664/0736	0	20	1034	0	1	7	000	0	0	2	171	0	00	10	50	0	0
0665/000736	000001	111400	120000	000000	26	; 8730	0665/0736	0	00	1000	0	0	0	000	0	0	0	113	0	12	00	26	0	0
0666/002124	055301	067000	000360	100010	10	; 5820	0666/2124	2	42	0432	0	0	7	000	0	0	0	166	0	00	51	10	0	0
0667/000736	000000	100000	120000	000000	10	; 8731	0667/0736	0	00	1000	0	0	0	000	0	0	0	000	0	12	00	10	0	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0670/006326	055300	027701	002020	100002	50	; 7397	0670/2326	1	42	0432	0	0	0	030	0	1	1	027	0	00	55	50	0	0
0671/001254	010000	112400	002400	000000	10	; 4798	0671/1254	0	00	1000	0	0	0	000	0	0	0	015	0	00	16	10	0	0
0672/001062	040000	100000	000400	000040	10	; 7398	0672/1062	0	00	1040	0	0	0	000	0	0	0	000	0	00	42	10	0	0
0673/000066	010006	122000	000020	000040	10	; 7399	0673/0066	0	00	1040	0	0	0	000	0	0	0	624	0	00	11	10	0	0
0674/122652	000003	100003	010000	000040	50	; 6985	0674/2652	0	00	1040	0	0	0	042	0	0	3	300	0	01	00	50	0	0
0675/041050	007221	072410	000340	004202	10	; 8736	0675/1050	1	20	0136	0	0	7	004	0	0	0	175	3	00	00	10	0	0
0676/002272	053001	070400	002740	100010	10	; 6986	0676/2272	2	02	0006	0	0	7	000	0	0	0	171	0	00	56	10	0	0
0677/072426	055200	040300	020550	000010	10	; 8744	0677/2426	2	00	0032	0	0	3	137	0	0	0	040	0	02	52	10	0	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0700/000124	005310	016700	000002	004000	10	; 4748	0700/0124	0	60	2432	0	0	0	030	1	0	0	0	015	0	00	00	10	0
0701/040060	007200	000000	050000	100002	33	; 4237	0701/0060	1	02	0036	0	0	0	004	0	0	0	0	000	0	05	00	33	0
0702/001602	050060	100000	170000	100042	25	; 4928	0702/1602	1	02	1340	0	0	0	000	0	0	0	0	000	0	17	50	25	0
0703/001574	050070	100000	000000	100042	25	; 4930	0703/1574	1	02	3340	0	0	0	000	0	0	0	0	000	0	00	50	25	0
0704/000303	010000	100400	002400	000000	33	; 5887	0704/0303	0	00	1000	0	0	0	000	0	0	0	0	001	0	00	16	33	0
0705/001403	010000	100400	002400	000040	10	; 5888	0705/1403	0	00	1040	0	0	0	000	0	0	0	0	001	0	00	16	10	0
0706/001405	010000	100400	002400	000040	10	; 5889	0706/1405	0	00	1040	0	0	0	000	0	0	0	0	001	0	00	16	10	0
0707/001002	005310	000000	000000	100000	10	; 5890	0707/1002	0	02	2432	0	0	0	000	0	0	0	0	000	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0710/002410	070000	102003	014420	000040	50	; 8180	0710/2410	0	00	1040	1	0	0	000	0	0	3	004	0	01	73	50	0	0
0711/040060	006600	000000	050000	100002	33	; 4247	0711/0060	1	02	0035	0	0	0	004	0	0	0	0	000	0	05	00	33	0
0712/040060	004200	000000	050000	100002	33	; 4266	0712/0060	1	02	0030	0	0	0	004	0	0	0	0	000	0	05	00	33	0
0713/003075	027604	112400	000000	000012	10	; 8181	0713/3075	3	00	1037	0	0	0	000	0	0	0	0	415	0	00	20	10	0
0714/002410	070000	100000	004420	000040	50	; 8183	0714/2410	0	00	1040	1	0	0	000	0	0	0	0	000	0	00	73	50	0
0715/000060	004600	000000	050000	100002	33	; 4282	0715/0060	1	02	0031	0	0	0	000	0	0	0	0	000	0	05	00	33	0
0716/040060	005600	000000	050000	100002	33	; 4292	0716/0060	1	02	0033	0	0	0	004	0	0	0	0	000	0	05	00	33	0
0717/003072	020005	100000	000000	120012	10	; 8184	0717/3072	3	03	1000	0	0	0	000	0	0	0	500	0	00	20	10	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0720/000665	000000	100001	000000	000010	47	; 8751	0720/0665	2	00	1000	0	0	0	000	0	0	1	000	0	00	00	47	0	0
0721/003155	005210	100000	000000	100000	50	; 8752	0721/3155	0	02	3032	0	0	0	000	0	0	0	0	000	0	00	00	50	0
0722/003062	025200	023000	020540	000002	50	; 8753	0722/3062	1	00	0032	0	0	3	000	0	0	0	0	026	0	02	22	50	0
0723/000724	000005	101000	020140	000040	24	; 8754	0723/0724	0	00	1040	0	0	3	000	0	0	0	0	502	0	02	00	24	0
0724/000075	000000	100000	170000	000240	10	; 8755	0724/0075	0	00	1040	0	0	0	000	0	0	0	0	000	1	17	00	10	0
0725/001154	007400	100010	000000	000202	50	; 8756	0725/1154	1	00	1017	0	0	0	000	0	0	0	0	000	3	00	00	50	0
0726/000066	020000	100000	050400	000000	33	; 4804	0726/0066	0	00	1000	0	0	0	000	0	0	0	0	000	0	05	22	33	0
0727/001040	007221	072410	000340	004202	10	; 8760	0727/1040	1	20	0136	0	0	7	000	0	0	0	0	175	3	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0730/001002	000000	100000	000000	000040	10	; 4693	0730/1002	0	00	1040	0	0	0	000	0	0	0	0	000	0	00	00	10	0
0731/000461	006621	072400	001340	104002	10	; 4695	0731/0461	1	22	0135	2	0	7	000	0	0	0	0	175	0	00	00	10	0
0732/000246	015310	004014	170000	004000	10	; 7553	0732/0246	0	64	2432	0	0	0	000	0	0	0	0	000	2	17	10	10	0
0733/002761	014210	004000	002600	004000	10	; 7555	0733/2761	0	60	2030	0	0	4	000	0	0	0	0	000	0	00	16	10	0
0734/000635	000000	100002	000400	000000	50	; 4697	0734/0635	0	00	1000	0	0	0	000	0	0	2	000	0	00	02	50	0	
0735/000020	005310	001000	162400	000000	01	; 4699	0735/0020	0	00	2432	0	0	0	000	0	0	0	0	002	0	16	06	01	0
0736/000002	005300	000000	020140	000002	03	; 4860	0736/0002	1	00	0432	0	0	3	000	0	0	0	0	000	0	02	00	03	0
0737/000722	000000	100000	000000	000000	10	; 8762	0737/0722	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0740/000765 005310 000005 000000 100010 07	; 8770	0740/0765	2	06	2432	0	0	0	0	000	0	0	1	000	0	00	00	07	0
0741/003155 005210 100000 000000 100000 50	; 8771	0741/3155	0	02	3032	0	0	0	0	000	0	0	0	000	0	00	00	50	0
0742/003061 026300 123400 000400 100012 50	; 8767	0742/3061	3	02	1434	0	0	0	0	000	0	0	0	027	0	00	22	50	0
0743/003154 007640 104001 000000 100000 10	; 8768	0743/3154	0	42	1237	0	0	0	0	000	0	0	1	000	0	00	00	10	0
0744/000736 030000 100000 136400 000040 50	; 7856	0744/0736	0	00	1040	1	0	0	0	000	0	0	0	000	0	13	36	50	0
0745/001154 000010 100010 000000 000242 50	; 8772	0745/1154	1	00	3040	0	0	0	0	000	0	0	0	000	3	00	00	50	0
0746/003032 007600 104000 002000 001000 10	; 7857	0746/3032	0	50	1037	0	0	0	0	000	0	0	0	000	0	00	04	10	0
0747/000775 005210 000004 000000 100000 10	; 8773	0747/0775	0	06	2032	0	0	0	0	000	0	0	0	000	0	00	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0750/001002 005310 000000 000000 100000 10	; 8047	0750/1002	0	02	2432	0	0	0	0	000	0	0	0	000	0	00	00	10	0
0751/002402 020002 100000 000400 000000 50	; 8048	0751/2402	0	00	1000	0	0	0	0	000	0	0	0	200	0	00	22	50	0
0752/001374 057410 100000 002000 100002 20	; 4887	0752/1374	1	02	3017	0	0	0	0	000	0	0	0	000	0	00	54	20	0
0753/002401 027610 160000 000400 000012 10	; 8056	0753/2401	3	00	3037	0	0	0	0	000	0	0	0	060	0	00	22	10	0
0754/001020 000005 101000 000000 000040 24	; 4724	0754/1020	0	00	1040	0	0	0	0	000	0	0	0	502	0	00	00	24	0
0755/001045 000005 101000 000000 000040 24	; 4725	0755/1045	0	00	1040	0	0	0	0	000	0	0	0	502	0	00	00	24	0
0756/000065 005310 000000 000000 100000 10	; 4897	0756/0065	0	02	2432	0	0	0	0	000	0	0	0	000	0	00	00	10	0
0757/000723 000000 100000 000000 000040 10	; 8774	0757/0723	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0760/002420 020005 110000 000000 120012 10	; 8585	0760/2420	3	03	1000	0	0	0	0	000	0	0	0	510	0	00	20	10	0
0761/002420 020005 110400 000000 120052 10	; 8586	0761/2420	3	03	1040	0	0	0	0	000	0	0	0	511	0	00	20	10	0
0762/002420 020005 111000 000000 120052 10	; 8587	0762/2420	3	03	1040	0	0	0	0	000	0	0	0	512	0	00	20	10	0
0763/002420 020005 111400 000000 120012 10	; 8588	0763/2420	3	03	1000	0	0	0	0	000	0	0	0	513	0	00	20	10	0
0764/000736 005615 001000 070000 100000 50	; 8515	0764/0736	0	02	2033	0	0	0	0	000	0	0	0	502	0	07	00	50	0
0765/000723 000001 111400 160000 000000 26	; 8777	0765/0723	0	00	1000	0	0	0	0	000	0	0	0	113	0	16	00	26	0
0766/003114 020005 163400 004000 120052 10	; 8516	0766/3114	3	03	1040	1	0	0	0	000	0	0	0	567	0	00	20	10	0
0767/000723 000000 100000 160000 000000 10	; 8778	0767/0723	0	00	1000	0	0	0	0	000	0	0	0	000	0	16	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
0770/003145 036205 114000 000000 100200 10	; 8666	0770/3145	0	42	1034	0	0	0	0	000	0	0	0	510	1	00	30	10	0
0771/003145 036305 115000 000000 100200 10	; 8668	0771/3145	0	42	1434	0	0	0	0	000	0	0	0	512	1	00	30	10	0
0772/003146 036205 106000 000000 100200 10	; 8670	0772/3146	0	42	1034	0	0	0	0	000	0	0	0	504	1	00	30	10	0
0773/003146 036305 107000 000000 100200 10	; 8672	0773/3146	0	42	1434	0	0	0	0	000	0	0	0	506	1	00	30	10	0
0774/000736 006305 105403 070000 100000 50	; 8533	0774/0736	0	42	1434	0	0	0	0	000	0	0	0	503	0	07	00	50	0
0775/001070 007221 072410 000340 004202 10	; 8782	0775/1070	1	20	0136	0	0	7	0	000	0	0	0	175	3	00	00	10	0
0776/003115 026205 163400 001000 124012 10	; 8535	0776/3115	3	23	1034	2	0	0	0	000	0	0	0	567	0	00	20	10	0
0777/000723 000000 100000 000000 000040 10	; 8784	0777/0723	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1000/001262 000140 102003 002400 004042 10	; 5223	1000/1262	1	20	1640	0	0	0	000	0	0	0	3	004	0	00	06	10	0
1001/040060 002200 000000 050000 100002 33	; 4302	1001/0060	1	02	0024	0	0	0	004	0	0	0	0	000	0	05	00	33	0
1002/001662 055210 004000 002420 004000 50	; 5153	1002/1662	0	60	2032	0	0	0	000	0	0	0	0	000	0	00	57	50	0
1003/001570 057400 100000 002000 004010 20	; 4906	1003/1570	2	20	1017	0	0	0	000	0	0	0	0	000	0	00	54	20	0
1004/001336 005301 000000 010040 004002 10	; 5388	1004/1336	1	20	0432	0	0	1	000	0	0	0	0	100	0	01	00	10	0
1005/001006 000000 100000 000000 000000 10	; 5076	1005/1006	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1006/000340 055310 004000 000000 004000 10	; 5086	1006/0340	0	60	2432	0	0	0	000	0	0	0	0	000	0	00	50	10	0
1007/000060 003200 000000 050000 100002 33	; 4312	1007/0060	1	02	0026	0	0	0	000	0	0	0	0	000	0	05	00	33	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1010/001006 000000 100000 000000 000000 10	; 5107	1010/1006	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1011/001006 000000 100000 000000 000000 10	; 5109	1011/1006	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1012/001006 000000 100000 000000 000000 10	; 5111	1012/1006	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1013/001006 000000 100000 000000 000000 10	; 7688	1013/1006	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1014/001006 000000 100000 000000 000000 10	; 7690	1014/1006	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1015/000060 002600 000000 050000 100002 33	; 4322	1015/0060	1	02	0025	0	0	0	000	0	0	0	0	000	0	05	00	33	0
1016/001002 000000 100000 000000 000040 10	; 4761	1016/1002	0	00	1040	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1017/000661 000004 141000 000000 000000 24	; 4762	1017/0661	0	00	1000	0	0	0	000	0	0	0	0	442	0	00	00	24	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1020/001044 060000 100000 000400 000040 10	; 4727	1020/1044	0	00	1040	0	0	0	000	0	0	0	0	000	0	00	62	10	0
1021/000075 007610 100010 170000 000200 10	; 4728	1021/0075	0	00	3037	0	0	0	000	0	0	0	0	000	3	17	00	10	0
1022/001056 030004 130000 000400 000240 10	; 5154	1022/1056	0	00	1040	0	0	0	000	0	0	0	0	430	1	00	32	10	0
1023/001334 005310 041000 110000 000200 10	; 4909	1023/1334	0	00	2432	0	0	0	000	0	0	0	0	042	1	11	00	10	0
1024/000520 147640 100001 002420 100000 50	; 5842	1024/0520	0	02	1237	0	1	0	000	0	0	1	000	0	00	47	50	0	0
1025/000075 030000 100000 172540 000000 10	; 4934	1025/0075	0	00	1000	0	0	3	000	0	0	0	0	000	0	17	36	10	0
1026/000275 015300 060400 002440 100002 05	; 5843	1026/0275	1	02	0432	0	0	1	000	0	0	0	0	061	0	00	16	05	0
1027/000275 005300 000000 000040 100002 05	; 5844	1027/0275	1	02	0432	0	0	1	000	0	0	0	0	000	0	00	00	05	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1030/000012 006200 100000 000000 100000 03	; 8794	1030/0012	0	02	1034	0	0	0	000	0	0	0	0	000	0	00	00	03	0
1031/000665 030000 100000 002400 000000 50	; 8795	1031/0665	0	00	1000	0	0	0	000	0	0	0	0	000	0	00	36	50	0
1032/001610 055200 000000 004000 100002 10	; 4953	1032/1610	1	02	0032	1	0	0	000	0	0	0	0	000	0	00	50	10	0
1033/003161 003010 000000 000200 100002 10	; 8796	1033/3161	1	02	2006	0	0	4	000	0	0	0	0	000	0	00	00	10	0
1034/000120 000000 100001 000400 000040 10	; 4956	1034/0120	0	00	1040	0	0	0	000	0	0	1	000	0	00	02	10	0	0
1035/006430 060000 133300 002000 000040 10	; 8914	1035/2430	0	00	1040	0	0	0	030	0	1	0	036	0	00	64	10	0	0
1036/006430 060000 133706 002000 000000 10	; 8919	1036/2430	0	04	1000	0	0	0	030	0	1	2	037	0	00	64	10	0	0
1037/003170 020005 163400 020000 120012 10	; 8920	1037/3170	3	03	1000	0	0	0	000	0	0	0	0	567	0	02	20	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1040/003162 000000 140300 000002 000000 50	; 8812	1040/3162	0	00	1000	0	0	0	030	1	0	0	040	0	00	00	50	0	
1041/001046 030000 100000 172540 000040 10	; 4959	1041/1046	0	00	1040	0	0	3	000	0	0	0	000	0	17	36	10	0	
1042/000722 000000 100000 120000 000000 10	; 8813	1042/0722	0	00	1000	0	0	0	000	0	0	0	000	0	12	00	10	0	
1043/000722 000001 101400 120000 000040 26	; 8814	1043/0722	0	00	1040	0	0	0	000	0	0	0	103	0	12	00	26	0	
1044/000552 000000 100000 000000 000040 50	; 4730	1044/0552	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	50	0	
1045/000075 007610 100010 170000 000200 10	; 4732	1045/0075	0	00	3037	0	0	0	000	0	0	0	000	3	17	00	10	0	
1046/000065 000070 102002 000000 100042 22	; 4960	1046/0065	1	02	3340	0	0	0	000	0	0	2	004	0	00	00	22	0	
1047/000040 010001 151000 000340 000040 05	; 8943	1047/0040	0	00	1040	0	0	7	000	0	0	0	152	0	00	10	05	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1050/003162 000000 140300 000002 000000 50	; 8817	1050/3162	0	00	1000	0	0	0	030	1	0	0	040	0	00	00	50	0	
1051/000270 030000 100000 132540 000000 10	; 5103	1051/0270	0	00	1000	0	0	3	000	0	0	0	000	0	13	36	10	0	
1052/000736 000000 100000 120000 000000 10	; 8818	1052/0736	0	00	1000	0	0	0	000	0	0	0	000	0	12	00	10	0	
1053/000736 000001 101400 120000 000040 26	; 8819	1053/0736	0	00	1040	0	0	0	000	0	0	0	103	0	12	00	26	0	
1054/125164 070000 104041 000020 000042 10	; 4772	1054/1164	1	40	1040	0	0	0	242	0	1	1	000	0	00	71	10	0	
1055/000144 070000 100000 002420 000000 10	; 4773	1055/0144	0	00	1000	0	0	0	000	0	0	0	000	0	00	77	10	0	
1056/001071 000002 121400 130000 000040 26	; 5155	1056/1071	0	00	1040	0	0	0	000	0	0	0	223	0	13	00	26	0	
1057/003176 015211 051000 004340 100000 10	; 8944	1057/3176	0	02	2032	1	0	7	000	0	0	0	152	0	00	10	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1060/035060 003010 004004 000000 021002 31	; 5720	1060/1060	1	55	2006	0	0	0	003	0	1	0	000	0	00	00	31	0	
1061/035060 004410 004004 000200 021042 31	; 5721	1061/1060	1	55	2051	0	0	4	003	0	1	0	000	0	00	00	31	0	
1062/035060 004410 004004 000200 021042 31	; 5722	1062/1060	1	55	2051	0	0	4	003	0	1	0	000	0	00	00	31	0	
1063/035060 003010 004004 000000 021002 31	; 5723	1063/1060	1	55	2006	0	0	0	003	0	1	0	000	0	00	00	31	0	
1064/004003 107650 140301 000000 100000 03	; 5724	1064/0003	0	02	3237	0	1	0	030	0	1	1	040	0	00	00	03	0	
1065/004005 107650 140301 000000 100000 03	; 5725	1065/0005	0	02	3237	0	1	0	030	0	1	1	040	0	00	00	03	0	
1066/004005 107650 140301 000000 100000 03	; 5726	1066/0005	0	02	3237	0	1	0	030	0	1	1	040	0	00	00	03	0	
1067/004003 107650 140301 000000 100000 03	; 5727	1067/0003	0	02	3237	0	1	0	030	0	1	1	040	0	00	00	03	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1070/003162 000000 140300 000002 000000 50	; 8822	1070/3162	0	00	1000	0	0	0	030	1	0	0	040	0	00	00	50	0	
1071/001634 035304 022000 020140 000202 10	; 5156	1071/1634	1	00	0432	0	0	3	000	0	0	0	424	1	02	30	10	0	
1072/000723 000000 100000 160000 000000 10	; 8823	1072/0723	0	00	1000	0	0	0	000	0	0	0	000	0	16	00	10	0	
1073/000723 000001 101400 160000 000040 26	; 8824	1073/0723	0	00	1040	0	0	0	000	0	0	0	103	0	16	00	26	0	
1074/000736 035300 000000 132540 000002 50	; 8679	1074/0736	1	00	0432	0	0	3	000	0	0	0	000	0	13	36	50	0	
1075/001135 030005 140000 000420 000202 32	; 8988	1075/1135	1	00	1000	0	0	0	000	0	0	0	540	1	00	33	32	0	
1076/000001 007600 104000 000000 001000 03	; 8680	1076/0001	0	50	1037	0	0	0	000	0	0	0	000	0	00	00	03	0	
1077/001135 030005 160000 000420 000242 32	; 8990	1077/1135	1	00	1040	0	0	0	000	0	0	0	560	1	00	33	32	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1100/002406	070000	100000	000420	000040	50	; 8113	1100/2406	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	73	50	0
1101/000417	027614	113400	000000	000012	10	; 8114	1101/0417	3	00	3037	0	0	0	0	000	0	0	0	417	0	00	20	10	0
1102/003002	070000	100000	004420	000040	50	; 8115	1102/3002	0	00	1040	1	0	0	0	000	0	0	0	000	0	00	73	50	0
1103/003064	000005	102400	070000	000040	10	; 8116	1103/3064	0	00	1040	0	0	0	0	000	0	0	0	505	0	07	00	10	0
1104/001006	000000	100000	000000	000000	10	; 7692	1104/1006	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
1105/001006	000000	100000	000000	000000	10	; 7694	1105/1006	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
1106/001006	000000	100000	000000	000000	10	; 7696	1106/1006	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
1107/001006	000000	100000	000000	000000	10	; 7698	1107/1006	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1111/001006	000000	100000	000000	000000	10	; 7702	1111/1006	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
1112/001006	000000	100000	000000	000000	10	; 7704	1112/1006	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
1113/001006	000000	100000	000000	000000	10	; 7706	1113/1006	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
1114/001041	005200	004003	160000	100002	10	; 4943	1114/1041	1	42	0032	0	0	0	0	000	0	0	3	000	0	16	00	10	0
1115/001032	000000	100001	000400	000040	10	; 4951	1115/1032	0	00	1040	0	0	0	0	000	0	0	1	000	0	00	02	10	0
1116/040060	003600	000000	050000	100002	33	; 4333	1116/0060	1	02	0027	0	0	0	0	004	0	0	0	000	0	05	00	33	0
1117/001121	025210	001004	160400	000000	22	; 5168	1117/1121	0	04	2032	0	0	0	0	000	0	0	0	002	0	16	22	22	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1120/005442	107657	153301	000000	100000	50	; 5780	1120/1442	0	02	3237	0	1	0	0	030	0	1	1	756	0	00	00	50	0
1121/001125	015310	000004	022540	100000	10	; 5169	1121/1125	0	06	2432	0	0	3	0	000	0	0	0	000	0	02	16	10	0
1122/003062	020000	123000	000400	000000	50	; 9404	1122/3062	0	00	1000	0	0	0	0	000	0	0	0	026	0	00	22	50	0
1123/000723	025211	002400	000020	100000	10	; 9405	1123/0723	0	02	2032	0	0	0	0	000	0	0	0	105	0	00	21	10	0
1124/001126	057210	000000	002220	000002	10	; 5781	1124/1126	1	00	2036	0	0	4	0	000	0	0	0	000	0	00	55	10	0
1125/040075	007201	072410	170340	000202	10	; 5170	1125/0075	1	00	0036	0	0	7	0	004	0	0	0	175	3	17	00	10	0
1126/001524	016000	141700	000002	100042	16	; 5784	1126/1524	1	02	1054	0	0	0	0	030	1	0	0	043	0	00	10	16	0
1127/001126	010004	120000	000020	000000	10	; 5785	1127/1126	0	00	1000	0	0	0	0	000	0	0	0	420	0	00	11	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1130/001630	017670	116701	002422	100000	50	; 9353	1130/1630	0	42	3337	0	0	0	0	030	1	0	1	015	0	00	17	50	0
1131/003261	017670	116701	002422	100000	10	; 9355	1131/3261	0	42	3337	0	0	0	0	030	1	0	1	015	0	00	17	10	0
1132/001142	106621	072401	000340	100002	10	; 5175	1132/1142	1	02	0135	0	1	7	0	000	0	0	1	175	0	00	00	10	0
1133/003252	010000	102004	002020	000000	10	; 9356	1133/3252	0	04	1000	0	0	0	0	000	0	0	0	004	0	00	15	10	0
1134/002264	006200	114701	000002	100000	50	; 8726	1134/2264	0	42	1034	0	0	0	0	030	1	0	1	011	0	00	00	50	0
1135/137211	000001	111400	120000	000000	26	; 8993	1135/3211	0	00	1000	0	0	0	0	043	0	1	0	113	0	12	00	26	0
1136/000270	007605	111410	130000	000200	26	; 8727	1136/0270	0	00	1037	0	0	0	0	000	0	0	0	513	3	13	00	26	0
1137/137211	000002	121400	120000	000000	26	; 8994	1137/3211	0	00	1000	0	0	0	0	043	0	1	0	223	0	12	00	26	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1140/005060 040000 140700 000400 000000 50	; 5835	1140/1060	0	00	1000	0	0	0	0	030	0	1	0	041	0	00	42	50	0
1141/000213 000000 100010 170000 000000 10	; 5836	1141/0213	0	00	1000	0	0	0	0	000	0	0	0	000	2	17	00	10	0
1142/001672 060000 130000 004400 000040 22	; 5176	1142/1672	0	00	1040	1	0	0	0	000	0	0	0	030	0	00	62	22	0
1143/101562 010000 100000 000042 000040 10	; 5837	1143/1562	0	00	1040	0	0	1	040	1	0	0	0	000	0	00	10	10	0
1144/041152 006661 076403 000340 100002 10	; 5179	1144/1152	1	42	0335	0	0	7	004	0	0	3	175	0	00	00	10	0	0
1145/131562 010000 100000 000042 000040 10	; 5838	1145/1562	0	00	1040	0	0	1	043	1	0	0	000	0	00	10	10	0	0
1146/045147 001410 104004 000000 125002 27	; 6570	1146/1147	1	77	3003	0	0	0	004	0	1	0	000	0	00	00	27	0	0
1147/000375 000104 111402 003420 004042 05	; 6572	1147/0375	1	20	1440	2	0	0	000	0	0	2	413	0	00	07	05	0	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1150/075151 000000 100041 004000 000010 07	; 9000	1150/1151	2	00	1000	1	0	0	207	0	1	1	000	0	00	00	07	0	0
1151/003250 005201 050000 000340 100002 10	; 9001	1151/3250	1	02	0032	0	0	7	000	0	0	0	150	0	00	00	10	0	0
1152/000020 000000 100006 002400 000040 03	; 5180	1152/0020	0	04	1040	0	0	0	000	0	0	2	000	0	00	06	03	0	0
1153/003221 000000 124000 010000 000040 10	; 9003	1153/3221	0	40	1040	0	0	0	000	0	0	0	020	0	01	00	10	0	0
1154/000665 000000 100000 000000 000000 50	; 8792	1154/0665	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	50	0	0
1155/002434 000000 120000 010000 000000 10	; 9004	1155/2434	0	00	1000	0	0	0	000	0	0	0	020	0	01	00	10	0	0
1156/001030 054610 000000 002200 000002 10	; 8793	1156/1030	1	00	2031	0	0	4	000	0	0	0	000	0	00	54	10	0	0
1157/003212 000000 120000 010000 000000 10	; 9005	1157/3212	0	00	1000	0	0	0	000	0	0	0	020	0	01	00	10	0	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1160/006150 055300 031700 007020 100002 50	; 5987	1160/2150	1	02	0432	3	0	0	030	0	1	0	033	0	00	55	50	0	0
1161/001172 000070 100000 020140 004042 25	; 5182	1161/1172	1	20	3340	0	0	3	000	0	0	0	000	0	02	00	25	0	0
1162/000522 040000 100000 000400 000000 50	; 5989	1162/0522	0	00	1000	0	0	0	000	0	0	0	000	0	00	42	50	0	0
1163/000066 010006 122000 000020 000040 10	; 5990	1163/0066	0	00	1040	0	0	0	000	0	0	0	624	0	00	11	10	0	0
1164/030226 010000 100000 002020 000042 34	; 4775	1164/0226	1	00	1040	0	0	0	003	0	0	0	000	0	00	15	34	0	0
1165/001054 070000 100000 000000 000000 10	; 4776	1165/1054	0	00	1000	0	0	0	000	0	0	0	000	0	00	70	10	0	0
1166/026142 054750 001046 002010 000050 10	; 5998	1166/2142	2	04	2671	0	0	0	302	0	1	2	002	0	00	54	10	0	0
1167/025240 007630 105044 000010 125010 35	; 6000	1167/1240	2	77	3137	0	0	0	302	0	1	0	002	0	00	00	35	0	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1170/075171 005301 042441 000340 004012 07	; 9081	1170/1171	3	20	0432	0	0	7	207	0	1	1	145	0	00	00	07	0	0
1171/003250 005201 050000 000340 100002 10	; 9082	1171/3250	1	02	0032	0	0	7	000	0	0	0	150	0	00	00	10	0	0
1172/001252 037221 072400 162740 105002 10	; 5184	1172/1252	1	32	0136	0	0	7	000	0	0	0	175	0	16	36	10	0	0
1173/003233 010200 106300 010402 001000 10	; 9086	1173/3233	0	50	1020	0	0	0	030	1	0	0	004	0	01	12	10	0	0
1174/001325 011701 171000 000340 100000 50	; 10004	1174/1325	0	02	1423	0	0	7	000	0	0	0	172	0	00	10	50	0	0
1175/003230 000000 120000 010000 000000 10	; 9087	1175/3230	0	00	1000	0	0	0	000	0	0	0	020	0	01	00	10	0	0
1176/003371 012611 170000 000340 004000 10	; 10005	1176/3371	0	20	3025	0	0	7	000	0	0	0	170	0	00	10	10	0	0
1177/002434 060000 124000 010400 000000 10	; 9089	1177/2434	0	40	1000	0	0	0	000	0	0	0	020	0	01	62	10	0	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1200/002406	070000	102003	014420	000000	50	: 8132	1200/2406	0	00	1000	1	0	0	000	0	0	3	004	0	01	73	50	0	
1201/003070	027614	112000	000000	000012	10	: 8133	1201/3070	3	00	3037	0	0	0	000	0	0	0	414	0	00	20	10	0	
1202/002406	070000	100000	004420	000000	50	: 8135	1202/2406	0	00	1000	1	0	0	000	0	0	0	000	0	00	73	50	0	
1203/003066	020005	110000	000000	120052	10	: 8136	1203/3066	3	03	1040	0	0	0	000	0	0	0	510	0	00	20	10	0	
1204/003002	076300	100000	004420	100000	50	: 8462	1204/3002	0	02	1434	1	0	0	000	0	0	0	000	0	00	73	50	0	
1205/000066	020000	110000	000420	000002	10	: 8463	1205/0066	1	00	1000	0	0	0	000	0	0	0	010	0	00	23	10	0	
1206/002406	077610	100007	010420	004000	50	: 8466	1206/2406	0	24	3037	0	0	0	000	0	0	3	000	0	01	73	50	0	
1207/003076	027616	120006	000000	000012	10	: 8467	1207/3076	3	04	3037	0	0	0	000	0	0	2	620	0	00	20	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1211/003101	027505	110400	000000	124012	57	: 8500	1211/3101	3	23	1417	0	0	0	000	0	0	0	511	0	00	20	57	0	
1212/001002	005310	000000	000000	100000	10	: 8502	1212/1002	0	02	2432	0	0	0	000	0	0	0	000	0	00	00	10	0	
1213/000417	005310	001004	002400	000000	10	: 8503	1213/0417	0	04	2432	0	0	0	000	0	0	0	002	0	00	06	10	0	
1214/002406	076200	102003	014420	004000	50	: 8525	1214/2406	0	20	1034	1	0	0	000	0	0	3	004	0	01	73	50	0	
1215/001721	027614	113000	000000	000012	10	: 8526	1215/1721	3	00	3037	0	0	0	000	0	0	0	416	0	00	20	10	0	
1216/002406	076300	110700	004422	100000	50	: 8529	1216/2406	0	02	1434	1	0	0	030	1	0	0	011	0	00	73	50	0	
1217/000774	020005	130400	000000	120012	10	: 8530	1217/0774	3	03	1000	0	0	0	000	0	0	0	531	0	00	20	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1221/042502	073022	030001	110100	000202	10	: 9518	1221/2502	1	00	0106	0	0	2	004	0	0	1	230	1	11	70	10	0	
1222/002502	077632	130001	110000	000200	10	: 9519	1222/2502	0	00	3137	0	0	0	000	0	0	1	230	1	11	70	10	0	
1223/042502	073022	030001	110100	000202	10	: 9520	1223/2502	1	00	0106	0	0	2	004	0	0	1	230	1	11	70	10	0	
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1225/003077	003024	000001	040100	005002	02	: 9523	1225/3077	1	30	0106	0	0	2	000	0	0	1	400	0	04	00	02	0	
1226/003077	007624	100001	040000	005000	02	: 9524	1226/3077	0	30	1137	0	0	0	000	0	0	1	400	0	04	00	02	0	
1227/003077	003024	000001	040100	005002	02	: 9525	1227/3077	1	30	0106	0	0	2	000	0	0	1	400	0	04	00	02	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1230/000121	020004	100000	000400	000040	10	: 9527	1230/0121	0	00	1040	0	0	0	000	0	0	0	400	0	00	22	10	0	
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1232/000121	020004	100000	000400	000040	10	: 9529	1232/0121	0	00	1040	0	0	0	000	0	0	0	400	0	00	22	10	0	
1233/000121	020004	100000	000400	000040	10	: 9530	1233/0121	0	00	1040	0	0	0	000	0	0	0	400	0	00	22	10	0	
1234/002002	007614	100000	040000	005000	33	: 9540	1234/2002	0	30	3037	0	0	0	000	0	0	0	400	0	04	00	33	0	
1235/003077	003004	000002	040100	005202	02	: 9541	1235/3077	1	30	0006	0	0	2	000	0	0	2	400	1	04	00	02	0	
1236/002502	077612	130000	110000	000200	10	: 9542	1236/2502	0	00	3037	0	0	0	000	0	0	0	230	1	11	70	10	0	
1237/002502	073002	030002	110100	000202	10	: 9543	1237/2502	1	00	0006	0	0	2	000	0	0	2	230	1	11	70	10	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1241/001240	014510	166004	002400	125052	35	:	6253	1241/1240	3	77	3451	0	0	0	000	0	0	0	064	0	00	16	35	0
1242/025240	007600	105044	000010	125010	35	:	6255	1242/1240	2	77	1037	0	0	0	302	0	1	0	002	0	00	00	35	0
1243/000024	000000	100000	000000	000000	05	:	6256	1243/0024	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	05	0
1244/034024	007600	104004	000000	021000	05	:	6258	1244/0024	0	55	1037	0	0	0	003	0	1	0	000	0	00	00	05	0
1245/054024	005310	105040	000010	104000	05	:	6260	1245/0024	0	62	3432	0	0	0	305	0	1	0	002	0	00	00	05	0
1246/054024	005310	105444	000010	021000	05	:	6262	1246/0024	0	55	3432	0	0	0	305	0	1	0	003	0	00	00	05	0
1247/002200	054350	116304	002002	021002	17	:	6278	1247/2200	1	55	3630	0	0	0	030	1	0	0	014	0	00	54	17	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1250/002516	015201	014401	002440	100002	10	:	9735	1250/2516	1	42	0032	0	0	1	000	0	0	1	111	0	00	16	10	0
1251/000542	010002	112000	002400	000000	50	:	9736	1251/0542	0	00	1000	0	0	0	000	0	0	0	214	0	00	16	50	0
1252/000001	030000	100006	162540	000000	03	:	5186	1252/0001	0	04	1000	0	0	3	000	0	0	2	000	0	16	36	03	0
1253/002030	013151	014404	002400	104042	10	:	9737	1253/2030	1	66	2646	0	0	0	000	0	0	0	111	0	00	16	10	0
1254/002406	076200	100000	020420	100000	50	:	4802	1254/2406	0	02	1034	0	0	0	000	0	0	0	000	0	02	73	50	0
1255/000726	020005	163400	000000	120052	10	:	4803	1255/0726	3	03	1040	0	0	0	000	0	0	0	567	0	00	20	10	0
1256/052516	050002	100103	010030	000042	10	:	9744	1256/2516	1	00	1040	0	0	0	115	0	0	3	200	0	01	51	10	0
1257/001276	017620	130000	010040	000002	32	:	9745	1257/1276	1	00	1137	0	0	1	000	0	0	0	030	0	01	10	32	0
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1261/000542	010002	111000	002400	000000	50	:	9782	1261/0542	0	00	1000	0	0	0	000	0	0	0	212	0	00	16	50	0
1262/001724	057420	100000	002000	000010	20	:	5225	1262/1724	2	00	1117	0	0	0	000	0	0	0	000	0	00	54	20	0
1263/003427	005300	000010	000000	100002	10	:	9783	1263/3427	1	02	0432	0	0	0	000	0	0	0	000	2	00	00	10	0
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1267/055264	005310	105444	005010	021010	35	:	6294	1267/1264	2	55	3432	3	0	0	305	0	1	0	003	0	00	00	35	0
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1271/003450	005300	000000	005240	100002	50	:	9983	1271/3450	1	02	0432	3	0	5	000	0	0	0	000	0	00	00	50	0
1272/000065	003000	000000	000000	100002	10	:	5229	1272/0065	1	02	0006	0	0	0	000	0	0	0	000	0	00	00	10	0
1273/001270	015200	104004	000240	125000	10	:	9984	1273/1270	0	77	1032	0	0	5	000	0	0	0	000	0	00	10	10	0
1274/001002	010000	100000	002400	000000	10	:	4807	1274/1002	0	00	1000	0	0	0	000	0	0	0	000	0	00	16	10	0
1275/001320	070000	100000	000000	000000	10	:	4808	1275/1320	0	00	1000	0	0	0	000	0	0	0	000	0	00	70	10	0
1276/003335	002601	070000	001340	104002	10	:	9746	1276/3335	1	22	0025	2	0	7	000	0	0	0	170	0	00	00	10	0
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1301/002412	027614	103400	000000	000012	23	; 8598	1301/2412	3	00	3037	0	0	0	0	000	0	0	0	407	0	00	20	23	0
1302/002406	076200	100000	004420	100000	50	; 8600	1302/2406	0	02	1034	1	0	0	0	000	0	0	0	000	0	00	73	50	0
1303/003122	020005	112000	000000	120052	10	; 8601	1303/3122	3	03	1040	0	0	0	0	000	0	0	0	514	0	00	20	10	0
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1311/000060	000200	100000	050000	100000	33	; 4343	1311/0060	0	02	1020	0	0	0	0	000	0	0	0	000	0	05	00	33	0
1312/002406	076300	104001	000420	100000	50	; 8621	1312/2406	0	42	1434	0	0	0	0	000	0	0	1	000	0	00	73	50	0
1313/003126	027614	102006	000000	000012	23	; 8622	1313/3126	3	04	3037	0	0	0	0	000	0	0	2	404	0	00	20	23	0
1314/000230	045200	041000	012002	100002	13	; 5331	1314/0230	1	02	0032	0	0	0	0	000	1	0	0	042	0	01	44	13	0
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1316/002044	046300	100000	002002	100000	13	; 5350	1316/2044	0	02	1434	0	0	0	0	000	1	0	0	000	0	00	44	13	0
1317/000230	045200	000000	002002	104010	13	; 5351	1317/0230	2	22	0032	0	0	0	0	000	1	0	0	000	0	00	44	13	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1321/000071	020001	102400	000020	000000	10	; 4811	1321/0071	0	00	1000	0	0	0	0	000	0	0	0	105	0	00	21	10	0
1322/001442	107650	100001	000000	100000	50	; 6486	1322/1442	0	02	3237	0	1	0	0	000	0	0	1	000	0	00	00	50	0
1323/141322	000002	100002	010000	000040	10	; 6487	1323/1322	0	00	1040	0	0	0	0	044	0	0	2	200	0	01	00	10	0
1324/002012	045300	000000	002002	100002	13	; 5373	1324/2012	1	02	0432	0	0	0	0	000	1	0	0	000	0	00	44	13	0
1325/120560	000002	100002	000000	000000	22	; 7127	1325/0560	0	00	1000	0	0	0	0	042	0	0	2	200	0	00	00	22	0
1326/001360	007610	102300	000002	000010	35	; 6489	1326/1360	2	00	3037	0	0	0	0	030	1	0	0	004	0	00	00	35	0
1327/120560	070002	100002	002020	000040	22	; 7129	1327/0560	0	00	1040	0	0	0	0	042	0	0	2	200	0	00	75	22	0
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1331/000122	053140	040400	112000	004250	20	; 4842	1331/0122	2	20	0646	0	0	0	0	000	0	0	0	041	1	11	54	20	0
1332/022022	057647	136300	000022	100002	10	; 5381	1332/2022	1	42	1237	0	0	0	0	032	1	0	0	734	0	00	51	10	0
1333/000002	000000	100000	000000	000040	03	; 9795	1333/0002	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	03	0
1334/000074	000000	100016	170140	000040	33	; 4853	1334/0074	0	04	1040	0	0	3	0	000	0	0	2	000	2	17	00	33	0
1335/000067	010000	140006	020160	000000	10	; 4855	1335/0067	0	04	1000	0	0	3	0	000	0	0	2	040	0	02	11	10	0
1336/006040	045300	042300	002002	100002	13	; 5389	1336/2040	1	02	0432	0	0	0	0	030	1	1	0	044	0	00	44	13	0
1337/000542	000000	100000	000000	000040	10	; 9796	1337/0542	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1342/022042	057651	105000	010022	100002	10	:	5397	1342/2042	1	42	3237	0	0	0	002	1	0	0	102	0	01	51	10	0
1343/044523	017651	101000	010040	100000	50	:	6507	1343/0523	0	02	3237	0	0	1	004	0	1	0	102	0	01	10	50	0
1344/006556	005200	042300	000040	104010	50	:	10503	1344/2556	2	22	0032	0	0	1	030	0	1	0	044	0	00	00	50	0
1345/044522	017641	101000	010040	100000	50	:	6509	1345/0522	0	02	1237	0	0	1	004	0	1	0	102	0	01	10	50	0
1346/002210	001401	166404	000340	125002	27	:	10504	1346/2210	1	77	1003	0	0	7	000	0	0	0	165	0	00	00	27	0
1347/001360	005200	002300	000042	105010	35	:	6512	1347/1360	2	32	0032	0	0	1	030	1	0	0	004	0	00	00	35	0
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1355/002532	010002	122000	002400	000000	50	:	9850	1355/2532	0	00	1000	0	0	0	000	0	0	0	224	0	00	16	50	0
1356/000075	007622	101010	060000	000010	10	:	9844	1356/0075	2	00	1137	0	0	0	000	0	0	0	202	2	06	00	10	0
1357/003341	004601	063000	000340	105002	12	:	9852	1357/3341	1	32	0031	0	0	7	000	0	0	0	166	0	00	00	12	0
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1361/001766	010240	161000	007400	100000	10	:	6527	1361/1766	0	02	1220	3	0	0	000	0	0	0	062	0	00	16	10	0
1362/025770	107600	106044	000010	125000	12	:	6533	1362/1770	0	77	1037	0	1	0	302	0	1	0	004	0	00	00	12	0
1363/025365	007600	105044	000010	125000	10	:	6535	1363/1365	0	77	1037	0	0	0	302	0	1	0	002	0	00	00	10	0
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1365/001146	000010	145700	000002	104052	35	:	6538	1365/1146	3	62	3040	0	0	0	030	1	0	0	043	0	00	00	35	0
1366/035365	007600	104404	002420	021000	10	:	6539	1366/1365	0	55	1037	0	0	0	003	0	1	0	001	0	00	07	10	0
1367/055752	000000	100004	000000	000000	10	:	6540	1367/1752	0	04	1000	0	0	0	005	0	1	0	000	0	00	00	10	0
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1372/000060	014410	000000	050420	100042	33	:	5474	1372/0060	1	02	2051	0	0	0	000	0	0	0	000	0	05	13	33	0
1373/001457	005201	063000	000340	100002	10	:	10020	1373/1457	1	02	0032	0	0	7	000	0	0	0	166	0	00	00	10	0
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1375/001440	055300	020000	024140	000002	22	:	4893	1375/1440	1	00	0432	1	0	3	000	0	0	0	020	0	02	50	22	0
1376/003342	017400	100004	000000	104010	10	:	9859	1376/3342	2	26	1017	0	0	0	000	0	0	0	000	0	00	10	10	0
1377/003342	007410	100004	000000	104010	10	:	9860	1377/3342	2	26	3017	0	0	0	000	0	0	0	000	0	00	00	10	0

