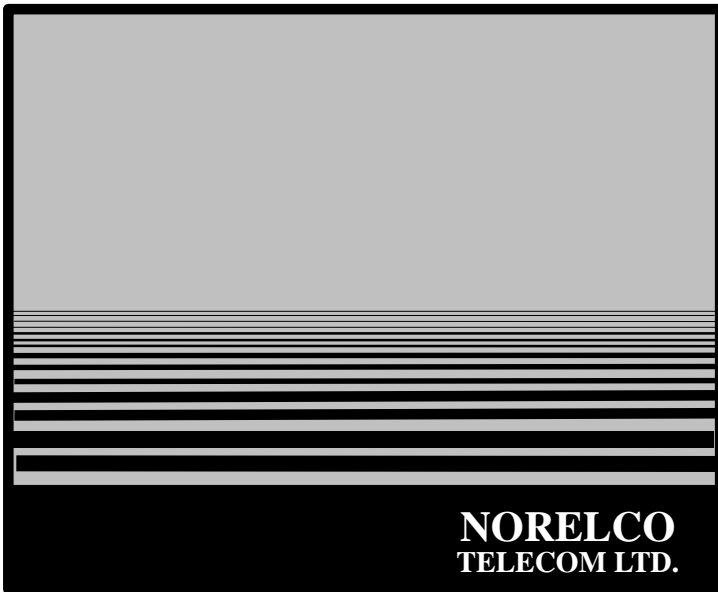


# *ULTRASWITCH 100*

## **AUTOMATIC MULTI-FUNCTION TELEPHONE LINE MANAGER**



USER GUIDE

# REGISTRATION

---

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, user should ensure that it is permissible to be connected to the facilities of the local telecommunication company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situation.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs to alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**Caution:** Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100.

# CONTENTS

---

<b>1. INSTALLATION</b>	1
<b>2. OPERATION</b>	5
To Make Calls	5
To Receive Voice Calls	5
To Receive Fax Messages	7
To Receive Modem Calls	9
To Decipher "Distinctive Ringing"	12
Incoming Call Screening	13
To Control Answering Machine	14
To Operate with A Pulse System	14
<b>3. PROGRAMMING</b>	15
<b>4. TROUBLESHOOTING</b>	23

# 1. INSTALLATION

---

The package of the *Ultra Switch 100* itself contains the following parts list.

1. *Ultra Switch 100*
2. Power Adapter
3. RJ11 Phone Line Cord
4. Four Rubber Feet
5. Wall Mounting Kit
6. User Guide
7. Quick Reference Guide

If a part appears damaged or missing, contact your nearest *Ultra Switch 100* location immediately. Save all packing materials. Reuse the package for mailing if you experience a problem.

## STEPS TO GET STARTED

1. Remove the *Ultra Switch 100* from the packing box. Stick the four rubber feet to the edges of the *Ultra Switch's* bottom side to prevent possible slide of this device.
2. Plug the connecting end of the 12VAC power adapter into the jack on the rear panel of the *Ultra Switch 100* labeled 12 VAC. Plug the other end of the adapter into an AC power outlet. Once connected, the **POWER** indicator on the top of the *Ultra Switch* will light up.
3. Connect one end of the supplied phone cord to the jack labeled **LINE-IN**. Connect the other end of the line cord to the incoming telephone line (C/O line). Connection of the *Ultra Switch 100* in various situations are illustrated in Fig.1-2, Fig.1-3 and Fig.1-4. Connect your communication devices to their associated jacks at the rear panel of the *Ultra Switch 100* as illustrated in Fig.1-1.
4. The *Ultra Switch 100* is now ready for use. Indeed, it works with the default parameters set by the control program. If you want your *Ultra Switch 100* to work differently, you may use any tone phone connected

---

behind the *Ultra Switch 100* to program new parameters for the desired functions. Please refer to Chapter 3 for the instructions on function programming.

