

M7100 System Model Radio User's Guide *for* Cecil County, Maryland

Training Session Notes

* SAFETY ITEMS *

- **DO NOT**...operate the mobile radio when someone is outside the vehicle within two feet of the antenna. This is a recommendation from OSHA that applies to any type of radio transmitter such as a cellular telephone, CB radio, our old radio system, or our new ORION radios.
- **DO NOT**...operate the mobile radio if any of the antenna connectors are loose. This is a basic safety precaution. If the antenna cable or connectors are loose, please place a service call for repair.
- **DO NOT**...operate the mobile radio near or in an area where blasting is taking place. Anyone using radio controlled explosives must post signs. If you see a caution sign about blasting in the area, you must turn your radio off. This applies to any radio equipment capable of transmitting: phones, CBs, etc.
- **DO NOT**...operate the mobile radio in an explosive atmosphere. The radio is an electrical device with switches that can cause an explosion in an explosive atmosphere. If you can operate your vehicle or any power tools, it is safe to use the radio.

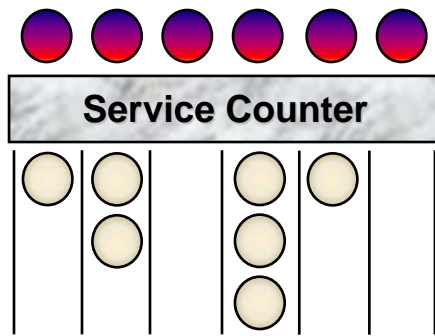
Operating Rules and Regulations

The Federal Communications Commission sets all rules for two-way radio use. The user of two-way radio equipment should be familiar with these basic rule requirements.

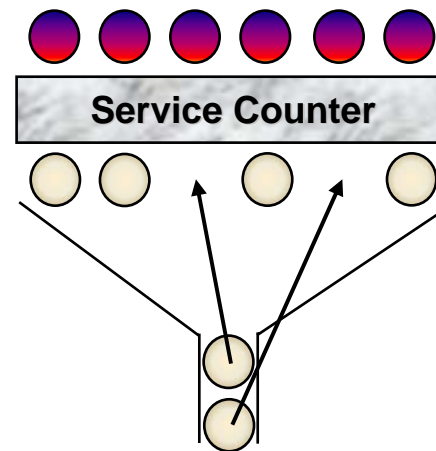
- **It is a violation of FCC rules to interrupt any distress or emergency message.**
- **Any use of profane or obscene language is prohibited.**
- **It is against the law to send false call letters or a false distress or emergency message.**
- **All messages must be brief and limited to the business need.**
- **It is a violation of FCC rules to send personal messages, unless in an emergency.**
- **The FCC requires that radio systems be identified by use of the assigned Call Letters. The radio system does this automatically.**

Conventional vs. Trunked

Conventional



Trunked

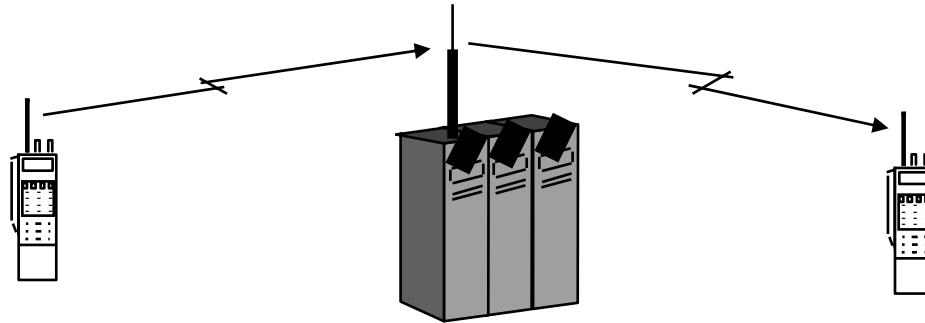


 Service Employee

 Customer

Computerized Assignment of Channels

Why Trunking?



Trunking:

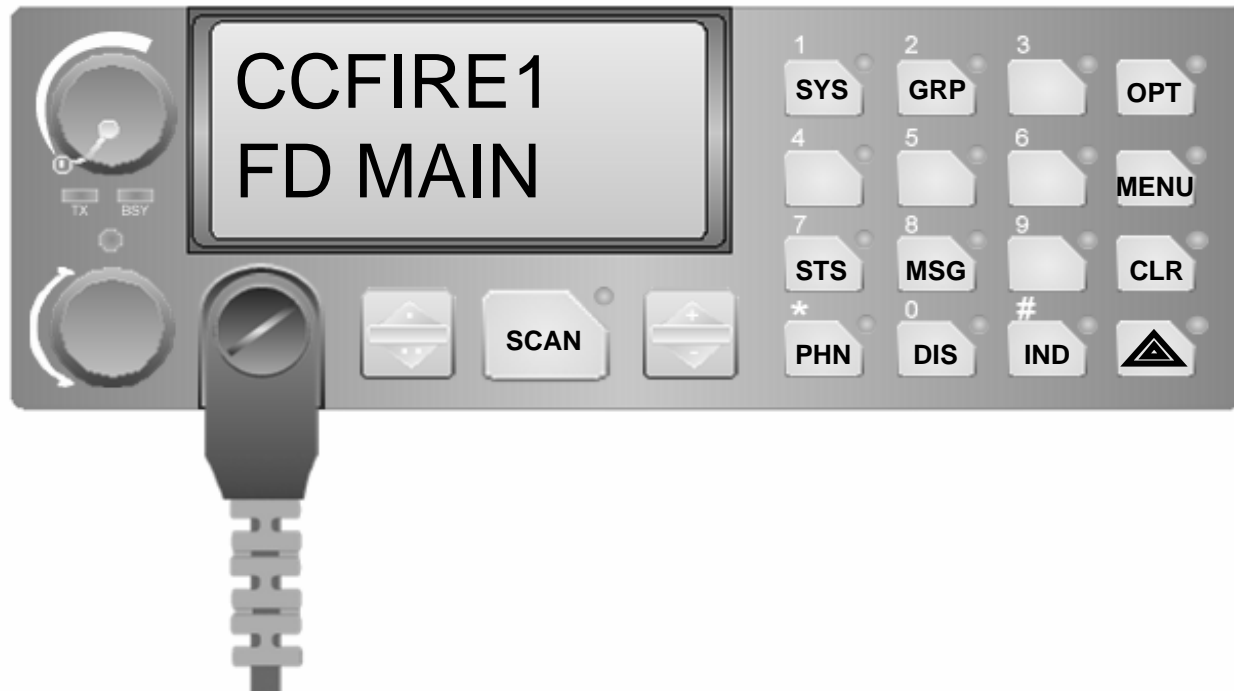
- Improves spectral efficiency
- Relieves the user from managing the channel
- Encourages cross agency / shared communications
- Establishes communications privacy
- Encourages private communications
- Discourages eavesdropping by scanners
- Establishes "queuing" rather than "waiting"
- Enables priority use during busy times

