Click2Enter-I

Operator’s & Installer’s Guide

Version 2.0

Click2Enter™

Click2Enter, Inc.

Designing and Manufacturing Access Control Technology For the 21st Century

Protected By United States Patent
Numbers 5,903,216 & 5,955,947
Foreign Patents (PCTs) in Application

Contents

1 Introduction

Overview

Click2Enter-I does away with cumbersome keys, access control codes, and remote control actuators, because every emergency response vehicle and responder already carries the key—their mobile or portable radio transceiver.

Click2Enter-I was developed to provide public safety personnel (or any authorized user) immediate access to gated residences, communities, or any security-controlled mechanism. Other authorized users can use Click2Enter-I as long as they have programmed access into its frequency bank and have a radio transceiver. Click2Enter-I, compared with other emergency access control systems, will set the industry standard for many years to come.

The Click2Enter-I combines scanner/receiver technology with control technology to act as a radio-controlled key to open access control devices (gates or security control mechanisms), allowing public safety agencies (or any authorized users) immediate access for dealing with emergencies as they occur. All that is required to activate the Click2Enter-I is that the operator be in proximity to the unit, and use two short deliberate pulses of their radio transceiver to initiate an instant activation/entry.

Features

- Scanner/receiver radio
- Externally visible power LED & activation LED
- Time/day/agency memory recall
- User-selected PIN for security of programmed frequencies
- Factory override PIN, via software
- Separate device available to perform external test/ operation of Click2Enter-I
- Five year manganese dioxide lithium battery memory backup features
- CTCSS, PL/DPL private line (PL) programming capability
- Auto detect and load of sub-audible private line codes

- Able to receive talk around carriers of trunk line radio system transmissions
- Able to receive radio transmissions to include 800 MHz bands
- 20 channel capacity
- Programmable via RS-232 interface
- Two radio transmission “clicks” for activation
- Able to capture and exhibit activation data log, via software
- Relay or dry contact ready
- Extra set of relay contacts to activate a multitude of devices
- Latch open and close features. Programmable for variables 0 to 60 minute reset delay on each channel (0 = pulse ON only)
- Field programmable using a Windows CE PDA
- Unit enclosed in a NEMA/EEMAC Type 4 fiberglass box, with security screws supplied
- Ability to handle high power mobile transmitters and lower power hand held portable transmitters
- Compatible with most analog or digital radio transmitters, using private line sub-audible transmissions (digital set to “clear mode”)
- Proprietary programming software built into each unit
- Computer software programmable using standard terminal emulation software
- Variable activation range via programming
- Retrofit kit available for extreme temperature range installations (hot & cold)
- Mutual aid compatible
- Ability to adapt and use 24V DC to 30V DC or 12V AC to 24V AC (Click2Enter-I power will be a regulated 12V DC)
- Lightning surge protected (current/surge limiting circuit) rated at 140 V AC and 175 V DC. Surge current rated at 600 amps
- Reflective logo for night identification

2 Operation

Overview

Click2Enter-I takes advantage of state of the art electronics presently being designed into scanner radio technology. The modified scanner/radio technology provides public safety agencies a quick, safe, reliable and stealthy means to activate gates or security control mechanisms.

Fire Departments, Police/Sheriff Departments, Ambulance/ Rescue Companies and other public safety agencies are issued radio frequencies by the FCC for their restricted use only. Possession of transmitting devices for non-authorized personnel is tightly controlled and transmitting on these frequencies is against the law (Federal & State statutes). The public's right to receive these emergency agency communications is not restricted, making it legal to possess emergency response scanning devices.

How it Works

The Click2Enter-I uses technology that is inherent in most all radio broadcast equipment and adapts this technology to work as a control mechanism. The security of the Click2Enter-I is increased by requiring a verification of the FCC assigned carrier frequency and the agency assigned sub-audible communication (private line code). So it takes two separate verifications to cause an activation of the unit.

An "auto-load" feature enables the Click2Enter-I sub-audible PL (private line) code to be auto detected and auto loaded. The installer/programmer can choose to enable the auto-load feature, or can manually assign the PL code.

Click2Enter-I stores a running activation log in memory for operator recall. The Click2Enter-I system allows access by any public safety agency or authorized users as long as a frequency they use is programmed into its memory.

Activation Sequence

The entire activation sequence takes less than four seconds. The operator can either be on foot and using a portable radio, or in a moving vehicle using a portable or mobile radio.

Approach the Click2Enter-I unit, then:

1. Hold the push-to-talk (mike) button until the activation light illuminates.
2. When the light shuts off, release the push-to-talk button.
3. When the activation light illuminates again, hold the push-to-talk button again until the light shuts off.
4. When the light goes out, release the button.
5. The gate opens and/or the security system deactivates.

