To understand the use of a Spiro, it si first necessary to have
a basic understanding of how the phone system works: The phone in your
house is connected to a toll office and the phone company's computers.
When you dial a number the computer records your number and the number
that you dial. It then translates the number you dialed into a series
of tones. Each combination of two tones signifies one number. It is these
tones which your Spiro duplicates. These are also the tones an operator
uses when she calls a number for you. When you dial a number on the
Spiro, you dial the same way you would on a touch tone phone, which
by the way uses different tones to prevent you from using it as a
Spiro. The only difference from dialing on a touch tone phone is that
before you dial you must press the "Key Pulse" button *' on your panel
and after you dial you must press the start button "#" on your keyboard.
The "Key Pulse" "*" tells the phone company's equipment you are about
to give it a number and the "start" "#" button tells it you are finished
giving the number you wish to call and want the call to go through.

To use the Spiro, you must first get yourself connected to
a long distance trunk. Any phone line that runs out of state is called a
long distance trunk. To do this you must dial an 800 number, a long
distance call wh ich is free for you. It is ususally owned by car rental
compan ies, airlines, hotels and resorts. You may als o dial long distance
in formation. As soon as long distance information or the 800 number
(a list of them will follow) starts to ring, press the "Key Pulse*"
and "start #" bu ttons simultaneously. This produces a thirteenth tone
of 2600 cycles per second. Hold this button for perhaps a second. When

you release the button, you will hear a knacheck noise and the 800 number
or information will have stopped ringing. You are now hooked into a long
distan ce trunk. The next step is to press "Key Pulse ✳" and then the area
code and the number followed by the start "#" button. Your call will go
through after this. If your call doesn't go through stay on the line
and a recording will come on after perhaps a minute and say "I am sorry,
but your call cannot be completed as dialed. Please check the number and
dial again. Ask your operator for assistance." After this she will give a
series of numbers, the first 3 of which are an area code where the recording
originated. By listening to the recording and finding out the area code you
can tell whether your call is just hung u p or stuck some place half
way between where you are calling to. The reason your call can get stuck
some place is that when y ou are calling from San Francisco to New York,
for example, if the circuits are busy from S.F. to N.Y., your call
might be sent to Florida and then to N.Y. or any other place in the nation
through which there are free circuits. Another reason that can cause you
to get recordings is improper dialing- dialing either too slow or too
fast. When you get this recording, press the 2600 button and dial the
number again on your Spiro. It is not necessary to dial the 800 number
again. IT IS VERY IMPORTANT THAT YOU DO NOT MAKE TOO MANY 800 CALLS PER
MONTH FROM YOUR HOME PHONE OR TALK FOR MORE THAN 5 TO 10 MINUTES. LONG
DISTANCE INFORMATION IS EVEN MORE DANGEROUS BECAUSE NO ONE TALKS TO
INFORMATION FOR MORE THAN A MINUTE OR TWO. The safest though not the
cheapest way to use the Spiro is to dial a local toll and beep off

of an exchange instead of an 800 number. Also beep off any # out of your
area code. Try to beep off just before the ringing starts, after the last
click. Thus you end up paying 25¢ for the first 3 minutes and a nickle every
min ute after or some other similar inexpensive amount. Ma Bell thinks you
are talking to the number you beeped off from, but in actuality you are
talking to a number much further away. Every exchange is different and
the only way to find out what the cheapest and best one is for you is
to open y our telephone Book to the beginning and start calling local toll
exchan g es. Use the first 3 digets of the exchange and any random last 4
digets, except for 9900 or 00-- because these are usually Pacific telephone
offices of internal phone company numbers. As soon as the number you dialed
starts to ring, press the 2600 button (* and #). If the number continues
to ring hang up before someone answers and you get charged for the call.
Even tually , you will find an exchan ge that will stop ringing when you
press the 2600 cy cle button (* and #). Try "KP" and Area Code And
Number and "St" and see if your call goes through. If it does, you have
found an exchange that works. If you are calling from y our area code to
an exchange within your area code it is not necessary to dial the area
code as long as the place you beep off of is within your area code.
some toll exch ang es will work for calls inside the U.S. Others will
work all over the world.

Now to the busin ess of international calls. The only difference
is that you must connect y ourself into a Satelite switch ing station.
To call Lon don, England, for example, y ou dial after having beeped
off another number. KP 011044St 011 is called an access code. It means that
y ou want the call to go by satelite. 044 is the county code for England.

After you dial KP 011 044 St you mu st wait until you get a dial tone like sound. If you don't, it may be a very busy time and all the circuits are busy. When you get the dial tone, press key pulse again KP + 044 (county code must be repeated) + 1 which is area code for London and a seven digit number. Thus simplified, it looks like this: KP 011 044 St wait for tone KP 044 + 1 + 7d St. Try 246-8000 for experimentation. For Paris, France ju st substitute 033 for 044. The area code for Paris is also 1.