EDACS® Trunking System Features

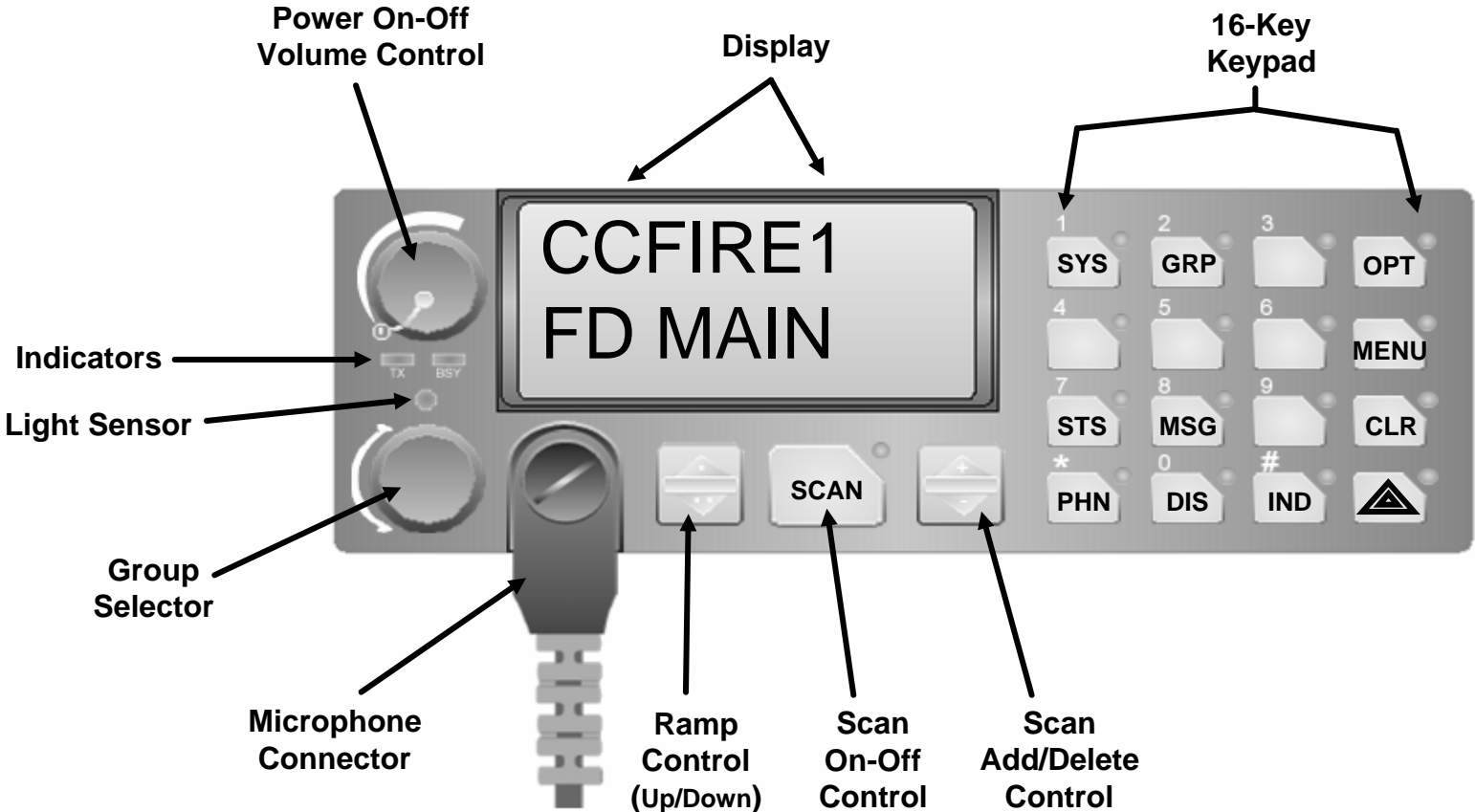
- **Digital Control Channel**
- **Multiple Working Channels**
- **< 0.5 Second Access**
- **Group & Individual Voice Calls**
- **Logical ID (LID) for each radio**
- **Late / Delayed Entry**
- **Emergency Calls**
- **Queuing with Priority**
- **Unit Enable / Disable**
- **Wide Area Coverage**

M-7100 SYSTEM MODEL RADIO KEY FEATURES

- 2-Line, 16-Character Alphanumeric Display
- Back-lit Keypad
- LEDs on Keypad Function
- Custom Scan Capability
- No Stepping on Someone's Transmission
- Easy to Use



M-7100 Front View



M-7100 Desk Top Station



Display Indicators

(Refer to Previous Page for Display Position)

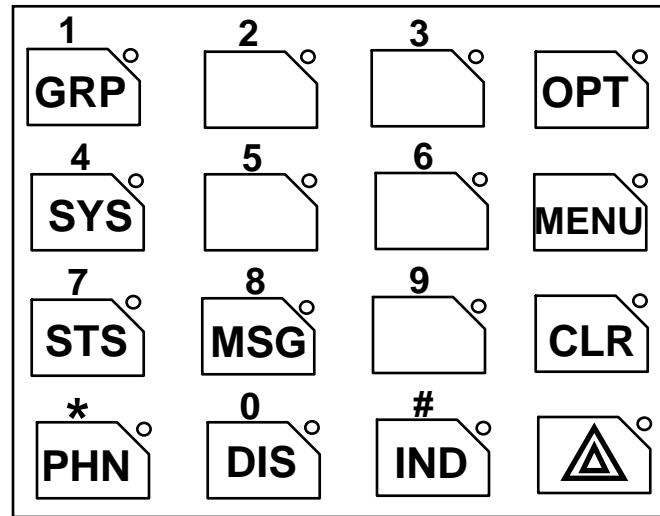
LINE 1: Current System Name (*example:* CCFIRE1)
 Volume Level (VOL = 10)
 Caller Identification (GR 1234)
 Call Queued (QUEUED)
 'Who Has Called' (* WHC *)

LINE 2: Current Talkgroup Name (*example:* FD MAIN)
 System Busy (SYS BUSY)
 Call Denied (DENIED)
 Individual Call (*INDV*)
 Control Channel Scan (CC SCAN)
 Wide Area Scan (WA SCAN)
 Receive Emergency (*RX EMER*)
 Transmit Emergency (*TX EMER*)