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1405/041160	000003	140201	000002	000040	22	; 5983	1405/1160	0	00	1040	0	0	0	024	1	0	1	340	0	00	00	22	0	
1406/001520	040000	100000	002400	000000	10	; 6136	1406/1520	0	00	1000	0	0	0	000	0	0	0	000	0	00	46	10	0	
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1431/044260	106300	100000	005000	104000	30	; 5541	1431/0260	0	22	1434	3	1	0	004	0	1	0	000	0	00	00	30	0	
1432/126254	010000	100000	000050	000240	10	; 10238	1432/2254	0	00	1040	0	0	1	142	0	1	0	000	1	00	10	10	0	
1433/124434	011700	104001	000050	000000	36	; 10239	1433/0434	0	40	1423	0	0	1	142	0	1	1	000	0	00	10	36	0	
1434/000736	003001	073010	120340	000202	50	; 10557	1434/0736	1	00	0006	0	0	7	000	0	0	0	176	3	12	00	50	0	
1435/003346	105201	042002	000320	004002	10	; 9890	1435/3346	1	20	0032	0	1	6	000	0	0	2	144	0	00	01	10	0	
1436/002234	057610	100000	002000	000010	10	; 10558	1436/2234	2	00	3037	0	0	0	000	0	0	0	000	0	00	54	10	0	
1437/002046	000000	100000	000000	000000	33	; 9891	1437/2046	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	33	0	