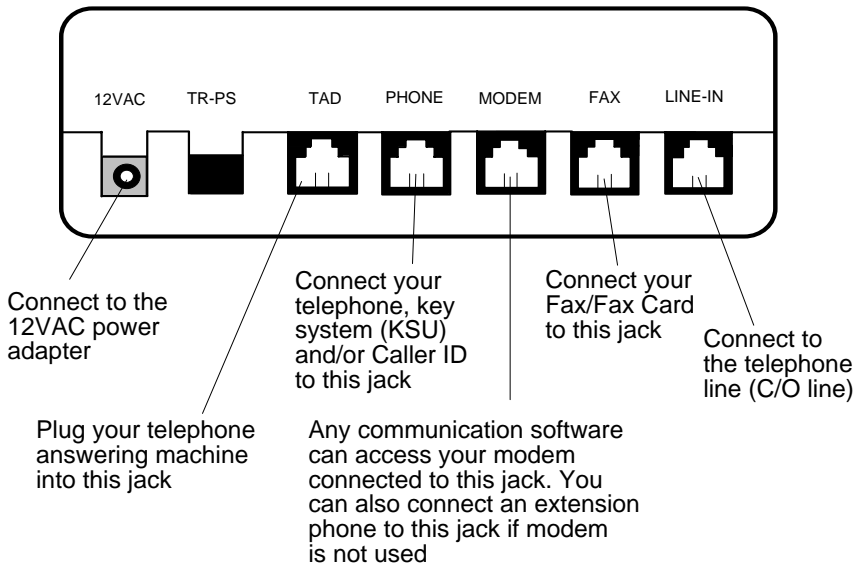
If you have a **Caller ID** device, you may connect your Caller ID in front of the *Ultra Switch 100* or connect it to the phone port of the *Ultra Switch 100*. When connecting in front of the *Ultra Switch 100*, you should set the "Rings to Answer" to 2 or more rings (please refer to page 16, "Rings to Answer"). If the Caller ID is connected to the phone port of the *Ultra Switch 100*, you should declare the availability of the Caller ID by programming the "device availability" of the *Ultra Switch 100* (please refer to page 19, Function Code "7").

Whenever the *Ultra Switch 100* answers a call and starts ringing a particular extension, the LEDs corresponding to another two extensions will blink in accordance with the ring cycles. When the extension is answered, the two LEDs stated above stop blinking and the LED corresponding to this extension lights up.

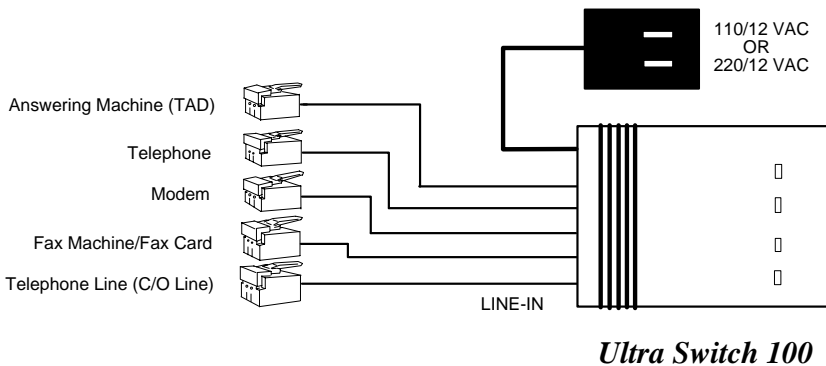
**Note:** In certain cases, a Caller ID device connected to the *Ultra Switch 100* may display calls in a different manner. Nevertheless, Caller ID information is kept in memory if the device has the capacity.

### **WARNING!**

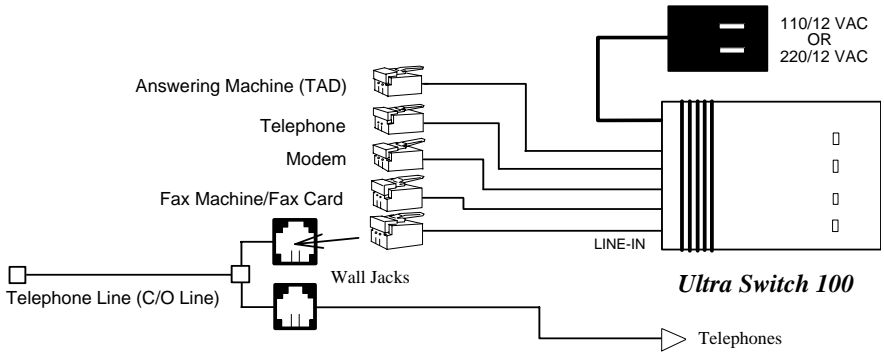
1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.