M-7100 Alert Tones

| | |
|------------------------|---|
| Call Originate | short mid-pitched beep (“beep”) |
| Autokey | short mid-pitched beep sounding after queued and an open channel is gained (“beep”) |
| Call Queued | high-pitched tone (“beep”) sounded when the system places the call request in a queue |
| System Busy | three low-pitched beeps (“dut-dut-dut”) |
| Call Denied | low pitched tone (“bomp”) sounded when the radio is not authorized on the selected system |
| Timing Out | five short high-pitched warning tones (“beep..”) followed by a low-pitched tone (“bomp”) |
| Key Press Alert | short tone (“beep”) for access or low-pitched (“bomp”) for denial |
| Missed I-Call | telephone ring sounded when an incoming individual call has not been answered |

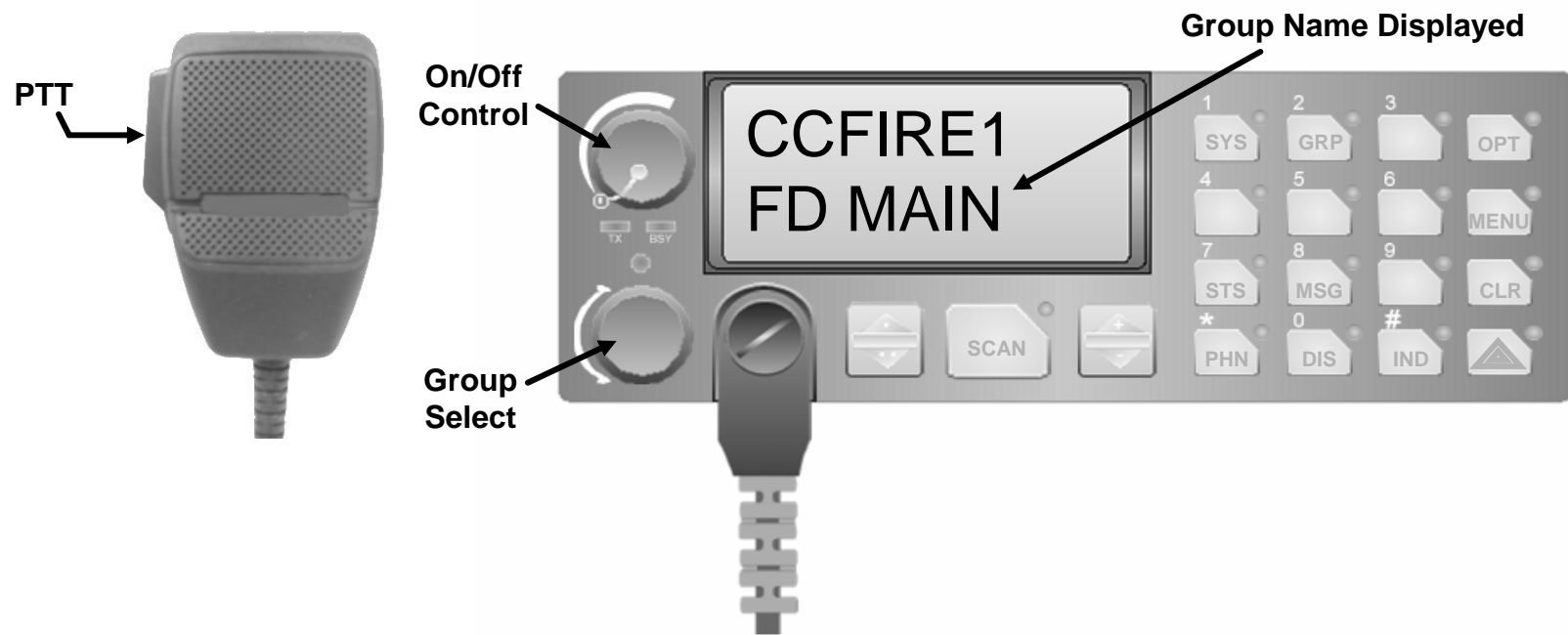
Keypad Functions



SYS - changes current system
GRP - changes current group
OPT - toggle a PC programmable feature on/off
MENU - accesses the menu list and acts as an “enter” key
CLR - clears the display

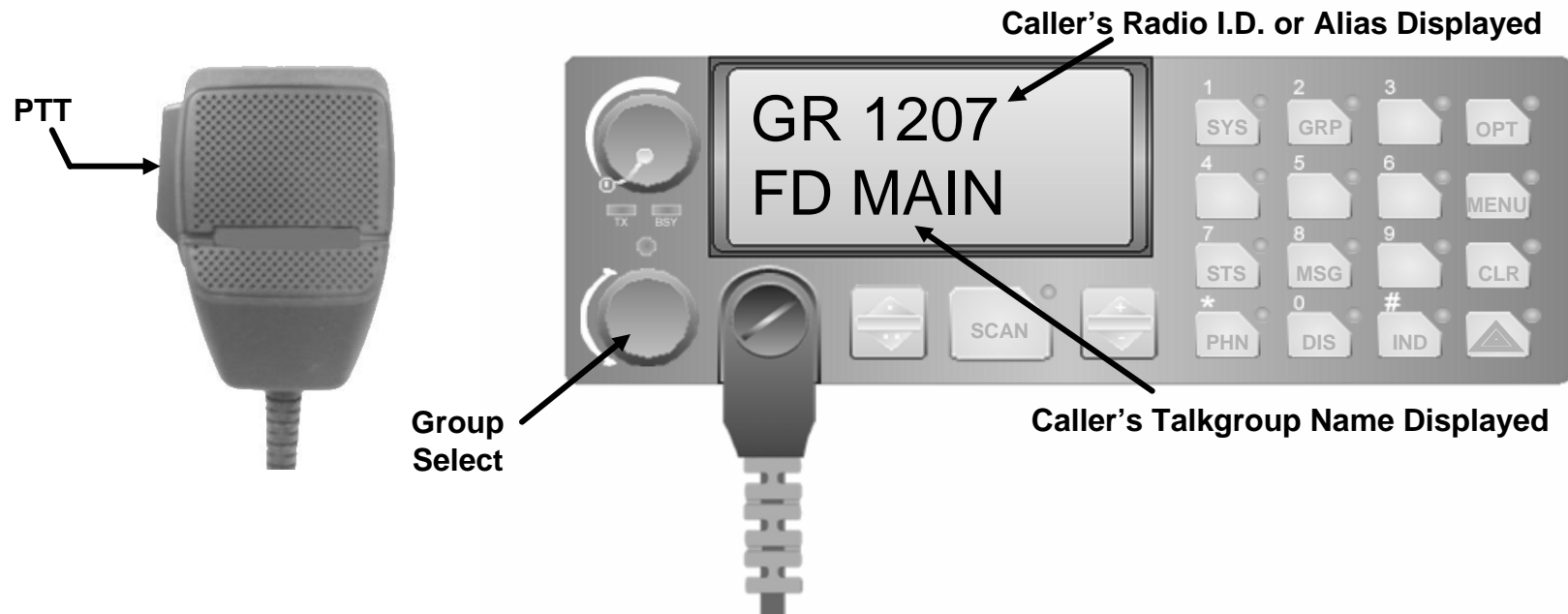
STS - status button
MSG - message button
PHN - used to place telephone calls
DIS - used to change the display brightness
IND - used to place individual calls
 - used to declare an emergency

