ZOOM®

Dialer 27

for Hotline and/or Toll Restriction

Installation & User Guide

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Getting Started

Thank you for purchasing the Dialer 27, which can be used as a hotline dialer, a toll restrictor, or both. The Dialer 27 plugs into a standard phone jack, and works for all the phones on the same phone line. Before you begin installing the dialer, you should read the section below.

How Dialer 27 Works

When Dialer 27 is used for a hotline application, it dials a phone number whenever something triggers the dialer. You can program the number dialed by the dialer, and the trigger that causes the dialer to dial. You can program the dialer from any tone phone connected to the same phone line as the dialer.

You can also use the dialer to restrict access to toll numbers.

Setting up and using the dialer involves these easy steps:
1. Install the dialer.
2. Once the dialer is installed, program it as a hotline dialer, a toll restrictor, or both.
3. Use the dialer.

Installing the Dialer

First, find a suitable location for the dialer. This location needs two things:

*   A standard phone jack connected to the phone line you want to use for your dialer.
    It's okay if there's something plugged into that jack, since the dialer has an extra jack for that situation. (Some toll restriction features may not work on a phone line that has ADSL service for high-speed Internet access.)
*   An electrical outlet near the phone jack for plugging in the dialer's power cube.

This power outlet should be powered up all the time, and not turned on or off by a light switch.

The dialer's location should be as close as possible to where the phone line enters your premises. See if you can tell where the phone line comes into your premises, and locate the dialer at the nearest phone jack if possible. If you can't tell and you have an apartment, pick a jack toward the center of the building. If you can't tell and you have a home, pick a jack on or near the first floor if possible.

See the picture following. Plug the power cube into the power outlet, and plug its other end into the dialer power jack. The dialer's light will blink rapidly ON and OFF. If there's something plugged into the phone jack you've chosen, unplug it and plug it into the dialer phone jack 1 as shown. Now plug the short dialer phone cord into the dialer phone jack 2, with the other end of the

dialer cord going into the wall jack you've chosen. Once you do this, the light should blink once a second to show that the dialer is installed correctly. If the light stays ON constantly, you should swap the cords plugged into the dialer, so that the short cord goes into jack 1. Now the LED should blink properly, showing that the dialer is installed correctly.
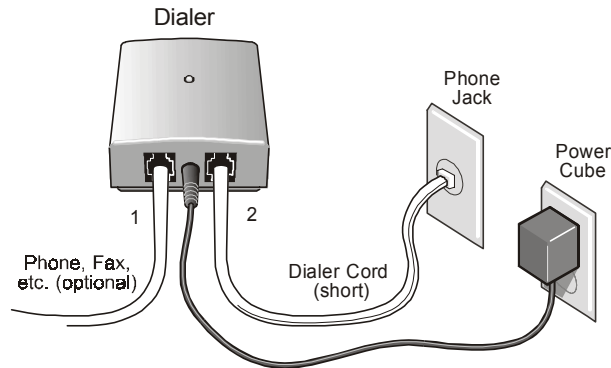
Note: If the dialer's LED remains on solidly (i.e., does not blink), plug the dialer cord into the dialer's phone jack 1. This is very important.

If you'd like, you can mount the dialer on your wall using the self-adhesive pad provided, or you can use screws if you prefer. To use the self-adhesive pad, peel off the tape on both sides of the pad, stick the pad to the bracket on the slightly smaller side with holes, and then attach the bracket to the wall. Instead of using the pad, you can attach the bracket with two ¾" #6 flathead wood screws, available in any hardware store.
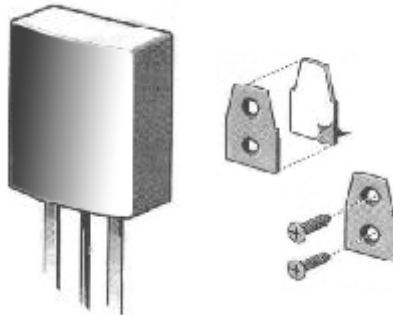
Setting Up the Dialer as a Hotline

If you do not want to program a hotline number but do want to restrict access to toll numbers, see **Setting Up the Dialer as a Toll Restrictor** (page 9). Otherwise please read below about programming a hotline number and trigger. If you want to, you can also set the dialer up as a Toll Restrictor after you have programmed a hotline number.