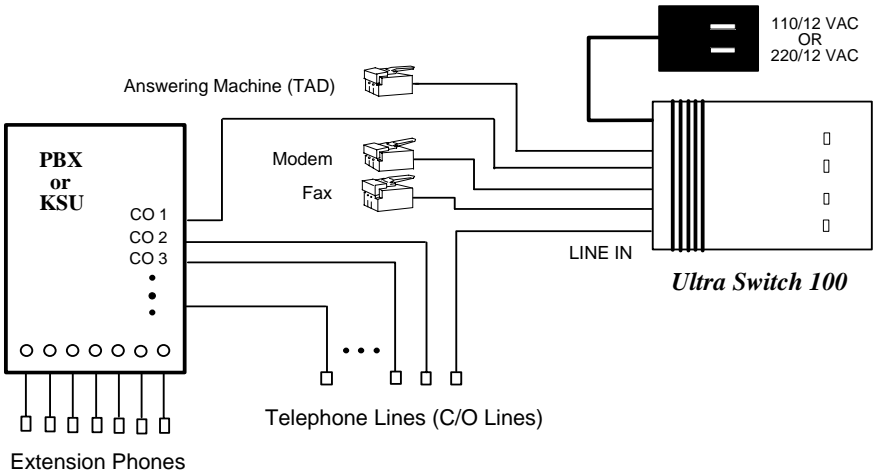
**Figure 1-1 Rear view of the *Ultra Switch 100***



**Figure 1-2 Simple Connection of the *Ultra Switch 100***



**Figure 1-3 More complex connection of the *Ultra Switch 100* in private home or small office**



**Figure 1-4 Installation in an office with KSU (Key System Unit)**

## 2. OPERATION

---

### To make calls

To use your own communication devices such as phone, fax machine or modem, you simply operate each device as if it were connected directly to the *Ultra Switch 100*. In other words, you can make a call from any device following the normal procedure for outward dialing.

When you attempt to make a call from a device (such as phone) and the line is currently being occupied by another device (such as fax machine), the *Ultra Switch 100* will generate a busy tone to remind you that the line is not available for the time being. This "**Barge-In Protection**" facilitates protection of any voice or fax/data call from being intervened by other telephone equipment connected to the *Ultra Switch 100*.

If an attempt to make a call via phone port is rejected due to the unavailability of the C/O line described above, the *Ultra Switch 100* will inform you when the line is available. Indeed, after the line is released, the *Ultra Switch 100* will ring the phone connected to the *Ultra Switch 100* one time to advise that the line is now available for communication.

### To receive voice calls

**1: Pick up any phone which is ringing.**

**2:**

<b>Case 1</b>
- If the phone is connected directly on the <i>Ultra Switch 100</i> and the caller is on the line and the line is clear - start conversation.
<b>Case 2</b>
-If the phone is connected directly on the <i>Ultra Switch 100</i> and the caller is on the line but the ring-back tone is heard - press *0 to stop the ring-back tone, and then talk to the caller. If you need to ring the phone connected behind the <i>Ultra Switch 100</i> again, press *1; if you want to ring the fax machine (or the modem connected to the <i>Ultra Switch 100</i> , press the Fax (or Modem) Access Code.

---

The procedure stated above is carried out under the condition that the phone is answered within a certain number of rings. However, it is possible that no one answers the call. In this situation, the call can be processed as follows:

1. The telephone answering machine answers the call after the number of rings exceeds the "Rings to Answer" preset in the answering machine. The answering machine then starts its normal operation.

**Note:** The "Rings to Answer" set in the answering machine must be shorter than the "Rings to Phone" ( default value: **5 rings**, page 18 ) of the *Ultra Switch 100*, otherwise, the answering machine will never answer the call. Please refer to your answering machine's operation guide to set the "Rings to Answer".

2. By the time that the number of rings exceeds the "Rings to Phone" (and, of course, the line is not answered.), the *Ultra Switch 100* will start ringing the fax machine provided that the "Rings to Phone" is set to be smaller than the "Maximum Rings" (default value: **9 rings**, page 17). Pick up the handset of a phone attached to the *Ultra Switch 100*, the line will be switched back to the phone port if the line has not been answered by the fax machine yet.

**N**

*Ultra Switch 100* switches a call from the phone port to the fax port as stated above, it is quite natural to assume that no one is in the room. The *Ultra Switch 100*, after answering the next incoming voice call, rings your phone only two times and transfers the call to the fax port. This allows a caller, whose fax machine is not able to issue the CNG tone for auto-switching, to send fax message to your fax machine. You can restore the "Rings to Phone" by employing one of the following operations through a telephone set that is connected to the *Ultra Switch 100*:

- Answer an incoming call.
- Make a call.
- Pick up the handset and then hang it up.