M-7100 Operation To Talk



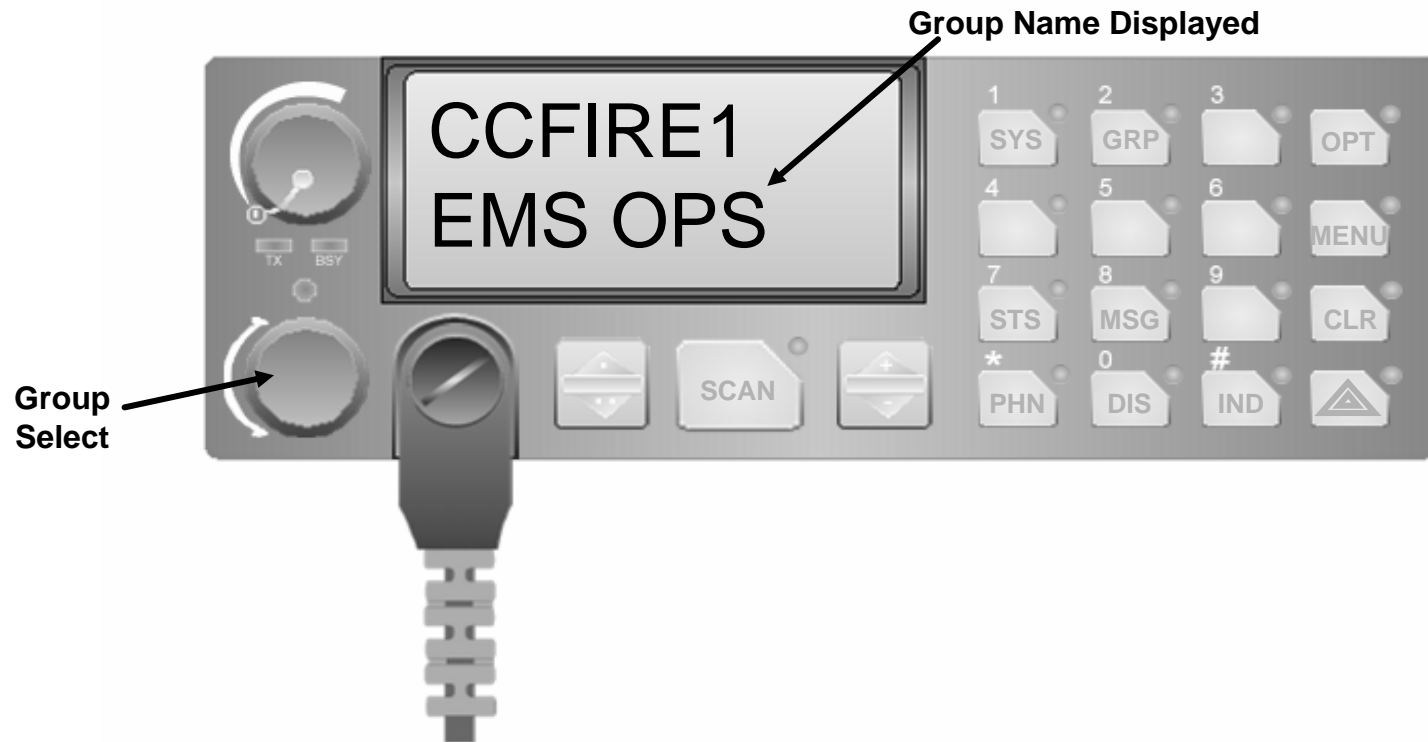
- Turn on the radio.
- Select the group you want to reach.
- The Group names appear on Line 2 of the display.
- PTT.

To Receive A Call



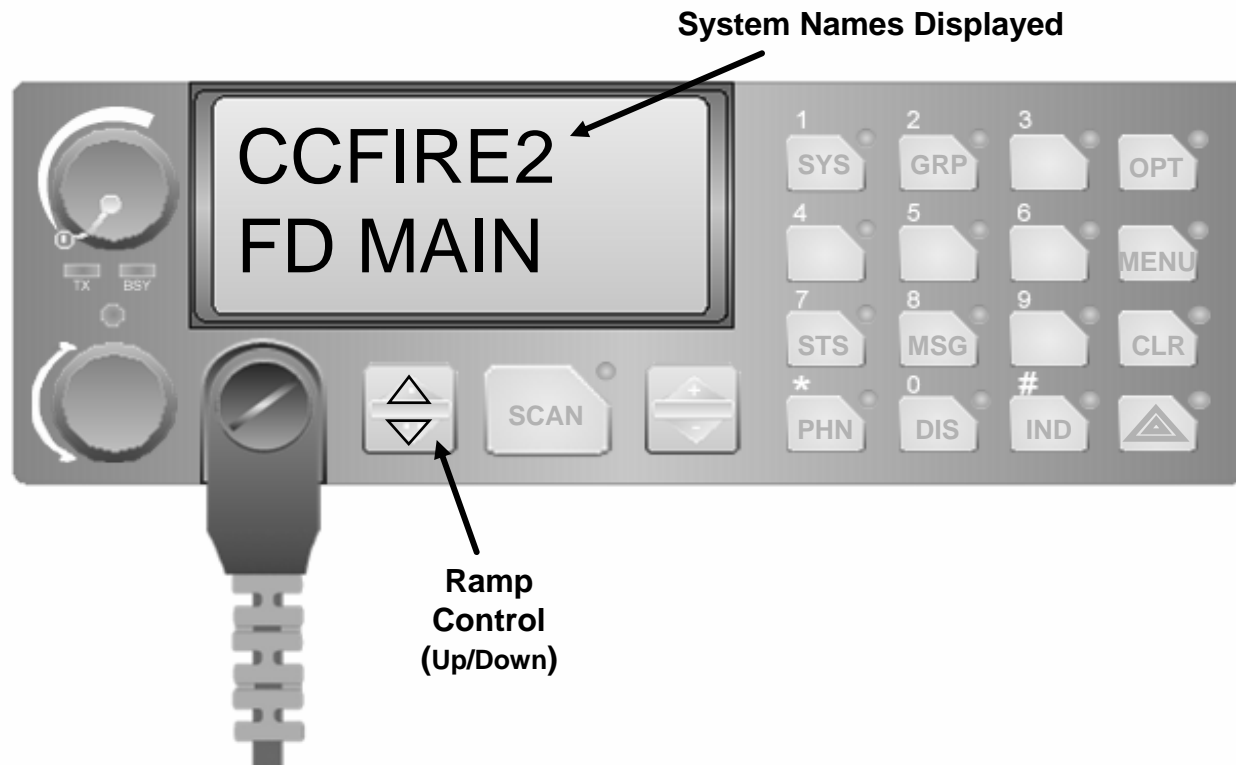
- Line 1 displays the caller's Radio ID (the GR indicates the call is a "Group Call").
- Line 2 displays the caller's talkgroup name.
- If in Scan and you want to talk to the caller, change to the group that appeared in the display.
- PTT.