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1441/000756	007610	100010	170000	000200	10	:	4896	1441/0756	0	00	3037	0	0	0	000	0	0	0	000	3	17	00	10	0
1442/044260	106300	100000	000000	000000	30	:	5579	1442/0260	0	00	1434	0	1	0	004	0	1	0	000	0	00	00	30	0
1443/002540	055200	024300	002022	100002	10	:	9966	1443/2540	1	42	0032	0	0	0	030	1	0	0	020	0	00	55	10	0
1444/124434	011701	100000	020170	000000	36	:	6802	1444/0434	0	00	1423	0	0	3	142	0	1	0	100	0	02	11	36	0
1445/126034	030006	110000	112410	000000	10	:	6803	1445/2034	0	00	1000	0	0	0	142	0	1	0	610	0	11	36	10	0
1446/001444	070000	100000	022160	000040	10	:	6804	1446/1444	0	00	1040	0	0	3	000	0	0	0	000	0	02	75	10	0
1447/003364	015200	014001	002640	100002	10	:	9968	1447/3364	1	42	0032	0	0	5	000	0	0	1	010	0	00	16	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1451/052266	057640	142300	000022	100002	50	:	10257	1451/2266	1	02	1237	0	0	0	035	1	0	0	044	0	00	51	50	0
1452/002074	054410	000000	002400	000050	10	:	5619	1452/2074	2	00	2051	0	0	0	000	0	0	0	000	0	00	56	10	0
1453/000006	000000	100000	020140	000040	03	:	10258	1453/0006	0	00	1040	0	0	3	000	0	0	0	000	0	02	00	03	0
1454/001440	010000	140000	000020	000040	10	:	4902	1454/1440	0	00	1040	0	0	0	000	0	0	0	040	0	00	11	10	0
1455/001441	010000	140000	000020	000000	10	:	4903	1455/1441	0	00	1000	0	0	0	000	0	0	0	040	0	00	11	10	0
1456/001370	010001	163000	120340	000000	10	:	10014	1456/1370	0	00	1000	0	0	7	000	0	0	0	166	0	12	10	10	0
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ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1461/004234	005300	044701	001000	100002	32	:	5628	1461/0234	1	42	0432	2	0	0	030	0	1	1	041	0	00	00	32	0
1462/003414	000001	142000	000000	000040	10	:	10294	1462/3414	0	00	1040	0	0	0	000	0	0	0	144	0	00	00	10	0
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1465/126104	030006	110000	112410	000040	10	:	6853	1465/2104	0	00	1040	0	0	0	142	0	1	0	610	0	11	36	10	0
1466/001464	070000	100000	022160	000000	10	:	6854	1466/1464	0	00	1000	0	0	3	000	0	0	0	000	0	02	75	10	0
1467/000250	005200	045701	001002	100002	33	:	5755	1467/0250	1	42	0032	2	0	0	030	1	0	1	043	0	00	00	33	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1471/056600	050000	101446	000030	000042	10	:	10433	1471/2600	1	04	1040	0	0	0	305	0	1	2	003	0	00	51	10	0
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1473/076576	000000	105541	000010	000000	10	:	10435	1473/2576	0	40	1000	0	0	0	317	0	1	1	003	0	00	00	10	0
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1475/001477	003010	106304	000002	125002	27	:	10075	1475/1477	1	77	3006	0	0	0	030	1	0	0	004	0	00	00	27	0
1476/002632	053150	000000	002000	000050	10	:	10661	1476/2632	2	00	2646	0	0	0	000	0	0	0	000	0	00	54	10	0
1477/002546	076200	104001	000000	100000	10	:	10076	1477/2546	0	42	1034	0	0	0	000	0	0	1	000	0	00	70	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1500/003002 070000 110700 004422 000000 50	; 8106	1500/3002	0	00	1000	1	0	0	0	030	1	0	0	011	0	00	73	50	0
1501/003063 000000 100004 000000 000000 10	; 8107	1501/3063	0	04	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
1502/002406 075310 000000 000420 100000 50	; 8581	1502/2406	0	02	2432	0	0	0	0	000	0	0	0	000	0	00	73	50	0
1503/000760 106300 112701 000002 100000 33	; 8583	1503/0760	0	02	1434	0	1	0	0	030	1	0	1	015	0	00	00	33	0
1504/040060 001200 000000 050000 100002 33	; 4353	1504/0060	1	02	0022	0	0	0	0	004	0	0	0	000	0	05	00	33	0
1505/040060 000600 000000 050000 100002 33	; 4363	1505/0060	1	02	0021	0	0	0	0	004	0	0	0	000	0	05	00	33	0
1506/000060 001600 100000 050000 100000 33	; 4373	1506/0060	0	02	1023	0	0	0	0	000	0	0	0	000	0	05	00	33	0
1507/000075 004602 000410 060000 000010 10	; 4508	1507/0075	2	00	0031	0	0	0	0	000	0	0	0	201	2	06	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1510/000074 047612 101010 062540 000010 10	; 4527	1510/0074	2	00	3037	0	0	3	000	0	0	0	0	202	2	06	46	10	0
1511/001510 010000 100000 160420 100042 10	; 4542	1511/1510	1	02	1040	0	0	0	000	0	0	0	0	000	0	16	13	10	0
1512/001510 017410 100000 160420 100002 10	; 4557	1512/1510	1	02	3017	0	0	0	000	0	0	0	0	000	0	16	13	10	0
1513/000075 005205 001010 060000 100010 10	; 4574	1513/0075	2	02	0032	0	0	0	000	0	0	0	0	502	2	06	00	10	0
1514/000074 013105 001010 060420 100052 10	; 4589	1514/0074	3	02	0446	0	0	0	000	0	0	0	0	502	2	06	13	10	0
1515/000353 005300 000000 000000 100002 10	; 4604	1515/0353	1	02	0432	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1516/000074 003105 001010 060000 100052 17	; 4613	1516/0074	3	02	0446	0	0	0	000	0	0	0	0	502	2	06	00	17	0
1517/000060 013000 000000 050420 100002 33	; 5461	1517/0060	1	02	0006	0	0	0	000	0	0	0	0	000	0	05	13	33	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1520/121325 016301 163000 004352 100002 74	; 6959	1520/1325	1	02	1434	1	0	7	142	1	0	0	0	166	0	00	10	74	0
1521/051420 000002 100103 014010 000042 74	; 6964	1521/1420	1	00	1040	1	0	0	115	0	0	0	3	200	0	01	00	74	0
1522/002176 005310 000000 004000 100000 10	; 6966	1522/2176	0	02	2432	1	0	0	000	0	0	0	0	000	0	00	00	10	0
1523/001120 005200 000000 000000 100002 10	; 5778	1523/1120	1	02	0032	0	0	0	000	0	0	0	0	000	0	00	00	10	0
1524/001532 000000 100004 004000 000040 10	; 5789	1524/1532	0	04	1040	1	0	0	000	0	0	0	0	000	0	00	00	10	0
1525/000075 000000 100010 170140 000040 10	; 6968	1525/0075	0	00	1040	0	0	3	000	0	0	0	0	000	2	17	00	10	0
1526/045527 001400 104004 000000 125002 27	; 7502	1526/1527	1	77	1003	0	0	0	004	0	1	0	0	000	0	00	00	27	0
1527/002743 107600 105704 000002 125000 12	; 7515	1527/2743	0	77	1037	0	1	0	030	1	0	0	0	003	0	00	00	12	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1530/002212 003101 073010 120340 000242 10	; 10440	1530/2212	1	00	0446	0	0	7	000	0	0	0	0	176	3	12	00	10	0
1531/001325 006200 100100 000002 100000 50	; 10441	1531/1325	0	02	1034	0	0	0	010	1	0	0	0	000	0	00	00	50	0
1532/001540 010000 100006 000040 005040 10	; 5790	1532/1540	0	34	1040	0	0	1	000	0	0	0	2	000	0	00	10	10	0
1533/042217 003001 073010 120340 000242 10	; 10442	1533/2217	1	00	0046	0	0	7	004	0	0	0	0	176	3	12	00	10	0
1534/003470 000050 100000 004000 100042 50	; 10713	1534/3470	1	02	3240	1	0	0	000	0	0	0	0	000	0	00	00	50	0
1535/001537 003010 104004 000000 021002 27	; 10097	1535/1537	1	55	3006	0	0	0	000	0	0	0	0	000	0	00	00	27	0
1536/001771 003030 000010 120200 000202 10	; 10714	1536/1771	1	00	2106	0	0	4	000	0	0	0	0	000	3	12	00	10	0
1537/073377 000000 133543 000030 000040 10	; 10098	1537/3377	0	00	1040	0	0	0	317	0	0	3	037	0	00	01	10	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1540/001542 005210 004000 000000 100000 12	; 5791	1540/1542	0	42	2032	0	0	0	000	0	0	0	000	0	00	00	12	0	
1541/005573 010000 100104 000000 000002 32	; 10161	1541/1573	1	04	1000	0	0	0	010	0	1	0	000	0	00	10	32	0	
1542/001544 105300 000004 000240 004002 12	; 5793	1542/1544	1	24	0432	0	1	5	000	0	0	0	000	0	00	00	12	0	
1543/074005 010000 101540 000010 000000 03	; 10162	1543/0005	0	00	1000	0	0	0	317	0	1	0	003	0	00	10	03	0	
1544/000554 017650 100000 000200 100000 10	; 5794	1544/0554	0	02	3237	0	0	4	000	0	0	0	000	0	00	10	10	0	
1545/071541 000000 163543 000030 000000 10	; 10163	1545/1541	0	00	1000	0	0	0	317	0	0	3	067	0	00	01	10	0	
1546/141550 015211 167006 000342 001000 10	; 5802	1546/1550	0	54	3032	0	0	7	044	1	0	2	166	0	00	10	10	0	
1547/061541 000000 110143 000030 000040 10	; 10164	1547/1541	0	00	1040	0	0	0	316	0	0	3	010	0	00	01	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1550/001552 005200 005300 001202 100002 10	; 5804	1550/1552	1	42	0032	2	0	4	030	1	0	0	002	0	00	00	10	0	
1551/061541 000000 120143 000030 000040 10	; 10165	1551/1541	0	00	1040	0	0	0	316	0	0	3	020	0	00	01	10	0	
1552/001554 035200 000004 006440 004002 10	; 5806	1552/1554	1	24	0032	1	0	1	000	0	0	0	000	0	00	36	10	0	
1553/061543 000000 120143 000030 000000 10	; 10166	1553/1543	0	00	1000	0	0	0	316	0	0	3	020	0	00	01	10	0	
1554/145556 005300 100006 004002 004000 10	; 5808	1554/1556	0	24	1432	1	0	0	044	1	1	2	000	0	00	00	10	0	
1555/071551 000000 163543 000030 000040 10	; 10167	1555/1551	0	00	1040	0	0	0	317	0	0	3	067	0	00	01	10	0	
1556/002110 055300 004000 002020 100002 10	; 5809	1556/2110	1	42	0432	0	0	0	000	0	0	0	000	0	00	55	10	0	
1557/061541 000000 130143 000030 000000 10	; 10168	1557/1541	0	00	1000	0	0	0	316	0	0	3	030	0	00	01	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1560/102224 055300 024011 010240 100210 74	; 10530	1560/2224	2	42	0432	0	0	5	040	0	0	1	020	3	01	50	74	0	
1561/001560 000012 100003 000000 100042 22	; 10533	1561/1560	1	02	3040	0	0	0	000	0	0	3	200	0	00	00	22	0	
1562/001024 005201 070400 000340 100002 10	; 5840	1562/1024	1	02	0032	0	0	7	000	0	0	0	171	0	00	00	10	0	
1563/002214 015310 000004 000000 100000 10	; 10534	1563/2214	0	06	2432	0	0	0	000	0	0	0	000	0	00	10	10	0	
1564/142106 010000 100000 000002 000000 50	; 7007	1564/2106	0	00	1000	0	0	0	044	1	0	0	000	0	00	10	50	0	
1565/001572 016100 141700 000202 100042 16	; 5848	1565/1572	1	02	1454	0	0	4	030	1	0	0	043	0	00	10	16	0	
1566/005604 004557 076300 000000 004042 05	; 7009	1566/1604	1	60	2651	0	0	0	030	0	1	0	774	0	00	00	05	0	
1567/005604 057617 172300 002000 005010 05	; 7011	1567/1604	2	30	3037	0	0	0	030	0	1	0	774	0	00	54	05	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1570/001023 015200 040000 020160 000002 10	; 4907	1570/1023	1	00	0032	0	0	3	000	0	0	0	040	0	02	11	10	0	
1571/001023 005300 000000 020140 000002 10	; 4908	1571/1023	1	00	0432	0	0	3	000	0	0	0	000	0	02	00	10	0	
1572/000336 000000 100004 000000 000040 05	; 5849	1572/0336	0	04	1040	0	0	0	000	0	0	0	000	0	00	00	05	0	
1573/042134 047201 063400 002340 004002 33	; 10172	1573/2134	1	20	0036	0	0	7	004	0	0	0	167	0	00	44	33	0	
1574/001025 007201 072400 160340 100002 10	; 4932	1574/1025	1	02	0036	0	0	7	000	0	0	0	175	0	16	00	10	0	
1575/001025 000000 100000 160000 000000 10	; 4933	1575/1025	0	00	1000	0	0	0	000	0	0	0	000	0	16	00	10	0	
1576/001601 004510 100004 000000 120042 10	; 5907	1576/1601	1	07	3451	0	0	0	000	0	0	0	000	0	00	00	10	0	
1577/040004 007201 063400 000340 100002 03	; 10173	1577/0004	1	02	0036	0	0	7	004	0	0	0	167	0	00	00	03	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1601/001612	005200	000000	005000	100002	10	: 5913	1601/1612	1	02	0032	3	0	0	0	000	0	0	0	000	0	00	00	10	0
1602/040065	007201	072400	000340	100002	10	: 4937	1602/0065	1	02	0036	0	0	7	004	0	0	0	175	0	00	00	10	0	
1603/000222	010000	100000	000000	000040	10	: 4938	1603/0222	0	00	1040	0	0	0	000	0	0	0	000	0	00	10	10	0	
1604/002645	003001	070400	000340	100002	10	: 7017	1604/2645	1	02	0006	0	0	7	000	0	0	0	171	0	00	00	10	0	
1605/002646	007600	160004	014000	100000	10	: 7019	1605/2646	0	06	1037	1	0	0	000	0	0	0	060	0	01	00	10	0	
1606/002211	003001	070400	000340	100002	10	: 7021	1606/2211	1	02	0006	0	0	7	000	0	0	0	171	0	00	00	10	0	
1607/002274	055300	000000	006060	100002	10	: 7027	1607/2274	1	02	0432	1	0	1	000	0	0	0	000	0	00	55	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1611/000120	000000	120007	010000	000000	10	: 4955	1611/0120	0	04	1000	0	0	0	000	0	0	3	020	0	01	00	10	0	
1612/052130	050002	100201	000022	000002	22	: 5914	1612/2130	1	00	1000	0	0	0	025	1	0	1	200	0	00	51	22	0	
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1627/002721	016201	171000	000340	100000	10	: 7241	1627/2721	0	02	1034	0	0	7	000	0	0	0	172	0	00	10	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1637/006556	005300	042300	000040	104010	10	: 10201	1637/2556	2	22	0432	0	0	1	030	0	1	0	044	0	00	00	10	0	

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1642/025242 000002 100201 000000 000040 22	; 6148	1642/1242	0	00	1040	0	0	0	022	0	1	1	200	0	00	00	22	0	
1643/001530 045310 100004 000420 020000 10	; 10336	1643/1530	0	05	3432	0	0	0	000	0	0	0	000	0	00	43	10	0	
1644/001646 005210 010700 007022 100000 10	; 6219	1644/1646	0	02	2032	3	0	0	030	1	0	0	011	0	00	05	10	0	
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1646/022172 056000 146040 000032 100042 16	; 6221	1646/2172	1	42	1054	0	0	0	302	1	0	0	044	0	00	51	16	0	
1647/002576 000000 100000 000000 000040 10	; 10338	1647/2576	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1657/042577 005210 100004 000002 020000 10	; 10344	1657/2577	0	05	3032	0	0	0	004	1	0	0	000	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1661/001665 010000 100006 000000 005040 10	; 6427	1661/1665	0	34	1040	0	0	0	000	0	0	2	000	0	00	10	10	0	
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1663/101132 000002 100003 000000 000040 22	; 5174	1663/1132	0	00	1040	0	0	0	040	0	0	3	200	0	00	00	22	0	
1664/001666 003010 004000 000200 104002 27	; 7350	1664/1666	1	62	2006	0	0	4	000	0	0	0	000	0	00	00	27	0	
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1667/002322 010001 163000 000340 000040 10	; 7353	1667/2322	0	00	1040	0	0	7	000	0	0	0	166	0	00	10	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1671/001677 105300 000000 000000 105002 10	; 6430	1671/1677	1	32	0432	0	1	0	000	0	0	0	000	0	00	00	10	0	
1672/001673 000000 100002 000400 000040 10	; 5177	1672/1673	0	00	1040	0	0	0	000	0	0	2	000	0	00	02	10	0	
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1674/002716 007610 104404 002420 021000 10	; 7364	1674/2716	0	55	3037	0	0	0	000	0	0	0	001	0	00	07	10	0	
1675/002716 107600 104404 002420 125000 10	; 7365	1675/2716	0	77	1037	0	1	0	000	0	0	0	001	0	00	07	10	0	
1676/002716 007610 104404 002420 021000 10	; 7366	1676/2716	0	55	3037	0	0	0	000	0	0	0	001	0	00	07	10	0	
1677/001360 003010 006300 000002 104012 35	; 6432	1677/1360	3	62	2006	0	0	0	030	1	0	0	004	0	00	00	35	0	

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1701/000670	015300	000404	002440	020002	50	:	7382	1701/0670	1	05	0432	0	0	1	000	0	0	0	001	0	00	16	50	0
1702/001704	107640	100000	000000	100000	10	:	6434	1702/1704	0	02	1237	0	1	0	000	0	0	0	000	0	00	00	10	0
1703/044523	017651	101000	010040	100000	50	:	7385	1703/0523	0	02	3237	0	0	1	004	0	1	0	102	0	01	10	50	0
1704/001706	016300	100006	000040	004000	10	:	6435	1704/1706	0	24	1434	0	0	1	000	0	0	2	000	0	00	10	10	0
1705/044522	017641	101000	010040	100000	50	:	7387	1705/0522	0	02	1237	0	0	1	004	0	1	0	102	0	01	10	50	0
1706/001720	005200	000004	000040	004002	10	:	6436	1706/1720	1	24	0032	0	0	1	000	0	0	0	000	0	00	00	10	0
1707/106722	000000	100000	002000	000000	10	:	7388	1707/2722	0	00	1000	0	0	0	040	0	1	0	000	0	00	04	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1711/002736	010240	160400	007400	100000	10	:	7466	1711/2736	0	02	1220	3	0	0	000	0	0	0	061	0	00	16	10	0
1712/026737	107600	106044	000010	125000	12	:	7468	1712/2737	0	77	1037	0	1	0	302	0	1	0	004	0	00	00	12	0
1713/025715	007600	105044	000010	125000	10	:	7470	1713/1715	0	77	1037	0	0	0	302	0	1	0	002	0	00	00	10	0
1714/045715	001400	104004	000000	125002	27	:	7471	1714/1715	1	77	1003	0	0	0	004	0	1	0	000	0	00	00	27	0
1715/002740	000001	130000	005000	000000	22	:	7473	1715/2740	0	00	1000	3	0	0	000	0	0	0	130	0	00	00	22	0
1716/035715	007600	104404	002420	021000	10	:	7475	1716/1715	0	55	1037	0	0	0	003	0	1	0	001	0	00	07	10	0
1717/056733	000000	100004	000000	000040	10	:	7476	1717/2733	0	04	1040	0	0	0	005	0	1	0	000	0	00	00	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1722/052232	050002	100201	000022	000042	22	:	6449	1722/2232	1	00	1040	0	0	0	025	1	0	1	200	0	00	51	22	0
1723/003120	007606	101410	070000	000200	50	:	8545	1723/3120	0	00	1037	0	0	0	000	0	0	0	603	3	07	00	50	0
1724/001734	043000	000000	002020	104002	11	:	5227	1724/1734	1	22	0006	0	0	0	000	0	0	0	000	0	00	45	11	0
1725/001272	006100	101010	172400	000042	16	:	5228	1725/1272	1	00	1454	0	0	0	000	0	0	0	002	2	17	06	16	0
1726/050004	150000	142302	000022	000002	03	:	6455	1726/0004	1	00	1000	0	1	0	035	1	0	2	044	0	00	51	03	0
1727/001736	020000	100400	000420	000040	10	:	8550	1727/1736	0	00	1040	0	0	0	000	0	0	0	001	0	00	23	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1731/003467	015205	003400	022540	000002	50	:	10678	1731/3467	1	00	0032	0	0	3	000	0	0	0	507	0	02	16	50	0
1732/003467	010005	103400	002400	000000	50	:	10679	1732/3467	0	00	1000	0	0	0	000	0	0	0	507	0	00	16	50	0
1733/001731	003034	001000	110200	000202	10	:	10680	1733/1731	1	00	2106	0	0	4	000	0	0	0	402	1	11	00	10	0
1734/041334	054200	000000	002020	000002	10	:	5233	1734/1334	1	00	0030	0	0	0	004	0	0	0	000	0	00	55	10	0
1735/041334	056600	000000	002020	000002	10	:	5235	1735/1334	1	00	0035	0	0	0	004	0	0	0	000	0	00	55	10	0
1736/035736	023010	020410	000620	100202	34	:	8557	1736/1736	1	02	2006	0	0	4	003	0	1	0	021	3	00	23	34	0
1737/000066	020000	100000	000420	000000	10	:	8558	1737/0066	0	00	1000	0	0	0	000	0	0	0	000	0	00	23	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1740/003136 020005 110000 000000 120012 23	; 8638	1740/3136	3	03	1000	0	0	0	000	0	0	0	0	510	0	00	20	23	0
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1742/003140 020005 111000 000000 120012 23	; 8640	1742/3140	3	03	1000	0	0	0	000	0	0	0	0	512	0	00	20	23	0
1743/003141 020005 111400 000000 120012 23	; 8641	1743/3141	3	03	1000	0	0	0	000	0	0	0	0	513	0	00	20	23	0
1744/003134 020000 100000 000400 000040 10	; 8642	1744/3134	0	00	1040	0	0	0	000	0	0	0	0	000	0	00	22	10	0
1745/021322 040002 100201 012022 000040 10	; 6484	1745/1322	0	00	1040	0	0	0	022	1	0	1	200	0	01	45	10	0	0
1746/057240 000000 102040 000010 000040 10	; 9141	1746/3240	0	00	1040	0	0	0	305	0	1	0	004	0	00	00	10	0	0
1747/067240 005610 002040 000010 100000 10	; 9147	1747/3240	0	02	2033	0	0	0	306	0	1	0	004	0	00	00	10	0	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1751/003061 026300 123400 000400 100000 50	; 8836	1751/3061	0	02	1434	0	0	0	000	0	0	0	027	0	00	22	50	0	0
1752/001756 000000 100006 004000 005000 10	; 6542	1752/1756	0	34	1000	1	0	0	000	0	0	2	000	0	00	00	10	0	0
1753/001760 001450 104005 000000 020002 10	; 8837	1753/1760	1	45	3203	0	0	0	000	0	0	1	000	0	00	00	10	0	0
1754/000640 007600 100010 000000 000200 50	; 8839	1754/0640	0	00	1037	0	0	0	000	0	0	0	000	3	00	00	50	0	0
1755/022260 000000 100000 000002 000000 50	; 8840	1755/2260	0	00	1000	0	0	0	002	1	0	0	000	0	00	00	50	0	0
1756/001761 107600 100004 002020 100000 10	; 6543	1756/1761	0	06	1037	0	1	0	000	0	0	0	000	0	00	05	10	0	0
1757/000722 000000 100000 000000 000000 10	; 8841	1757/0722	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	10	0	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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1761/001360 105210 011300 000002 105010 35	; 6545	1761/1360	2	32	2032	0	1	0	030	1	0	0	012	0	00	00	35	0	0
1762/001774 060000 100000 000400 000000 10	; 5241	1762/1774	0	00	1000	0	0	0	000	0	0	0	000	0	00	62	10	0	0
1763/000144 070000 100000 002420 000000 10	; 5242	1763/0144	0	00	1000	0	0	0	000	0	0	0	000	0	00	77	10	0	0
1764/000640 000010 100010 000000 000242 50	; 8846	1764/0640	1	00	3040	0	0	0	000	0	0	0	000	3	00	00	50	0	0
1765/052266 055210 042304 000022 100002 50	; 8848	1765/2266	1	06	2032	0	0	0	035	1	0	0	044	0	00	51	50	0	0
1766/000356 000000 100000 000000 000000 05	; 6548	1766/0356	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	05	0	0
1767/000723 000000 100000 000000 000040 10	; 8849	1767/0723	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
1770/001326 107610 104404 002420 125000 10	; 6563	1770/1326	0	77	3037	0	1	0	000	0	0	0	001	0	00	07	10	0	0
1771/003472 015201 003400 022540 000002 50	; 10728	1771/3472	1	00	0032	0	0	3	000	0	0	0	107	0	02	16	50	0	0
1772/003472 010001 103400 002400 000000 50	; 10729	1772/3472	0	00	1000	0	0	0	000	0	0	0	107	0	00	16	50	0	0
1773/001771 003030 000010 120200 000202 10	; 10730	1773/1771	1	00	2106	0	0	4	000	0	0	0	000	3	12	00	10	0	0
1774/001775 010000 120000 002020 000000 10	; 5244	1774/1775	0	00	1000	0	0	0	000	0	0	0	020	0	00	15	10	0	0
1775/000152 017610 100000 002000 004000 10	; 5245	1775/0152	0	20	3037	0	0	0	000	0	0	0	000	0	00	14	10	0	0
1776/002027 005200 004001 020140 000002 10	; 6787	1776/2027	1	40	0032	0	0	3	000	0	0	1	000	0	02	00	10	0	0
1777/003165 025211 146404 000020 125000 10	; 8903	1777/3165	0	77	3032	0	0	0	000	0	0	0	145	0	00	21	10	0	0

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2003/002504	040000	120000	012000	000040	10	; 9554	2003/2504	0	00	1040	0	0	0	000	0	0	0	020	0	01	44	10	0	
2004/006004	057400	104104	000400	004002	10	; 5340	2004/2004	1	64	1017	0	0	0	010	0	1	0	000	0	00	52	10	0	
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2011/001656	007440	100004	170000	100002	10	; 5346	2011/1656	1	06	1217	0	0	0	000	0	0	0	000	0	17	00	10	0	
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2013/022012	057600	142304	000022	104002	10	; 5378	2013/2012	1	26	1037	0	0	0	032	1	0	0	044	0	00	51	10	0	
2014/003331	001600	112300	002002	004000	10	; 9705	2014/3331	0	20	1023	0	0	0	030	1	0	0	014	0	00	04	10	0	
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2017/001250	055300	000000	002260	100002	10	; 9708	2017/1250	1	02	0432	0	0	5	000	0	0	0	000	0	00	55	10	0	
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2023/001656	010000	100016	170000	000000	10	; 5384	2023/1656	0	04	1000	0	0	0	000	0	0	2	000	2	17	10	10	0	
2024/001450	010002	111400	002400	000040	50	; 9717	2024/1450	0	00	1040	0	0	0	000	0	0	0	213	0	00	16	50	0	
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2027/002252	040010	100100	006022	100042	10	; 6788	2027/2252	1	02	3040	1	0	0	010	1	0	0	000	0	00	45	10	0	
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2031/001260	046200	104001	002020	100000	10	; 9773	2031/1260	0	42	1034	0	0	0	000	0	0	1	000	0	00	45	10	0	
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2035/003442	005210	000000	164000	100000	10	; 10467	2035/3442	0	02	2032	1	0	0	000	0	0	0	000	0	16	00	10	0	
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2037/001002	000000	100000	000000	000040	10	; 10468	2037/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0	

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2041/022040	157600	130002	010022	004002	10	:	5394	2041/2040	1	20	1037	0	1	0	002	1	0	2	030	0	01	51	10	0
2042/001342	107600	100004	000000	105000	10	:	5398	2042/1342	0	36	1037	0	1	0	000	0	0	0	000	0	00	00	10	0
2043/001656	010000	100016	170000	000000	10	:	5399	2043/1656	0	04	1000	0	0	0	000	0	0	2	000	2	17	10	10	0
2044/122052	055200	004001	000400	100010	10	:	5407	2044/2052	2	42	0032	0	0	0	042	0	0	1	000	0	00	52	10	0
2045/022050	055300	046301	000022	100010	10	:	5409	2045/2050	2	42	0432	0	0	0	032	1	0	1	044	0	00	51	10	0
2046/003345	000002	100002	000000	000040	22	:	9892	2046/3345	0	00	1040	0	0	0	000	0	0	2	200	0	00	00	22	0
2047/063345	000004	100042	000030	000040	10	:	9893	2047/3345	0	00	1040	0	0	0	306	0	0	2	400	0	00	01	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2054/022060	055217	036306	000020	004002	10	:	5431	2054/2060	1	64	2032	0	0	0	032	0	0	2	734	0	00	51	10	0
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2056/003352	011700	100006	000240	004000	10	:	9900	2056/3352	0	24	1423	0	0	5	000	0	0	2	000	0	00	10	10	0
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ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2062/037370	003010	104004	000000	021002	27	:	9992	2062/3370	1	55	3006	0	0	0	003	0	1	0	000	0	00	00	27	0
2063/011174	010001	170406	000342	000000	10	:	9993	2063/1174	0	04	1000	0	0	7	001	1	0	2	171	0	00	10	10	0
2064/002070	005310	041700	001002	105000	33	:	5441	2064/2070	0	32	2432	2	0	0	030	1	0	0	043	0	00	00	33	0
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ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2073/002072	016104	120000	000020	100042	16	:	5507	2073/2072	1	02	1454	0	0	0	000	0	0	0	420	0	00	11	16	0
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2075/000212	005210	000000	000000	100000	10	:	5622	2075/0212	0	02	2032	0	0	0	000	0	0	0	000	0	00	00	10	0
2076/002100	145201	070401	000740	100002	50	:	10033	2076/2100	1	02	0032	0	1	7	000	0	0	1	171	0	00	42	50	0
2077/003376	015301	004001	000020	100002	10	:	10034	2077/3376	1	42	0432	0	0	0	000	0	0	1	100	0	00	11	10	0