---

## To receive fax messages

Most of the fax machines nowadays are G3 compatible and will issue the CNG tone when they attempt to initiate fax transmission. After detecting the CNG tone, the *Ultra Switch 100* will route the line to the fax port for fax communication. As a result, automatic fax switching is achieved.

However, there are still many fax machines on the market that do not issue CNG tone at all. In this case, the *Ultra Switch 100* will not route the line to the fax port because it can not distinguish this type of fax calls from the regular voice calls. In order to receive fax messages that are transmitted from these fax machines, the *Ultra Switch 100* supports two other types of switching to switch the line to the fax port. They are: (1) manual switching, and (2) TAD-to-Fax switching.

---

### Manual Switching

---

Manual switching can be conducted locally or remotely by dialing the Fax Access Code through a tone-dial telephone.

#### Manual Switching Locally

Answer the phone (which is connected to the *Ultra Switch 100*) and press the Fax Access Code (default code: **11**, page 17) for transferring the call to your fax machine.

**Note:** . After answering the phone, if no one is on the line ( in this case, you  
y  
tered is not a correct Fax Access Code, you can make

---

### **Manual Switching Remotely**

Instruct the caller to enter the Fax Access Code after the line is answered by the *Ultra Switch 100*. The *Ultra Switch 100* will route the line to the fax port after it receives the correct code.

**Note:** . The remote switching can only be conducted through a tone-dial

*100* will answer the call after "Rings to

---

### **TAD-to-Fax Switching**

When this TAD-to-Fax mode is activated, the *Ultra Switch 100* will route the line to the fax port after the answering machine (connected behind the *Ultra Switch 100*) completes its operation ( i.e., answers the line, plays the pre-recorded outgoing message, and records incoming voice message, etc. ). Please refer to page 20 to enable this mode.

The TAD-to-Fax switching is useful to facilitate fax transmission from a pulse-dial fax machine by which Fax Access Code can not be entered to instruct the *Ultra Switch 100* for fax switching. When this mode is on, you may record the outgoing message to remind the fax caller to stay on the line until the fax tone is heard.

---

## To receive modem messages

---

### Automatic Modem Switching

---

Whenever a calling modem issues the reverse modem tone to request a data communication, the *Ultra Switch 100* can recognize the reverse modem tone and route the line to the modem port.

**Note: Reverse Modem Detection**

the calling modem to issue reverse

- 
- 1: Type your phone number**
  - 2: After the phone number, type the letter "R"**
  - 3: Press the Enter key**

The calling computer's modem generates reverse modem tone immediately after dialing.

---

## **Modem Switching by Modem Access Code**

---

There is an alternative for your *Ultra Switch 100* to route a modem call to the modem port. This allows computer connection via the modems that do not support reverse modem communication. This approach requires the Modem Access Code to instruct the *Ultra Switch 100* that a computer communication is requested. The *Ultra Switch 100*, after receiving the Modem Access Code (default code: **22**, page 17), routes the line to the modem port through which the calling and the receiving modems are connected for computer communication.

The Modem Access Code can be entered locally or remotely, both requires the code to be entered after the call is answered by the *Ultra Switch 100*.

### **To Enter the Modem Access Code Remotely**

Instruct the caller to follow the steps listed below to access your computer:

- 1:Type your phone number.**

---

**2:After the phone number, type several commas to provide a delay until the *Ultra Switch* answers.**

Note that for most computers, a comma causes the computer to delay a certain period of time before performing the succeeding operations. Determine the number of commas required based on how long a call rings before the *Ultra Switch 100* answers.

**3: After the commas, type the Modem Access Code.**

To make sure that the *Ultra Switch* receives the Modem Access Code correctly, type it several times consecutively. It is therefore highly recommended that the Modem Access code to be set in a repeated sequence such as 22, 33, or 444.

**Example:** Suppose that your phone number is 218-0707, and the Modem Access Code is 22, then typing of the following code 2 1 8 0 7 0 7 , , , 2 2 , 2 2 will instruct the *Ultra Switch* to switch the line to the modem port.

**4:Press the Enter Key.**

**To Enter the Modem Access Code Locally**

Enter the Modem Access Code through a tone-dial telephone.