Programming a Hotline Phone Number

This section tells you how to program the number you want the dialer to dial when a trigger occurs.

To program a hotline phone number, do the following.
1. Take your phone off-hook
2. Press **# 0 #**
3. Enter the hotline phone number
4. Press **# #**
5. Listen for two confirmation beeps
6. Place your phone on-hook

If you wish, you can program a complicated hotline number, consisting of a sequence of numbers separated by pauses and other items. See the section **Advanced Hotline Number Programming** to learn how to do this.

Programming a Trigger

Before you can use your dialer, you will need to select the trigger that will tell the dialer when to dial the hotline number you programmed.
The available triggers are:

- **N seconds after coming off-hook, where N is from 1 to 9.**

- **Dial tone**. This is good for situations where you want someone to be able to dial without dialer involvement by dialing as soon as the dialer detects dial tone after someone comes off-hook. The dialer detects dial tone within about a tenth of a second. Please see the note below on how to reprogram a dialer configured in this mode.

- **Someone presses the first digit of the hotline phone number for a long time (more than .6 seconds).** This is good for situations where you want someone to be able to dial normally most of the time, and to be able to trigger the dialer by holding down the button of the first tone dialed. This only works for phones that generate a tone during the whole time you're pushing the button.

- **On power-up** After the dialer receives power, it electronically takes the phone off-hook and then dials after it detects about a tenth of a second of dial tone. This trigger is normally only recommended when the dialer is embedded in an electronic system. Please see the note below on how to reprogram a dialer configured in this mode.

Only one trigger can be active at any time.

To select the trigger '**dial N seconds after coming off-hook**', do the following:
1. Take your phone off-hook
2. Press **# 8 1**
3. Enter a digit from 1 through 9 for the number of seconds you want the dialer to wait
4. Press **# #**
5. Listen for two confirmation beeps
6. Place your phone on-hook

To select the trigger '**dial on dialtone detection**', do the following:
1. Take your phone off-hook
2. Press **# 8 3**
3. Press **# #**
4. Listen for two confirmation beeps
5. Place your phone on-hook

To select the trigger '**Long touchtone**', do the following:
1. Take your phone off-hook
2. Press **# 8 2**
3. Press **# #**
4. Listen for two confirmation beeps
5. Place your phone on-hook

To select the trigger '**dial on power-up**', do the following:
1. Take your phone off-hook
2. Press **# 8 4**
3. Press **# #**
4. Listen for two confirmation beeps
5. Place your phone on-hook

To reprogram a dialer configured to dial when it detects dialtone or upon power-up:

1. Unplug your dialer's power source, by either unplugging the power cube at the wall or unplugging the power jack at the dialer.
2. Plug you dialer's power source back in
3. Take your phone off-hook
4. Enter the desired programming command(s). (You must begin within 15 seconds of taking your phone off-hook, or the current trigger stays in effect.)
5. Listen for two confirmation beeps
6. Place your phone on-hook

Hotline Security

Hotline security lets you add a password that is then required for programming the dialer, and also lets you enable universal call blocking. Password protection is designed to make it impossible to reprogram your dialer without first entering the password. Universal call blocking is designed to make it impossible for a user to dial around the hotline number before the trigger happens.

Setting a Password

To set up a password, do the following:
1. Take your phone off-hook
2. Press **# * 1**
3. Enter a **password** of from 1 to 6 digits, using one of the numbers 0 through 9 for each digit
4. Press **# #**
5. Listen for two confirmation beeps
6. Place your phone on-hook

Entering a password enables password protection for the dialer. Now you must enter the password before any dialer programming, so please don't lose your password. (You may want to write it on the dialer's label.)