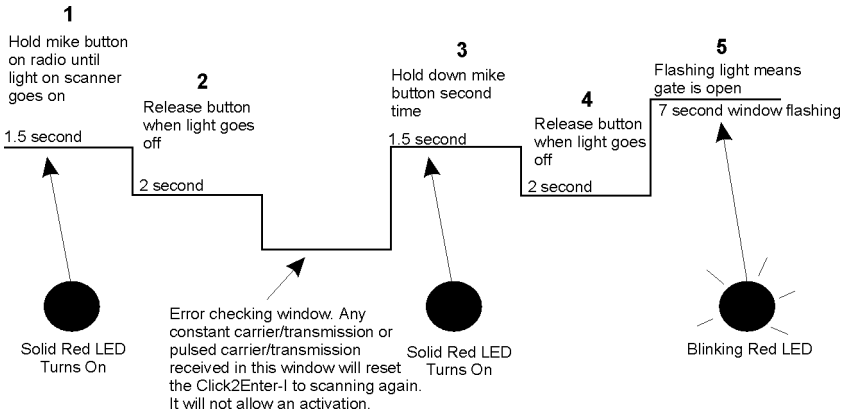


Figure 1. Activation Pulse Diagram

Note: The activation light will blink while the gate is being opened. If the gate does not begin to open once the activation light begins to blink, it is recommended that the Click2Enter-I be allowed to reset, then retry the activation sequence shown above.

If the Click2Enter-I still fails to activate the gate while the activation light is blinking, a decision to force the gate will have to be made.

Working with Radios

Since the Click2Enter-I will operate on multiple frequencies, you will need to establish who will be allowed access to the system. The Click2Enter-I will allow 20 different frequencies to operate the system. This allows multiple agencies and authorized users to operate the gate.

Note: This system requires no changes to the transmitting radios.

To program the Click2Enter-I for the radio system(s) being used, a few key pieces of information are needed:

- ***What frequency does the public safety agency want to designate for the activation frequency?*** Since the system works off of two timed transmission pulses, the regular use of the frequency will not be impaired.
- ***Does the public safety agency use Private Line Coding (tone), and if so, does it use PL (analog) or DPL (digital)?*** The Click2Enter-I works with a carrier and either type of Private Line Coding. The Click2Enter-I will work with a carrier alone, but this method is not as secure as using Private Line Coding and a carrier together.
- ***Does the public safety agency use either a Trunk or Digital radio system?*** If either are used, some accommodations must be made to use the Click2Enter-I.
    - To program the unit for a Trunk system, a talk-around or sub-channel will have to be assigned to the Click2Enter-I.
    - To program the unit for a Digital system do one of the following:
        - Program the unit to use the carrier frequency alone, knowing that this is not as secure as carrier and Private Line Coding together.
        - Reprogram one of the public safety agencies' radio frequencies to the analog or clear mode and assign it a Private Line Code.
- ***Are the carrier frequencies being used wideband or narrow band?*** The Click2Enter-I will work with most platforms being used today. See page 19 for more information on wideband and narrowband.

Portable Radios

The Click2Enter-I is designed to operate most efficiently and accurately with the transmitting radio in the upright position (vertical radio antenna). The range and effectiveness of the radio will be greatly altered in any other configuration.

Note: The Click2Enter-I will operate with a portable radio oriented in either the vertical or horizontal plane, however, the base range setting of 10 feet was set holding the radio vertically. If the radio is held horizontally, the base range setting will be increased to ±15 feet. This difference is due to the orientation of the small antenna on the Click2Enter-I. Since the Click2Enter-I needs to operate with both mobile radios and portable radios, it is best to orient the antenna for the plane of most activations (vertically).

3 Installation

Tips/Suggestions

Temperature Range

Click2Enter-I has a minimum and maximum operating temperature specification.

Maximum Range: 140° F

For most high temperature applications, the maximum rated temperature of the unit is 140 degrees Fahrenheit. For best operation, mount the unit in a location where it is shaded from direct sunlight. Should it be necessary to mount the unit in the direct sun, you may purchase an after-market sun bonnet retrofit device from Click2Enter, Inc. You may also add your own wood, plastic or fiberglass device to adequately shade the Click2Enter-I and expand its upper limit temperature range. The use of metal is prohibited since it may effect the operating range and make the provided gain/range setting data ineffective.

Minimum Range: 14° F

The low end operations of the Click2Enter-I is 14 degrees Fahrenheit. For installations that may subject the Click2Enter-I to a temperature range below this limit, you may purchase an after-market retrofit heater kit from Click2Enter, Inc. The heater retrofit kit will allow operations well below 0° F.

Mounting

It is highly recommended that the Click2Enter-I be mounted so that the operator can clearly see the operation LED and power LED. Both of these LEDs provide important feedback to the operator.

Also, Click2Enter-I has a reflective logo on its front panel to assist in immediate identification during night use.

The Click2Enter-I fiberglass box comes with four mounting brackets. We suggest that you use security head screws or bolts when mounting the unit, to prevent theft.