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2100/005062	005210	045300	005002	104000	50	:	10040	2100/1062	0	62	2032	3	0	0	030	1	1	0	042	0	00	00	50	0
2101/005062	004510	045300	005002	104042	50	:	10043	2101/1062	1	62	2451	3	0	0	030	1	1	0	042	0	00	00	50	0
2102/000420	001700	100006	000100	000002	36	:	6838	2102/0420	1	04	1423	0	0	2	000	0	0	2	000	0	00	00	36	0
2103/125060	017641	101000	010000	100000	10	:	10045	2103/1060	0	02	1237	0	0	0	042	0	1	0	102	0	01	10	10	0
2104/002256	010001	100000	000020	000000	10	:	6883	2104/2256	0	00	1000	0	0	0	000	0	0	0	100	0	00	11	10	0
2105/125062	017651	101000	010000	100000	10	:	10047	2105/1062	0	02	3237	0	0	0	042	0	1	0	102	0	01	10	10	0
2106/004234	046000	144700	003020	100042	16	:	5635	2106/0234	1	42	1054	2	0	0	030	0	1	0	041	0	00	45	16	0
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ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2112/002110	002610	004000	005000	104000	10	:	5815	2112/2110	0	62	2025	3	0	0	000	0	0	0	000	0	00	00	10	0
2113/002110	004550	004000	005000	104042	27	:	5816	2113/2110	1	62	2651	3	0	0	000	0	0	0	000	0	00	00	27	0
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2115/002114	000000	120006	010000	000040	10	:	10092	2115/2114	0	04	1040	0	0	0	000	0	0	2	020	0	01	00	10	0
2116/001535	015310	014000	002400	104002	32	:	10095	2116/1535	1	62	2432	0	0	0	000	0	0	0	010	0	00	16	32	0
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2125/000253	015310	065000	007400	104002	32	:	5824	2125/0253	1	62	2432	3	0	0	000	0	0	0	062	0	00	16	32	0
2126/003404	001411	166404	000340	125002	27	:	10136	2126/3404	1	77	3003	0	0	7	000	0	0	0	165	0	00	00	27	0
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2135/003407	005300	040300	000002	100002	10	:	10177	2135/3407	1	02	0432	0	0	0	030	1	0	0	040	0	00	00	10	0
2136/000002	003101	073010	120340	000242	03	:	10178	2136/0002	1	00	0446	0	0	7	000	0	0	0	176	3	12	00	03	0
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ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2142/001240 017610 166004 002400 125010 35	; 6011	2142/1240	2	77	3037	0	0	0	0	000	0	0	0	064	0	00	16	35	0
2143/002142 006300 100000 000000 004000 10	; 6012	2143/2142	0	20	1434	0	0	0	0	000	0	0	0	000	0	00	00	10	0
2144/124434 011600 104001 000050 000200 36	; 10224	2144/0434	0	40	1023	0	0	1	142	0	1	1	000	1	00	10	36	0	
2145/052144 000012 100003 002412 100042 10	; 10225	2145/2144	1	02	3040	0	0	0	105	1	0	3	200	0	00	06	10	0	
2146/001432 055300 000000 000200 004002 10	; 10227	2146/1432	1	20	0432	0	0	4	000	0	0	0	000	0	00	50	10	0	
2147/002560 055300 004001 000200 100002 10	; 10228	2147/2560	1	42	0432	0	0	4	000	0	0	1	000	0	00	50	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2150/052152 040002 100201 000402 000040 22	; 6082	2150/2152	0	00	1040	0	0	0	025	1	0	1	200	0	00	42	22	0	
2151/002150 004510 104004 000000 125042 27	; 6083	2151/2150	1	77	3451	0	0	0	000	0	0	0	000	0	00	00	27	0	
2152/020002 054401 173700 002202 000050 03	; 6086	2152/0002	2	00	1051	0	0	4	032	1	0	0	177	0	00	54	03	0	
2153/020002 053001 173700 002002 000010 03	; 6088	2153/0002	2	00	1006	0	0	0	032	1	0	0	177	0	00	54	03	0	
2154/003416 000001 142000 000300 000000 10	; 10280	2154/3416	0	00	1000	0	0	6	000	0	0	0	144	0	00	00	10	0	
2155/003413 000010 100000 000000 100042 11	; 10281	2155/3413	1	02	3040	0	0	0	000	0	0	0	000	0	00	00	11	0	
2156/001462 055201 042400 000300 004002 10	; 10282	2156/1462	1	20	0032	0	0	6	000	0	0	0	145	0	00	50	10	0	
2157/002564 055301 046401 000300 100002 10	; 10283	2157/2564	1	42	0432	0	0	6	000	0	0	1	145	0	00	50	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2160/003426 000007 172316 000002 000000 10	; 10352	2160/3426	0	04	1000	0	0	0	030	1	0	2	774	2	00	00	10	0	
2161/001344 010001 100400 002400 000040 10	; 10353	2161/1344	0	00	1040	0	0	0	000	0	0	0	101	0	00	16	10	0	
2162/001470 045201 042000 000720 100002 10	; 10354	2162/1470	1	02	0032	0	0	6	000	0	0	0	144	0	00	43	10	0	
2163/003434 000000 100006 000000 000040 10	; 10355	2163/3434	0	04	1040	0	0	0	000	0	0	2	000	0	00	00	10	0	
2164/002610 155301 042002 000300 104002 10	; 10364	2164/2610	1	22	0432	0	1	6	000	0	0	2	144	0	00	50	10	0	
2165/002035 000000 100000 000000 000042 34	; 10475	2165/2035	1	00	1040	0	0	0	000	0	0	0	000	0	00	00	34	0	
2166/052174 000000 104004 000002 000000 10	; 6942	2166/2174	0	44	1000	0	0	0	005	1	0	0	000	0	00	00	10	0	
2167/002175 005201 042400 000300 004010 34	; 10476	2167/2175	2	20	0032	0	0	6	000	0	0	0	145	0	00	00	34	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2170/000066 010004 120000 000020 000040 10	; 6216	2170/0066	0	00	1040	0	0	0	000	0	0	0	420	0	00	11	10	0	
2171/001644 007640 104000 006000 001000 10	; 6217	2171/1644	0	50	1237	1	0	0	000	0	0	0	000	0	00	04	10	0	
2172/001650 107640 100014 172020 100000 10	; 6224	2172/1650	0	06	1237	0	1	0	000	0	0	0	000	2	17	05	10	0	
2173/000074 006200 100010 170000 100000 10	; 6225	2173/0074	0	02	1034	0	0	0	000	0	0	0	000	2	17	00	10	0	
2174/000003 000000 100004 160000 000000 03	; 6943	2174/0003	0	04	1000	0	0	0	000	0	0	0	000	0	16	00	03	0	
2175/001002 000000 100000 000000 000040 10	; 10477	2175/1002	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0	
2176/000350 054751 070100 012002 000050 10	; 6978	2176/0350	2	00	2671	0	0	0	010	1	0	0	170	0	01	54	10	0	
2177/003440 030002 140006 116400 000000 10	; 10482	2177/3440	0	04	1000	1	0	0	000	0	0	2	240	0	11	36	10	0	

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2200/055264 005310 107044 005010 021010 35	; 6281	2200/1264	2	55	3432	3	0	0	0	305	0	1	0	006	0	00	00	35	0
2201/001654 107600 111304 002022 100000 10	; 6283	2201/1654	0	06	1037	0	1	0	0	030	1	0	0	012	0	00	05	10	0
2202/104151 000001 170000 010000 000040 05	; 6302	2202/0151	0	00	1040	0	0	0	0	040	0	1	0	170	0	01	00	05	0
2203/055240 007600 145044 000010 125010 35	; 6304	2203/1240	2	77	1037	0	0	0	0	305	0	1	0	042	0	00	00	35	0
2204/002206 017651 171000 000340 100000 10	; 6990	2204/2206	0	02	3237	0	0	7	000	0	0	0	0	172	0	00	10	10	0
2205/056600 057640 101440 000030 100002 10	; 10493	2205/2600	1	02	1237	0	0	0	0	305	0	1	0	003	0	00	51	10	0
2206/001564 003001 041000 010000 100002 10	; 6992	2206/1564	1	02	0006	0	0	0	0	000	0	0	0	142	0	01	00	10	0
2207/003443 000001 142400 000000 000040 10	; 10494	2207/3443	0	00	1040	0	0	0	0	000	0	0	0	145	0	00	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2210/043405 003001 062410 120340 000202 50	; 10505	2210/3405	1	00	0006	0	0	7	004	0	0	0	0	165	3	12	00	50	0
2211/001607 007400 104000 000000 004002 10	; 7029	2211/1607	1	60	1017	0	0	0	000	0	0	0	0	000	0	00	00	10	0
2212/003444 005200 000000 020140 000002 10	; 10507	2212/3444	1	00	0032	0	0	3	000	0	0	0	0	000	0	02	00	10	0
2213/051560 050000 100100 001030 000042 10	; 10508	2213/1560	1	00	1040	2	0	0	115	0	0	0	0	000	0	00	51	10	0
2214/001450 010002 122000 002400 000000 50	; 10509	2214/1450	0	00	1000	0	0	0	000	0	0	0	0	224	0	00	16	50	0
2215/003426 000007 172300 000002 000200 10	; 10510	2215/3426	0	00	1000	0	0	0	030	1	0	0	0	774	1	00	00	10	0
2216/001473 005200 000000 000000 100002 10	; 10511	2216/1473	1	02	0032	0	0	0	000	0	0	0	0	000	0	00	00	10	0
2217/002214 005300 000000 020140 000002 10	; 10512	2217/2214	1	00	0432	0	0	3	000	0	0	0	0	000	0	02	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2220/001702 117640 100004 000000 105000 10	; 6416	2220/1702	0	36	1237	0	1	0	000	0	0	0	0	000	0	00	10	10	0
2221/001326 005211 005000 010000 104000 10	; 6422	2221/1326	0	62	2032	0	0	0	000	0	0	0	0	102	0	01	00	10	0
2222/001677 000001 102006 010000 005040 10	; 6425	2222/1677	0	34	1040	0	0	0	000	0	0	0	2	104	0	01	00	10	0
2223/001661 000000 100004 000000 000000 10	; 6426	2223/1661	0	04	1000	0	0	0	000	0	0	0	0	000	0	00	00	10	0
2224/003447 000000 100006 160000 000040 10	; 10543	2224/3447	0	04	1040	0	0	0	000	0	0	2	000	0	16	00	10	10	0
2225/003447 007600 100016 160000 000200 10	; 10544	2225/3447	0	04	1037	0	0	0	000	0	0	2	000	3	16	00	10	10	0
2226/003445 000000 100006 160000 000000 10	; 10545	2226/3445	0	04	1000	0	0	0	000	0	0	2	000	0	16	00	10	10	0
2227/003447 007600 100016 160000 000200 10	; 10546	2227/3447	0	04	1037	0	0	0	000	0	0	2	000	3	16	00	10	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2230/001677 015200 040000 002400 100002 10	; 6438	2230/1677	1	02	0032	0	0	0	000	0	0	0	0	040	0	00	16	10	0
2231/001677 015200 060400 002400 100002 10	; 6439	2231/1677	1	02	0032	0	0	0	000	0	0	0	0	061	0	00	16	10	0
2232/025726 005210 004000 005000 104000 10	; 6451	2232/1726	0	62	2032	3	0	0	002	0	1	0	000	0	00	00	10	10	0
2233/020004 150000 142302 000022 000042 03	; 6453	2233/0004	1	00	1040	0	1	0	032	1	0	2	044	0	00	51	03	0	0
2234/003450 005200 040300 000002 100002 10	; 10559	2234/3450	1	02	0032	0	0	0	030	1	0	0	0	040	0	00	00	10	0
2235/001450 010002 122000 002400 000000 50	; 10560	2235/1450	0	00	1000	0	0	0	000	0	0	0	0	224	0	00	16	50	0
2236/122463 000002 100003 010000 000040 10	; 7041	2236/2463	0	00	1040	0	0	0	042	0	0	3	200	0	01	00	10	10	0
2237/003450 005200 040300 000002 100002 10	; 10561	2237/3450	1	02	0032	0	0	0	030	1	0	0	0	040	0	00	00	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2240/000470 005200 000000 000040 100002 10	; 6464	2240/0470	1	02	0032	0	0	0	1	000	0	0	0	000	0	00	00	10	0
2241/002242 005200 000000 002440 100002 10	; 6465	2241/2242	1	02	0032	0	0	0	1	000	0	0	0	000	0	00	56	10	0
2242/000470 000000 100000 000000 000040 10	; 6466	2242/0470	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0
2243/000470 010000 160400 002400 000040 10	; 6467	2243/0470	0	00	1040	0	0	0	0	000	0	0	0	061	0	00	16	10	0
2244/001360 102610 004001 000000 104010 35	; 6554	2244/1360	2	62	2025	0	1	0	0	000	0	0	1	000	0	00	00	35	0
2245/001360 104510 004001 000000 104052 35	; 6555	2245/1360	3	62	2451	0	1	0	0	000	0	0	1	000	0	00	00	35	0
2246/000255 016200 100000 002400 104000 10	; 6566	2246/0255	0	22	1034	0	0	0	0	000	0	0	0	000	0	00	16	10	0
2247/055752 000000 100004 000000 000000 10	; 6567	2247/1752	0	04	1000	0	0	0	0	005	0	1	0	000	0	00	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2250/050004 000002 100003 162410 100040 03	; 6785	2250/0004	0	02	1040	0	0	0	0	105	0	0	3	200	0	16	06	03	0
2251/051776 030002 100003 122410 000040 22	; 6786	2251/1776	0	00	1040	0	0	0	0	105	0	0	3	200	0	12	36	22	0
2252/122033 000000 100003 160020 000000 10	; 6789	2252/2033	0	00	1000	0	0	0	0	042	0	0	3	000	0	16	01	10	0
2253/002033 005310 001000 162400 000000 10	; 6790	2253/2033	0	00	2432	0	0	0	0	000	0	0	0	002	0	16	06	10	0
2254/002102 025300 000000 022160 000002 10	; 6836	2254/2102	1	00	0432	0	0	3	000	0	0	0	0	000	0	02	25	10	0
2255/000144 075200 000000 022560 000002 10	; 6837	2255/0144	1	00	0032	0	0	3	000	0	0	0	0	000	0	02	77	10	0
2256/002117 025200 000000 022160 000002 10	; 6885	2256/2117	1	00	0032	0	0	3	000	0	0	0	0	000	0	02	25	10	0
2257/000144 075200 000000 022560 000002 10	; 6886	2257/0144	1	00	0032	0	0	3	000	0	0	0	0	000	0	02	77	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2260/052262 055200 042300 020162 000002 10	; 6898	2260/2262	1	00	0032	0	0	3	035	1	0	0	0	044	0	02	51	10	0
2261/000040 005300 000000 020140 000002 05	; 6899	2261/0040	1	00	0432	0	0	3	000	0	0	0	0	000	0	02	00	05	0
2262/002264 006300 104000 000000 100000 13	; 6902	2262/2264	0	42	1434	0	0	0	000	0	0	0	0	000	0	00	00	13	0
2263/022264 056200 104001 000022 100002 10	; 6904	2263/2264	1	42	1034	0	0	0	002	1	0	1	000	0	00	51	10	0	0
2264/000002 000000 100004 000000 000000 03	; 6910	2264/0002	0	04	1000	0	0	0	000	0	0	0	0	000	0	00	00	03	0
2265/000002 000000 100000 000000 000040 03	; 6911	2265/0002	0	00	1040	0	0	0	000	0	0	0	0	000	0	00	00	03	0
2266/012270 155200 000001 020160 000002 10	; 6924	2266/2270	1	00	0032	0	1	3	001	0	0	1	000	0	02	51	10	0	0
2267/102174 005300 000000 020142 000002 10	; 6928	2267/2174	1	00	0432	0	0	3	040	1	0	0	0	000	0	02	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2270/126271 000000 100000 000000 000000 10	; 6932	2270/2271	0	00	1000	0	0	0	042	0	1	0	0	000	0	00	00	10	0
2271/056123 007651 114300 000000 100000 13	; 6939	2271/2123	0	42	3237	0	0	0	035	0	1	0	110	0	00	00	13	0	0
2272/000213 000000 100010 170000 000000 10	; 6987	2272/0213	0	00	1000	0	0	0	000	0	0	0	0	000	2	17	00	10	0
2273/002204 010001 170406 004340 000000 10	; 6988	2273/2204	0	04	1000	1	0	7	000	0	0	2	171	0	00	10	10	0	0
2274/002236 003020 000100 000042 100002 10	; 7038	2274/2236	1	02	0106	0	0	1	010	1	0	0	000	0	00	00	10	0	0
2275/002463 003020 000000 002440 100002 10	; 7040	2275/2463	1	02	0106	0	0	1	000	0	0	0	0	000	0	00	06	10	0
2276/002346 055200 000000 002020 100002 50	; 7243	2276/2346	1	02	0032	0	0	0	000	0	0	0	0	000	0	00	55	50	0
2277/002653 010001 162400 004340 000000 10	; 7244	2277/2653	0	00	1000	1	0	7	000	0	0	0	165	0	00	10	10	0	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2300/002666	010001	163000	000340	000000	50	:	7261	2300/2666	0	00	1000	0	0	7	000	0	0	0	166	0	00	10	50	0
2301/002656	010001	170400	000340	000040	10	:	7262	2301/2656	0	00	1040	0	0	7	000	0	0	0	171	0	00	10	10	0
2302/002666	010001	170400	000340	000000	50	:	7270	2302/2666	0	00	1000	0	0	7	000	0	0	0	171	0	00	10	50	0
2303/002664	010000	100000	000040	000040	10	:	7271	2303/2664	0	00	1040	0	0	1	000	0	0	0	000	0	00	10	10	0
2304/002350	055300	000000	002020	100002	50	:	7297	2304/2350	1	02	0432	0	0	0	000	0	0	0	000	0	00	55	50	0
2305/002306	010000	100000	000000	000040	10	:	7298	2305/2306	0	00	1040	0	0	0	000	0	0	0	000	0	00	10	10	0
2306/002350	055301	063000	002360	100002	50	:	7300	2306/2350	1	02	0432	0	0	7	000	0	0	0	166	0	00	55	50	0
2307/002672	010001	163000	000340	000040	10	:	7301	2307/2672	0	00	1040	0	0	7	000	0	0	0	166	0	00	10	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2310/002701	006100	104001	000000	100042	16	:	7306	2310/2701	1	42	1454	0	0	0	000	0	0	1	000	0	00	00	16	0
2311/002675	000000	100000	005000	000040	13	:	7307	2311/2675	0	00	1040	3	0	0	000	0	0	0	000	0	00	00	13	0
2312/002315	000000	100000	002000	000000	10	:	7333	2312/2315	0	00	1000	0	0	0	000	0	0	0	000	0	00	04	10	0
2313/002314	055200	000004	002440	020002	10	:	7334	2313/2314	1	05	0032	0	0	1	000	0	0	0	000	0	00	56	10	0
2314/002315	000000	100000	002000	000000	10	:	7335	2314/2315	0	00	1000	0	0	0	000	0	0	0	000	0	00	04	10	0
2315/002711	016201	162400	000340	100000	10	:	7336	2315/2711	0	02	1034	0	0	7	000	0	0	0	165	0	00	10	10	0
2316/002346	055300	000000	006020	100002	50	:	7341	2316/2346	1	02	0432	1	0	0	000	0	0	0	000	0	00	55	50	0
2317/002714	003010	000000	000200	100002	10	:	7342	2317/2714	1	02	2006	0	0	4	000	0	0	0	000	0	00	00	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2320/002350	055341	073000	002360	100002	50	:	7345	2320/2350	1	02	0632	0	0	7	000	0	0	0	176	0	00	55	50	0
2321/006715	000007	153300	000000	000000	10	:	7346	2321/2715	0	00	1000	0	0	0	030	0	1	0	756	0	00	00	10	0
2322/001670	107640	100001	000000	100000	10	:	7356	2322/1670	0	02	1237	0	1	0	000	0	0	1	000	0	00	00	10	0
2323/046322	000000	100000	000000	000000	10	:	7357	2323/2322	0	00	1000	0	0	0	004	0	1	0	000	0	00	00	10	0
2324/002350	055210	000000	002020	100002	50	:	7378	2324/2350	1	02	2032	0	0	0	000	0	0	0	000	0	00	55	50	0
2325/001700	054600	000000	007020	000002	10	:	7380	2325/1700	1	00	0031	3	0	0	000	0	0	0	000	0	00	55	10	0
2326/002330	100000	100001	000000	000000	10	:	7402	2326/2330	0	00	1000	0	1	0	000	0	0	1	000	0	00	00	10	0
2327/002326	004510	104004	000000	125042	27	:	7403	2327/2326	1	77	3451	0	0	0	000	0	0	0	000	0	00	00	27	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2330/002346	040000	100000	002020	000040	50	:	7406	2330/2346	0	00	1040	0	0	0	000	0	0	0	000	0	00	45	50	0
2331/042332	054401	071000	002360	100050	10	:	7408	2331/2332	2	02	0051	0	0	7	004	0	0	0	172	0	00	55	10	0
2332/002333	010000	161000	002400	000000	10	:	7410	2332/2333	0	00	1000	0	0	0	000	0	0	0	062	0	00	16	10	0
2333/002334	010001	171000	000340	000000	10	:	7411	2333/2334	0	00	1000	0	0	7	000	0	0	0	172	0	00	10	10	0
2334/002350	057650	100000	002020	100002	50	:	7414	2334/2350	1	02	3237	0	0	0	000	0	0	0	000	0	00	55	50	0
2335/002152	040001	100000	010400	000000	10	:	7415	2335/2152	0	00	1000	0	0	0	000	0	0	0	100	0	01	42	10	0
2336/041710	007201	062000	000340	100010	35	:	7458	2336/1710	2	02	0036	0	0	7	004	0	0	0	164	0	00	00	35	0
2337/041710	003601	062000	000340	100010	35	:	7460	2337/1710	2	02	0027	0	0	7	004	0	0	0	164	0	00	00	35	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2341/001710 102610 004001 000000 104010 35	; 7487	2341/1710	2	62	2025	0	1	0	000	0	0	1	000	0	00	00	35	0	
2342/001710 102610 004001 000000 104010 35	; 7490	2342/1710	2	62	2025	0	1	0	000	0	0	1	000	0	00	00	35	0	
2343/001710 104510 004001 000000 104052 35	; 7492	2343/1710	3	62	2451	0	1	0	000	0	0	1	000	0	00	00	35	0	
2344/000255 016200 100000 002400 104000 10	; 7496	2344/0255	0	22	1034	0	0	0	000	0	0	0	000	0	00	16	10	0	
2345/056733 000000 100004 000000 000040 10	; 7497	2345/2733	0	04	1040	0	0	0	005	0	1	0	000	0	00	00	10	0	
2346/040001 006601 062000 000340 100002 03	; 7660	2346/0001	1	02	0035	0	0	7	004	0	0	0	164	0	00	00	03	0	
2347/040001 002201 062000 000340 100002 03	; 7661	2347/0001	1	02	0024	0	0	7	004	0	0	0	164	0	00	00	03	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2351/040001 003601 062000 000340 100002 03	; 7668	2351/0001	1	02	0027	0	0	7	004	0	0	0	164	0	00	00	03	0	
2352/002764 000000 100014 170000 000000 10	; 7679	2352/2764	0	04	1000	0	0	0	000	0	0	0	000	2	17	00	10	0	
2353/002354 050010 100000 002400 000050 10	; 7680	2353/2354	2	00	3040	0	0	0	000	0	0	0	000	0	00	56	10	0	
2354/002764 000000 100014 170000 000000 10	; 7681	2354/2764	0	04	1000	0	0	0	000	0	0	0	000	2	17	00	10	0	
2355/000075 010004 120010 170020 000040 10	; 7682	2355/0075	0	00	1040	0	0	0	000	0	0	0	420	2	17	11	10	0	
2356/000074 000000 100010 170000 000000 10	; 7732	2356/0074	0	00	1000	0	0	0	000	0	0	0	000	2	17	00	10	0	
2357/002360 030000 100000 002400 000000 10	; 7733	2357/2360	0	00	1000	0	0	0	000	0	0	0	000	0	00	36	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2361/002770 000000 100000 006000 000000 10	; 7736	2361/2770	0	00	1000	1	0	0	000	0	0	0	000	0	00	04	10	0	
2362/002772 000001 153400 000020 000000 10	; 7739	2362/2772	0	00	1000	0	0	0	000	0	0	0	157	0	00	01	10	0	
2363/000075 010006 120010 170020 000000 10	; 7740	2363/0075	0	00	1000	0	0	0	000	0	0	0	620	2	17	11	10	0	
2364/002774 000000 100000 006000 000040 10	; 7743	2364/2774	0	00	1040	1	0	0	000	0	0	0	000	0	00	04	10	0	
2365/000075 010006 130010 170020 000040 10	; 7744	2365/0075	0	00	1040	0	0	0	000	0	0	0	630	2	17	11	10	0	
2366/026370 007647 177440 000010 001000 10	; 7762	2366/2370	0	50	1237	0	0	0	302	0	1	0	777	0	00	00	10	0	
2367/036370 007640 104000 000000 001000 10	; 7763	2367/2370	0	50	1237	0	0	0	003	0	1	0	000	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2370/002350 040000 100000 002020 000000 50	; 7765	2370/2350	0	00	1000	0	0	0	000	0	0	0	000	0	00	45	50	0	
2371/025240 007610 107044 000010 125010 35	; 7768	2371/1240	2	77	3037	0	0	0	302	0	1	0	006	0	00	00	35	0	
2372/002346 055300 000000 006020 100002 50	; 7878	2372/2346	1	02	0432	1	0	0	000	0	0	0	000	0	00	55	50	0	
2373/003046 005310 000000 004000 100000 10	; 7879	2373/3046	0	02	2432	1	0	0	000	0	0	0	000	0	00	00	10	0	
2374/000061 000001 170000 010000 000040 10	; 7882	2374/0061	0	00	1040	0	0	0	000	0	0	0	170	0	01	00	10	0	
2375/003047 006100 145301 000002 100042 16	; 7884	2375/3047	1	42	1454	0	0	0	030	1	0	1	042	0	00	00	16	0	
2376/002350 055200 001700 002022 100002 50	; 7904	2376/2350	1	02	0032	0	0	0	030	1	0	0	003	0	00	55	50	0	
2377/001710 007610 100000 000000 000010 35	; 7905	2377/1710	2	00	3037	0	0	0	000	0	0	0	000	0	00	00	35	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2400/003057	027600	120000	000400	120012	10	; 8059	2400/3057	3	03	1037	0	0	0	000	0	0	0	020	0	00	22	10	0	
2401/002400	067610	100000	002420	000000	10	; 8060	2401/2400	0	00	3037	0	0	0	000	0	0	0	000	0	00	67	10	0	
2402/002404	060000	100000	002400	000000	10	; 8070	2402/2404	0	00	1000	0	0	0	000	0	0	0	000	0	00	66	10	0	
2403/000071	020000	100000	000400	000040	10	; 8071	2403/0071	0	00	1040	0	0	0	000	0	0	0	000	0	00	22	10	0	
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2405/002402	070000	100000	000000	000040	10	; 8074	2405/2402	0	00	1040	0	0	0	000	0	0	0	000	0	00	70	10	0	
2406/001002	005310	000000	000000	100000	10	; 8099	2406/1002	0	02	2432	0	0	0	000	0	0	0	000	0	00	00	10	0	
2407/000001	020004	100000	000400	000000	03	; 8100	2407/0001	0	00	1000	0	0	0	000	0	0	0	400	0	00	22	03	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2411/002402	020002	100000	000400	000040	10	; 8194	2411/2402	0	00	1040	0	0	0	000	0	0	0	200	0	00	22	10	0	
2412/000417	000000	103400	000000	000040	10	; 8470	2412/0417	0	00	1040	0	0	0	000	0	0	0	007	0	00	00	10	0	
2413/074550	146200	102140	002010	100000	10	; 8476	2413/0550	0	02	1034	0	1	0	317	0	1	0	004	0	00	44	10	0	
2414/001742	000000	116701	000002	000000	50	; 8488	2414/1742	0	40	1000	0	0	0	030	1	0	1	015	0	00	00	50	0	
2415/003100	000001	140000	020020	000000	10	; 8489	2415/3100	0	00	1000	0	0	0	000	0	0	0	140	0	02	01	10	0	
2416/000635	000000	110000	020020	000040	53	; 8573	2416/0635	0	00	1040	0	0	0	000	0	0	0	010	0	02	01	53	0	
2417/004004	006300	173710	004000	100200	03	; 8575	2417/0004	0	02	1434	1	0	0	030	0	1	0	077	3	00	00	03	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2421/003121	023010	004000	000600	104002	27	; 8593	2421/3121	1	62	2006	0	0	4	000	0	0	0	000	0	00	22	27	0	
2422/003133	137615	112005	000000	020200	50	; 8631	2422/3133	0	05	3037	0	1	0	000	0	0	1	514	1	00	30	50	0	
2423/003132	020000	100000	000400	000040	10	; 8632	2423/3132	0	00	1040	0	0	0	000	0	0	0	000	0	00	22	10	0	
2424/000770	000000	160002	010000	000050	47	; 8655	2424/0770	2	00	1040	0	0	0	000	0	0	2	060	0	01	00	47	0	
2425/003143	033010	045700	162222	104002	27	; 8657	2425/3143	1	62	2006	0	0	4	030	1	0	0	043	0	16	35	27	0	
2426/000723	000010	100000	160000	100042	10	; 8745	2426/0723	1	02	3040	0	0	0	000	0	0	0	000	0	16	00	10	0	
2427/000723	007400	100000	160000	100002	10	; 8746	2427/0723	1	02	1017	0	0	0	000	0	0	0	000	0	16	00	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2430/003171	017670	100010	032420	000200	10	; 8931	2430/3171	0	00	3337	0	0	0	000	0	0	0	000	3	03	17	10	0	
2431/003171	000000	100000	160000	000040	10	; 8932	2431/3171	0	00	1040	0	0	0	000	0	0	0	000	0	16	00	10	0	
2432/003211	000001	101400	120000	000040	26	; 9017	2432/3211	0	00	1040	0	0	0	000	0	0	0	103	0	12	00	26	0	
2433/003250	005201	050000	000340	100002	10	; 9018	2433/3250	1	02	0032	0	0	7	000	0	0	0	150	0	00	00	10	0	
2434/043217	003001	041410	000340	000202	10	; 9026	2434/3217	1	00	0006	0	0	7	004	0	0	0	143	3	00	00	10	0	
2435/002434	010000	100000	002020	000040	10	; 9027	2435/2434	0	00	1040	0	0	0	000	0	0	0	000	0	00	15	10	0	
2436/077226	000001	172046	000010	000000	10	; 9042	2436/3226	0	04	1000	0	0	0	307	0	1	2	174	0	00	00	10	0	
2437/003222	003001	041016	000340	000202	10	; 9046	2437/3222	1	04	0006	0	0	7	000	0	0	2	142	3	00	00	10	0	