Follow this sequence to program the dialer when the password is active.
1. Take your phone off-hook
2. Press **#**
3. Enter the **password**
4. Enter the command you want, exactly as it appears in this manual. For instance, enter #83## to specify triggering upon dialtone detection. (Do not go on-hook between entering the **password** and the command.)
5. Listen for two confirmation beeps
6. Place your phone on-hook

You must enter the password before each command you enter.

To disable a password, do the following.
1. Take your phone off-hook
2. Press **#**
3. Enter the **password**
4. Press **# * 1**
5. Press **# #**
6. Listen for two confirmation beeps
7. Place your phone on-hook

Universal Call Blocking

Universal call blocking prevents any dialing before a trigger occurs. When universal call blocking is active, no calls can be made except by the dialer to the hotline number. No other users can share the phone line. Note that universal call blocking disables triggering via a long DTMF tone.

To enable universal call blocking, do the following:
1. Take your phone off-hook
2. Enter **# * 2 1**
3. Press **# #**
4. Listen for two confirmation beeps
5. Place your phone on-hook

To disable universal call blocking, do the following:
1. Take your phone off-hook
2. Enter **# * 2 0**
3. Press **# #**
4. Listen for two confirmation beeps
5. Place your phone on-hook

Advanced Hotline Number Programming

You can program a hotline number that is a sequence of numbers, separated by timed pauses and other events, such as prompts for computer tones or DTMF tones. You can do this by programming a dialer string. A dialer string is made up of a series of instructions and numbers. Instructions include one that tells the dialer to wait for a certain amount of time, and others that tell the dialer to wait for a computer tone, for voice, or for DTMF. Numbers can be phone numbers, PINs, or other codes that you want the dialer to dial.

Dialer strings can be too long to program all at once by hand. Therefore, you enter dialer strings one instruction or number at a time. There are separate commands to start a dialer string, and to add to a dialer string that has already been started.

To start a dialer string, do the following:
1.   Take your phone off-hook
2.   Press **# 0 #**
3.   Enter the *first* **Instruction or Number**
     (Instructions are listed below. A Number is from one to 92 DTMF digits. See details below.)
4.   Press **# #**
5.   Listen for two confirmation beeps
6.   Place your phone on-hook

 To continue a dialer string, do the following:
1.   Take your phone off-hook
2.   Press **# 1 #**
3.   Enter the *second or third, etc.,* **Instruction or Number**

(You can keep adding Instructions or Numbers until you reach a limit that's discussed below, after the examples.)
4. Press **# #**
5. Listen for two confirmation beeps
6. Place your phone on-hook

List of Instructions for Dialer Strings:

* 1 PPP	Pause PP.P seconds (0.1 second increments, 00.1 to 99.9 seconds)
* 2	Listen for Dialtone or computer tone (the tone must last at least 2.4 seconds)
* 4	Listen for Voice (at least .2 seconds of voice)
* 5	Listen for any DTMF tone

Entering a Number in a Dialer String:

Enter the complete number you want the dialer to dial.

To enter the characters * or #, you need to use the Special Sequence * 0 before the * or #.

The Special Sequence must come at the start of a number. This means that if * or # occurs in the middle or at the end of a number, you must break the number into segments. See examples below.

* 0 n Special Sequence for numbers starting with * or # (**n** = * or #).

Examples:

Suppose you want to program your dialer to call a server, wait for a computer tone, and then deliver an identifying string. Suppose the server's phone number is 1 888 555-3333, and the ID string is 0123456789. You could program the dialer to do this as follows:

1. Take your phone off-hook
2. Enter   **# 0 # 1 8 8 8 5 5 5 3 3 3 3 # #**
3. Listen for two confirmation beeps
4. Place your phone on-hook
5. Take your phone off-hook
6. Enter   **# 1 # * 2 # #**
7. Listen for two confirmation beeps
8. Place your phone on-hook
9. Take your phone off-hook
10. Enter   **# 1 # 0 1 2 3 4 5 6 7 8 9 # #**
11. Listen for two confirmation beeps
12. Place your phone on-hook