Changing Groups



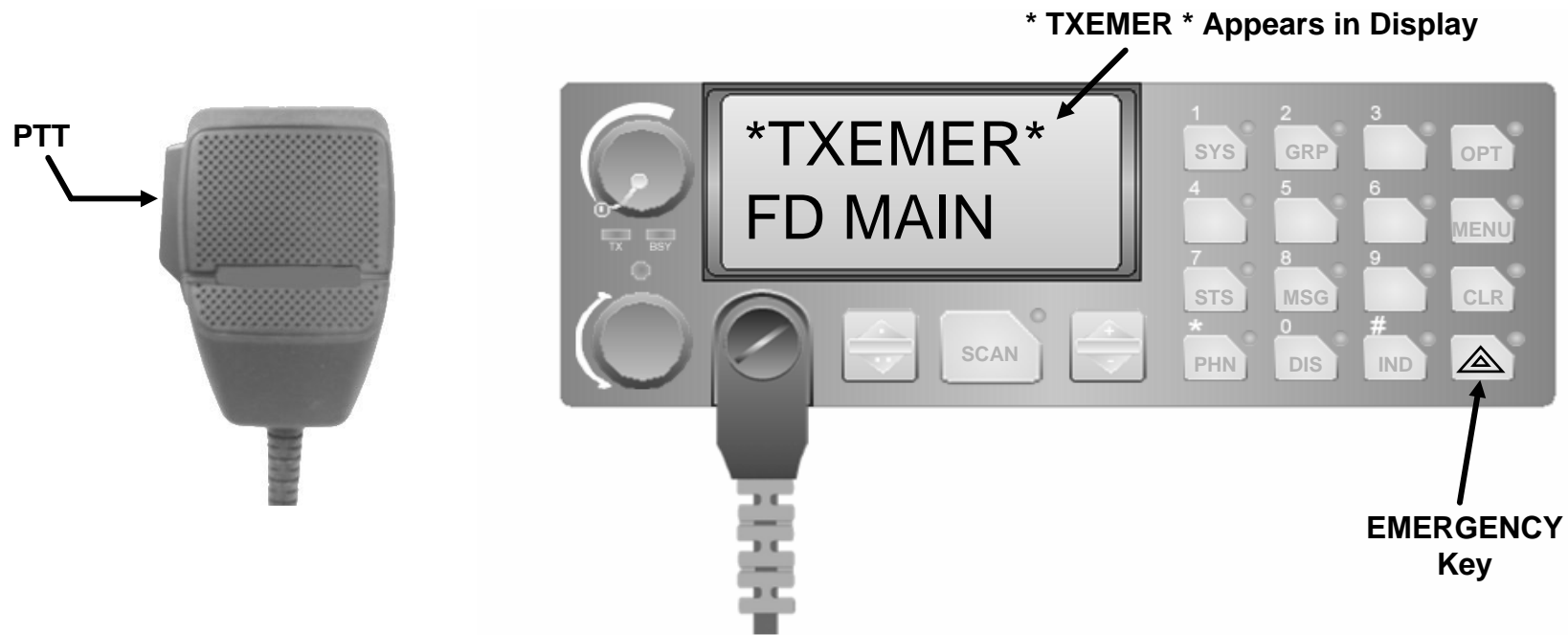
- Turn the **GROUP SELECTION** knob to select a group.
- Group names appear on Line 2 of the display.

Changing Systems



- Toggle the RAMP CONTROL button to select a system.
- System names appear on Line 1 of the display.

Declaring an Emergency*



- Press and hold the EMERGENCY key for approximately 2 seconds.
- Wait until *TXEMER* appears in display; *TXEMER* will flash, alternating with the current group.
- PTT and talk.