**Note:** If the code you entered is not the correct Modem Access Code, you can make correction by pressing # to erase the previous code first and then entering the Modem Access Code. Notice that the code you entered previously may be a legal access code, though it is not the desired Modem Access Code. In this case, the line may be directed to the specific port corresponding to that access code, as such, re-entering the Modem Access Code can only be accepted before the line is answered by another device.

---

## To decipher "Distinctive Ringing" service

When operating in the **Distinctive Ringing** mode (page 19), the *Ultra Switch 100* can decipher the "Distinctive Ringing" service\* provided by the telephone company. This service assigns multiple phone numbers to a single line, with each number having its own ring identity. Working in conjunction with this service, the *Ultra Switch 100* identifies and directs the three ring types to a designated extension port. This allows you to connect up to three different telephone devices to a single telephone line without the burden of remembering ring pattern of each number.

Specifically, the *Ultra Switch 100* directs the call corresponding to the Primary Directory Number (PDN) to the phone port, directs the call corresponding to the first Secondary Directory Number (1st SDN) to the fax port, and directs the call corresponding to the second Secondary Directory Number (2nd SDN) to the modem port. With the *Ultra Switch 100*, the "Distinctive Ringing" service can support a wide range of applications through a single line. For example, if you are a subscriber of the "Distinctive Ringing" service, you may assign the PDN for voice device, the 1st SDN for fax device, and the 2nd SDN for computer communication.

The ring patterns detectable by the *Ultra Switch* are summarized below:

<b>DN</b>	<b>Ring Patterns</b>
PDN	Normal ringing
First SDN	Two long or two short bursts or One short, one long burst or One long, one short burst
Second SDN	One short, one long, one short burst or One long, one short, one long burst or Two short and one long burst

\* The term "Distinctive Ringing Service" may vary with each telephone company. Contact your local telephone company for availability in your area.

---

## Incoming Call Screening

You may use Call Filtering feature of the *Ultra Switch 100* to screen the incoming calls. When the Call Filter mode is enabled, only those calls with correct access code can pass through the *Ultra Switch 100* to their designated destination.

**There are three Call Filter modes: (1) Fax Filter mode, (2) Modem Filter Mode, and (3) Phone Filter Mode.** When working in the **Fax Filter mode**, the *Ultra Switch* disables the feature of automatic fax switching and processes fax switching completely through manual switching. In other words, when detecting the incoming CNG tone, the *Ultra Switch* disconnects the line immediately. All the incoming fax calls must be processed manually by entering the Fax Access Code. Likewise, when operating in the **Modem Filter mode**, the reverse modem detection is disabled and routing to the modem port can only be conducted by entering the correct Modem Access Code. When operating in the **Phone Filter mode**, the *Ultra Switch* will block the incoming voice calls unless **# followed by a Phone Access code** (page 21) is entered within a certain time interval ( the time taken for issuing rings with the number of rings equivalent to "Rings to Phone"; default: **5 rings**, page 18 ). The caller will first hear three short beeps indicating that the *Ultra Switch* is in the Phone Filter mode, and then a long silence during this waiting (for Phone Access Code) period. If the Phone Access Code is not entered correctly within this time interval, the *Ultra Switch* will route the line to the fax port or disconnect the line depending on the operating parameters set in the *Ultra Switch*. **If the code is entered incorrectly, the caller may press # first to delete the previous erroneous code and then enter the correct code (Fax Access Code, Modem Access Code, or Phone Access Code) to make correction.**

---

### To Enable/Disable the Call Filter Mode

---

MODE	ENABLE	DISABLE
Fax Filter Mode	#*81*	##*81*
Modem Filter Mode	#*82*	##*82*
Phone Filter Mode	#*83*	##*83*

---

## **To control Answering Machine from a remote location**

In many occasions, you may need to remotely control your answering machine (For instance, remote change of the outgoing message, or remote retrieval of the recorded incoming messages, etc.). It is conceivable that the control codes of your answering machine may conflict with the control codes (such as Fax Access Code, Modem Access Code, etc.) of the *Ultra Switch 100*. When this occurs, the *Ultra Switch 100* will be triggered by the control code instructions. As a result, you may not be able to access your answering machine. To avoid such possibility, **you should first suspend code reception of the *Ultra Switch 100* by pressing \*2 and then press the desired control codes of your answering machine.** The *Ultra Switch 100* will not intercept and/or interpret any tone code since then.

The code reception capability will be resumed automatically when you hang up the phone.