Suppose you want to program your dialer to call a server, wait for a voice prompt, and then deliver an identifying string followed by a pound sign. Suppose the server's phone number is 1 888 555-3333, and the ID string is 0123456789#. You could program the dialer to do this as follows:

1. Take your phone off-hook
2. Enter   **# 0 # 1 8 8 8 5 5 5 3 3 3 3 #**
3. Listen for two confirmation beeps
4. Place your phone on-hook
5. Take your phone off-hook
6. Enter   **1 # * 4 # #**
7. Listen for two confirmation beeps
8. Place your phone on-hook
9. Take your phone off-hook
10. Enter   **# 1 # 0 1 2 3 4 5 6 7 8 9 #**
11. Listen for two confirmation beeps
12. Place your phone on-hook
13. Take your phone off-hook
14. Enter   **# * 0 # # #**
15. Listen for two confirmation beeps
16. Place your phone on-hook

Note: The maximum total number of characters in a dialer string is 96. For each number, count the number of DTMF digits in the number plus one. The *2, *4, and *5 instructions each count as three characters, the * 0 n instruction counts as 4 characters, and the *1 PPP instruction counts as 6 characters. For the above examples, the total number of characters are 26 and 30, respectively.

Setting Up the Dialer as a Toll Restrictor

In this section we tell you how to set up your dialer as a toll restrictor. If you don't want to do this, please go to **Settings** on page 12.

Setting up the dialer as a toll restrictor prevents people from making toll calls on your line. You can define which toll calls are restricted. Some of the possible call types you can restrict are:

- All toll calls
- All international toll calls
- All toll calls to a particular country
- All domestic toll calls
- All calls to fee-based 900 numbers
- Calls to particular destinations

If you want to restrict all calls other than hotline calls, please see the section **Universal Call Blocking** under **Hotline Security** on pages 5 & 6.

To set up the dialer as a toll restrictor, you will have to do four things. They are:

- Tell the dialer how many digits there are in a domestic toll call
- Tell the dialer what the domestic toll prefix is
- Tell the dialer what the international toll prefix is
- Program numbers to restrict

You may optionally allow some numbers within a restricted area. For example, you may restrict all calls to a particular country, except for the phone number of a relative who lives in that country.

Note: The domestic toll call length and prefix, and the international prefix, are set to the North American standards by default. So in North America, if you don't change these defaults, you just have to program the numbers you want to restrict.

Set the Domestic Toll Length

To set the domestic toll call length, do the following:
1. Take your phone off-hook
2. Press **# 5**
3. Enter **LL**, where **LL** is the 2-digit description of the number of digits in a domestic toll call
4. Press **# #**
5. Listen for two confirmation beeps
6. Place your phone on-hook

LL is the two-digit length of a domestic toll call, including the domestic toll prefix. The **default** value is **11**. Note that if the length in your area is less

than 10, you must enter the first digit 0. For example, if your domestic toll calls are 8 digits long, you must enter **08**.

If the length of a domestic toll call in your location is variable, enter **00**.

Set the Domestic Toll Prefix

To set the domestic toll prefix, do the following:
1.   Take your phone off-hook
2.   Press **# 6**
3.   Enter **ddd**, where **ddd** is the 1, 2, or 3 digit prefix for a domestic toll call
4.   Press **# #**
5.   Listen for two confirmation beeps
6.   Place your phone on-hook

ddd is the domestic toll call prefix. The **default** value is **1**. Enter your complete domestic toll prefix, up to three digits. If your toll prefix is less than three digits, enter only the digit or digits used. Do not enter extra digits to bring the total to three.

Note: If you want to restrict any local calls, enter ***** for **ddd** instead of your domestic toll prefix. This will enable the dialer to restrict calls starting with an arbitrary digit. Otherwise the dialer can only restrict calls which start with either the domestic or international prefix.

Note: Leave **ddd** blank if you don't want to restrict any domestic calls.