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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2441/003250 005201 050000 000340 100002 10	; 9051	2441/3250	1	02	0032	0	0	7	000	0	0	0	0	150	0	00	00	10	0
2442/003250 005201 050000 000340 100002 10	; 9055	2442/3250	1	02	0032	0	0	7	000	0	0	0	0	150	0	00	00	10	0
2443/043225 005601 040400 160340 100002 10	; 9056	2443/3225	1	02	0033	0	0	7	004	0	0	0	0	141	0	16	00	10	0
2444/003227 000001 101400 120000 000040 26	; 9070	2444/3227	0	00	1040	0	0	0	000	0	0	0	0	103	0	12	00	26	0
2445/003250 005201 050000 000340 100002 10	; 9071	2445/3250	1	02	0032	0	0	7	000	0	0	0	0	150	0	00	00	10	0
2446/003234 000000 120000 002400 000000 10	; 9106	2446/3234	0	00	1000	0	0	0	000	0	0	0	0	020	0	00	06	10	0
2447/003250 005201 050000 000340 100002 10	; 9108	2447/3250	1	02	0032	0	0	7	000	0	0	0	0	150	0	00	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2450/153241 007600 100006 000002 004000 10	; 9121	2450/3241	0	24	1037	0	0	0	045	1	0	2	000	0	00	00	00	10	0
2451/073236 003021 041116 000342 000202 10	; 9125	2451/3236	1	04	0106	0	0	7	017	1	0	2	142	3	00	00	00	10	0
2452/072454 057201 040102 000740 100010 10	; 9134	2452/2454	2	02	0036	0	0	7	017	0	0	2	140	0	00	52	10	0	0
2453/051746 057217 073700 002200 000010 34	; 9140	2453/1746	2	00	2036	0	0	4	035	0	0	0	777	0	00	54	34	0	0
2454/003250 005201 050000 000340 100002 10	; 9159	2454/3250	1	02	0032	0	0	7	000	0	0	0	0	150	0	00	00	10	0
2455/002461 005601 040400 160340 100002 10	; 9171	2455/2461	1	02	0033	0	0	7	000	0	0	0	0	141	0	16	00	10	0
2456/072460 055301 051100 000740 100010 10	; 9177	2456/2460	2	02	0432	0	0	7	017	0	0	0	0	152	0	00	52	10	0
2457/066461 000000 102040 000010 000000 10	; 9178	2457/2461	0	00	1000	0	0	0	306	0	1	0	004	0	00	00	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2460/063242 000001 100342 000020 000000 10	; 9183	2460/3242	0	00	1000	0	0	0	236	0	0	2	100	0	00	01	10	0	0
2461/003243 005201 042406 030340 000202 13	; 9184	2461/3243	1	04	0032	0	0	7	000	0	0	2	145	1	03	00	13	0	0
2462/006464 045301 050207 002362 004002 10	; 9204	2462/2464	1	24	0432	0	0	7	020	1	1	3	150	0	00	45	10	0	0
2463/002644 016200 100000 000040 004000 10	; 7042	2463/2644	0	20	1034	0	0	1	000	0	0	0	000	0	00	10	10	0	0
2464/002466 045201 053206 002362 004002 10	; 9212	2464/2466	1	24	0032	0	0	7	020	1	0	2	156	0	00	45	10	0	0
2465/116464 000000 100000 000000 000040 10	; 9213	2465/2464	0	00	1040	0	0	0	041	0	1	0	000	0	00	00	10	0	0
2466/003246 005301 053406 004340 004002 10	; 9216	2466/3246	1	24	0432	1	0	7	000	0	0	2	157	0	00	00	10	0	0
2467/113246 005201 053406 004342 004002 10	; 9218	2467/3246	1	24	0032	1	0	7	041	1	0	2	157	0	00	00	10	0	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2470/003251 030005 100000 020000 000240 10	; 9330	2470/3251	0	00	1040	0	0	0	000	0	0	0	0	500	1	02	30	10	0
2471/000071 020001 102400 000020 000000 10	; 9334	2471/0071	0	00	1000	0	0	0	000	0	0	0	0	105	0	00	21	10	0
2472/000635 000000 100002 000400 000000 50	; 9369	2472/0635	0	00	1000	0	0	0	000	0	0	2	000	0	00	02	50	0	0
2473/003255 030000 102002 162400 000000 22	; 9371	2473/3255	0	00	1000	0	0	0	000	0	0	2	004	0	16	36	22	0	0
2474/043313 013010 000000 000240 100002 10	; 9453	2474/3313	1	02	2006	0	0	5	004	0	0	0	000	0	00	10	10	0	0
2475/003311 005600 004001 000000 100002 10	; 9454	2475/3311	1	42	0033	0	0	0	000	0	0	1	000	0	00	00	10	0	0
2476/001002 005310 000000 000000 100000 10	; 9509	2476/1002	0	02	2432	0	0	0	000	0	0	0	000	0	00	00	10	0	0
2477/003315 115311 073005 000340 100000 10	; 9510	2477/3315	0	06	2432	0	1	7	000	0	0	1	176	0	00	10	10	0	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2500/001002	005310	000000	000000	100000	10	; 9513	2500/1002	0	02	2432	0	0	0	0	000	0	0	0	000	0	00	00	10	0
2501/003317	017600	100000	002000	000000	10	; 9514	2501/3317	0	00	1037	0	0	0	0	000	0	0	0	000	0	00	14	10	0
2502/003320	025300	000000	022160	000002	10	; 9546	2502/3320	1	00	0432	0	0	3	000	0	0	0	000	0	02	25	10	0	
2503/000144	075200	000000	022560	000002	10	; 9547	2503/0144	1	00	0032	0	0	3	000	0	0	0	000	0	02	77	10	0	
2504/002000	010021	162416	000340	000242	01	; 9561	2504/2000	1	04	1140	0	0	7	000	0	0	2	165	3	00	10	01	0	
2505/002504	001700	101000	002400	000000	10	; 9562	2505/2504	0	00	1423	0	0	0	000	0	0	0	002	0	00	06	10	0	
2506/003322	005300	000000	000000	004002	10	; 9694	2506/3322	1	20	0432	0	0	0	000	0	0	0	000	0	00	00	10	0	
2507/001002	005201	073000	000340	100002	10	; 9695	2507/1002	1	02	0032	0	0	7	000	0	0	0	176	0	00	00	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2510/003325	012710	000000	000240	100000	10	; 9700	2510/3325	0	02	2425	0	0	5	000	0	0	0	000	0	00	10	10	0	0
2511/003325	010200	100004	000240	100000	10	; 9701	2511/3325	0	06	1020	0	0	5	000	0	0	0	000	0	00	10	10	0	0
2512/003334	010000	100000	020240	000000	10	; 9725	2512/3334	0	00	1000	0	0	5	000	0	0	0	000	0	02	10	10	0	0
2513/002512	004410	000000	000200	100042	10	; 9726	2513/2512	1	02	2051	0	0	4	000	0	0	0	000	0	00	00	10	0	0
2514/002515	003010	000000	000200	100002	10	; 9729	2514/2515	1	02	2006	0	0	4	000	0	0	0	000	0	00	00	10	0	0
2515/040065	015600	000000	002400	100002	10	; 9730	2515/0065	1	02	0033	0	0	0	004	0	0	0	000	0	00	16	10	0	0
2516/005256	077420	142300	000000	004010	32	; 9741	2516/1256	2	20	1117	0	0	0	030	0	1	0	044	0	00	70	32	0	0
2517/052516	000002	100003	002410	100042	10	; 9742	2517/2516	1	02	1040	0	0	0	105	0	0	3	200	0	00	06	10	0	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2520/001333	010000	100000	000240	000002	32	; 9792	2520/1333	1	00	1000	0	0	5	000	0	0	0	000	0	00	10	32	0	0
2521/000040	000000	100000	000000	000040	05	; 9793	2521/0040	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	05	0	0
2522/002524	057410	100004	120400	104010	10	; 9819	2522/2524	2	26	3017	0	0	0	000	0	0	0	000	0	12	52	10	0	0
2523/002522	030000	100000	002400	000000	10	; 9820	2523/2522	0	00	1000	0	0	0	000	0	0	0	000	0	00	36	10	0	0
2524/002527	005200	000000	025140	000002	10	; 9828	2524/2527	1	00	0032	3	0	3	000	0	0	0	000	0	02	00	10	0	0
2525/002507	005300	000000	020140	000002	10	; 9829	2525/2507	1	00	0432	0	0	3	000	0	0	0	000	0	02	00	10	0	0
2526/001356	001440	104000	000000	005042	10	; 9836	2526/1356	1	70	1243	0	0	0	000	0	0	0	000	0	00	00	10	0	0
2527/005350	145310	046301	000420	100000	10	; 9838	2527/1350	0	42	2432	0	1	0	030	0	1	1	044	0	00	43	10	0	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2530/001376	017620	104001	000240	100002	32	; 9856	2530/1376	1	42	1137	0	0	5	000	0	0	1	000	0	00	10	32	0	0
2531/001376	007620	104001	000000	100000	10	; 9857	2531/1376	0	42	1137	0	0	0	000	0	0	1	000	0	00	00	10	0	0
2532/003412	005301	042000	000300	104010	50	; 9871	2532/3412	2	22	0432	0	0	6	000	0	0	0	144	0	00	00	50	0	0
2533/022260	070000	100000	000002	000000	10	; 9873	2533/2260	0	00	1000	0	0	0	002	1	0	0	000	0	00	70	10	0	0
2534/003354	005210	004000	005000	104000	10	; 9916	2534/3354	0	62	2032	3	0	0	000	0	0	0	000	0	00	00	10	0	0
2535/003356	002601	070000	000340	100002	10	; 9917	2535/3356	1	02	0025	0	0	7	000	0	0	0	170	0	00	00	10	0	0
2536/003360	035310	045700	002402	104000	10	; 9932	2536/3360	0	62	2432	0	0	0	030	1	0	0	043	0	00	36	10	0	0
2537/003360	034510	045700	002402	104042	27	; 9934	2537/3360	1	62	2451	0	0	0	030	1	0	0	043	0	00	36	27	0	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2540/001270 057600 100000 002000 000010 27	; 9977	2540/1270	2	00	1037	0	0	0	000	0	0	0	000	0	00	54	27	0	
2541/001271 004550 134304 000002 125042 27	; 9978	2541/1271	1	77	3651	0	0	0	030	1	0	0	030	0	00	00	27	0	
2542/003374 000010 130000 010000 004042 10	; 10010	2542/3374	1	20	3040	0	0	0	000	0	0	0	030	0	01	00	10	0	
2543/000075 000000 100010 170000 000040 10	; 10011	2543/0075	0	00	1040	0	0	0	000	0	0	0	000	2	17	00	10	0	
2544/141475 115211 074001 000342 104002 32	; 10070	2544/1475	1	62	2032	0	1	7	044	1	0	1	170	0	00	10	32	0	
2545/003400 036200 100000 002400 104000 14	; 10072	2545/3400	0	22	1034	0	0	0	000	0	0	0	000	0	00	36	14	0	
2546/002550 000000 100004 000000 000000 33	; 10077	2546/2550	0	04	1000	0	0	0	000	0	0	0	000	0	00	00	33	0	
2547/003304 015310 004000 002400 104000 10	; 10078	2547/3304	0	62	2432	0	0	0	000	0	0	0	000	0	00	16	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2550/043401 003001 062410 120340 000202 10	; 10082	2550/3401	1	00	0006	0	0	7	004	0	0	0	165	3	12	00	10	0	
2551/002114 003001 062400 000340 100002 10	; 10083	2551/2114	1	02	0006	0	0	7	000	0	0	0	165	0	00	00	10	0	
2552/003402 005300 000000 020140 000002 10	; 10087	2552/3402	1	00	0432	0	0	3	000	0	0	0	000	0	02	00	10	0	
2553/002552 005300 000000 000240 004002 10	; 10088	2553/2552	1	20	0432	0	0	5	000	0	0	0	000	0	00	00	10	0	
2554/001541 005300 004001 000000 100012 07	; 10150	2554/1541	3	42	0432	0	0	0	000	0	0	1	000	0	00	00	07	0	
2555/001541 005200 004003 000000 100012 07	; 10152	2555/1541	3	42	0032	0	0	0	000	0	0	3	000	0	00	00	07	0	
2556/052144 000002 100103 010012 000002 74	; 10216	2556/2144	1	00	1000	0	0	0	115	1	0	3	200	0	01	00	74	0	
2557/022260 070000 100000 000002 000000 10	; 10217	2557/2260	0	00	1000	0	0	0	002	1	0	0	000	0	00	70	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2560/006562 040010 100100 002020 100042 16	; 10229	2560/2562	1	02	3040	0	0	0	010	0	1	0	000	0	00	45	16	0	
2561/002145 000000 100006 000000 000000 10	; 10230	2561/2145	0	04	1000	0	0	0	000	0	0	2	000	0	00	00	10	0	
2562/001430 000002 100003 000000 000040 22	; 10232	2562/1430	0	00	1040	0	0	0	000	0	0	3	200	0	00	00	22	0	
2563/001430 000010 100000 000000 100042 11	; 10233	2563/1430	1	02	3040	0	0	0	000	0	0	0	000	0	00	00	11	0	
2564/006566 040000 100100 002020 100042 16	; 10284	2564/2566	1	02	1040	0	0	0	010	0	1	0	000	0	00	45	16	0	
2565/003413 000020 100000 000000 100042 11	; 10285	2565/3413	1	02	1140	0	0	0	000	0	0	0	000	0	00	00	11	0	
2566/001460 000001 142403 000020 000000 10	; 10288	2566/1460	0	00	1000	0	0	0	000	0	0	3	145	0	00	01	10	0	
2567/001460 000011 142400 000000 100042 11	; 10289	2567/1460	1	02	3040	0	0	0	000	0	0	0	145	0	00	00	11	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2570/003422 007620 100016 120000 000200 10	; 10325	2570/3422	0	04	1137	0	0	0	000	0	0	2	000	3	12	00	10	0	
2571/003422 007610 100016 120000 000200 10	; 10326	2571/3422	0	04	3037	0	0	0	000	0	0	2	000	3	12	00	10	0	
2572/002576 000000 100000 000000 000040 10	; 10348	2572/2576	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	10	0	
2573/002160 000000 100000 000000 000010 07	; 10349	2573/2160	2	00	1000	0	0	0	000	0	0	0	000	0	00	00	07	0	
2574/073427 000002 100103 010000 100042 11	; 10373	2574/3427	1	02	1040	0	0	0	017	0	0	3	200	0	01	00	11	0	
2575/043427 000002 100103 000000 000000 22	; 10374	2575/3427	0	00	1000	0	0	0	014	0	0	3	200	0	00	00	22	0	
2576/056600 050000 101446 000030 000042 10	; 10384	2576/2600	1	04	1040	0	0	0	305	0	1	2	003	0	00	51	10	0	
2577/026576 000000 100100 000000 000000 10	; 10385	2577/2576	0	00	1000	0	0	0	012	0	1	0	000	0	00	00	10	0	

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2600/002604 050000 100000 000000 000040 10	; 10396	2600/2604	0	00	1040	0	0	0	000	0	0	0	000	0	00	50	10	0	
2601/003431 010000 100000 002400 000000 10	; 10397	2601/3431	0	00	1000	0	0	0	000	0	0	0	000	0	00	16	10	0	
2602/072606 077610 172150 120012 000200 10	; 10400	2602/2606	0	00	3037	0	0	0	317	1	0	0	074	3	12	70	10	0	
2603/073432 000000 172140 000012 000000 10	; 10401	2603/3432	0	00	1000	0	0	0	317	1	0	0	074	0	00	00	10	0	
2604/056600 050000 102040 000030 100042 10	; 10408	2604/2600	1	02	1040	0	0	0	305	0	1	0	004	0	00	51	10	0	
2605/056600 050010 102040 000030 100042 11	; 10411	2605/2600	1	02	3040	0	0	0	305	0	1	0	004	0	00	51	11	0	
2606/063423 000002 100003 000000 000040 22	; 10414	2606/3423	0	00	1040	0	0	0	006	0	0	3	200	0	00	00	22	0	
2607/063267 000002 100003 000000 000040 22	; 10415	2607/3267	0	00	1040	0	0	0	006	0	0	3	200	0	00	00	22	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2610/003437 005204 040010 115240 000202 10	; 10455	2610/3437	1	00	0032	3	0	5	000	0	0	0	440	3	11	00	10	0	
2611/003435 005300 020000 014240 100002 10	; 10457	2611/3435	1	02	0432	1	0	5	000	0	0	0	020	0	01	00	10	0	
2612/002205 010001 142006 000300 000002 34	; 10489	2612/2205	1	04	1000	0	0	6	000	0	0	2	144	0	00	10	34	0	
2613/002205 010001 142000 000300 000040 10	; 10490	2613/2205	0	00	1040	0	0	6	000	0	0	0	144	0	00	10	10	0	
2614/002622 157610 100001 002000 000010 10	; 10575	2614/2622	2	00	3037	0	1	0	000	0	0	1	000	0	00	54	10	0	
2615/003453 007450 104010 120000 104210 10	; 10577	2615/3453	2	62	3217	0	0	0	000	0	0	0	000	3	12	00	10	0	
2616/002620 053140 000000 007000 100050 10	; 10585	2616/2620	2	02	0646	3	0	0	000	0	0	0	000	0	00	54	10	0	
2617/003267 003100 000000 005000 100042 10	; 10586	2617/3267	1	02	0446	3	0	0	000	0	0	0	000	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2620/003453 017440 104010 120000 104210 10	; 10589	2620/3453	2	62	1217	0	0	0	000	0	0	0	000	3	12	10	10	0	
2621/003456 010000 100016 170000 005000 10	; 10591	2621/3456	0	34	1000	0	0	0	000	0	0	2	000	2	17	10	10	0	
2622/000075 010000 100010 172400 000000 10	; 10597	2622/0075	0	00	1000	0	0	0	000	0	0	0	000	2	17	16	10	0	
2623/003461 015213 013010 122400 000200 10	; 10599	2623/3461	0	00	2032	0	0	0	000	0	0	0	316	3	12	16	10	0	
2624/003456 013110 000014 170000 104050 10	; 10605	2624/3456	2	26	2446	0	0	0	000	0	0	0	000	2	17	10	10	0	
2625/003460 113150 004011 120000 104250 10	; 10607	2625/3460	2	62	2646	0	1	0	000	0	0	1	000	3	12	10	10	0	
2626/003457 017632 113010 162400 000200 10	; 10611	2626/3457	0	00	3137	0	0	0	000	0	0	0	216	3	16	16	10	0	
2627/003270 015210 004000 002400 104000 10	; 10612	2627/3270	0	62	2032	0	0	0	000	0	0	0	000	0	00	16	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2630/001474 004410 000000 000000 100042 10	; 10649	2630/1474	1	02	2051	0	0	0	000	0	0	0	000	0	00	00	10	0	
2631/001534 004410 000000 000000 100042 10	; 10650	2631/1534	1	02	2051	0	0	0	000	0	0	0	000	0	00	00	10	0	
2632/001731 003034 001000 110200 000202 10	; 10672	2632/1731	1	00	2106	0	0	4	000	0	0	0	402	1	11	00	10	0	
2633/001730 073034 001000 112000 000202 10	; 10673	2633/1730	1	00	2106	0	0	0	000	0	0	0	402	1	11	74	10	0	
2634/002636 054410 000000 000420 000050 10	; 10684	2634/2636	2	00	2051	0	0	0	000	0	0	0	000	0	00	53	10	0	
2635/003265 000000 100000 020140 000040 10	; 10685	2635/3265	0	00	1040	0	0	3	000	0	0	0	000	0	02	00	10	0	
2636/000075 000000 100010 170140 000040 10	; 10687	2636/0075	0	00	1040	0	0	3	000	0	0	0	000	2	17	00	10	0	
2637/000002 010047 107400 022540 004042 03	; 10689	2637/0002	1	60	1240	0	0	3	000	0	0	0	707	0	02	16	03	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2640/002642	054410	000000	000420	000050	10	:	10734	2640/2642	2	00	2051	0	0	0	000	0	0	0	000	0	00	53	10	0
2641/003265	000000	100000	020140	000040	10	:	10735	2641/3265	0	00	1040	0	0	3	000	0	0	0	000	0	02	00	10	0
2642/000075	000000	100010	170140	000040	10	:	10737	2642/0075	0	00	1040	0	0	3	000	0	0	0	000	2	17	00	10	0
2643/000002	010003	107400	022540	004042	03	:	10739	2643/0002	1	60	1040	0	0	3	000	0	0	0	307	0	02	16	03	0
2644/000530	005201	063000	001340	100002	10	:	7043	2644/0530	1	02	0032	2	0	7	000	0	0	0	166	0	00	00	10	0
2645/002646	007400	160004	014000	100002	10	:	7052	2645/2646	1	06	1017	1	0	0	000	0	0	0	060	0	01	00	10	0
2646/000530	003001	063000	001340	100002	11	:	7054	2646/0530	1	02	0006	2	0	7	000	0	0	0	166	0	00	00	11	0
2647/052650	005200	042140	000012	100002	10	:	7073	2647/2650	1	02	0032	0	0	0	315	1	0	0	044	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2650/150065	000002	100003	010000	000000	10	:	7074	2650/0065	0	00	1000	0	0	0	045	0	0	3	200	0	01	00	10	0
2651/002264	016200	100000	000040	100000	10	:	7137	2651/2264	0	02	1034	0	0	1	000	0	0	0	000	0	00	10	10	0
2652/004541	006300	106301	000000	100000	10	:	7152	2652/0541	0	42	1434	0	0	0	030	0	1	1	004	0	00	00	10	0
2653/000620	054401	071000	002360	100050	10	:	7249	2653/0620	2	02	0051	0	0	7	000	0	0	0	172	0	00	55	10	0
2654/002655	005210	100004	000000	020000	10	:	7258	2654/2655	0	05	3032	0	0	0	000	0	0	0	000	0	00	00	10	0
2655/126300	005200	000040	000000	100002	10	:	7260	2655/2300	1	02	0032	0	0	0	242	0	1	0	000	0	00	00	10	0
2656/002657	005341	073000	000340	100002	10	:	7263	2656/2657	1	02	0632	0	0	7	000	0	0	0	176	0	00	00	10	0
2657/002660	010000	100006	000000	000040	10	:	7264	2657/2660	0	04	1040	0	0	0	000	0	0	2	000	0	00	10	10	0