Distance Ranges

The operational activation range of the Click2Enter-I can be configured in many different ways.

Note: There are many variables in transmitter output power and frequency of operation, as well as installation variables such as mounting height, mounting to a fence or cement wall, etc. that can effect the operational range of the Click2Enter-I.

A chart to assist you in assigning an arbitrary distance setting of 10 feet for installations in the field is located in Table 1 below. This is a guide for you to set the general distance based on the frequency range of a 4W portable radio operating on the individual channel of assignment. These settings were made in optimal conditions. The values in your application may vary. The base range settings are not absolute. The settings in Table 1 were obtained using a 4W portable unit at a distance of 10 feet.

Note: For VHF low, a 5W radio was used.

Should the Click2Enter-I not activate at a reasonable distance or be too sensitive causing spurious activation to occur, you may want to change this setting.

Table 1: Click2Enter-I Gain/Ranging Base Settings*

Portable Radio Frequency Band	*Frequency Used*	*Click2Enter-I Gain/Range Setting*[1]
VHF Low (5W) Radio	51.0000 MHz	
VHF High (4W) Radio	154.445 MHz	
UHF Low (4W) Radio	464.500 MHz	
UHF High (4W) Radio	853.150 MHz	

* The data in this table is based on a 10 foot operating range

[1] Each lot shipment of Click2Enter-I is specifically calibrated for its own unique gain/range settings. The Gain/Range column in Table 1 shows these base settings. Each production run may be different so always match the data in this table to the unit it was shipped with.

Power Output

Another installation concept to consider is the lower power output of the hand held portable radio compared to the higher output power of the mobile transmitter radio. Should activation of the unit only be required via the hand held portable, then it is acceptable to set the operational activation distance to that particular unit.

If both portable and mobile radios are to be used, set the operation range of the portable radio first, then test the mobile's range. It is recommended that you never enable the portable handheld transmitter to operate at a range greater than the 10 feet based on the settings shown in Table 1. In some applications, due to radio wave propagation, the portable will not work at the same distance ratio as the mobile. In most applications, if the mobile radio operates at a setting of 75 feet, then the portable should operate at a range of 10 feet. These are arbitrary numbers, but they show the operational difference between the two different power outputs of units working off of the same frequency.

We recommend assigning a separate frequency and channel to be used with portable radios if the portable radios might be ignored based on the operational range of the mobile.

It is desirable to use the portables in conjunction with the mobiles. Assigning the portable units their own channel will allow greater control over the range of the Click2Enter-I. Remember that if the higher power mobile accesses the portable unit's different channel, it may open the gate at a further distance, thus causing an accidental or spurious activation or opening.

Option Relay

The option relay is provided for the installer/user to be able to activate other devices when the Click2Enter-I is activated. This relay provides a short one-time contact which can activate any other device to which it is attached. For example, if there is an alarm at the residential or commercial site, the installer could assign a circuit loop from the security alarm system to the option relay contacts. This would activate the alarm whenever the Click2Enter-I was activated, adding an increased security potential to the system.

Installation of the Click2Enter-I

OPERATORS WITHOUT BATTERY BACKUP

Install the Click2Enter-I where the top and bottom LED lights and the reflective sticker can be seen. Also, note that the logo is reflective for night identification so mount the Click2Enter-I in a visible location.

1. Install two wires from the appropriate transformer to the power terminals. Use terminals 5 and 6 for 12-24 V AC power and terminals (-)7 and (+)8 for 12-30 V DC power. Also you can use an existing radio receiver or magnetic lock power found on most circuit boards. The Click2Enter-I uses ≈77 mA in resting state and ≈150 mA in the latch state.

2. Install the two wires from terminals 3 and 4 (gate operation) on the Click2Enter-I to the keying relay terminal and the common terminal. The proper location on the operator terminal strip will be designated by the manufacturer's instructions. This device needs to be set up as a keying and hold-open function. The Click2Enter-I should be connected to a fire switch terminal. Never connect the Click2Enter-I to safety or auxiliary terminals.

Note: In some cases, such as with the FAAC 401 MPS control panel, install two wires to the keying function and two wires to break the reversing terminals.

The Elite and Sentex operators should use the fire switch terminal and the common.

DoorKing should use the key terminal. This is usually #11 and common.

Note: Be sure to check with your manufacturer instructions to identify proper terminals for hold-open activation.

3. Terminals 1 and 2 on the Click2Enter-I are used for an optional relay. You can then run wires to any low voltage load (up to 1 amp) that you wish to key. This relay does not have a timed function. If you need a timed relay for your auxiliary devices, you must install a timer circuit.

Note: The Click2Enter-I will not activate when power to the operator has failed. This condition will be shown by no visible power LED.