Set the International Toll Prefix

To set the international toll prefix, do the following:
1.   Take your phone off-hook
2.   Press **# 7**
3.   Enter **iii**, where **iii** is the 1, 2, or 3 digit prefix for an international toll call
4.   Press **# #**
5.   Listen for two confirmation beeps
6.   Place your phone on-hook

iii is the international toll call prefix. The **default** value is **011**. Enter your complete international toll prefix, up to three digits. If your toll prefix is less than three digits, enter only the digit or digits used. Do not enter extra digits to bring the total to three.

Note: Leave **iii** blank if you don't want to restrict any international calls.

Set Toll Restriction

To restrict a call that starts with a certain DTMF sequence, do the following:
1. Take your phone off-hook
2. Press **# 98**
3. Enter **sequence** which is a sequence of 1 to 15 DTMF digits
4. Press **# #**

5. Listen for two confirmation beeps
6. Place your phone on-hook

You can restrict many different starting sequences by issuing this command for each such sequence. You can specify up to about 350 different sequences. This total will be reduced by any sequences you allow, below.

Examples:

If the domestic toll prefix is 1, and you want to restrict all domestic toll calls, enter **1** for **sequence**. The dialer won't let anyone make a call that starts with 1.

If the international toll prefix is 011, and you want to restrict all international calls, enter **011** for **sequence**. The dialer won't let anyone make a call that starts with 011.

If the international toll prefix is 011, and you want to restrict all calls to Germany, enter **01149** for **sequence** (49 is the country code for Germany).

If you want to restrict calls to a particular telephone number, say **1 501 555 1234**, enter that number for **sequence**.

You may restrict a total of up to about 350 different numbers.

Allow Some Calls Within a Restricted Area

To allow calls within an area you have restricted, do the following:
1.   Take your phone off-hook
2.   Press **# 99**
3.   Enter **sequence** which is a sequence of 1 to 15 DTMF digits
4.   Press **# #**
5.   Listen for two confirmation beeps
6.   Place your phone on-hook

You can use this command repeatedly to allow calls within many different areas that otherwise would be restricted. You may enter up to 350 sequences that you want to allow. This number will be reduced by any sequences you restrict, above.

Examples:

If you have restricted all domestic toll calls within the United States, but want to allow calls to San Francisco, enter the domestic prefix plus the area code of San Francisco, **1 415** for **sequence**.

If you have restricted all calls to Germany, but want to allow calls to Uncle Franz, enter Uncle Franz's number, including the international prefix and country code, for example, **01149 089 12345678** for **sequence**.

Settings

In this section we tell you how to vary the loudness or length of the DTMF tones generated by your dialer. If you don't care about these things, please go to **Using Your Dialer** on page 13.

Dialer Tone Settings

The dialer dials by generating DTMF tones. You can adjust the DTMF tone volume and tone length to please you.

Note that if you select short and/or soft tones, these may not be consistently and reliably detected. If you have this problem, often you can make just the first tone of each number longer or louder to make detection reliable. The first tone is the first digit of the hotline number, or if you used advanced hotline number programming, it is the first digit of each of the numbers you entered. By default, the first tone is longer than other tones, but at the same volume. You can modify the length and loudness of first tones using the **#*5n** and **#*6n** commands below.

If you don't want to change the DTMF tone settings, please turn **to Using the Dialer** on page 13.

Tone Volume: To control the volume, go off-hook and dial

#*34##   for LOUD tones (nominally 0dBm)

#*33##   for MEDIUM tones (nominally -6dBm) (default)

#*32##   for SOFT tones (nominally -12dBm)

#*31##   for SOFTEST tones (nominally -18dBm)

#*60##   first tones same as other tones (default)

#*61##   first tones LOUD, other tones as programmed by #*3 command

Tone Length: To control the length, go off-hook and dial

#*45##   for 250 millisecond tones

#*44##   for 150 millisecond tones

#*43##   for 100 millisecond tones (default)

#*42##   for 70 millisecond tones

#*41##   for 50 millisecond tones

#*40##   for 40 millisecond tones

#*50##   first tones same as other tones

#*51##   first tones long (1/4 second), other tones as programmed by #*4 command

Note: Interdigit time is 30ms for 40ms tones, 50ms for 50 -100ms tones, and 70ms for 150 & 250ms tones.