## **To operate with a Pulse System**

In some countries or areas, the public telephone network accepts pulse dialing only. As a result, the tone controls of the *Ultra Switch 100* stated above is no longer applicable because the dialing signals of the devices in use are pulses rather than tones. The *Ultra Switch 100*, however, provides an alternative to cope with the pulse dialing problem with the cost of less flexibility in many applications. You may enable Pulse Recognition ability of the *Ultra Switch 100* to accept pulse control signals.

When Pulse Recognition is enabled, the Fax Access Code and Modem Access code can be dialed locally through a pulse telephone except that the codes are single-digit and are not changeable. The pulse Fax Access Code and Modem Access Code are 1 and 2, respectively. While all the remote control features are no longer applicable unless a caller dials from a tone-dialing device.

### 3. PROGRAMMING

---

The *Ultra Switch 100* allows you to program a wide range of function parameters so that you can adapt the *Ultra Switch 100* to your operating environment completely without sacrificing some vital features of the attached devices or the *Ultra Switch 100* itself.

To program the desired function code into the *Ultra Switch 100*, you simply lift the handset of the phone connected to the phone port of the *Ultra Switch 100*, press **#\*** followed by the specific function code together with the required parameter, and finally ends up with **\*** to complete function setting. The *Ultra Switch 100* will respond with three short tones to indicate the success of function programming. Notice that when **#\*** are pressed, the **POWER** indicator on the top of the *Ultra Switch 100* will turn off and you will hear three short tones from the handset indicating that the *Ultra Switch 100* is ready for function programming. After setting a function parameter, you may need to program another function parameter. In this case, you just enter the corresponding function code along with its parameter and terminate with **\***. The same procedure of function programming can be repeated until all the desired functions have been programmed. Finally, you may either hang up the phone or press **\*** once more to quit. The **POWER** indicator will light up again indicating that the *Ultra Switch 100* is back to normal operation. The *Ultra Switch 100* then works exactly according to the functions you just programmed.

Note that each function setting must be completed within 6 seconds, otherwise the *Ultra Switch 100* will respond with a long tone, ignore the code having been entered and return to the ready state for further function programming.

The following is a list of all function codes available for programming and the detailed explanation associated with each function code.

1.



(1) Lift the Handset

2.



(2) Press #\* + Function Code  
(+ Parameter, if necessary + \*)

3.



(3) Acknowledgement Tone:  
Beep. Beep. Beep - Setting is accepted  
Barr ----- - Wrong Setting

4.



(4) Press \* and hang up

**Repeat Step 2 and Step 3 if more function settings are desired**

Function Code	Description	Default	Range of Parameter
0	<p><b>"Rings to Answer"</b> Number of rings detected by the <i>Ultra Switch 100</i> before the it answers.</p> <p><b>Example:</b> # * 0 5 *</p> <p>The <i>Ultra Switch 100</i> will answer the call after detecting 5 rings from the C/O line. With the devices connected to the <i>Ultra Switch 100</i> do not ring in this interval.</p>	1	1 - 9

Function Code	Description	Default	Range of Parameter
1	<p><b><i>Fax Access Code</i></b> Tone code for routing the line to the Fax port.</p> <p><b>Example:</b> # * 1 1 2 3 *</p> <p>"123" is now the Fax Access Code. Pressing 123 will instruct the <i>Ultra Switch 100</i> to route the line to the fax port.</p>	11	1- 9 or 10-99 or 100-999
2	<p><b><i>Modem Access Code</i></b> Tone code for routing the line to the modem port.</p> <p><b>Example:</b> # * 2 5 5 *</p> <p>"55" is now the Modem Access Code. Pressing 55 will instruct the <i>Ultra Switch 100</i> to route the line to the modem port.</p>	22	1-9 or 10-99 or 100-999
3	<p><b><i>"Maximum Rings"</i></b> Number of rings generating by the <i>Ultra Switch 100</i> before it disconnects the line. After answering the line, the <i>Ultra Switch 100</i> issues ring-back tones to inform the caller that the call is in process and is not answered by any device (except the <i>Ultra Switch 100</i> itself) yet.</p> <p><b>Example:</b> # * 3 8 *</p> <p>The <i>Ultra Switch 100</i> will disconnect the line after generating eight ring-back tones.</p>	9	1-99