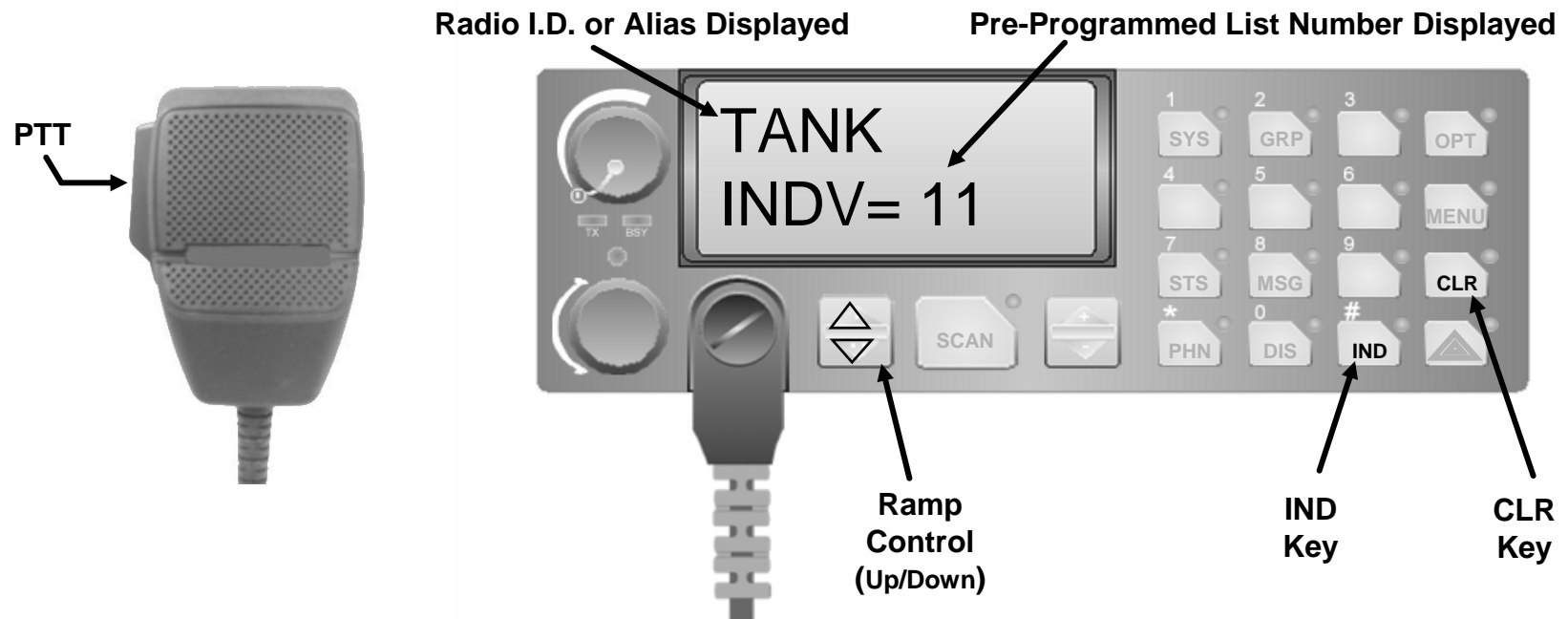
* Note: This feature only available in trunked mode, not available in conventional.

Clearing an Emergency*



- Press and hold the CLR key.
- Press the EMERGENCY key.
- The display will return to the condition previous to the emergency state.

Sending an Individual Call (*Preprogrammed*)



- Push the IND (individual) key.
- Use the RAMP CONTROL to find the desired unit .
- PTT
- Press the CLR (clear) button to return to group call mode.

Note: While in the individual call mode, you will miss all talkgroup calls.

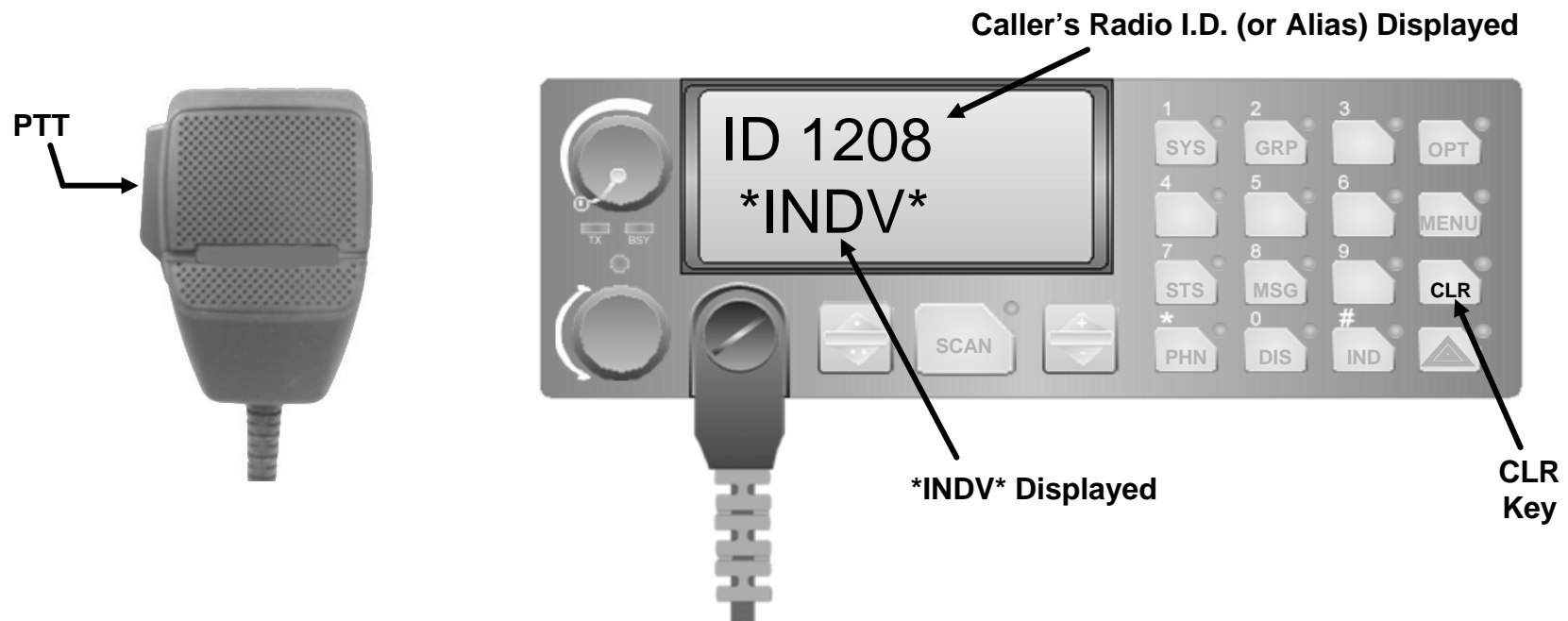
Sending a Individual Call (Keypad Entry)



- Push the IND (individual) key.
- Use the numeric keypad to enter the LID number of the desired unit.
- PTT
- Press the CLR (clear) button to return to group call mode.

Note: While in the individual call mode, you will miss all talkgroup calls.