Using the Dialer

Using the Dialer in Hotline Mode

For most configurations, using the dialer in hotline mode is as simple as picking going off-hook. When the dialer detects a trigger condition such as a time after going off-hook, or detection of dial tone, the dialer will dial out the hotline number. The user will hear tones as the dialer dials. Then the call will proceed with normal call progress tones. That's all there is to it!

In other cases, the user must consciously choose to have the dialer dial the hotline number. For example, the trigger could be a 3-second pause after coming off-hook, or the trigger could be holding down the first digit of the hotline number for .6 seconds or more. In the first case, the user must remember not to dial anything until the programmed pause expires. In the second case, the user must remember to hold down the first digit of the hotline number for .6 seconds or more. In both cases, once the trigger occurs, the dialer will dial the hotline number (or, more precisely in the second case, the rest of the hotline number). If the user doesn't want to trigger the hotline number, or if they don't know about the hotline number, they can dial normally, and the dialer will let them do so without interfering unless you've programmed it otherwise.

Another way the dialer can be used in hotline mode is for remote sensing applications. The trigger in this case could be either going off-hook and pausing for a short length of time, or powering up the dialer. In either case, the dialer relays an event detected by a sensor. The output of the sensor must be arranged so that if a relevant event occurs, either the phone line connected to the dialer is taken off-hook, or the dialer is powered up. If the dialer is set to trigger on power up, and the dialer is powered up, the dialer will go off-hook on its own. In this type of application, the receiving equipment identifies the calling site either by using ANI to detect the phone number of the dialer's line, or by decoding an ID string that the dialer sends after the receiving equipment answers.

Using the Dialer in Toll Restrictor Mode

When a user places a call that may be blocked (restricted), the dialer listens to the digits the user dials and stores them. While the dialer stores those dialed digits, they sound very soft because the dialer prevents them from being heard by the local telephone office. When the user has finished dialing, the dialer decides whether the call should be restricted or not. If it is restricted, the dialer quickly sends a number to the central office, so that the user can't redial the restricted number. If the number is allowed, the dialer redials it. When the dialer finishes dialing, it waits passively on the phone line waiting for another call.

In most configurations, many calls are never restricted, such as local calls that don't start with a 1. The dialer typically lets the digits dialed for these calls go directly to the central telephone office.

When a user dials an international call that may be restricted by the dialer, the dialer will analyze the call after the user has stopped dialing for about three seconds. The dialer does this because international phone numbers vary in length, so it's hard for the dialer to tell when the user has finished dialing all the required digits. To avoid the three-second delay, the user can simply press # after dialing the last digit of the phone number. As soon as the dialer hears the number, it decides whether the number dialed is restricted or not, and dials as appropriate.

Frequently Asked Questions are covered in the next section. If you don't have a question, you're done. Enjoy your dialer!

Frequently Asked Questions

Q: Why doesn't my dialer work?

A: There are a number of reasons the dialer might not work.
1) Is the dialer plugged in?
    a) Is the power adapter plugged into the dialer's power jack, and into a working wall outlet?
    b) Is one end of the dialer's short phone cord plugged into the dialer's phone jack, and the other end into a working wall jack for your phone line?
2) Is the dialer's phone line plugged into the right dialer phone jack?
    a) If the Dialer's LED is on solidly, please switch the phone line to the dialer's other jack.

Q: Why doesn't the dialer dial my hotline number?