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2660/002304	010000	100000	000040	000040	10	:	7265	2660/2304	0	00	1040	0	0	1	000	0	0	0	000	0	00	10	10	0
2661/002662	005310	100004	000000	020000	10	:	7267	2661/2662	0	05	3432	0	0	0	000	0	0	0	000	0	00	00	10	0
2662/126663	005301	073040	000340	100002	10	:	7268	2662/2663	1	02	0432	0	0	7	242	0	1	0	176	0	00	00	10	0
2663/002302	010001	163006	000340	000000	10	:	7269	2663/2302	0	04	1000	0	0	7	000	0	0	2	166	0	00	10	10	0
2664/002665	005341	062400	000340	100002	10	:	7272	2664/2665	1	02	0632	0	0	7	000	0	0	0	165	0	00	00	10	0
2665/002304	010001	171000	000340	000000	10	:	7273	2665/2304	0	00	1000	0	0	7	000	0	0	0	172	0	00	10	10	0
2666/000001	005300	000004	000040	020002	03	:	7275	2666/0001	1	05	0432	0	0	1	000	0	0	0	000	0	00	00	03	0
2667/002670	000000	100000	006000	000040	10	:	7284	2667/2670	0	00	1040	1	0	0	000	0	0	0	000	0	00	04	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2670/002671	000000	110000	000020	000000	10	:	7285	2670/2671	0	00	1000	0	0	0	000	0	0	0	010	0	00	01	10	0
2671/000002	054410	000000	002220	000050	03	:	7286	2671/0002	2	00	2051	0	0	4	000	0	0	0	000	0	00	55	03	0
2672/002673	005301	070400	000340	100002	10	:	7303	2672/2673	1	02	0432	0	0	7	000	0	0	0	171	0	00	00	10	0
2673/002674	005341	067001	000340	100002	13	:	7304	2673/2674	1	42	0632	0	0	7	000	0	0	1	166	0	00	00	13	0
2674/052310	050000	142300	000022	000002	10	:	7305	2674/2310	1	00	1000	0	0	0	035	1	0	0	044	0	00	51	10	0
2675/002676	006000	104001	000000	100042	16	:	7308	2675/2676	1	42	1054	0	0	0	000	0	0	1	000	0	00	00	16	0
2676/052677	000001	110300	000002	000040	10	:	7309	2676/2677	0	00	1040	0	0	0	035	1	0	0	110	0	00	00	10	0
2677/000371	000000	104000	000000	000000	10	:	7310	2677/0371	0	40	1000	0	0	0	000	0	0	0	000	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2700/002706	005200	000000	000040	100002	10	:	7314	2700/2706	1	02	0032	0	0	1	000	0	0	0	000	0	00	00	10	0
2701/002702	005301	070404	000340	004002	10	:	7315	2701/2702	1	24	0432	0	0	7	000	0	0	0	171	0	00	00	10	0
2702/002703	005341	063000	004340	100002	10	:	7316	2702/2703	1	02	0632	1	0	7	000	0	0	0	166	0	00	00	10	0
2703/000531	007620	104000	000000	100000	10	:	7317	2703/0531	0	42	1137	0	0	0	000	0	0	0	000	0	00	00	10	0
2704/002706	005200	000000	000040	100002	10	:	7320	2704/2706	1	02	0032	0	0	1	000	0	0	0	000	0	00	00	10	0
2705/002706	005200	000000	005040	100002	10	:	7321	2705/2706	1	02	0032	3	0	1	000	0	0	0	000	0	00	00	10	0
2706/006707	005300	004301	000000	100002	10	:	7322	2706/2707	1	42	0432	0	0	0	030	0	1	1	000	0	00	00	10	0
2707/001710	003010	005700	000202	104012	35	:	7324	2707/1710	3	62	2006	0	0	4	030	1	0	0	003	0	00	00	35	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2710/002264	107620	100000	002020	100000	10	:	7326	2710/2264	0	02	1137	0	1	0	000	0	0	0	000	0	00	05	10	0
2711/002712	000002	100000	000020	000040	10	:	7337	2711/2712	0	00	1040	0	0	0	000	0	0	0	200	0	00	01	10	0
2712/002713	005310	000000	004000	100000	10	:	7338	2712/2713	0	02	2432	1	0	0	000	0	0	0	000	0	00	00	10	0
2713/102316	004410	000000	000002	100042	10	:	7339	2713/2316	1	02	2051	0	0	0	040	1	0	0	000	0	00	00	10	0
2714/002320	010001	171000	000340	000000	10	:	7343	2714/2320	0	00	1000	0	0	7	000	0	0	0	172	0	00	10	10	0
2715/001660	005300	000000	005040	100002	10	:	7347	2715/1660	1	02	0432	3	0	1	000	0	0	0	000	0	00	00	10	0
2716/000631	001600	130000	007400	004000	10	:	7368	2716/0631	0	20	1023	3	0	0	000	0	0	0	030	0	00	06	10	0
2717/002720	106650	001400	002620	000000	10	:	7372	2717/2720	0	00	2235	0	1	4	000	0	0	0	003	0	00	07	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2720/001710	007600	101700	000002	000010	35	:	7374	2720/1710	2	00	1037	0	0	0	030	1	0	0	003	0	00	00	35	0
2721/002324	010001	162400	000340	000040	10	:	7377	2721/2324	0	00	1040	0	0	7	000	0	0	0	165	0	00	10	10	0
2722/002723	000002	100000	000020	000000	10	:	7389	2722/2723	0	00	1000	0	0	0	000	0	0	0	200	0	00	01	10	0
2723/002724	003001	071000	000340	100002	10	:	7390	2723/2724	1	02	0006	0	0	7	000	0	0	0	172	0	00	00	10	0
2724/002725	010001	171000	000340	000040	10	:	7391	2724/2725	0	00	1040	0	0	7	000	0	0	0	172	0	00	10	10	0
2725/001710	005300	001700	000042	105010	35	:	7393	2725/1710	2	32	0432	0	0	1	030	1	0	0	003	0	00	00	35	0
2726/002727	010001	171000	000340	000000	10	:	7450	2726/2727	0	00	1000	0	0	7	000	0	0	0	172	0	00	10	10	0
2727/002336	055301	073000	002360	100002	10	:	7451	2727/2336	1	02	0432	0	0	7	000	0	0	0	176	0	00	55	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2730/002731	010001	171000	000340	000040	10	:	7453	2730/2731	0	00	1040	0	0	7	000	0	0	0	172	0	00	10	10	0
2731/106732	005200	000004	000040	020002	10	:	7454	2731/2732	1	05	0032	0	0	1	040	0	1	0	000	0	00	00	10	0
2732/002336	055200	004001	002020	100002	10	:	7455	2732/2336	1	42	0032	0	0	0	000	0	0	1	000	0	00	55	10	0
2733/002734	000000	100006	004000	005040	10	:	7478	2733/2734	0	34	1040	1	0	0	000	0	0	2	000	0	00	00	10	0
2734/002735	107640	100004	002020	100000	10	:	7479	2734/2735	0	06	1237	0	1	0	000	0	0	0	000	0	00	05	10	0
2735/001710	105210	011300	000002	105010	35	:	7482	2735/1710	2	32	2032	0	1	0	030	1	0	0	012	0	00	00	35	0
2736/002340	055201	062400	002740	000002	10	:	7484	2736/2340	1	00	0032	0	0	7	000	0	0	0	165	0	00	56	10	0
2737/002762	107600	104404	002420	125000	10	:	7494	2737/2762	0	77	1037	0	1	0	000	0	0	0	001	0	00	07	10	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2740/002741 000100 104000 000000 001042 10	; 7499	2740/2741	1	50	1440	0	0	0	000	0	0	0	000	0	00	00	00	10	0
2741/002742 005310 104000 000000 004000 10	; 7500	2741/2742	0	60	3432	0	0	0	000	0	0	0	000	0	00	00	00	10	0
2742/001526 003010 004000 000200 104012 35	; 7501	2742/1526	3	62	2006	0	0	4	000	0	0	0	000	0	00	00	00	35	0
2743/022744 001410 104004 000002 125002 27	; 7517	2743/2744	1	77	3003	0	0	0	002	1	0	0	000	0	00	00	00	27	0
2744/002745 000000 100000 007000 000040 10	; 7518	2744/2745	0	00	1040	3	0	0	000	0	0	0	000	0	00	04	10	0	
2745/122746 000000 100002 010020 000040 10	; 7519	2745/2746	0	00	1040	0	0	0	042	0	0	2	000	0	01	01	10	0	
2746/002747 006100 144701 000002 100042 16	; 7521	2746/2747	1	42	1454	0	0	0	030	1	0	1	041	0	00	00	16	0	
2747/002750 005301 066000 000340 100002 10	; 7523	2747/2750	1	42	0432	0	0	7	000	0	0	0	164	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2750/002751 000004 100000 000020 000000 10	; 7524	2750/2751	0	00	1000	0	0	0	000	0	0	0	400	0	00	01	10	0	
2751/002752 007210 041700 000202 100000 10	; 7526	2751/2752	0	02	2036	0	0	4	030	1	0	0	043	0	00	00	10	0	
2752/002753 005341 071000 004340 100002 10	; 7530	2752/2753	1	02	0632	1	0	7	000	0	0	0	172	0	00	00	10	0	
2753/002754 005310 000000 004000 100000 10	; 7531	2753/2754	0	02	2432	1	0	0	000	0	0	0	000	0	00	00	10	0	
2754/002755 003030 000300 004002 100002 10	; 7533	2754/2755	1	02	2106	1	0	0	030	1	0	0	000	0	00	00	10	0	
2755/000463 000000 100000 000000 000050 07	; 7534	2755/0463	2	00	1040	0	0	0	000	0	0	0	000	0	00	00	07	0	
2756/070467 000000 133543 000030 000040 10	; 7547	2756/0467	0	00	1040	0	0	0	317	0	0	3	037	0	00	01	10	0	
2757/002760 005630 000000 000200 100000 10	; 7549	2757/2760	0	02	2133	0	0	4	000	0	0	0	000	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2760/000732 000101 100000 010000 004042 05	; 7550	2760/0732	1	20	1440	0	0	0	000	0	0	0	100	0	01	00	05	0	
2761/000255 004550 104004 000000 125042 27	; 7557	2761/0255	1	77	3651	0	0	0	000	0	0	0	000	0	00	00	27	0	
2762/001710 007600 101700 000002 000010 35	; 7559	2762/1710	2	00	1037	0	0	0	030	1	0	0	003	0	00	00	35	0	
2763/002352 057650 100000 002400 100002 10	; 7677	2763/2352	1	02	3237	0	0	0	000	0	0	0	000	0	00	56	10	0	
2764/000075 010000 100000 000000 000040 10	; 7683	2764/0075	0	00	1040	0	0	0	000	0	0	0	000	0	00	10	10	0	
2765/002766 007600 100010 120000 000200 10	; 7729	2765/2766	0	00	1037	0	0	0	000	0	0	0	000	3	12	00	10	0	
2766/002767 005201 000000 020140 000002 22	; 7730	2766/2767	1	00	0032	0	0	3	000	0	0	0	100	0	02	00	22	0	
2767/002356 057600 100000 002400 000002 10	; 7731	2767/2356	1	00	1037	0	0	0	000	0	0	0	000	0	00	56	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
2770/002771 000002 120000 000020 000000 10	; 7737	2770/2771	0	00	1000	0	0	0	000	0	0	0	220	0	00	01	10	0	
2771/002362 054410 000000 002020 000010 10	; 7738	2771/2362	2	00	2011	0	0	0	000	0	0	0	000	0	00	55	10	0	
2772/002773 005310 000000 004000 100000 10	; 7741	2772/2773	0	02	2432	1	0	0	000	0	0	0	000	0	00	00	10	0	
2773/002364 054410 000000 002220 000050 10	; 7742	2773/2364	2	00	2051	0	0	4	000	0	0	0	000	0	00	55	10	0	
2774/002775 000001 160000 000020 000000 10	; 7745	2774/2775	0	00	1000	0	0	0	000	0	0	0	160	0	00	01	10	0	
2775/002776 005310 000000 004000 100000 10	; 7746	2775/2776	0	02	2432	1	0	0	000	0	0	0	000	0	00	00	10	0	
2776/002777 004410 000000 000000 100042 10	; 7747	2776/2777	1	02	2051	0	0	0	000	0	0	0	000	0	00	00	10	0	
2777/003000 005310 100004 000000 020000 10	; 7748	2777/3000	0	05	3432	0	0	0	000	0	0	0	000	0	00	00	10	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3000/127001	000000	100046	130000	000040	10	; 7750	3000/3001	0	04	1040	0	0	0	0	242	0	1	2	000	0	13	00	10	0
3001/052366	055305	000040	020170	000010	10	; 7759	3001/2366	2	00	0432	0	0	3	305	0	0	0	500	0	02	51	10	0	
3002/001002	005310	000000	000000	100000	10	; 8090	3002/1002	0	02	2432	0	0	0	000	0	0	0	000	0	00	00	10	0	
3003/000001	000000	100000	000000	000040	03	; 8096	3003/0001	0	00	1040	0	0	0	000	0	0	0	000	0	00	00	03	0	
3004/003007	007610	100010	120000	000200	10	; 7770	3004/3007	0	00	3037	0	0	0	000	0	0	0	000	3	12	00	10	0	
3005/003337	005200	000000	000240	100002	10	; 9586	3005/3337	1	02	0032	0	0	5	000	0	0	0	000	0	00	00	10	0	
3006/003417	001600	113700	002002	004000	10	; 9587	3006/3417	0	20	1023	0	0	0	030	1	0	0	017	0	00	04	10	0	
3007/003015	005300	001400	022560	000002	10	; 7771	3007/3015	1	00	0432	0	0	3	000	0	0	0	003	0	02	07	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3010/003343	002600	000000	000000	100002	10	; 9588	3010/3343	1	02	0025	0	0	0	000	0	0	0	000	0	00	00	10	0	
3011/141443	005201	041000	010042	100010	34	; 9590	3011/1443	2	02	0032	0	0	1	044	1	0	0	142	0	01	00	34	0	
3012/003321	005300	000000	120240	100002	10	; 9591	3012/3321	1	02	0432	0	0	5	000	0	0	0	000	0	12	00	10	0	
3013/003451	005200	000000	000200	004002	10	; 7709	3013/3451	1	20	0032	0	0	4	000	0	0	0	000	0	00	00	10	0	
3014/002765	005301	062400	000340	100002	10	; 7711	3014/2765	1	02	0432	0	0	7	000	0	0	0	165	0	00	00	10	0	
3015/003016	000000	104201	002002	000040	10	; 7772	3015/3016	0	40	1040	0	0	0	020	1	0	1	000	0	00	04	10	0	
3016/003017	010001	162400	000340	000000	10	; 7773	3016/3017	0	00	1000	0	0	7	000	0	0	0	165	0	00	10	10	0	
3017/123020	000002	100002	010000	000040	10	; 7774	3017/3020	0	00	1040	0	0	0	042	0	0	2	200	0	01	00	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3020/003021	001410	100004	000000	120002	10	; 7775	3020/3021	1	07	3003	0	0	0	000	0	0	0	000	0	00	00	10	0	
3021/003022	007610	100004	000000	120000	10	; 7776	3021/3022	0	07	3037	0	0	0	000	0	0	0	000	0	00	00	10	0	
3022/003023	000000	100000	006000	000000	10	; 7777	3022/3023	0	00	1000	1	0	0	000	0	0	0	000	0	00	04	10	0	
3023/003024	000001	160000	000020	000040	10	; 7778	3023/3024	0	00	1040	0	0	0	000	0	0	0	160	0	00	01	10	0	
3024/007025	003017	072700	000200	100002	10	; 7779	3024/3025	1	02	2006	0	0	4	030	0	1	0	775	0	00	00	10	0	
3025/003026	010001	171006	000340	000040	10	; 7780	3025/3026	0	04	1040	0	0	7	000	0	0	2	172	0	00	10	10	0	
3026/003027	000002	140001	012400	000040	10	; 7781	3026/3027	0	00	1040	0	0	0	000	0	0	1	240	0	01	06	10	0	
3027/001710	007600	101700	000002	000010	35	; 7783	3027/1710	2	00	1037	0	0	0	030	1	0	0	003	0	00	00	35	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3030/007031	007601	133710	120000	000200	10	; 7853	3030/3031	0	00	1037	0	0	0	030	0	1	0	137	3	12	00	10	0	
3031/000744	005201	000000	020140	000002	22	; 7854	3031/0744	1	00	0032	0	0	3	000	0	0	0	100	0	02	00	22	0	
3032/003033	010001	162400	000340	000000	10	; 7858	3032/3033	0	00	1000	0	0	7	000	0	0	0	165	0	00	10	10	0	
3033/003034	000002	100000	000020	000000	10	; 7859	3033/3034	0	00	1000	0	0	0	000	0	0	0	200	0	00	01	10	0	
3034/003035	115311	071002	000340	104000	10	; 7861	3034/3035	0	22	2432	0	1	7	000	0	0	2	172	0	00	10	10	0	
3035/003036	006000	100000	000000	100042	16	; 7862	3035/3036	1	02	1054	0	0	0	000	0	0	0	000	0	00	00	16	0	
3036/001710	007610	100000	000000	000010	35	; 7863	3036/1710	2	00	3037	0	0	0	000	0	0	0	000	0	00	00	35	0	
3037/007040	007610	102310	120000	000200	10	; 7867	3037/3040	0	00	3037	0	0	0	030	0	1	0	004	3	12	00	10	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3040/003041	005200	001400	022560	000002	10	:	7868	3040/3041	1	00	0032	0	0	3	000	0	0	0	003	0	02	07	10	0
3041/003042	006000	104001	000000	100042	16	:	7869	3041/3042	1	42	1054	0	0	0	000	0	0	1	000	0	00	00	16	0
3042/003043	000000	100000	006000	000000	10	:	7870	3042/3043	0	00	1000	1	0	0	000	0	0	0	000	0	00	04	10	0
3043/003044	010001	162400	000340	000000	10	:	7871	3043/3044	0	00	1000	0	0	7	000	0	0	0	165	0	00	10	10	0
3044/003045	000002	103400	000020	000040	10	:	7872	3044/3045	0	00	1040	0	0	0	000	0	0	0	207	0	00	01	10	0
3045/001710	015311	071000	000340	100010	35	:	7874	3045/1710	2	02	2432	0	0	7	000	0	0	0	172	0	00	10	35	0
3046/002374	055200	000007	002400	000002	10	:	7881	3046/2374	1	04	0032	0	0	0	000	0	0	3	000	0	00	56	10	0
3047/107050	000000	100004	000000	000000	10	:	7885	3047/3050	0	04	1000	0	0	0	040	0	1	0	000	0	00	00	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3050/003051	000002	100001	000000	000040	22	:	7886	3050/3051	0	00	1040	0	0	0	000	0	0	1	200	0	00	00	22	0
3051/003052	000000	110300	000002	000000	10	:	7887	3051/3052	0	00	1000	0	0	0	030	1	0	0	010	0	00	00	10	0
3052/003053	005300	000004	000040	004002	10	:	7888	3052/3053	1	24	0432	0	0	1	000	0	0	0	000	0	00	00	10	0
3053/003054	003010	001400	002620	100002	10	:	7889	3053/3054	1	02	2006	0	0	4	000	0	0	0	003	0	00	07	10	0
3054/000543	000000	100001	000000	000010	07	:	7890	3054/0543	2	00	1000	0	0	0	000	0	0	1	000	0	00	00	07	0
3055/002376	017641	175000	000340	001000	10	:	7901	3055/2376	0	50	1237	0	0	7	000	0	0	0	172	0	00	10	10	0
3056/000020	064152	001410	062020	000050	17	:	8026	3056/0020	2	00	2650	0	0	0	000	0	0	0	203	2	06	65	17	0
3057/000003	027601	100000	000400	000012	03	:	8063	3057/0003	3	00	1037	0	0	0	000	0	0	0	100	0	00	22	03	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3060/000003	007610	130000	000000	000012	03	:	8076	3060/0003	3	00	3037	0	0	0	000	0	0	0	030	0	00	00	03	0
3061/000753	000000	123400	000000	000012	10	:	8080	3061/0753	3	00	1000	0	0	0	000	0	0	0	027	0	00	00	10	0
3062/000753	007600	123000	000000	000012	10	:	8081	3062/0753	3	00	1037	0	0	0	000	0	0	0	026	0	00	00	10	0
3063/003064	007606	103010	070000	000200	10	:	8108	3063/3064	0	00	1037	0	0	0	000	0	0	0	606	3	07	00	10	0
3064/000066	000000	100000	020000	000000	10	:	8109	3064/0066	0	00	1000	0	0	0	000	0	0	0	000	0	02	00	10	0
3065/000066	000006	140000	160020	000000	10	:	8128	3065/0066	0	00	1000	0	0	0	000	0	0	0	640	0	16	01	10	0
3066/003067	020005	115003	000000	120012	10	:	8137	3066/3067	3	43	1000	0	0	0	000	0	0	3	512	0	00	20	10	0
3067/000417	000000	100006	002400	000000	10	:	8138	3067/0417	0	04	1000	0	0	0	000	0	0	2	000	0	00	06	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3070/000417	027614	112000	000000	000012	10	:	8139	3070/0417	3	00	3037	0	0	0	000	0	0	0	414	0	00	20	10	0
3071/000066	030000	100000	162400	020040	10	:	8166	3071/0066	0	01	1040	0	0	0	000	0	0	0	000	0	16	36	10	0
3072/003073	020005	134003	000000	120012	10	:	8186	3072/3073	3	43	1000	0	0	0	000	0	0	3	530	0	00	20	10	0
3073/003074	020005	104401	001000	120012	10	:	8188	3073/3074	3	43	1000	2	0	0	000	0	0	1	501	0	00	20	10	0
3074/003075	005610	000004	002400	100000	10	:	8189	3074/3075	0	06	2033	0	0	0	000	0	0	0	000	0	00	06	10	0
3075/000022	027601	100000	050400	000000	33	:	8190	3075/0022	0	00	1037	0	0	0	000	0	0	0	100	0	05	22	33	0
3076/002412	055310	110700	002022	000002	10	:	8468	3076/2412	1	00	3432	0	0	0	030	1	0	0	011	0	00	55	10	0
3077/002002	000000	100000	000000	000000	33	:	9615	3077/2002	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	33	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3100/001743	000000	116701	000002	000000	10	; 8490	3100/1743	0	40	1000	0	0	0	0	030	1	0	1	015	0	00	00	10	0
3101/123102	005312	104003	010000	001000	10	; 8511	3101/3102	0	50	3432	0	0	0	0	042	0	0	3	200	0	01	00	10	0
3102/003103	005310	104002	004400	001000	10	; 8512	3102/3103	0	50	3432	1	0	0	0	000	0	0	2	000	0	00	02	10	0
3103/000764	004230	000000	004000	100000	10	; 8513	3103/0764	0	02	2130	1	0	0	0	000	0	0	0	000	0	00	00	10	0
3104/003004	005341	062400	000340	100002	10	; 7712	3104/3004	1	02	0632	0	0	7	000	0	0	0	165	0	00	00	10	0	
3105/001002	000000	100000	000000	000040	10	; 7714	3105/1002	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0
3106/001002	000000	100000	000000	000040	10	; 7715	3106/1002	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0
3107/001002	000000	100000	000000	000040	10	; 7716	3107/1002	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3110/001002	000000	100000	000000	000040	10	; 7717	3110/1002	0	00	1040	0	0	0	0	000	0	0	0	000	0	00	00	10	0
3111/003030	005301	062400	000340	100002	10	; 7724	3111/3030	1	02	0432	0	0	7	000	0	0	0	165	0	00	00	10	0	
3112/003037	005341	062400	000340	100002	10	; 7725	3112/3037	1	02	0632	0	0	7	000	0	0	0	165	0	00	00	10	0	
3113/002372	005341	062400	000340	100002	10	; 7726	3113/2372	1	02	0632	0	0	7	000	0	0	0	165	0	00	00	10	0	
3114/000003	006300	135701	000002	100000	03	; 8519	3114/0003	0	42	1434	0	0	0	030	1	0	1	033	0	00	00	03	0	
3115/003116	020000	104000	000400	000000	10	; 8536	3115/3116	0	40	1000	0	0	0	000	0	0	0	000	0	00	22	10	0	
3116/003117	005610	013000	010000	000000	10	; 8537	3116/3117	0	00	2033	0	0	0	000	0	0	0	016	0	01	00	10	0	
3117/000022	000000	100007	050000	000040	33	; 8538	3117/0022	0	04	1040	0	0	0	000	0	0	3	000	0	05	00	33	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3120/002416	026300	100000	000400	104000	10	; 8571	3120/2416	0	22	1434	0	0	0	0	000	0	0	0	000	0	00	22	10	0
3121/000256	007650	141710	160002	000200	10	; 8594	3121/0256	0	00	3237	0	0	0	0	030	1	0	0	043	3	16	00	10	0
3122/003123	006200	104003	000000	100000	10	; 8602	3122/3123	0	42	1034	0	0	0	0	000	0	0	3	000	0	00	00	10	0
3123/003124	020005	112400	000000	120012	10	; 8603	3123/3124	3	03	1000	0	0	0	0	000	0	0	0	515	0	00	20	10	0
3124/000417	000000	102002	000000	000040	22	; 8605	3124/0417	0	00	1040	0	0	0	0	000	0	0	2	004	0	00	00	22	0
3125/000417	000000	123000	000000	000000	22	; 8615	3125/0417	0	00	1000	0	0	0	0	000	0	0	0	026	0	00	00	22	0
3126/003127	027604	102407	000000	000012	23	; 8623	3126/3127	3	04	1037	0	0	0	0	000	0	0	3	405	0	00	20	23	0
3127/003124	027604	102000	000000	000012	23	; 8624	3127/3124	3	00	1037	0	0	0	0	000	0	0	0	404	0	00	20	23	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3130/003131	020004	100000	000400	000000	10	; 8628	3130/3131	0	00	1000	0	0	0	0	000	0	0	0	400	0	00	22	10	0
3131/002422	020005	113400	000000	120012	10	; 8629	3131/2422	3	03	1000	0	0	0	0	000	0	0	0	517	0	00	20	10	0
3132/000724	020001	102400	020020	000000	10	; 8633	3132/0724	0	00	1000	0	0	0	0	000	0	0	0	105	0	02	21	10	0
3133/001740	006200	116703	000002	100010	07	; 8636	3133/1740	2	42	1034	0	0	0	0	030	1	0	3	015	0	00	00	07	0
3134/003135	010007	112000	002020	000000	10	; 8643	3134/3135	0	00	1000	0	0	0	0	000	0	0	0	714	0	00	15	10	0
3135/000643	020001	102400	000020	000040	10	; 8644	3135/0643	0	00	1040	0	0	0	0	000	0	0	0	105	0	00	21	10	0
3136/003142	000000	100000	000000	000000	10	; 8646	3136/3142	0	00	1000	0	0	0	0	000	0	0	0	000	0	00	00	10	0
3137/003142	000000	100400	000000	000040	10	; 8647	3137/3142	0	00	1040	0	0	0	0	000	0	0	0	001	0	00	00	10	0