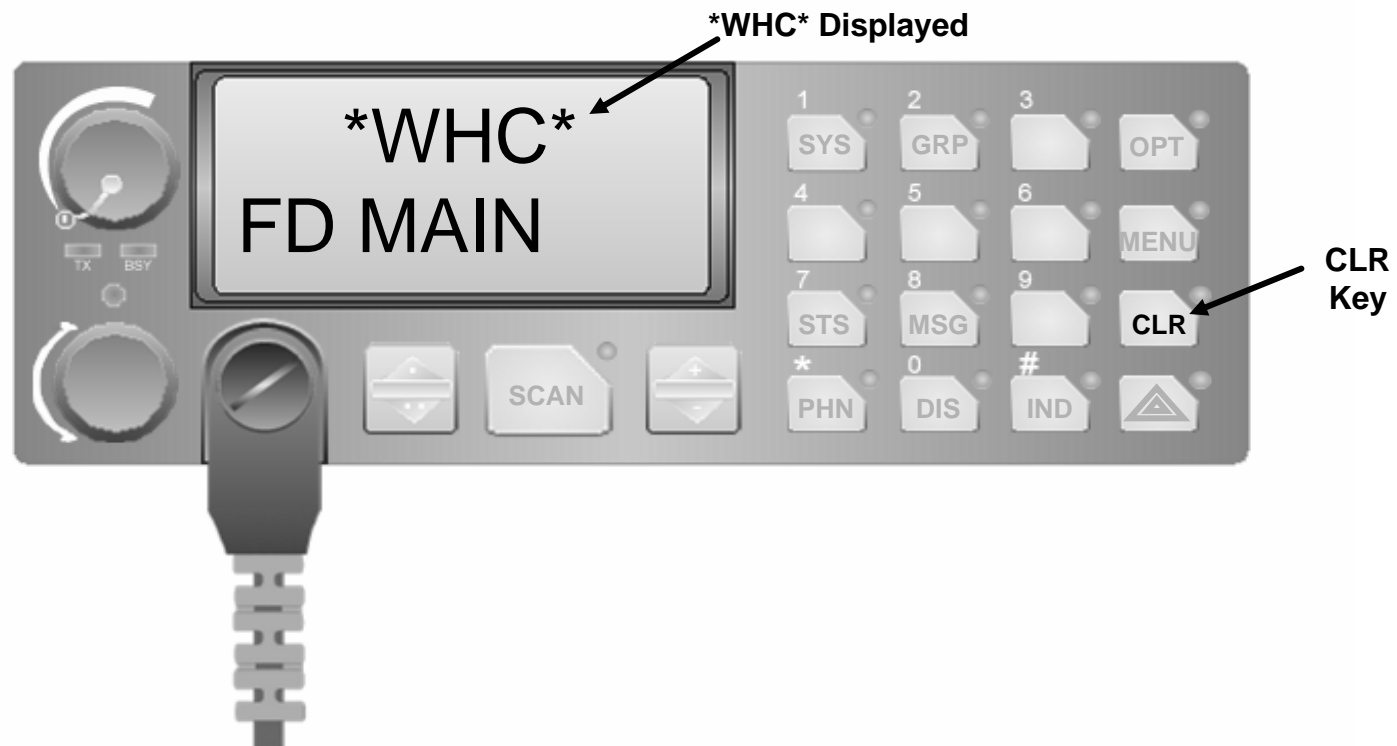
Receiving an Individual Call



- Line 1 displays the Radio ID of the caller; Line 2 displays *INDV*.
- PTT to answer the caller.
- Press the Clear button to return to group call mode.

Note: While in the individual call mode, you will miss all talkgroup calls.

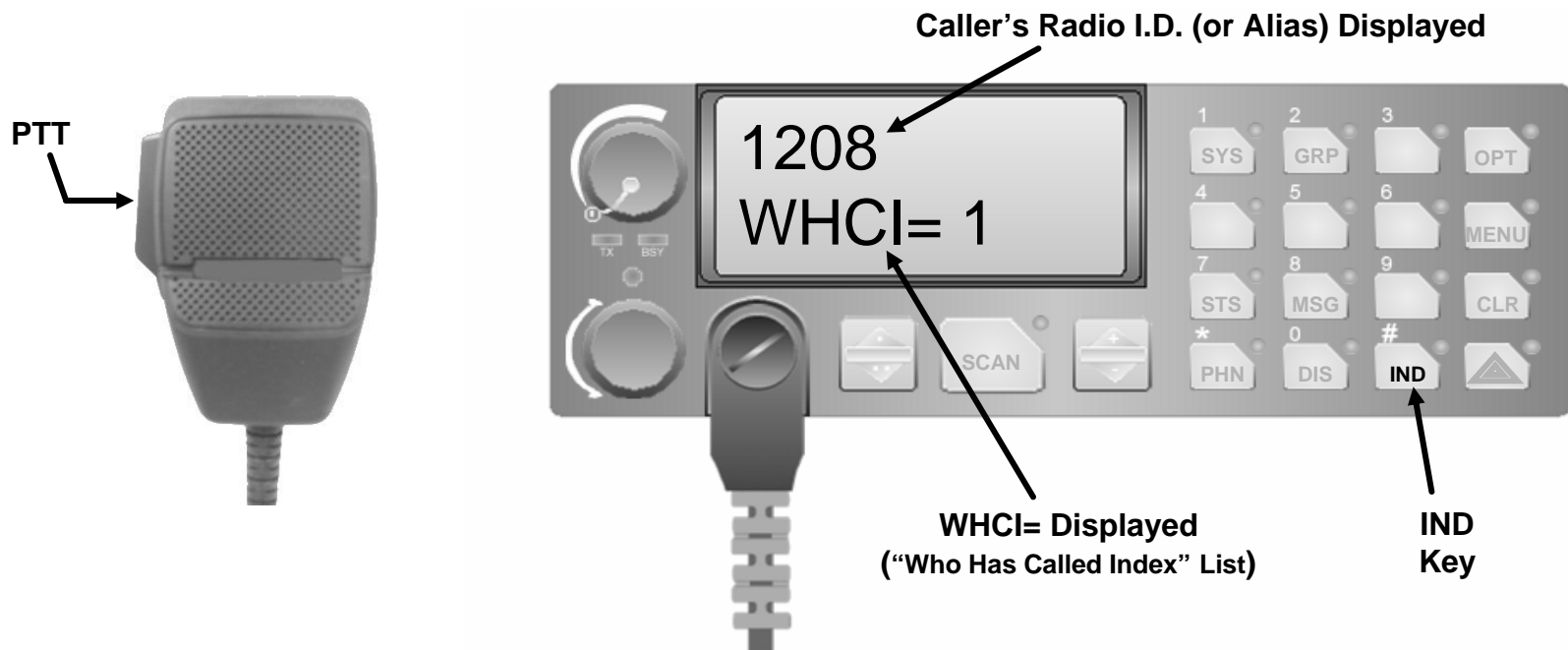
Missing an Individual Call



If an Individual Call is not answered:

- **Line 1 will display * WHC * and the radio will begin ringing.**
- **To stop the ringing, press the CLR button.**

Returning a Missed Individual Call



- Press the IND key.
- Line 2 shows the WHCI entry number.
- Line 1 shows the LID or alias of the unit that sent the message.
- PTT to return the call.

Note: The last ten individual calls received are stored in the WHCI list.

Sending a Phone Call



- Push the PHN key.
- Use the keypad to manually dial the phone number.
- PTT.