Function Code	Description	Default	Range of Parameter
4	<p><b>Types of Rings</b></p> <p>The <i>Ultra Switch 100</i> provides two types of ring-back tones:</p> <p>Type 1 : ON (1 second), OFF (2 seconds) # * 4 1 *</p> <p>Type 2 : ON (2 seconds), OFF (4 seconds) # * 4 2 *</p>	2	1,2
5	<p><b>"Rings to Phone"</b></p> <p>The maximum number of rings that the <i>Ultra Switch 100</i> will ring the attached phone. If the (voice) call is not answered by the end of these rings, the <i>Ultra Switch 100</i> will start ringing the fax machine provided that the "Rings to Phone" is set to be smaller than the "Maximum Rings".</p> <p><b>Example:</b> # * 5 3 *</p> <p>The <i>Ultra Switch 100</i> will automatically switch the line to the fax machine by the end of 3 rings if no one answers the phone.</p>	5	Any number less than or equal to the "Maximum Rings"
6	<p><b>Pulse Recognition</b></p> <p>When this function is enabled, both pulse control and tone control are acceptable; otherwise, only tone control is acceptable.</p> <p>Pulse Recognition enable: # * 6 1 *</p> <p>Pulse Recognition disable: # * 6 0 *</p>	0	0,1

Function Code	Description	Default	Range of Parameter
7	<p><b><i>Declaration of Device Availability</i></b></p> <p><b>Additional Programming:</b>  (refer to page 12, "<b>Distinctive Ringing</b>" and page 17, <b>Fax Access Code</b> and <b>Modem Access Code</b>)</p> <p>0: Fax or modem disabled  1: Fax is disabled  2: Modem is disabled  3: Fax and modem enabled  4: Caller ID with ringing  5: Caller ID without ringing  6: Caller ID disabled  7: Distinctive Ringing Mode enabled  8: Distinctive Ringing Mode disabled</p> <p><b>Example:</b> # * 7 2 *</p> <p>The modem port of the <i>Ultra Switch 100</i> is not being used.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. The Ultra Switch 100 will disconnect the line immediately if the call attempts to link to a disabled device. However, it is not necessary to disable a device. In this case, the Ultra Switch 100 will route a call to the port not in use if the access code or identification tone (either CNG tone or reverse modem tone) associated to that port is detected.</li> <li>2. When the Caller ID with ringing has been enabled, the Ultra Switch 100 will let the first two rings pass through the phone port so that caller information can be recorded by the display.</li> <li>3. Some phones do not require to be waken-up with a ring to record Called ID. In this case, the Caller ID without ringing should be enabled.</li> </ol>	3, 6 and 8	N / A

Function Code	Description	Default	Range of Parameter
8	<p><b>Call Filter</b></p> <p><b>Additional Programming:</b> (refer to page 21, <b>Security Code</b>)</p> <p>1: Turn on Fax Filter 2: Turn on Modem Filter 3: Turn on Phone Filter 4: Turn on TAD-to-Fax 5: Turn off all the Call Filter modes</p> <p><b>Example:</b> # * 8 4 *</p> <p>The <i>Ultra Switch 100</i> will switch the line to the fax machine after the answering machine ends its operation.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. More than one Call Filter may be enabled simultaneously.</li> <li>2. When the Fax Filter (Modem Filter) is switched on, the <i>Ultra Switch 100</i> will disconnect the C/O line immediately if the CNG tone (reverse modem tone) is detected.</li> <li>3. TAD-to-Fax is useful when the caller cannot enter a tone code to direct the <i>Ultra Switch 100</i> to transfer the call to the fax machine. In this case, you may pre-record an outgoing message in your answering machine to remind the caller not to hang up the phone if he/she wishes to send a fax. The <i>Ultra Switch 100</i> will route the line to the fax machine after the answering machine ends its operation.</li> <li>4. Fax Filter overrides TAD-to-Fax. Namely, only Fax Filter is effective when both Fax Filter and TAD-to-Fax are switched on.</li> </ol>	5	N / A

Function Code	Description	Default	Range of Parameter
9	<p><b>Security Code</b></p> <p><b>Additional Programming:</b> (refer to page 20, <b>Call Filter</b>)</p> <p><b>1:</b>To set a Phone Filter's security code (Phone Access Code)  <b>2:</b>To delete a Phone Filter's security code (Phone Access Code)</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. You can set up to 5 Phone Access Codes for the Phone Filter. If you attempt to set the 6th code, the <i>Ultra Switch 100</i> will respond with a short tone and ignore this setting.</li> <li>2. The <i>Ultra Switch 100</i> scans the received code from the most significant digit to the least significant digit and compare with the pre-programmed code table digit by digit. When a match is obtained, the <i>Ultra Switch 100</i> starts operation immediately regardless the code scanning being complete or not. As such, the <i>Ultra Switch 100</i> will never recognize a Phone Access Code 12 if 1 is the Fax Access Code.</li> </ol> <p><b>Example:</b> # * 9 1 4 5 *</p> <p>Setting "4 5" as a Phone Access Code. In this case, when setting in the Phone Filter mode, a caller must enter # 4 5 to access the telephone which is connected to the <i>Ultra Switch 100</i>.</p>		<p>0-9 or 10-99 or 100-999</p>