A: There are a number of possible reasons:
1) Did you hear the acknowledgment beeps when you programmed the hotline number?
2) Did you hear the acknowledgment beeps when you configured a trigger?
3) The trigger you programmed isn't occurring.
    a) Did you wait long enough for a trigger of a pause after coming off-hook?
    b) If your trigger is a long first tone of the hotline number,
        i) Did you make sure to press the first digit of the hotline number, and not some other key?
        ii) Did you remember to hold the key down for a second or longer?
    c) If your trigger is going off-hook, is the line in fact going off-hook?
    d) If your trigger is the dialer powering up, is the dialer in fact getting power? Check to see that the dialer's LED flashes.
4) The dialer may be defective.

Q: When I dial in toll restriction mode, why do the dialed digits sometimes sound soft?

A: When the tones are soft, the dialer is storing dialed digits while preventing them from being heard by the central telephone office. If the tones were loud, the central phone office would hear them and get confused.

Q: When should I consider having the dialer generate longer or louder tones?

A: If you hear the dialer dialing tones at the right time and those tones don't get you to the hotline number, or to the person you called, you may need to make the tones longer or louder. See the Settings section.

Q: How can I make the dialer dial faster?

A: You can program the dialer to use shorter tones. See the previous question.

Q: **How can I make the dialer tones quieter?**
A: Please see the question above about making tones louder.
Note that softer tones may not work as well as louder tones in some installations. You may be able to compensate by increasing tone length in some cases. Please see the question above about when to make tones longer to find out how to do this.

Q: **I have set the dialer to restrict calls, but I want to make calls to some numbers within the restricted area. How can I do this?**
A: See the section **Allow Some Calls Within a Restricted Area** on how to do this.

Q: **What do I do if the dialer has problems when I place calls using a fax machine or faxmodem?**
A: Sometimes the dialer won't work well with a fax machine or faxmodem. If your fax sends CNG (CalliNG) tones, see if you can turn these tones off.

Q: **I have two phone lines wired into one jack. How do I attach the dialer to the second line?**
A: A two-line jack is called an RJ-14 jack. You can purchase a line splitter that will provide two single-line jacks from one two-line jack. With this splitter you will be able to connect the dialer to either phone line.

Q: **How do I connect the dialer when all of the phone jacks in my house are for wall-mounted phones?**
A: You may purchase and install a wall plate adapter that provides a jack for the dialer. Another option is to connect a standard modular wall jack to the phone line and plug the dialer into that jack.

Q: **Does the dialer work with rotary or pulse phones?**
A: No, the dialer only works with tone phones connected to central telephone offices set up to accept standard tones called DTMF tones.

Q: **What happens if I finish dialing, and the dialer doesn't dial when I expect it to.**
A: When the dialer is storing digits you dial, you must complete your dialing within about 15 seconds of going off-hook for the dialer to properly process your number. If you think you have taken longer than this, please hang up and then try the call again.

Q: **I forgot the dialer's password. How can I reprogram the dialer?**
A: You can't, otherwise there'd be an easy way for a malicious person to program a dialer whose password was active. Try to find your password.

Q: **How can I remove a number I set to be restricted or allowed?**
A: There are two ways to do this. The easiest way is to remove all restricted or allowed numbers. You can also remove a particular restricted or allowed number.

To remove all restricted and allowed numbers, do the following:
1.   Take your phone off-hook
2.   Press **# 93**
3.   Press **# #**
4.   Listen for two confirmation beeps
5.   Place your phone on-hook

To remove a single restricted number, do the following:
1. Take your phone off-hook
2. Press **# 92**
3. Enter the **sequence** you used to set the restriction or allowed number
4. If the **sequence** is less than 7 digits, add *'s to bring the total to 7 digits
5. Press **9**
6. If the sequence is 7 digits or more, stop after the seventh digit
7. Press **8**
8. Press **# #**
9. Listen for two confirmation beeps
10. Place your phone on-hook

To remove a single allowed number, do the following:
1) Take your phone off-hook
2) Press **# 92**
3) Enter the **sequence** you used to set the restriction or allowed number
   a) If the **sequence** is less than 7 digits, add *'s to bring the total to 7 digits
      (i) Press **7**
   b) If the sequence is 7 digits or more, stop after the seventh digit
      (i) Press **8**
4) Press **# #**
5) Listen for two confirmation beeps
6) Place your phone on-hook

Note: If a password is active, you need to use the password for the commands above.