OPERATORS WITH BATTERY BACK UP (BUILT IN)

1. Hook up the power by connecting the Click2Enter-I terminals (-)7 and (+)8 to the radio receiver power and the common on the battery back up board. Test the unit to make sure that the gate holds open for the required time during both regular power and battery back up conditions. When the power comes back on, make sure that the gate will still hold open.

   Battery back up systems have three modes of operation:

   - Open and hold open when there is a power failure. Install Click2Enter-I as recommended above.
   - Remains closed and opens when the radio control device has given the signal to open. It will stay open until the power comes back on. In this case, connect the Click2Enter-I to the battery back up system as discussed above.
   - Gate stays closed and cycles using the power on the battery back up system until the power comes back on. In this case, connect the Click2Enter-I to the battery back up system as discussed above.

Note: Consult your gate operator manufacturer for proper installation with battery back up system.

2. Exterior battery back up system.

   This is usually an inverter type system providing 110 V AC to the gate operator. With this type of system, you may connect the Click2Enter-I in the same manner as if there were no battery back up system.

Caution: Remember that in the case of the built-in battery back up system, there is no safety function during the power failure mode of operation. Therefore, the Click2Enter-I must be used only when the gate is visible and there are no obstructions or people present.

Caution: Never bypass or disable any of the manufacturer gate safety systems or those required under the UL325 guidelines.

Review of activation terminals

- Elite and Sentex Operators: Use fire switch terminal and common.
- DoorKing: Use keying terminals such as 11 and common.
- FAAC 401MPS: Use terminals 1 and 2 for key and break, and terminals 8 and 9 for hold open.
- Battery back up for built-in units: use radio receiver relay and common terminals.

4 Configuration

Overview

The Click2Enter-I is simple to configure. The door on the waterproof case can be opened by unscrewing the security screws.

Once the door to the Click2Enter-I is open, the battery (B), serial port (C), barrier strip (① through ⑧), and test button (D) can be accessed.

Caution: DO NOT adjust the volume and squelch knobs (A), shown in Figure 2. Both of these knobs are set at the factory and adjusting them will effect the squelch and *will adversely effect the performance of the Click2Enter-I.*

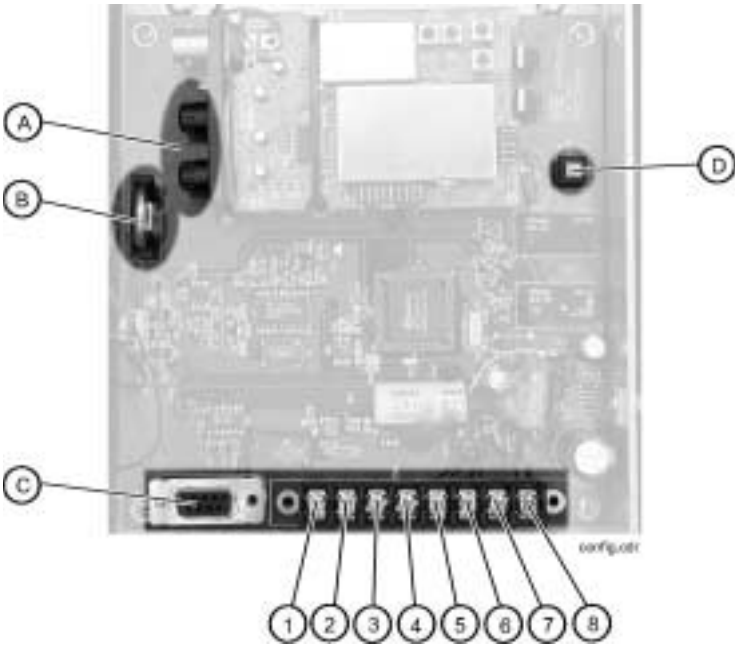


Figure 2. The Click2Enter-I System Board

Table 2: Barrier Strip Connections

Terminal Connection	*Connection Type*	*Description*
Lugs 1 and 2	Option Relay	Pulse on dry contact. Normally open relay
Lugs 3 and 4	Gate Relay	Normally open relay
Lugs 5 and 6		Used to supply 12 V AC to 24 V AC to the Click2Enter-I
Lug 7 (–) Lug 8 (+)		Used to supply 12 V DC to 30 V DC to the Click2Enter-I

Battery

The Click2Enter-I comes with a built in five year manganese dioxide lithium battery. This battery backs up the time/date and channel memory register.

Test button

The test button tests the unit's ability to receive radio signals. Once the button is pressed, the power LED will blink to indicate test mode and for approximately five minutes the unit will activate with any of the unit's standard (test only) radio signals that are in close proximity.

Once test mode is disabled, the Click2Enter-I will revert back to using the programmed operations channels.

A suitable test radio using carrier and sub-audible private line codes can be purchased from Click2Enter, Inc. or your Click2Enter authorized dealer.

RS-232 serial port

The RS-232 serial port connects the Click2Enter-I to a computer for programming purposes.