Function Code	Description	Default	Range of Parameter
# *	<p><b><i>System Restore</i></b></p> <p>To restore all function parameters to their default values.            # * # * *</p> <p><b>Note:</b>            The System Restore also deletes all the Phone Access Codes.</p>		N/A
#	<p><b><i>Function Restore</i></b></p> <p>To restore a particular function parameter to its default value.</p> <p><b>Example:</b> # * # 2 * # 8 3 *</p> <p>To restore Modem Access Code to 22 and turn off the Phone Filter.</p>		Any legal function code

## 4 TROUBLESHOOTING

---

### Q & A

1-The *Ultra Switch 100* does not transfer a fax call to the fax machine.

Probably the fax is from a machine which does not issue CNG tone. In this case, the *Ultra Switch 100* routes the call to your phone. After answering the phone, you can identify this call as a fax call if no one is on the line and then conduct manual switching to the fax machine by dialing the Fax Access Code.

2- I answer a phone call and no one is on the line.

This is a fax call. Dial the Fax Access Code and hang up. The *Ultra Switch 100* will then route the line to your fax machine. If your telephone company uses a pulse system, dial **1** to switch the line to the fax machine.

3- After my answering machine records a voice message, the *Ultra Switch 100* transfers the call to the fax port, even if the caller does not want to send a fax message and hangs up the phone immediately after he/she leaves a message.

The TAD-to-Fax mode of the *Ultra Switch 100* is activated. When the TAD-to-Fax mode is enabled, and when the *Ultra Switch 100* detects line disconnection by the answering machine, it will transfer the line to the fax port immediately. In other words, the call is always transferred to the fax machine after the answering machine ends its operation. This will take up to 30 seconds of delay (depending on how long your fax machine ends its waiting state for fax reception) before the line is available again provided that the caller disconnects the line instead of sending a fax. You may use Function Restore to turn off TAD-to-Fax.

---

4- When I pick up a phone to answer a call, the ring does not stop.

The phone you picked up is not connected to the *Ultra Switch 100*. It is connected directly to the incoming telephone line (C/O line). Press \*0 to stop the ring (page 5).

5- When I pick up the phone the *Ultra Switch 100* starts clicking.

The telephone line is not connected to the *Ultra Switch 100* properly. Check the connection to make sure that the telephone line is connected to the LINE-IN port.

6- When I pick up my phone to make a call, I hear a busy tone.

The telephone line is currently occupied by another device. Hang up the phone and wait until that device ends its present communication and then try again.

7

Make sure that your answering machine is set to answer within a certain ring that does not exceed the "Rings to Phone" (page 6, and page 18).

8- My phone rings and I get a dial tone or a warning tone when I pick it up.

The caller has hung up the phone before you answered.

---

9- When I want to use my communication device such as phone, fax or modem, the telephone line is not available.

Check if the line is occupied by other devices. If not, verify that the phone cord from your communication device is connected to the *Ultra Switch 100* properly.

10- The *Ultra Switch 100* does not function properly.

Power off and power on the *Ultra Switch 100* to reset the switch. The *Ultra Switch 100* should restore to its normal operation now; if not, contact your nearest dealer.

# INDEX

---

<b>A</b>		<b>N</b>	
acknowledgment tone	15-16	non-ring interval	18
<b>C</b>		<b>P</b>	
call filter	13-20	phone filter	13
CNG tone	7	phone ring count	16
<b>F</b>		pulse dialing phone	14-18
fax access code	13-20	pulse recognition	14-18
fax filter	13-20	<b>R</b>	
function code	16-22	remote control	
function programming	15-22	answering machine	14
function restore	22	reverse modem	
<b>K</b>		detection	9
KSU	4	<b>S</b>	
<b>M</b>		security code	13-21
modem access code	13-20	<b>T</b>	
modem filter	13-20	TAD-to-Fax	20
		types of ring	18