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3140/003142 000000 101000 000000 000040 10	; 8648	3140/3142	0	00	1040	0	0	0	000	0	0	0	002	0	00	00	10	0	
3141/003142 000000 101400 000000 000000 10	; 8649	3141/3142	0	00	1000	0	0	0	000	0	0	0	003	0	00	00	10	0	
3142/002424 010000 102000 002020 000040 10	; 8653	3142/2424	0	00	1040	0	0	0	000	0	0	0	004	0	00	15	10	0	
3143/003144 006300 100000 020140 100000 10	; 8658	3143/3144	0	02	1434	0	0	3	000	0	0	0	000	0	02	00	10	0	
3144/000001 030000 100004 162400 000040 03	; 8659	3144/0001	0	04	1040	0	0	0	000	0	0	0	000	0	16	36	03	0	
3145/001074 000001 111400 125000 000000 26	; 8675	3145/1074	0	00	1000	3	0	0	000	0	0	0	113	0	12	00	26	0	
3146/001074 000002 121400 125000 000000 26	; 8676	3146/1074	0	00	1000	3	0	0	000	0	0	0	223	0	12	00	26	0	
3147/003150 110007 112001 002020 000000 10	; 8699	3147/3150	0	00	1000	0	1	0	000	0	0	1	714	0	00	15	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3150/003151 010001 161400 000340 000000 10	; 8700	3150/3151	0	00	1000	0	0	7	000	0	0	0	163	0	00	10	10	0	
3151/040570 007201 072410 000340 004212 07	; 8702	3151/0570	3	20	0036	0	0	7	004	0	0	0	175	3	00	00	07	0	
3152/000643 030000 140400 002000 000200 10	; 8717	3152/0643	0	00	1000	0	0	0	000	0	0	0	041	1	00	34	10	0	
3153/074643 006200 130300 000010 100010 07	; 8719	3153/0643	2	02	1034	0	0	0	137	0	1	0	030	0	00	00	07	0	
3154/070740 055210 044300 001410 004002 10	; 8769	3154/0740	1	60	2032	2	0	0	137	0	0	0	040	0	00	52	10	0	
3155/077156 000000 130306 000010 000040 10	; 8786	3155/3156	0	04	1040	0	0	0	137	0	1	2	030	0	00	00	10	0	
3156/023157 000001 142442 004030 000040 10	; 8787	3156/3157	0	00	1040	1	0	0	302	0	0	2	145	0	00	01	10	0	
3157/003160 006300 114701 000002 100000 10	; 8788	3157/3160	0	42	1434	0	0	0	030	1	0	1	011	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3160/000004 000000 100004 000000 000000 03	; 8789	3160/0004	0	04	1000	0	0	0	000	0	0	0	000	0	00	00	03	0	
3161/040002 007201 072400 000340 004002 03	; 8797	3161/0002	1	20	0036	0	0	7	004	0	0	0	175	0	00	00	03	0	
3162/003163 000000 104000 000000 000040 10	; 8826	3162/3163	0	40	1040	0	0	0	000	0	0	0	000	0	00	00	10	0	
3163/000002 057221 072400 002740 004002 03	; 8828	3163/0002	1	20	0136	0	0	7	000	0	0	0	175	0	00	56	03	0	
3164/023157 000001 140042 000030 000000 10	; 8851	3164/3157	0	00	1000	0	0	0	302	0	0	2	140	0	00	01	10	0	
3165/003166 017611 153006 000340 004000 10	; 8904	3165/3166	0	24	3037	0	0	7	000	0	0	2	156	0	00	10	10	0	
3166/003167 017611 153406 000340 004000 10	; 8905	3166/3167	0	24	3037	0	0	7	000	0	0	2	157	0	00	10	10	0	
3167/001034 020004 100000 000400 000000 04	; 8910	3167/1034	0	00	1000	0	0	0	000	0	0	0	400	0	00	22	04	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3170/001047 020000 100000 000400 000000 04	; 8921	3170/1047	0	00	1000	0	0	0	000	0	0	0	000	0	00	22	04	0	
3171/003172 000001 140300 070002 000000 10	; 8933	3171/3172	0	00	1000	0	0	0	030	1	0	0	140	0	07	00	10	0	
3172/003173 010001 160000 020340 000040 10	; 8934	3172/3173	0	00	1040	0	0	7	000	0	0	0	160	0	02	10	10	0	
3173/003174 020005 163400 000000 120012 10	; 8935	3173/3174	3	03	1000	0	0	0	000	0	0	0	567	0	00	20	10	0	
3174/073175 020000 100100 000402 000000 10	; 8936	3174/3175	0	00	1000	0	0	0	017	1	0	0	000	0	00	22	10	0	
3175/061047 000002 100003 000000 000000 22	; 8937	3175/1047	0	00	1000	0	0	0	006	0	0	3	200	0	00	00	22	0	
3176/003200 016301 150000 000340 100000 10	; 8945	3176/3200	0	02	1434	0	0	7	000	0	0	0	150	0	00	10	10	0	
3177/002002 000000 100000 000000 000000 33	; 9616	3177/2002	0	00	1000	0	0	0	000	0	0	0	000	0	00	00	33	0	

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3200/003201	000002	100002	000000	000000	22	; 8946	3200/3201	0	00	1000	0	0	0	000	0	0	2	200	0	00	00	22	0	
3201/123202	007602	100002	000000	004000	22	; 8947	3201/3202	0	20	1037	0	0	0	042	0	0	2	200	0	00	00	22	0	
3202/003203	017660	103007	012420	004000	10	; 8949	3202/3203	0	24	1337	0	0	0	000	0	0	3	006	0	01	17	10	0	
3203/000636	015301	150406	000340	000002	32	; 8951	3203/0636	1	04	1432	0	0	7	000	0	0	2	151	0	00	10	32	0	
3204/027205	020000	131400	000422	000042	10	; 8964	3204/3205	1	00	1040	0	0	0	002	1	1	0	033	0	00	23	10	0	
3205/027206	025310	010000	000420	100002	10	; 8966	3205/3206	1	02	2432	0	0	0	002	0	1	0	010	0	00	23	10	0	
3206/073207	000004	100740	000002	000000	10	; 8967	3206/3207	0	00	1000	0	0	0	237	1	0	0	401	0	00	00	10	0	
3207/063210	000002	100002	010000	000000	10	; 8968	3207/3210	0	00	1000	0	0	0	006	0	0	2	200	0	01	00	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3210/000636	010001	151006	004340	000000	10	; 8969	3210/0636	0	04	1000	1	0	7	000	0	0	2	152	0	00	10	10	0	
3211/001150	075300	010700	020142	000002	10	; 8998	3211/1150	1	00	0432	0	0	3	030	1	0	0	011	0	02	70	10	0	
3212/003213	003001	041416	000340	000202	10	; 9011	3212/3213	1	04	0006	0	0	7	000	0	0	2	143	3	00	00	10	0	
3213/003214	005211	001400	124000	100000	26	; 9012	3213/3214	0	02	2032	1	0	0	000	0	0	0	103	0	12	00	26	0	
3214/003215	005200	004000	020140	000002	10	; 9013	3214/3215	1	40	0032	0	0	3	000	0	0	0	000	0	02	00	10	0	
3215/003216	005210	000004	000000	004000	10	; 9014	3215/3216	0	24	2032	0	0	0	000	0	0	0	000	0	00	00	10	0	
3216/072432	057610	173750	000400	000202	10	; 9016	3216/2432	1	00	3037	0	0	0	237	0	0	0	077	3	00	52	10	0	
3217/003220	000001	101400	120000	000000	26	; 9032	3217/3220	0	00	1000	0	0	0	000	0	0	0	103	0	12	00	26	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3220/001153	005300	000000	020140	000002	10	; 9033	3220/1153	1	00	0432	0	0	3	000	0	0	0	000	0	02	00	10	0	
3221/002436	055201	041000	002740	000002	10	; 9040	3221/2436	1	00	0032	0	0	7	000	0	0	0	142	0	00	56	10	0	
3222/072440	050000	173740	000400	000002	10	; 9048	3222/2440	1	00	1000	0	0	0	237	0	0	0	077	0	00	52	10	0	
3223/077224	005301	072040	020150	000002	10	; 9053	3223/3224	1	00	0432	0	0	3	307	0	1	0	174	0	02	00	10	0	
3224/002442	057201	040140	000740	100010	10	; 9054	3224/2442	2	02	0036	0	0	7	210	0	0	0	140	0	00	52	10	0	
3225/002444	005211	001410	020140	000200	26	; 9065	3225/2444	0	00	2032	0	0	3	000	0	0	0	103	3	02	00	26	0	
3226/072444	057600	173750	000400	000202	10	; 9068	3226/2444	1	00	1037	0	0	0	237	0	0	0	077	3	00	52	10	0	
3227/065170	075301	000040	020150	000002	10	; 9073	3227/1170	1	00	0432	0	0	3	306	0	1	0	100	0	02	70	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3230/003231	003001	041410	000340	000202	10	; 9093	3230/3231	1	00	0006	0	0	7	000	0	0	0	143	3	00	00	10	0	
3231/003232	000001	101400	120000	000000	26	; 9094	3231/3232	0	00	1000	0	0	0	000	0	0	0	103	0	12	00	26	0	
3232/065173	005201	000040	020150	000002	10	; 9095	3232/1173	1	00	0032	0	0	3	306	0	1	0	100	0	02	00	10	0	
3233/072446	050000	173740	000400	000002	10	; 9101	3233/2446	1	00	1000	0	0	0	237	0	0	0	077	0	00	52	10	0	
3234/143235	007620	104005	000002	120000	10	; 9113	3234/3235	0	47	1137	0	0	0	044	1	0	1	000	0	00	00	10	0	
3235/072450	055301	041100	002742	000002	10	; 9119	3235/2450	1	00	0432	0	0	7	017	1	0	0	142	0	00	56	10	0	
3236/153237	000141	105403	120002	100042	26	; 9130	3236/3237	1	42	1640	0	0	0	045	1	0	3	103	0	12	00	26	0	
3237/072452	050000	110040	024410	000002	10	; 9132	3237/2452	1	00	1000	1	0	0	307	0	0	0	010	0	02	52	10	0	

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3241/072456	057630	114043	000410	100002	10	:	9175	3241/2456	1	42	3137	0	0	0	307	0	0	3	010	0	00	52	10	0
3242/002454	010001	151000	000340	000000	10	:	9180	3242/2454	0	00	1000	0	0	7	000	0	0	0	152	0	00	10	10	0
3243/063244	000002	100103	010000	000040	10	:	9185	3243/3244	0	00	1040	0	0	0	016	0	0	3	200	0	01	00	10	0
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3246/003247	005201	042400	100340	000202	10	:	9228	3246/3247	1	00	0032	0	0	7	000	0	0	0	145	1	10	00	10	0
3247/000000	020001	102400	000020	000040	03	:	9229	3247/0000	0	00	1040	0	0	0	000	0	0	0	105	0	00	21	03	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3251/001130	065201	051000	002360	100002	10	:	9335	3251/1130	1	02	0032	0	0	7	000	0	0	0	152	0	00	65	10	0
3252/003253	007672	121400	160000	004000	26	:	9365	3252/3253	0	20	3337	0	0	0	000	0	0	0	223	0	16	00	26	0
3253/043254	006621	072400	021340	104002	10	:	9367	3253/3254	1	22	0135	2	0	7	004	0	0	0	175	0	02	00	10	0
3254/002472	060000	130000	000400	000040	22	:	9368	3254/2472	0	00	1040	0	0	0	000	0	0	0	030	0	00	62	22	0
3255/003256	034210	000004	162600	100000	10	:	9373	3255/3256	0	06	2030	0	0	4	000	0	0	0	000	0	16	36	10	0
3256/003257	036300	100000	122400	100000	10	:	9374	3256/3257	0	02	1434	0	0	0	000	0	0	0	000	0	12	36	10	0
3257/003260	000000	120000	000000	000000	24	:	9375	3257/3260	0	00	1000	0	0	0	000	0	0	0	020	0	00	00	24	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3261/003262	005301	061400	000340	100002	10	:	9398	3261/3262	1	02	0432	0	0	7	000	0	0	0	163	0	00	00	10	0
3262/003263	010001	161000	000340	000000	10	:	9399	3262/3263	0	00	1000	0	0	7	000	0	0	0	162	0	00	10	10	0
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3264/001122	020001	100000	000420	000040	10	:	9401	3264/1122	0	00	1040	0	0	0	000	0	0	0	100	0	00	23	10	0
3265/003266	013030	000000	002400	100002	10	:	9412	3265/3266	1	02	2106	0	0	0	000	0	0	0	000	0	00	16	10	0
3266/003267	007630	102003	002400	100000	10	:	9414	3266/3267	0	02	3137	0	0	0	000	0	0	3	004	0	00	06	10	0
3267/000040	010000	100000	000000	000000	05	:	9415	3267/0040	0	00	1000	0	0	0	000	0	0	0	000	0	00	10	05	0
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3271/000040	010000	100000	000200	000000	10	:	9421	3271/0040	0	00	1000	0	0	4	000	0	0	0	000	0	00	10	10	0
3272/023273	000002	100103	000010	000000	22	:	9426	3272/3273	0	00	1000	0	0	0	112	0	0	3	200	0	00	00	22	0
3273/000040	010000	100000	000040	000040	05	:	9427	3273/0040	0	00	1040	0	0	1	000	0	0	0	000	0	00	10	05	0
3274/003275	005201	042000	000300	100002	10	:	9429	3274/3275	1	02	0032	0	0	6	000	0	0	0	144	0	00	00	10	0
3275/023276	000001	142103	000030	000000	10	:	9431	3275/3276	0	00	1000	0	0	0	112	0	0	3	144	0	00	01	10	0
3276/000040	010001	142000	000300	000040	05	:	9435	3276/0040	0	00	1040	0	0	6	000	0	0	0	144	0	00	10	05	0
3277/003300	016200	141700	000242	100000	10	:	9437	3277/3300	0	02	1034	0	0	5	030	1	0	0	043	0	00	10	10	0

ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3301/003302	000001	142000	000000	000040	10	; 9440	3301/3302	0	00	1040	0	0	0	000	0	0	0	144	0	00	00	10	0	
3302/003313	010001	142006	000300	000000	10	; 9442	3302/3313	0	04	1000	0	0	6	000	0	0	2	144	0	00	10	10	0	
3303/043307	005601	063000	000340	100002	10	; 9444	3303/3307	1	02	0033	0	0	7	004	0	0	0	166	0	00	00	10	0	
3304/003305	010000	100006	000000	000000	10	; 9446	3304/3305	0	04	1000	0	0	0	000	0	0	2	000	0	00	10	10	0	
3305/003306	010000	100000	000040	000040	10	; 9447	3305/3306	0	00	1040	0	0	1	000	0	0	0	000	0	00	10	10	0	
3306/003307	005200	000000	000240	100002	10	; 9448	3306/3307	1	02	0032	0	0	5	000	0	0	0	000	0	00	00	10	0	
3307/003312	004401	070000	000340	100042	10	; 9449	3307/3312	1	02	0051	0	0	7	000	0	0	0	170	0	00	00	10	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3310/002474	044541	070000	006360	100042	10	; 9451	3310/2474	1	02	0651	1	0	7	000	0	0	0	170	0	00	45	10	0	
3311/003312	014430	000000	000000	100042	10	; 9455	3311/3312	1	02	2151	0	0	0	000	0	0	0	000	0	00	10	10	0	
3312/000040	010000	100000	000240	000000	05	; 9456	3312/0040	0	00	1000	0	0	5	000	0	0	0	000	0	00	10	05	0	
3313/003267	005600	000000	000000	100002	10	; 9458	3313/3267	1	02	0033	0	0	0	000	0	0	0	000	0	00	00	10	0	
3314/002474	042601	070000	006360	100002	10	; 9460	3314/2474	1	02	0025	1	0	7	000	0	0	0	170	0	00	45	10	0	
3315/023316	000000	131302	000022	000040	10	; 9511	3315/3316	0	00	1040	0	0	0	032	1	0	2	032	0	00	01	10	0	
3316/122500	050000	100000	000400	000002	10	; 9512	3316/2500	1	00	1000	0	0	0	042	0	0	0	000	0	00	52	10	0	
3317/001234	001600	100006	000000	000000	36	; 9515	3317/1234	0	04	1023	0	0	0	000	0	0	2	000	0	00	00	36	0	
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3320/005220	001700	122306	000100	000002	36	; 9549	3320/1220	1	04	1423	0	0	2	030	0	1	2	024	0	00	00	36	0	
3321/126506	055200	000040	024540	000010	10	; 9693	3321/2506	2	00	0032	1	0	3	242	0	1	0	000	0	02	52	10	0	
3322/003323	010001	171406	000340	000000	10	; 9696	3322/3323	0	04	1000	0	0	7	000	0	0	2	173	0	00	10	10	0	
3323/127324	000000	100040	000020	000000	10	; 9697	3323/3324	0	00	1000	0	0	0	242	0	1	0	000	0	00	01	10	0	
3324/002510	054410	004001	002020	100050	10	; 9699	3324/2510	2	42	2051	0	0	0	000	0	0	1	000	0	00	55	10	0	
3325/003326	116301	174001	000340	100000	10	; 9702	3325/3326	0	42	1434	0	1	7	000	0	0	1	170	0	00	10	10	0	
3326/003327	000002	100002	001000	000040	22	; 9703	3326/3327	0	00	1040	2	0	0	000	0	0	2	200	0	00	00	22	0	
3327/002014	010000	100000	000000	000000	33	; 9704	3327/2014	0	00	1000	0	0	0	000	0	0	0	000	0	00	10	33	0	
ADR/00--15	16--31	32--47	48--63	64--79	0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3330/123331	001600	100000	002032	100000	10	; 9710	3330/3331	0	02	1023	0	0	0	142	1	0	0	000	0	00	05	10	0	
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3332/002020	010001	163400	000340	000040	10	; 9712	3332/2020	0	00	1040	0	0	7	000	0	0	0	167	0	00	10	10	0	
3333/002512	044501	070000	006360	100042	10	; 9723	3333/2512	1	02	0451	1	0	7	000	0	0	0	170	0	00	45	10	0	
3334/002514	042701	070000	000740	100002	10	; 9728	3334/2514	1	02	0425	0	0	7	000	0	0	0	170	0	00	42	10	0	
3335/003336	013010	000004	000240	100042	10	; 9749	3335/3336	1	06	2046	0	0	5	000	0	0	0	000	0	00	10	10	0	
3336/003313	010000	100000	002400	000040	10	; 9750	3336/3313	0	00	1040	0	0	0	000	0	0	0	000	0	00	16	10	0	
3337/127340	005300	004041	004000	100002	10	; 9812	3337/3340	1	42	0432	1	0	0	242	0	1	1	000	0	00	00	10	0	

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3341/002530 045210 004000 005400 104000 10	: 9854	3341/2530	0	62	2032	3	0	0	000	0	0	0	000	0	00	42	10	0	
3342/002526 054710 000004 007000 100050 10	: 9863	3342/2526	2	06	2471	3	0	0	000	0	0	0	000	0	00	54	10	0	
3343/117344 000007 173440 004020 000000 10	: 9887	3343/3344	0	00	1000	1	0	0	241	0	1	0	777	0	00	01	10	0	
3344/001435 016301 170000 000340 104002 32	: 9889	3344/1435	1	22	1434	0	0	7	000	0	0	0	170	0	00	10	32	0	
3345/003350 016300 100000 000000 104000 10	: 9894	3345/3350	0	22	1434	0	0	0	000	0	0	0	000	0	00	10	10	0	
3346/003347 017640 104000 000000 001000 10	: 9896	3346/3347	0	50	1237	0	0	0	000	0	0	0	000	0	00	10	10	0	
3347/003350 005300 000000 000240 100002 10	: 9897	3347/3350	1	02	0432	0	0	5	000	0	0	0	000	0	00	00	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3350/003351 000100 100000 007020 100042 10	: 9898	3350/3351	1	02	1440	3	0	0	000	0	0	0	000	0	00	05	10	0	
3351/002056 003010 102304 000202 020002 33	: 9899	3351/2056	1	05	3006	0	0	4	030	1	0	0	004	0	00	00	33	0	
3352/003353 010001 101004 002400 000040 10	: 9902	3352/3353	0	04	1040	0	0	0	000	0	0	0	102	0	00	16	10	0	
3353/000650 015311 067400 000340 104000 10	: 9903	3353/0650	0	62	2432	0	0	7	000	0	0	0	167	0	00	10	10	0	
3354/003355 003010 104000 000200 104002 27	: 9919	3354/3355	1	62	3006	0	0	4	000	0	0	0	000	0	00	00	27	0	
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3356/043357 005600 000000 000000 100002 10	: 9924	3356/3357	1	02	0033	0	0	0	004	0	0	0	000	0	00	00	10	0	
3357/003360 015310 045710 000002 104000 10	: 9926	3357/3360	0	62	2432	0	0	0	030	1	0	0	043	2	00	10	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3361/003362 010000 100004 002400 000000 10	: 9936	3361/3362	0	04	1000	0	0	0	000	0	0	0	000	0	00	16	10	0	
3362/003363 000001 142000 000000 000000 10	: 9938	3362/3363	0	00	1000	0	0	0	000	0	0	0	144	0	00	00	10	0	
3363/000222 010001 142000 000300 000000 10	: 9940	3363/0222	0	00	1000	0	0	6	000	0	0	0	144	0	00	10	10	0	
3364/103365 005302 000002 015000 004002 10	: 9970	3364/3365	1	20	0432	3	0	0	040	0	0	2	200	0	01	00	10	0	
3365/003366 004210 000000 004200 100000 10	: 9971	3365/3366	0	02	2030	1	0	4	000	0	0	0	000	0	00	00	10	0	
3366/003367 010000 100006 000240 000040 10	: 9972	3366/3367	0	04	1040	0	0	5	000	0	0	2	000	0	00	10	10	0	
3367/002544 054550 000010 006000 100050 10	: 9974	3367/2544	2	02	2651	1	0	0	000	0	0	0	000	2	00	54	10	0	
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3371/003372 005300 000000 000240 100002 10	: 10006	3371/3372	1	02	0432	0	0	5	000	0	0	0	000	0	00	00	10	0	
3372/127373 000000 100040 000020 000040 10	: 10007	3372/3373	0	00	1040	0	0	0	242	0	1	0	000	0	00	01	10	0	
3373/052542 054434 100044 002212 120010 10	: 10009	3373/2542	2	07	3111	0	0	4	305	1	0	0	400	0	00	54	10	0	
3374/001456 040232 100002 012420 000002 32	: 10013	3374/1456	1	00	3120	0	0	0	000	0	0	2	200	0	01	47	32	0	
3375/002076 005201 071000 002340 004002 10	: 10031	3375/2076	1	20	0032	0	0	7	000	0	0	0	172	0	00	04	10	0	
3376/003377 010010 114000 002400 104042 27	: 10035	3376/3377	1	62	3040	0	0	0	000	0	0	0	010	0	00	16	27	0	
3377/002544 053101 070010 007340 100050 10	: 10066	3377/2544	2	02	0446	3	0	7	000	0	0	0	170	2	00	54	10	0	

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
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3401/002552 050240 140000 012000 000042 10	:	10085	3401/2552	1	00	1260	0	0	0	000	0	0	0	040	0	01	54	10	0
3402/002114 055310 124003 010420 000002 10	:	10089	3402/2114	1	40	3432	0	0	0	000	0	0	3	020	0	01	53	10	0
3403/040004 057201 063400 002340 000010 03	:	10138	3403/0004	2	00	0036	0	0	7	004	0	0	0	167	0	00	54	03	0
3404/003405 003001 062410 120340 000202 10	:	10146	3404/3405	1	00	0006	0	0	7	000	0	0	0	165	3	12	00	10	0
3405/002554 045300 021300 020562 000002 10	:	10148	3405/2554	1	00	0432	0	0	3	030	1	0	0	022	0	02	43	10	0
3406/001613 010000 100000 000240 000042 32	:	10188	3406/1613	1	00	1040	0	0	5	000	0	0	0	000	0	00	10	32	0
3407/063410 000002 100103 010000 000000 10	:	10192	3407/3410	0	00	1000	0	0	0	016	0	0	3	200	0	01	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3410/000004 010000 100006 000000 000000 03	:	10193	3410/0004	0	04	1000	0	0	0	000	0	0	2	000	0	00	10	03	0
3411/050002 000000 142303 000032 000000 03	:	10243	3411/0002	0	00	1000	0	0	0	135	1	0	3	044	0	00	01	03	0
3412/052154 000002 100103 010012 000002 34	:	10263	3412/2154	1	00	1000	0	0	0	115	1	0	3	200	0	01	00	34	0
3413/052154 000000 142303 000032 000040 10	:	10286	3413/2154	0	00	1040	0	0	0	135	1	0	3	044	0	00	01	10	0
3414/126254 010001 142000 000310 000000 10	:	10297	3414/2254	0	00	1000	0	0	6	142	0	1	0	144	0	00	10	10	0
3415/124434 011601 146001 000310 000200 36	:	10299	3415/0434	0	40	1023	0	0	6	142	0	1	1	144	1	00	10	36	0
3416/124434 011601 146001 000310 000200 36	:	10302	3416/0434	0	40	1023	0	0	6	142	0	1	1	144	1	00	10	36	0
3417/003420 015300 000004 002400 004002 10	:	10316	3417/3420	1	24	0432	0	0	0	000	0	0	0	000	0	00	16	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3420/003421 010001 163400 000340 000000 10	:	10323	3420/3421	0	00	1000	0	0	7	000	0	0	0	167	0	00	10	10	0
3421/002570 050000 120006 010000 000040 10	:	10324	3421/2570	0	04	1040	0	0	0	000	0	0	2	020	0	01	50	10	0
3422/077423 000000 101540 000010 000000 10	:	10327	3422/3423	0	00	1000	0	0	0	317	0	1	0	003	0	00	00	10	0
3423/073424 010000 134341 000002 000000 10	:	10330	3423/3424	0	40	1000	0	0	0	237	1	0	1	030	0	00	10	10	0
3424/023425 005300 000000 020142 000002 10	:	10331	3424/3425	1	00	0432	0	0	3	002	1	0	0	000	0	02	00	10	0
3425/001641 000000 102704 000002 000050 07	:	10332	3425/1641	2	04	1040	0	0	0	030	1	0	0	005	0	00	00	07	0
3426/056574 050000 101440 000030 000042 10	:	10371	3426/2574	1	00	1040	0	0	0	305	0	1	0	003	0	00	51	10	0
3427/000074 030000 100000 172400 000040 10	:	10375	3427/0074	0	00	1040	0	0	0	000	0	0	0	000	0	17	36	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3430/002576 045210 100004 000420 025000 10	:	10379	3430/2576	0	35	3032	0	0	0	000	0	0	0	000	0	00	43	10	0
3431/026602 050000 102040 000010 000000 10	:	10398	3431/2602	0	00	1000	0	0	0	302	0	1	0	004	0	00	50	10	0
3432/003433 000000 124001 010000 000000 10	:	10402	3432/3433	0	40	1000	0	0	0	000	0	0	1	020	0	01	00	10	0
3433/002606 077600 100016 120000 000200 10	:	10404	3433/2606	0	04	1037	0	0	0	000	0	0	2	000	3	12	70	10	0
3434/071473 000000 103543 000030 000000 10	:	10420	3434/1473	0	00	1000	0	0	0	317	0	0	3	007	0	00	01	10	0
3435/003436 007614 140010 110000 000200 10	:	10458	3435/3436	0	00	3037	0	0	0	000	0	0	0	440	3	11	00	10	0
3436/002035 005200 000000 020140 000002 10	:	10459	3436/2035	1	00	0032	0	0	3	000	0	0	0	000	0	02	00	10	0
3437/002165 005300 000000 020140 000010 34	:	10474	3437/2165	2	00	0432	0	0	3	000	0	0	0	000	0	02	00	34	0

ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3440/003441 005200 000000 160140 000002 10	:	10483	3440/3441	1	00	0032	0	0	3	000	0	0	0	000	0	16	00	10	0
3441/003442 035210 000004 162160 100000 10	:	10486	3441/3442	0	06	2032	0	0	3	000	0	0	0	000	0	16	35	10	0
3442/002612 055211 042000 020140 100000 10	:	10488	3442/2612	0	02	2032	0	0	3	000	0	0	0	144	0	02	50	10	0
3443/002205 010001 142400 000300 000000 10	:	10495	3443/2205	0	00	1000	0	0	6	000	0	0	0	145	0	00	10	10	0
3444/002216 057610 100000 002000 000010 10	:	10517	3444/2216	2	00	3037	0	0	0	000	0	0	0	000	0	00	54	10	0
3445/003446 000000 100000 020140 000000 10	:	10548	3445/3446	0	00	1000	0	0	3	000	0	0	0	000	0	02	00	10	0
3446/003447 035301 042400 162700 100002 10	:	10549	3446/3447	1	02	0432	0	0	6	000	0	0	0	145	0	16	36	10	0
3447/001434 000100 100004 020140 020042 10	:	10556	3447/1434	1	05	1440	0	0	3	000	0	0	0	000	0	02	00	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3450/060003 000002 100103 010000 000040 03	:	10562	3450/0003	0	00	1040	0	0	0	016	0	0	3	200	0	01	00	03	0
3451/003452 015302 013000 002440 100002 10	:	10571	3451/3452	1	02	0432	0	0	1	000	0	0	0	216	0	00	16	10	0
3452/002614 155200 000001 007020 100002 10	:	10573	3452/2614	1	02	0032	3	1	0	000	0	0	1	000	0	00	55	10	0
3453/003454 115303 013001 022540 000002 10	:	10581	3453/3454	1	00	0432	0	1	3	000	0	0	1	316	0	02	16	10	0
3454/003455 017622 113010 162400 000200 10	:	10582	3454/3455	0	00	1137	0	0	0	000	0	0	0	216	3	16	16	10	0
3455/002616 077640 100000 020140 100000 10	:	10583	3455/2616	0	02	1237	0	0	3	000	0	0	0	000	0	02	70	10	0
3456/001656 010000 100006 000200 000000 10	:	10592	3456/1656	0	04	1000	0	0	4	000	0	0	2	000	0	00	10	10	0
3457/002624 057440 100000 022540 100010 10	:	10603	3457/2624	2	02	1217	0	0	3	000	0	0	0	000	0	02	56	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3460/003461 010003 113000 007400 000040 10	:	10608	3460/3461	0	00	1040	3	0	0	000	0	0	0	316	0	00	16	10	0
3461/002626 075200 000000 020140 000002 10	:	10609	3461/2626	1	00	0032	0	0	3	000	0	0	0	000	0	02	70	10	0
3462/003463 005200 004001 005000 100002 10	:	10643	3462/3463	1	42	0032	3	0	0	000	0	0	1	000	0	00	00	10	0
3463/002630 075210 001007 012000 000000 10	:	10648	3463/2630	0	04	2032	0	0	0	000	0	0	3	002	0	01	74	10	0
3464/003465 003010 002003 002600 100002 10	:	10666	3464/3465	1	02	2006	0	0	4	000	0	0	3	004	0	00	06	10	0
3465/003466 010007 103407 002400 000000 10	:	10667	3465/3466	0	04	1000	0	0	0	000	0	0	3	707	0	00	16	10	0
3466/000002 010000 100000 000000 000000 03	:	10668	3466/0002	0	00	1000	0	0	0	000	0	0	0	000	0	00	10	03	0
3467/002634 077630 141000 110000 000200 10	:	10682	3467/2634	0	00	3137	0	0	0	000	0	0	0	042	1	11	70	10	0
ADR/00--15 16--31 32--47 48--63 64--79 0-5	(SEQ#)	ADR/	J	T	AR	AD	BR	MQ	FM	SCAD	SC	FE	SH	#	VMA	MEM	COND	SPEC	M
3470/003471 003010 002003 002600 100002 10	:	10720	3470/3471	1	02	2006	0	0	4	000	0	0	3	004	0	00	06	10	0
3471/003466 010003 103407 002400 000040 10	:	10722	3471/3466	0	04	1040	0	0	0	000	0	0	3	307	0	00	16	10	0
3472/002640 077630 100010 160000 000200 10	:	10732	3472/2640	0	00	3137	0	0	0	000	0	0	0	000	3	16	70	10	0
3777/003165 025211 146404 000020 125000 10	:	8901	3777/3165	0	77	3032	0	0	0	000	0	0	0	145	0	00	21	10	0

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
000/ 2 0 0 1002	; 4973	001/ 2 2 0 1005	; 4974
002/ 2 1 0 1005	; 4975	003/ 2 0 1 1005	; 4976
004/ 2 2 0 1006	; 4978	005/ 2 6 1 1005	; 4979
006/ 2 5 1 1005	; 4980	007/ 2 4 0 1005	; 4981
010/ 2 1 1 1010	; 4983	011/ 2 4 1 1010	; 4984
012/ 2 1 0 1011	; 4985	013/ 2 0 1 1011	; 4986
014/ 2 1 0 1012	; 4988	015/ 2 0 1 1012	; 4989
016/ 2 2 0 1012	; 4990	017/ 2 3 1 1012	; 4991
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
020/ 2 0 0 1013	; 4997	021/ 2 5 1 1014	; 4998
022/ 2 0 1 1104	; 4999	023/ 2 0 0 1105	; 5000
024/ 2 2 1 1106	; 5001	025/ 2 4 0 1107	; 5002
026/ 2 6 1 1110	; 5003	027/ 2 0 0 1111	; 5004
030/ 2 0 0 1112	; 5005	031/ 2 0 1 1113	; 5006
032/ 2 0 1 1006	; 5018	033/ 2 0 1 1006	; 5019
034/ 2 0 1 1006	; 5020	035/ 2 0 1 1006	; 5021
036/ 2 0 1 1006	; 5022	037/ 2 0 1 1006	; 5023
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
040/ 2 0 0 1002	; 5027	041/ 2 0 0 1002	; 5028
042/ 2 0 0 1002	; 5029	043/ 2 0 0 1002	; 5030
044/ 2 0 0 1002	; 5031	045/ 2 0 0 1002	; 5032
046/ 2 0 0 1002	; 5033	047/ 2 0 0 1002	; 5034
050/ 2 0 0 1002	; 5035	051/ 2 0 0 1002	; 5036
052/ 2 0 0 1002	; 5037	053/ 2 0 0 1002	; 5038
054/ 2 0 0 1002	; 5039	055/ 2 0 0 1002	; 5040
056/ 2 0 0 1002	; 5041	057/ 2 0 0 1002	; 5042
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
060/ 2 0 0 1002	; 5043	061/ 2 0 0 1002	; 5044
062/ 2 0 0 1002	; 5045	063/ 2 0 0 1002	; 5046
064/ 2 0 0 1002	; 5047	065/ 2 0 0 1002	; 5048
066/ 2 0 0 1002	; 5049	067/ 2 0 0 1002	; 5050
070/ 2 0 0 1002	; 5051	071/ 2 0 0 1002	; 5052
072/ 2 0 0 1002	; 5053	073/ 2 0 0 1002	; 5054
074/ 2 0 0 1002	; 5055	075/ 2 0 0 1002	; 5056
076/ 2 0 0 1002	; 5057	077/ 2 0 0 1002	; 5058

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
100/ 2 0 0 1002	; 5062	101/ 2 0 0 1002	; 5063
102/ 4 0 1 1415	; 7219	103/ 4 2 0 1415	; 7220
104/ 2 0 0 1002	; 5209	105/ 0 0 0 1000	; 5210
106/ 4 4 0 1415	; 7221	107/ 4 6 1 1415	; 7222
110/ 4 0 0 1414	; 6373	111/ 4 2 1 1414	; 6374
112/ 4 4 1 1414	; 6375	113/ 4 6 0 1414	; 6376
114/ 4 0 1 0515	; 5738	115/ 4 2 0 0515	; 5739
116/ 4 4 0 0515	; 5740	117/ 4 0 0 0514	; 5741
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
120/ 4 0 0 0506	; 4182	121/ 4 1 1 0506	; 4183
122/ 4 0 0 1412	; 6162	123/ 4 0 1 1413	; 6163
124/ 3 0 1 0110	; 4201	125/ 3 0 0 0111	; 4202
126/ 4 0 0 1411	; 6165	127/ 4 1 0 1410	; 6166
130/ 2 0 0 1002	; 5859	131/ 2 0 0 1002	; 5860
132/ 0 1 1 1407	; 6128	133/ 4 6 0 1406	; 6129
134/ 6 0 0 0310	; 6593	135/ 4 0 0 0314	; 6594
136/ 6 0 0 0400	; 6595	137/ 4 0 0 0404	; 6596
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
140/ 4 1 1 0704	; 5863	141/ 4 0 0 0707	; 5864
142/ 6 2 0 0704	; 5865	143/ 6 3 1 0704	; 5866
144/ 4 1 1 0303	; 5868	145/ 0 1 1 0302	; 5869
146/ 6 2 0 0303	; 5870	147/ 6 3 1 0303	; 5871
150/ 4 5 0 0704	; 5873	151/ 4 4 1 0707	; 5874
152/ 6 6 1 0704	; 5875	153/ 6 7 0 0704	; 5876
154/ 4 1 0 0307	; 5878	155/ 0 5 0 0302	; 5879
156/ 6 2 1 0307	; 5880	157/ 6 3 0 0307	; 5881
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
160/ 4 1 0 0705	; 5936	161/ 4 0 0 0707	; 5937
162/ 6 2 1 0705	; 5938	163/ 6 3 0 0705	; 5939
164/ 4 1 1 1403	; 5941	165/ 0 1 1 1402	; 5942
166/ 6 2 0 1403	; 5943	167/ 6 3 1 1403	; 5944
170/ 4 1 0 0706	; 5965	171/ 4 1 1 0707	; 5966
172/ 6 2 1 0706	; 5967	173/ 6 3 0 0706	; 5968
174/ 4 1 1 1405	; 5970	175/ 0 1 1 1404	; 5971
176/ 6 2 0 1405	; 5972	177/ 6 3 1 1405	; 5973

ADR/	A	B	P	J	(SEQ#)	ADR/	A	B	P	J	(SEQ#)
200/	5	5	0	0100	; 3960	201/	1	5	1	0100	; 3961
202/	0	1	1	0103	; 3965	203/	7	3	1	0100	; 3967
204/	5	5	0	0002	; 3969	205/	1	5	1	0002	; 3970
206/	3	6	0	0002	; 3971	207/	7	3	1	0002	; 3972
210/	5	5	0	0205	; 3974	211/	1	5	1	0205	; 3975
212/	3	6	0	0205	; 3976	213/	7	3	1	0205	; 3977
214/	5	5	1	0201	; 3979	215/	1	5	0	0201	; 3980
216/	3	6	1	0201	; 3981	217/	7	3	0	0201	; 3982

ADR/	A	B	P	J	(SEQ#)	ADR/	A	B	P	J	(SEQ#)
220/	4	5	1	0112	; 5479	221/	0	5	0	0112	; 5480
222/	6	6	0	0112	; 5481	223/	6	7	1	0112	; 5482
224/	4	1	0	0200	; 5511	225/	0	1	1	0200	; 5512
226/	6	6	0	0200	; 5513	227/	6	2	1	0200	; 5514
230/	4	1	0	0211	; 5584	231/	0	1	1	0211	; 5585
232/	6	6	0	0211	; 5586	233/	6	2	1	0211	; 5587
234/	4	1	1	0210	; 5589	235/	0	1	0	0210	; 5590
236/	6	6	1	0210	; 5591	237/	6	2	0	0210	; 5592

ADR/	A	B	P	J	(SEQ#)	ADR/	A	B	P	J	(SEQ#)
240/	0	0	1	1316	; 5315	241/	0	0	0	1317	; 5316
242/	0	2	1	1314	; 5317	243/	0	0	1	1315	; 5318
244/	0	1	0	1400	; 5319	245/	0	0	0	1401	; 5320
246/	0	0	1	1004	; 5321	247/	2	0	0	1002	; 5322
250/	7	0	1	0103	; 4020	251/	2	0	0	0104	; 4021
252/	0	6	1	1516	; 4608	253/	0	2	0	1516	; 4609
254/	2	0	0	0600	; 4619	255/	0	4	1	0700	; 4620
256/	4	0	0	0402	; 4788	257/	0	5	0	0403	; 4789

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ADR/	A	B	P	J	(SEQ#)	ADR/	A	B	P	J	(SEQ#)
260/	2	0	0	0415	; 4817	261/	4	0	1	0414	; 4818
262/	2	0	1	0504	; 4819	263/	0	0	1	0505	; 4820
264/	2	0	1	0703	; 4915	265/	2	0	0	0702	; 4916
266/	0	0	1	1114	; 4917	267/	0	0	0	1115	; 4918
270/	5	5	0	1517	; 5454	271/	1	5	1	1517	; 5455
272/	7	6	1	1517	; 5456	273/	7	7	0	1517	; 5457
274/	5	5	0	1600	; 5466	275/	1	5	1	1600	; 5467
276/	7	6	1	1600	; 5468	277/	7	7	0	1600	; 5469

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
300/ 0 3 1 1507	; 4488	301/ 0 2 0 1507	; 4489
302/ 0 1 0 1507	; 4490	303/ 0 0 1 1507	; 4491
304/ 0 7 0 1507	; 4492	305/ 0 6 1 1507	; 4493
306/ 0 5 1 1507	; 4494	307/ 0 4 0 1507	; 4495
310/ 4 3 0 1507	; 4497	311/ 4 2 1 1507	; 4498
312/ 4 1 1 1507	; 4499	313/ 4 0 0 1507	; 4500
314/ 4 7 1 1507	; 4501	315/ 4 6 0 1507	; 4502
316/ 4 5 0 1507	; 4503	317/ 4 4 1 1507	; 4504
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
320/ 0 3 1 1513	; 4563	321/ 0 2 0 1513	; 4564
322/ 0 1 0 1513	; 4565	323/ 0 0 1 1513	; 4566
324/ 0 7 0 1513	; 4567	325/ 0 6 1 1513	; 4568
326/ 0 5 1 1513	; 4569	327/ 0 4 0 1513	; 4570
330/ 4 3 0 1510	; 4515	331/ 4 2 1 1510	; 4516
332/ 4 1 1 1510	; 4517	333/ 4 0 0 1510	; 4518
334/ 4 7 1 1510	; 4519	335/ 4 6 0 1510	; 4520
336/ 4 5 0 1510	; 4521	337/ 4 4 1 1510	; 4522
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
340/ 0 3 0 1514	; 4578	341/ 0 2 1 1514	; 4579
342/ 0 1 1 1514	; 4580	343/ 0 0 0 1514	; 4581
344/ 0 7 1 1514	; 4582	345/ 0 6 0 1514	; 4583
346/ 0 5 0 1514	; 4584	347/ 0 4 1 1514	; 4585
350/ 7 3 1 1511	; 4531	351/ 7 2 0 1511	; 4532
352/ 7 1 0 1511	; 4533	353/ 7 0 1 1511	; 4534
354/ 7 7 0 1511	; 4535	355/ 7 6 1 1511	; 4536
356/ 7 5 1 1511	; 4537	357/ 7 4 0 1511	; 4538
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
360/ 0 3 1 1515	; 4593	361/ 0 2 0 1515	; 4594
362/ 0 1 0 1515	; 4595	363/ 0 0 1 1515	; 4596
364/ 0 7 0 1515	; 4597	365/ 0 6 1 1515	; 4598
366/ 0 5 1 1515	; 4599	367/ 0 4 0 1515	; 4600
370/ 7 3 1 1512	; 4546	371/ 7 2 0 1512	; 4547
372/ 7 1 0 1512	; 4548	373/ 7 0 1 1512	; 4549
374/ 7 7 0 1512	; 4550	375/ 7 6 1 1512	; 4551
376/ 7 5 1 1512	; 4552	377/ 7 4 0 1512	; 4553

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
400/ 1 5 1 0516	; 4220	401/ 1 5 1 0516	; 4221
402/ 0 6 0 0516	; 4222	403/ 0 7 1 0516	; 4223
404/ 5 5 1 0701	; 4230	405/ 1 5 0 0701	; 4231
406/ 7 6 0 0701	; 4232	407/ 7 7 1 0701	; 4233
410/ 5 5 0 0711	; 4240	411/ 1 5 1 0711	; 4241
412/ 7 6 1 0711	; 4242	413/ 7 7 0 0711	; 4243
414/ 5 5 0 0100	; 4250	415/ 2 5 0 0102	; 4252
416/ 7 6 1 0100	; 4256	417/ 7 7 0 0100	; 4257
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
420/ 5 5 0 0712	; 4259	421/ 1 5 1 0712	; 4260
422/ 7 6 1 0712	; 4261	423/ 7 7 0 0712	; 4262
424/ 5 0 1 0014	; 4269	425/ 1 0 0 0014	; 4270
426/ 3 6 0 0100	; 4271	427/ 3 6 0 0100	; 4272
430/ 5 5 1 0715	; 4275	431/ 1 5 0 0715	; 4276
432/ 7 6 0 0715	; 4277	433/ 7 7 1 0715	; 4278
434/ 5 5 1 0716	; 4285	435/ 1 5 0 0716	; 4286
436/ 7 6 0 0716	; 4287	437/ 7 7 1 0716	; 4288
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
440/ 5 5 1 1001	; 4295	441/ 1 5 0 1001	; 4296
442/ 7 6 0 1001	; 4297	443/ 7 7 1 1001	; 4298
444/ 5 5 1 1007	; 4305	445/ 1 5 0 1007	; 4306
446/ 7 6 0 1007	; 4307	447/ 7 7 1 1007	; 4308
450/ 1 5 0 1015	; 4315	451/ 1 5 0 1015	; 4316
452/ 0 6 1 1015	; 4317	453/ 0 7 0 1015	; 4318
454/ 5 5 0 1116	; 4326	455/ 1 5 1 1116	; 4327
456/ 7 6 1 1116	; 4328	457/ 7 7 0 1116	; 4329
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
460/ 5 5 0 1311	; 4336	461/ 1 5 1 1311	; 4337
462/ 7 6 1 1311	; 4338	463/ 7 7 0 1311	; 4339
464/ 5 5 1 1504	; 4346	465/ 1 5 0 1504	; 4347
466/ 7 6 0 1504	; 4348	467/ 7 7 1 1504	; 4349
470/ 5 5 0 1505	; 4356	471/ 1 5 1 1505	; 4357
472/ 7 6 1 1505	; 4358	473/ 7 7 0 1505	; 4359
474/ 1 5 1 1506	; 4366	475/ 1 5 1 1506	; 4367
476/ 0 6 0 1506	; 4368	477/ 0 7 1 1506	; 4369

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
500/ 5 5 0 0106	; 4035	501/ 2 5 0 0107	; 4037
502/ 7 6 1 0105	; 4041	503/ 7 3 1 0100	; 4042
504/ 5 5 1 0306	; 4044	505/ 1 5 0 0306	; 4045
506/ 7 6 1 0114	; 4046	507/ 7 3 0 0115	; 4047
510/ 5 5 1 0312	; 4049	511/ 1 5 0 0312	; 4050
512/ 3 6 1 0312	; 4051	513/ 7 3 0 0312	; 4052
514/ 5 5 1 0300	; 4054	515/ 1 5 0 0300	; 4055
516/ 3 6 1 0300	; 4056	517/ 7 3 0 0300	; 4057
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
520/ 5 5 0 0313	; 4059	521/ 1 5 1 0313	; 4060
522/ 3 6 0 0313	; 4061	523/ 7 3 1 0313	; 4062
524/ 5 5 0 0301	; 4064	525/ 1 5 1 0301	; 4065
526/ 3 6 0 0301	; 4066	527/ 7 3 1 0301	; 4067
530/ 5 5 1 0413	; 4069	531/ 1 5 0 0413	; 4070
532/ 3 6 1 0413	; 4071	533/ 7 3 0 0413	; 4072
534/ 5 5 1 0401	; 4074	535/ 1 5 0 0401	; 4075
536/ 3 6 1 0401	; 4076	537/ 7 3 0 0401	; 4077
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
540/ 5 5 0 0105	; 4081	541/ 1 5 1 0105	; 4082
542/ 7 6 1 0106	; 4083	543/ 7 3 1 0100	; 4084
544/ 5 5 1 0311	; 4086	545/ 1 5 0 0311	; 4087
546/ 7 6 0 0202	; 4088	547/ 7 3 1 0203	; 4089
550/ 5 5 0 0214	; 4091	551/ 1 5 1 0214	; 4092
552/ 3 6 0 0214	; 4093	553/ 7 3 1 0214	; 4094
554/ 5 5 0 0304	; 4096	555/ 1 5 1 0304	; 4097
556/ 3 6 0 0304	; 4098	557/ 7 3 1 0304	; 4099
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
560/ 5 5 1 0215	; 4101	561/ 1 5 0 0215	; 4102
562/ 3 6 1 0215	; 4103	563/ 7 3 0 0215	; 4104
564/ 5 5 1 0305	; 4106	565/ 1 5 0 0305	; 4107
566/ 3 6 1 0305	; 4108	567/ 7 3 0 0305	; 4109
570/ 5 5 0 0316	; 4111	571/ 1 5 1 0316	; 4112
572/ 3 6 0 0316	; 4113	573/ 7 3 1 0316	; 4114
574/ 5 5 0 0406	; 4116	575/ 1 5 1 0406	; 4117
576/ 3 6 0 0406	; 4118	577/ 7 3 1 0406	; 4119

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
600/ 1 0 0 0014	; 4378	601/ 1 0 0 0014	; 4379
602/ 0 0 0 0013	; 4380	603/ 0 0 1 0012	; 4381
604/ 0 0 0 0010	; 4382	605/ 0 0 1 0011	; 4383
606/ 0 4 1 0013	; 4384	607/ 0 4 0 0012	; 4385
610/ 1 0 0 0014	; 4387	611/ 1 0 0 0014	; 4388
612/ 4 0 1 0013	; 4389	613/ 4 0 0 0012	; 4390
614/ 4 0 1 0010	; 4391	615/ 4 0 0 0011	; 4392
616/ 4 4 0 0013	; 4393	617/ 4 4 1 0012	; 4394
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
620/ 0 5 0 0010	; 4396	621/ 0 5 1 0011	; 4397
622/ 0 1 1 0013	; 4398	623/ 0 1 0 0012	; 4399
624/ 0 1 1 0010	; 4400	625/ 0 1 0 0011	; 4401
626/ 0 5 0 0013	; 4402	627/ 0 5 1 0012	; 4403
630/ 4 5 1 0010	; 4405	631/ 4 5 0 0011	; 4406
632/ 4 1 0 0013	; 4407	633/ 4 1 1 0012	; 4408
634/ 4 1 0 0010	; 4409	635/ 4 1 1 0011	; 4410
636/ 4 5 1 0013	; 4411	637/ 4 5 0 0012	; 4412
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
640/ 0 6 0 0010	; 4414	641/ 0 6 1 0011	; 4415
642/ 0 2 1 0013	; 4416	643/ 0 2 0 0012	; 4417
644/ 0 2 1 0010	; 4418	645/ 0 2 0 0011	; 4419
646/ 0 6 0 0013	; 4420	647/ 0 6 1 0012	; 4421
650/ 4 6 1 0010	; 4423	651/ 4 6 0 0011	; 4424
652/ 4 2 0 0013	; 4425	653/ 4 2 1 0012	; 4426
654/ 4 2 0 0010	; 4427	655/ 4 2 1 0011	; 4428
656/ 4 6 1 0013	; 4429	657/ 4 6 0 0012	; 4430
ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
660/ 0 7 1 0010	; 4432	661/ 0 7 0 0011	; 4433
662/ 0 3 0 0013	; 4434	663/ 0 3 1 0012	; 4435
664/ 0 3 0 0010	; 4436	665/ 0 3 1 0011	; 4437
666/ 0 7 1 0013	; 4438	667/ 0 7 0 0012	; 4439
670/ 4 7 0 0010	; 4441	671/ 4 7 1 0011	; 4442
672/ 4 3 1 0013	; 4443	673/ 4 3 0 0012	; 4444
674/ 4 3 1 0010	; 4445	675/ 4 3 0 0011	; 4446
676/ 4 7 0 0013	; 4447	677/ 4 7 1 0012	; 4448

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
700/ 3 0 0 0502	; 7918	701/ 3 6 1 0500	; 7919
702/ 0 0 0 1102	; 7920	703/ 4 4 1 1100	; 7921
704/ 0 4 0 1200	; 7922	705/ 0 6 0 1202	; 7923
706/ 0 1 1 1202	; 7924	707/ 0 5 0 1202	; 7925
710/ 3 6 1 0511	; 7929	711/ 3 3 0 0510	; 7930
712/ 4 0 0 0512	; 7931	713/ 4 0 1 0510	; 7932
714/ 0 4 0 0710	; 7933	715/ 0 6 0 0714	; 7934
716/ 0 1 1 0714	; 7935	717/ 0 5 0 0714	; 7936

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
720/ 6 2 0 1212	; 7940	721/ 3 6 0 1210	; 7941
722/ 0 0 0 1204	; 7942	723/ 4 4 1 1206	; 7943
724/ 0 4 0 1214	; 7944	725/ 0 6 0 1216	; 7945
726/ 0 1 1 1216	; 7946	727/ 0 5 0 1216	; 7947
730/ 0 0 0 1500	; 7951	731/ 0 0 0 1500	; 7952
732/ 0 0 0 1500	; 7953	733/ 0 0 0 1500	; 7954
734/ 0 0 0 1500	; 7955	735/ 0 0 0 1500	; 7956
736/ 0 0 0 1500	; 7957	737/ 0 0 0 1500	; 7958

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
740/ 3 1 0 1502	; 7964	741/ 3 0 1 1502	; 7965
742/ 4 4 0 1312	; 7966	743/ 4 4 1 1310	; 7967
744/ 0 4 1 1300	; 7968	745/ 0 6 1 1302	; 7969
746/ 0 1 0 1302	; 7970	747/ 0 5 1 1302	; 7971
750/ 3 3 1 1502	; 7975	751/ 3 2 0 1502	; 7976
752/ 0 0 1 1002	; 7977	753/ 0 0 1 1002	; 7978
754/ 0 4 0 1304	; 7979	755/ 0 6 0 1306	; 7980
756/ 0 1 1 1306	; 7981	757/ 0 5 0 1306	; 7982

ADR/ A B P J	(SEQ#)	ADR/ A B P J	(SEQ#)
760/ 6 2 0 0410	; 7986	761/ 3 6 1 0416	; 7987
762/ 6 0 1 0410	; 7988	763/ 4 4 1 0416	; 7989
764/ 0 4 1 0412	; 7990	765/ 3 6 1 0416	; 7991
766/ 0 1 1 0412	; 7992	767/ 0 5 0 0412	; 7993
770/ 6 2 0 0410	; 7997	771/ 3 6 1 0416	; 7998
772/ 6 0 1 0410	; 7999	773/ 4 4 1 0416	; 8000
774/ 0 4 1 0412	; 8001	775/ 3 6 1 0416	; 8002
776/ 0 1 1 0412	; 8003	777/ 0 5 0 0412	; 8004