Barrier Strip

The barrier strip connects the Click2Enter-I to the devices that it will control and to its power source.

Access Control

Access to the Click2Enter-I maintenance unit is protected by three levels of passwords. The initial passwords are set when the unit is powered up for the first time. The default values for the unit are:

- Level 1: 123456
- Level 2: 234567

Level 1 is the lowest level and is used primarily by installers and other field personnel. Level 2 is intended for use by distributors or other wider use. For example, the level 2 password may be the same for all units sold from one distributor, but the level 1 password should be set to a unique value.

If the other two passwords are lost, Click2Enter, Inc. can access the unit through a factory override password. If this is necessary, please contact Click2Enter at (877) 939-3800.

Passwords can be from 1 to 15 characters in length. Level 1 ***must*** begin with the number 1 and level 2 ***must*** begin with the number 2 as shown above.

Test Mode

The Click2Enter-I has a special test mode feature. Test mode can be activated by pressing the button on the Click2Enter-I, or selecting the test mode command from the maintenance interface. Once activated, the power LED will blink until the unit returns to normal mode after approximately five minutes. Table 3 on page 18 shows the frequencies available during test mode.

You can also enter your own user-defined test channels in any of the 20 available channel memories. 00 through 09 have been preassigned by the factory using the Family Radio Service frequencies. Any of those channels can be re-programmed as needed.

Table 3: Fixed Test Channel Memory

CH	*Frequency*	*PL Code*	*Gate*	*Gain*	*Opt*
00	462.5625	67.0	32	0	N
01	462.5875	71.9	37	1	Y
02	462.6125	74.4	43	1	N
03	462.6375	77.0	45	2	N
04	462.6625	79.7	51	0	Y
05	462.6875	82.5	56	0	N
06	462.7125	85.4	59	3	Y
07	467.5625	88.5	63	4	N
08	467.5875	91.5	67	1	Y
09	467.6125	94.8	75	2	N
10	User Defined				
11	User Defined				
12	User Defined				
13	User Defined				
14	User Defined				
15	User Defined				
16	User Defined				
17	User Defined				
18	User Defined				
19	User Defined				

5 Programming

Overview

Having multiple-user programmability answers the mutual aid problem that presently exists with other emergency access control products.

The Click2Enter-I is programmed to work with the most commonly used frequencies used by public safety agencies. See “Specifications” on page 31.

Note: A standard carrier line radio’s frequency and tone (PL or DPL) may be entered into the Click2Enter-I to allow property owners to open the gate with their own radio.

VHF Wide Band vs. Narrow Band

The frequency bandwidth, or stepping, is very important to the operation of the Click2Enter-I. Since the Click2Enter-I is a wide-band receiver, it will work with 100% of the allocated wide band frequencies with Private Line Code assignments.

Although very few VHF narrow band radios are in use for public safety applications, it is possible to program the Click2Enter-I for this kind of radio. A VHF narrow band frequency will contain four digits to the right of the decimal point. For example, the frequency 137.1234 is in the narrow band range. A frequency containing 3 digits to the right of the decimal point is in the wide band range. For example, the frequency 154.123 is in the wide band range.

There are some limitations in using the VHF narrow band frequency range. Using VHF narrow band, the Click2Enter-I will operate at 100% efficiency with the frequency or carrier only. The Private Line Codes will operate in only 50% of the allocated frequencies. It is impossible to predict which Private Line Codes will work, so it is highly recommended that the system be fully tested by a public safety official in your area.

UHF Wide Band vs. Narrow Band

As with VHF wideband, UHF wideband will have three digits after the decimal point and will work with all Private Line Codes.

Although very few UHF narrow band radios are in use for public safety applications, it is possible to program the Click2Enter-I for some frequencies in this band.

For UHF narrow band, the frequency can contain four or five digits after the decimal point. Four digit UHF frequencies will work with all Private Line Codes. UHF narrow band frequencies that contain five digits after the decimal point are beyond the range of the Click2Enter-I.

Note: A small number of four digit UHF frequencies (i.e. 380.1234) are in use for public safety applications, but at this time there are very few, if any, five digit UHF frequencies (i.e. 380.12345) being used for public safety applications.

Programming the Click2Enter-I

Any terminal emulator such as Windows HyperTerminal can be used to program the unit. If HyperTerminal is not installed on your Windows-based computer, it can be installed from the Microsoft Windows installation CD:

1. Click **Settings** > **Control Panel** from the **Start** menu.
2. Click **Add/Remove Programs**.
3. Click the **Windows Setup** tab.
4. Double-Click **Communications** from the component menu.
5. Select the HyperTerminal checkbox.
6. Click **OK**.

Note: See page 25 for HyperTerminal settings.

Adding Frequencies to the Click2Enter-I

1. Once the frequencies have been obtained from the proper agencies, verify that they will work with the Click2Enter-I system by comparing them to Table 1 on page 10.