Examples:

To remove the restricted **sequence 1**, enter **# 9 2 1 * * * * * * 9 # #**.

To remove the allowed **sequence 1 415**, enter **# 9 2 1 4 1 5 * * * 7 # #**.

To remove the allowed **sequence 1 501 555 1234**, enter
 # 9 2 1 501 555 8 # #.

Q: I set a number to be restricted, and then changed it to be allowed, but it is still restricted.
A: You need to remove the restricted number before you can change it to be allowed. Please see the question above.
Q: I removed a restricted sequence, but it is still restricted.
A: If the restricted sequence is longer than 7 digits, and shares the first 7 digits with other restricted or allowed sequences, one of the other sequences may have been removed instead. The best approach in this situation is to remove all sequences with the **# 9 3 # #** command.

Command Summary

All commands begin right after you take your phone off-hook. Unless otherwise stated, this command summary is presented for a dialer with password protection disabled.

Note: When a command is complete, the dialer makes two beeps to signal the command was successful.

To Set Up a Trigger and Hotline Number

Set trigger of n second pause after coming off-hook	**# 8 1 n # #**
Set trigger of long first digit of hotline number	**# 8 2 # #**
Set trigger of 3-second dial tone	**# 8 3 # #**
Set trigger of power-up	**# 8 4 # #**
Set Hotline Number	**# 0 # <hotline number> # #**

To Set Dialing Parameters for Toll Restriction

Domestic toll call length LL	**# 5 LL # #**
Domestic toll prefix ddd	**# 6 ddd # #**
International toll prefix iii	**# 7 iii # #**

To Restrict Calls

Restrict Calls to numbers starting with digits **S**	**# 9 8 S # #** **[S is from 1 to 15 digits]**

To Allow Calls within a Restricted Area

Allow Calls to numbers starting with digits **S**	**# 9 9 S # #** **[S is from 2 to 15 digits]**

To Set Security Features

Set Password	**# * 1 Password # #** **[Password is 2 to 6 digits; may not include * or #]**
Universal Call Blocking	*** 2 1 # #**

To Change Dialing Speed or Dialing Volume

Super Fast Tones (40msec)	**#* 40 ##**	Softest Tones (-18 dBm)	**#* 31 ##**
Very Fast Tones (50msec)	**#* 41 ##**	Softer Tones (-12 dBm)	**#* 32 ##**
Fast Tones (70msec)	**#* 42 ##**	Soft Tones (-6 dBm)	**#* 33 ##**
Standard Tones (100msec)	**#* 43 ##**	Loud Tones (0 dBm)	**#* 34 ##**
Slow Tones (100msec)	**#* 44 ##**		
Very Slow Tones (250msec)	**#* 45 ##**		

To Kill a Command in Progress

Hang up the phone

Erase All Dialer Programming: Caution!

#**3332858##

Dialer LED Definitions

The dialer's LED provides useful information about the dialer and the line it's connected to. This table shows the LED's blinking patterns and what they mean.

Note: If dialer LED is on solidly, plug the short dialer phone cord into the dialer's other jack.

LED Pattern	Meaning
ON ¤	When the LED is ON solidly, it indicates that the dialer's short phone cord is plugged into the wrong dialer jack. **Please plug this short phone cord into the dialer's other jack.**
OFF	The dialer is OFF-HOOK. This is usually because someone is using a phone or a modem or fax. The LED will also be OFF if the dialer has no power.
One Blink Every Second: ¤ ¤ ¤ ¤ ¤ ¤ ¤ Repeats Continuously	This pattern of one blink per second indicates that the line is ON-HOOK. The dialer is ready.
Other Blinking Patterns ¤ ¤¤¤ ¤¤	The dialer will blink in other patterns when first powered up and while routing calls. This is normal.