Australia	= 061		Access Code 011
Adelaide	= 061 + 32 +		82 = City area Code
Brisbane	= 061 + 72 +		
Camberra	= 061 + 62 +		
Hobart	= 061 + 02 +		
Pert	= 061 + 92 +		
Sydney	= 061 + 2 +		

France	= 033		Access Code 011
Bordeaux	= 033 + 56 + 6d	6d =	# of digits in phone # = 6
Cannes	= 033 + 93 + 6d		
Grenoble	= 033 + 76 + 6d		
Lyon	= 033 + 78 + 6d		
Marseilles	= 033 + 91 + 6d		
Nice	= 033 + 93 + 6d		
St. Tropez	= 033 + 94 + 6d		
Vouvray	= 033 + 47 + 6d		

Germany	= 049		Access Code 011
berlin	= 049 + 311 +		
Military	= 049 + 311 + 319 +		
Hamburg	= 049 + 411		
Hanover	= " + 511		
Heidelberg	= " + 6221		
Mannheim	= " + 621		
Military	= " + 621 + 730		
Munich	= " + 811		
Nurnberg	= " + 911		

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Germany      = 049
Stuttgart   =049  + 711
Frankfurt   = "   + 151


Hong Kong = 752                          Access Code 011
Cheung  Chou= 752 + 5 + 981 +  3d
Clear Water Bay= "  + 3 + 29  +  3d
    Fan Ding  = "   + 0 + 90  +  3d-4d
    Hong Kong = "   + 5 + 5d - 6d
    Lamma     = "   + 5 + 982 +  3d
    Ma Wan    = "   + 5 + 986 +  2d
    Sha Tin   = "   + 0 + 61  +  3d - 4d
    Tai 0     = "   + 5 + 985 +  3d
    Tsun Wan  = "   + 0 + 40  +  4d
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Example to call Ma Wan : KP 011 + 752 S+ wait for dial tone KP 752 + 5
+ 986 + 2d S+

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Japan      = 081                         Access Code 011
Hakone    = 081 + 460 + 6d
Kobe      = "   + 78  + 6d-7d
Kyoto     = "   + 75  + 7d
Nagoya    = "   + 52  + 7d
Osaka     = "   + 6   + 7d
Tachikawa = "   + 425 + 6d
Military  = "   + 423 + 62 + 2961
Tokyo     = "   + 3   + 7d
Yokohama  = "   + 45  + 7d
Military  = "   + 462 + 51  + 1520


United Kingdom = 044                     Access Code 011
Birmingham, Eng. = 044 + 21  + 7d
Coven t ry, Eng. = "   + 203 + 5d
Edingburgh, scot.= "   + 31  + 7d
Glasgow, Scot.   = "   + 41  + 7d
Liverpool, Eng.  = "   + 51  + 7d
London           = "   + 1   + 7d
Manchester, Eng. = "   + 61  + 7d
Sheffield, Eng.  = "   + 742 + 5d-6d


Holland          = 031                   Access Code 011
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If you wish to call a country that is not on theses tables
you can call up the Route and Rateoperator and ask her. To do
this you must dial KP141 ST. You must also

sound like an operator. The procedure is as follows: She will say, "Hello, Rate and Route". Your response will be " I'd like operators ratings for ----- (Such town and country). She will give you the routing as it appears on the table above. If she says "I'm sorry, but that is IO ≠ C", that means that you already have the information on your table. she also might say overseas operator #160 + 555 or some other numbers depending on the place that you are calling. This means that you can't dial directly and must go through an operator who will ask you for your number and then call you back. Thus you can't call for free. More information is being obtained all the time, and eventually we will have routing for all these places.

A list of 800 numbers follows:

Number	Description
800 - 328- 4567	National Car Rental
- 648 -6881	
- 648 - 3011	
- 648 - 6894	
- " - 6811	
- " - 3311	
- " - 3341	
- " - 1177	
- " - 3773	
- 228 - 9650	Omaha
- 792 - 0750	
- 874 - 5000	Memphis
- 238 - 5000	
- 221 - 2156	N.Y.,
- 253 - 1301	Whirlpool
- 922 - 2734	Hawaii
- 621 - 6013	
- 228 - 9650	Neb., Budget Car Rental
- 528 - 1234	Western Hotels
- 327- 6087	Florida
- 327 - 5115	
- 243- 6000	
- 542 - 5115	
- 328 - 4567	
- 631 - 1971	

800 numbers continued

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800-631 -1972
    792 -0707        United Airlines
    336 -0336        A.A.A.
    238 -5000
    792 -0760        American Express
    243 -6000        Redwing Shoes
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One last bit of information. To check credit card numbers, dial KP 000 ST ẟ wait for tone, then cial KP + 10 didgets of the credit card number + ST. It is not necessary to say you can't dial the letter. The computer will respond with "affirmative if it is a good credit card or negative and repeat the 10 didgets you dialed back if it is a bad credit card.