2. After the programmer has determined that the frequencies are suitable for programming, the Private Line (PL) coding must be obtained.

   The PL coding can be either analog (PL) or digital (DPL). The Click2Enter-I can auto-load either of these types, but the programmer must know whether the frequency is PL or DPL.

   To be most effective, it is recommended that the exact PL and DPL coding be obtained from the public safety agency for verification and programmed manually into the unit.

Caution: There is a small chance that the Click2Enter-I may falsely load improper PL or DPL codings. If auto-load is used to load the PL or DPL coding, it is highly recommended that the public safety agency be encouraged to test the system within 48 hours of installation. Failure to comply could result in a defective system.

   Connect and log in to the Click2Enter-I using a standard male to female serial cable and a terminal emulator program. See “Logging On to the Unit” on page 24. Type **E** at the **C2E>** prompt and enter the frequency data. See page 28 for information on entering this data.

Removing Existing Frequencies

If you need to remove a frequency from the Click2Enter-I, you must zero out the frequency from the assigned channel.

1. Enter the Click2Enter-I setup program (See “Logging On to the Unit” on page 24) and select **E – Enter Channel Data**.
2. Enter the Channel number at the Channel prompt.
3. Use the **Backspace** key to remove the entire frequency data including the leading space at the Frequency prompt.
4. Enter **0**, and press **Enter**.

The setup program will then clear the channel of all data.

Gain Settings

The gain must be set while entering the frequency into the unit. The gain setting allows the programmer to set the range of operation by adjusting the unit sensitivity.

When programming the gain setting, always adjust to the **minimum distance** necessary for your application to prevent unwanted activations.

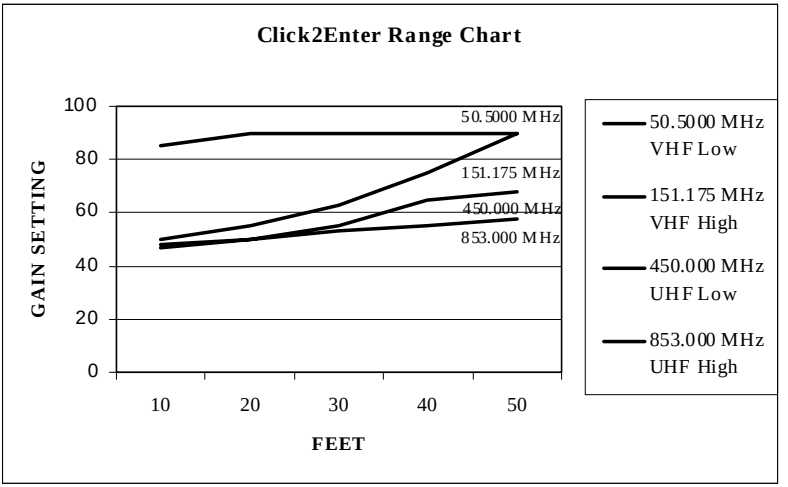
Note: In very rare circumstances, you may need to adjust the gain/range setting very low in order to accommodate the higher power output of a mobile transmitter. In doing so, the lower-powered 4W portable unit will be ranged in too closely to operate the Click2Enter-I.

The gain can be set from 0 to 255. The actual gain swing typically programmed will be between 30 and 150.

Warning: To protect the lives of people and pets, as well as to prevent property damage, do not set the gain to a level that allows for the operation of the gate to be beyond the line of sight.

Figure 3 on page 23 shows the gain/range settings of a typical 4W portable radio operating in the various frequency bands. The figure shows that the gain/range of the unit is dependent on the frequency band. It is also dependent on the radio power output and the relative placement.

These settings were derived from optimum placement of the unit. The actual settings required in your application may differ.



Band	*10 feet*	*20 feet*	*30 feet*	*40 feet*	*50 feet*
50.5000 MHz (5W) @ 123.00 (PL)	048	050	053	055	058
151.1750 MHz (4W) @ 192.8 (PL)	050	055	063	075	090
450.0000 MHz (4W) @ 82.5 (PL)	047	050	055	065	068
853.0000 MHz (4W) @ D023 (DPL)	048	050	053	055	058

Figure 3. Ranging Chart

Programming with a Palm Top

To make programming the Click2Enter-I easier, a small PSION REVO organizer with terminal emulator software can be used to program the unit in the field. This organizer has a complete keyboard to make programming the Click2Enter-I simple. A brochure for the PSION REVO is included with the Click2Enter-I. For more information on this product, please contact Click2Enter at (877) 939-3800.

Logging On to the Unit

During Initial Power Up

Connect a PC to the Click2Enter-I serial port. The first time the Click2Enter-I is powered on, the firmware will detect that the non-volatile memory has not been initialized. The unit will enter the factory maintenance mode (level 3) and prompt the user to enter the serial number, time, and date.

After the initial installation, the Click2Enter-I will default to level 1 or level 2 mode.

Note: Although the serial number is typically entered by the factory, in the event that you need to enter it manually, is important to connect a PC to each unit when it is initially powered on.

During Normal Operation

To access the Click2Enter-I maintenance interface:

1. Connect a PC or serial-enabled palm top to the Click2Enter-I serial port using a standard 9-pin male to female serial cable.
2. Run a terminal emulator such as Microsoft Windows HyperTerminal.
3. The Click2Enter-I operates at:
   - 9600 bps
   - No parity
   - Eight data bits
   - One stop bit
   - Xon/Xoff Flow control
4. Press the **Enter** key.

   Note: The unit will not display anything on the terminal program until you press the **Enter** key.
5. Enter the password as shown below. For default password, see “Access Control” on page 17.

```
Click2Enter (tm) - V1.06 - C2E-1.0 - S/N
Copyright (C) 2000 Click2Enter Inc., Sonoma CA
U.S. Patent number 5,903,216 and 5,955,947.
Foreign patents pending. All rights reserved.

Password: Type password here. It will not show on the screen.
```

Figure 4. The Maintenance Screen login prompt

Note: When the programmer leaves Click2Enter-I idle for approximately five minutes, a time-out feature causes the unit to default to asking for the re-entry of the assigned password.

If you enter the password correctly, the maintenance command prompt shown below appears:

```
Press ? for help.

C2E> ?
```

Figure 5. The Maintenance Screen command prompt

Note: If no maintenance commands are sent to the Click2Enter-I within five minutes, the maintenance mode will terminate and the unit will revert to its normal mode.

Maintenance Commands

Enter the **?** command to list the following maintenance commands.

```
C2E> ?

C - Complete Program Listing
D - Set Date & Time
E - Enter Channel Data
G - Toggle Gate Relay
H - List Activation History
L - List Channels
O - Toggle Option Relay
P - Change Passwords
R - Reset
S - Status Report
T - Toggle Test Mode
X - Exit Programming Mode
Y - Copy Test Channels
Z - Erase all Channels and History
```

Figure 6. Viewing the List of Maintenance Commands

C This command will list the 50 event activation history (date, time and channel of activation), the test channel register (0-19 channels) and the activation channel register (0-19 channels).

D This command sets the time and date of the on-board clock chip. The data must be entered ***exactly*** in the form: mm/dd/yyyy hh:mm. For example, “04/18/2000 18:43.”

Note: Time is in 24 hour format.

E This command allows the operator to enter data for a specific channel.

```
C2E> E

             Channel: 19
           Frequency: 460.125
        Mode (C/P/D): D
 DPL Code (0 = auto): D732
      Gate Open Time: 22
                Gain: 44
Option Control (Y/N): Y

C2E>
```

Figure 7. Entering Channel Data

- **Frequency**: Enter a frequency at the Frequency prompt. To remove or zero a programmed frequency, see "Removing Existing Frequencies" on page 21.

Note: At least three digits after the decimal point must be entered in the frequency.

- **Mode**: Select the channel Mode by entering one of the following:
  - C Carrier-only operation
  - P PL tone activation
  - D DPL code activation

- **Code**: Enter the DPL or PL codings that are supplied by the public safety agency. The DPL and PL codings can also be auto-loaded by selecting PL/DPL Code **0**. If auto-load is selected, be sure to have the public safety agency test the unit for proper operation.

Note: When entering a DPL Code, you must add a "D" prior to the number as shown in Figure 7 above. For PL codes, just enter the number without a preceding letter.

- **Gate Open Time**: Enter the length of time the gate will stay open before it automatically closes.
- **Gain**: The typical base setting for Gain varies with each lot/shipment.
- **Option Control**: Enter **Y** in the Option Control prompt to allow the option relay to activate. For more information on the option relay, see "Option Relay" on page 11.

G This command changes the state of the Gate relay for testing purposes, allowing field service personnel to check the wiring of the Gate relay.

H This command lists the 50 most current entries stored in the activation history log.

L This command lists the contents of the channel memory.

O This command changes the state of the Option relay for testing purposes, allowing field service personnel to check the wiring of the Option relay.

P This command allows the user to change passwords. At level 1, only the level 1 password can be changed. At level 2, the level 1 and level 2 passwords can be changed. See Figure 8 below.

```
C2E> P

Password level: 1
   New Password: 123456
    Enter again: 123456

C2E> 2

 Password level: 2
   New Password: 234567
    Enter again: 234567

Invalid password or passwords don't
match.
Installer password must start with a
'1'.
Distributor password must start with a
'2'.

C2E>
```

Figure 8. Changing Passwords

Level 1 ***must*** begin with the number 1 and level 2 ***must*** begin with the number 2, as shown in Figure 8 above. See “Access Control” on pag e17. The previous example shows the original factory override passwords.

R The reset command resets the Click2Enter-I to a normal operating status as follows:

- Test Mode is cancelled
- The gate is closed
- The option control is deactivated

S This command lists the current state of the Click2Enter-I.

T This command toggles the test mode on or off. See “Test Mode” on page 17.

X This command terminates the maintenance mode access to the Click2Enter-I. The maintenance mode terminates automatically if no commands are entered within approximately five minutes.

Y This command is for Click2Enter, Inc. use only.

Z This command erases all channels.

6 Specifications

Memory Channels	
Main Bank	20
Test Bank	20
Spurious Rejection	
FM at 154 MHz	40 dB
Selectivity	
± 10 KHz	-6 dB
± 18 KHz	-50 dB
IF Interference Ratio	
257.5 MHz at 154 MHz	50 dB
21.4 MHZ at 154 MHZ	100 dB
Scanning Rate	25 channels/sec.
IF Frequencies	257.5 MHz, 21.4 MHz, and .455 MHz
Current Demand Nominal Conditions	≈77 mA at idle (±10%) 150 mA during activation with large LED in ON condition and gate relay in latch condition

	Freq.	**Step**	**Mode**
Frequency Coverage	29 - 54 MHz	5 KHz	FM
	137 - 174 MHz	5 KHz	FM
	380 - 512 MHz	12.5 KHz	FM
	806 - 824 MHz	12.5 KHz	FM
	849 - 869 MHz	12.5 KHz	FM
	894 - 960 MHz	12.5 KHz	FM
	(Without Cellular Band)		

Max. Current at Relay	
Gate	1 A
Option	1 A
Power Requirement	12 to 30 VDC 12 to 24 VAC
Current Drain	Gate, Option, and LED activation = (±10%) 150 mA
Operating Temperature	-10° to +60° C
Dimensions	8½" x 6½" x 4¾" (HWD)
Weight	≈2.9 lbs.

7 Click2Enter, Inc. Limited Warranty

Click2Enter, Inc. (Click2Enter) warrants the Click2Enter-I (Product) only to be free from defects in material and workmanship under normal use and service for a period of one year after the date of purchase by the original customer.

Click2Enter's sole obligation under this warranty is limited to repairing or replacing, at our discretion, any parts which shall be determined by Click2Enter to be defective, and is conditioned upon the original customer giving notice of any such defect to Click2Enter within the warranty period. Click2Enter reserves the sole right to make the final decision whether there is a defect in materials and/or workmanship, and whether or not the product is within the warranty period. Click2Enter is not responsible for any damages or other cost/s proximately caused by, or which may result from installation, handling, non-recommended operation abuse, or modifications not authorized by Click2Enter for any damages which may arise out of use of the Product.

This warranty shall not apply to any Click2Enter product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished including improper installation or connection to an improper voltage source, or products damaged by Acts of God (lightning strikes, power surges, floods, fire, natural disaster) or extended to units which have been repaired or altered outside of the factory.

Click2Enter, Inc. reserves the right to make changes or improvements to our products without incurring any obligation to similarly alter products previously purchased.

The warranty covers bench repairs only, and any repairs must be made at the factory or place designated in writing by Click2Enter. Any product must be returned to Click2Enter: by calling toll free **877-939-3800**; by writing Click2Enter, Inc. P.O. Box 1532 Sonoma, California 95476; or via the world wide web at ***www.click2enter.net***. Freight will be paid by the party seeking warranty service. Click2Enter will pay freight on our return of repaired or replaced items in warranty. Click2Enter will not be responsible for any costs incurred involving on-site service calls, or for any labor charges incurred in the removal or replacement of defective units/parts.

THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ALL OTHERWARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABLE QUALITY, MERCHANTABILITY OR FITNESS FORA PARTICULAR PURPOSE, OR THOSE ARISING BY LAW, STATUTE, USAGE OF TRADE OR COURSE OF DEALING, AND IN LIEU OF ANY OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF CLICK2ENTER. ACCORDINGLY, CLICK2ENTER ASSUMES NO LIABILITY OR OBLIGATION WHATSOEVER IN THE SALE OF THIS PRODUCT INCLUDING ANY LIABILITY FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES TO YOU OR ANY OTHER PERSON, PROPERTY OR ENTITY RESULTING FROM THE USE OR POSSESSION THEREOF. OUR MAXIMUM AGGREGATE LIABILITY TO YOU SHALL NOT EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT. THE LIMITATIONS IN THIS SECTION SHALL APPLY WHETHER OR NOT THE ALLEGED BREACH OR DEFAULT IS A BREACH OF A FUNDAMENTAL CONDITION OR TERM, OR A FUNDAMENTAL BREACH. WARRANTIES IMPLIED BY LAW ARE LIMITED IN DURATION TO THE ONE YEAR PERIOD DESCRIBED ABOVE.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Warranty Registration

To validate the above warranty, the purchaser must fill out and return the enclosed warranty postcard.