Note: The M-7100 radio is capable of one-way conversation only.
(The caller can only hear the radio if the PTT is pressed and the caller can only be heard when PTT is released).

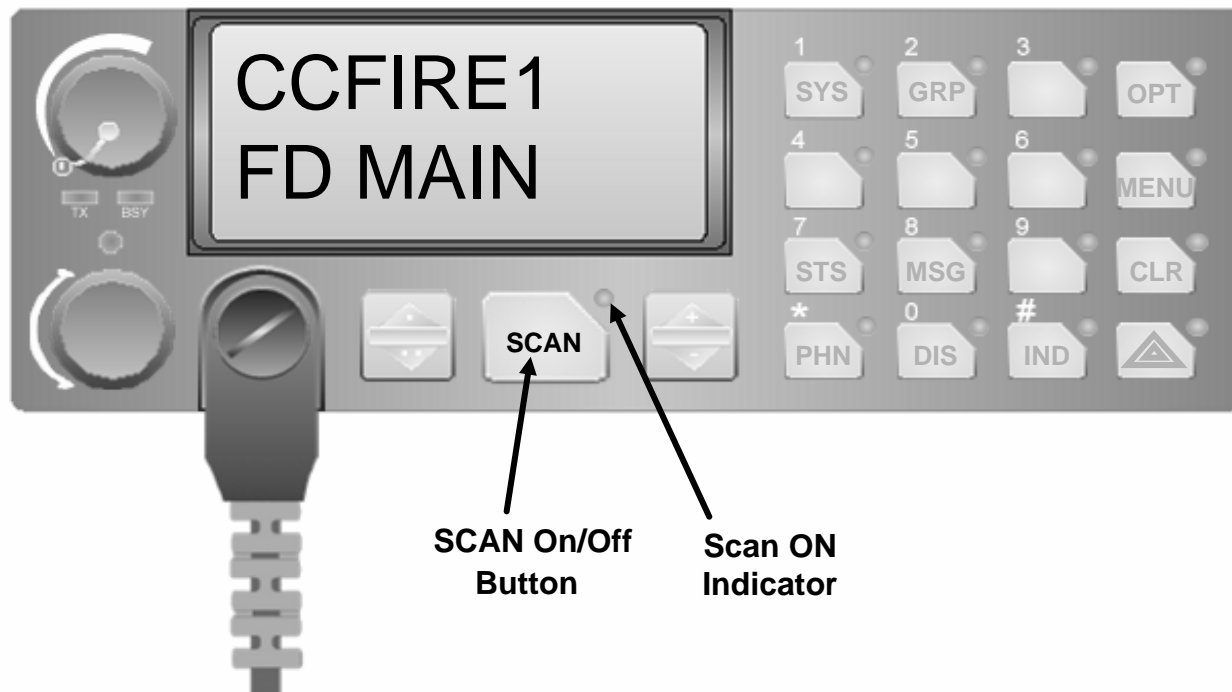
Receiving a Phone Call



- PTT to answer the call

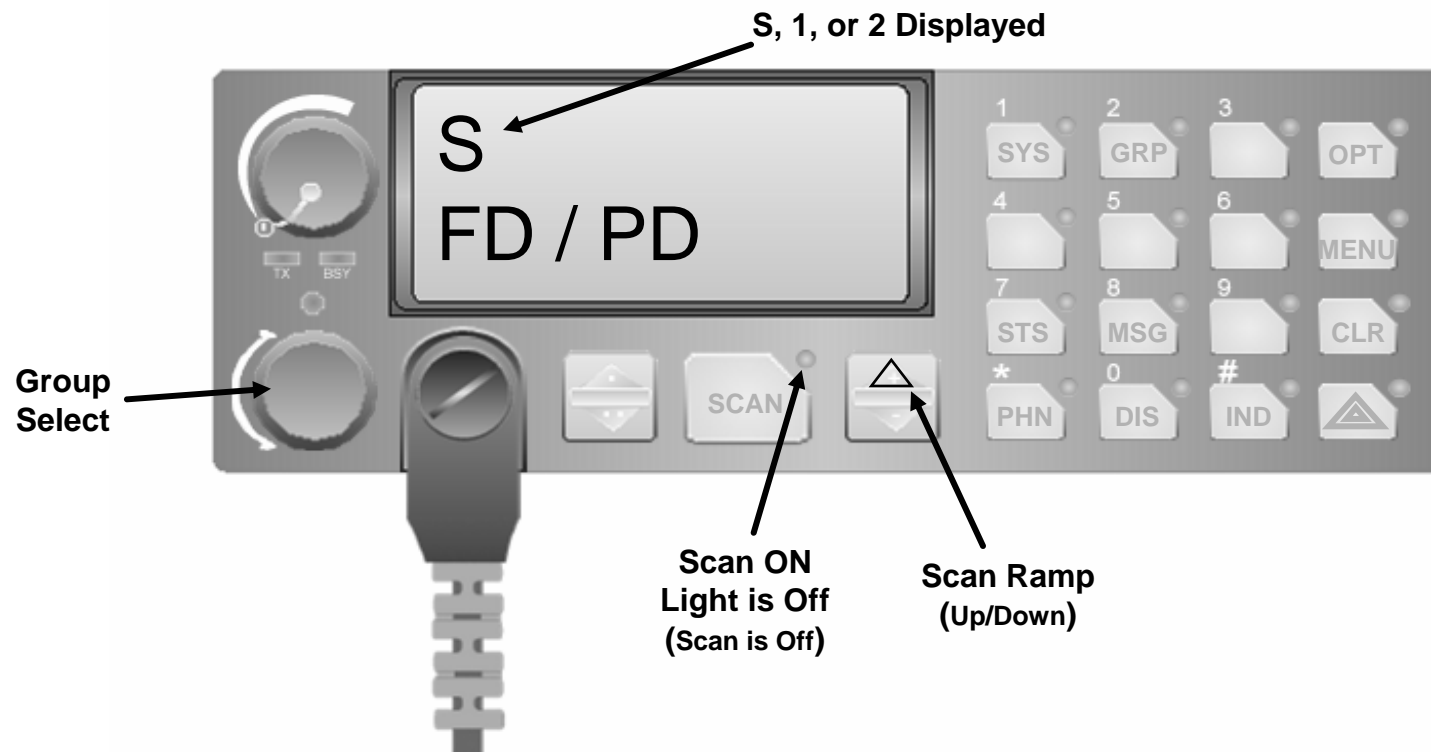
Note: The M-7100 radio is capable of one-way conversation only.
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Turning SCAN On/Off



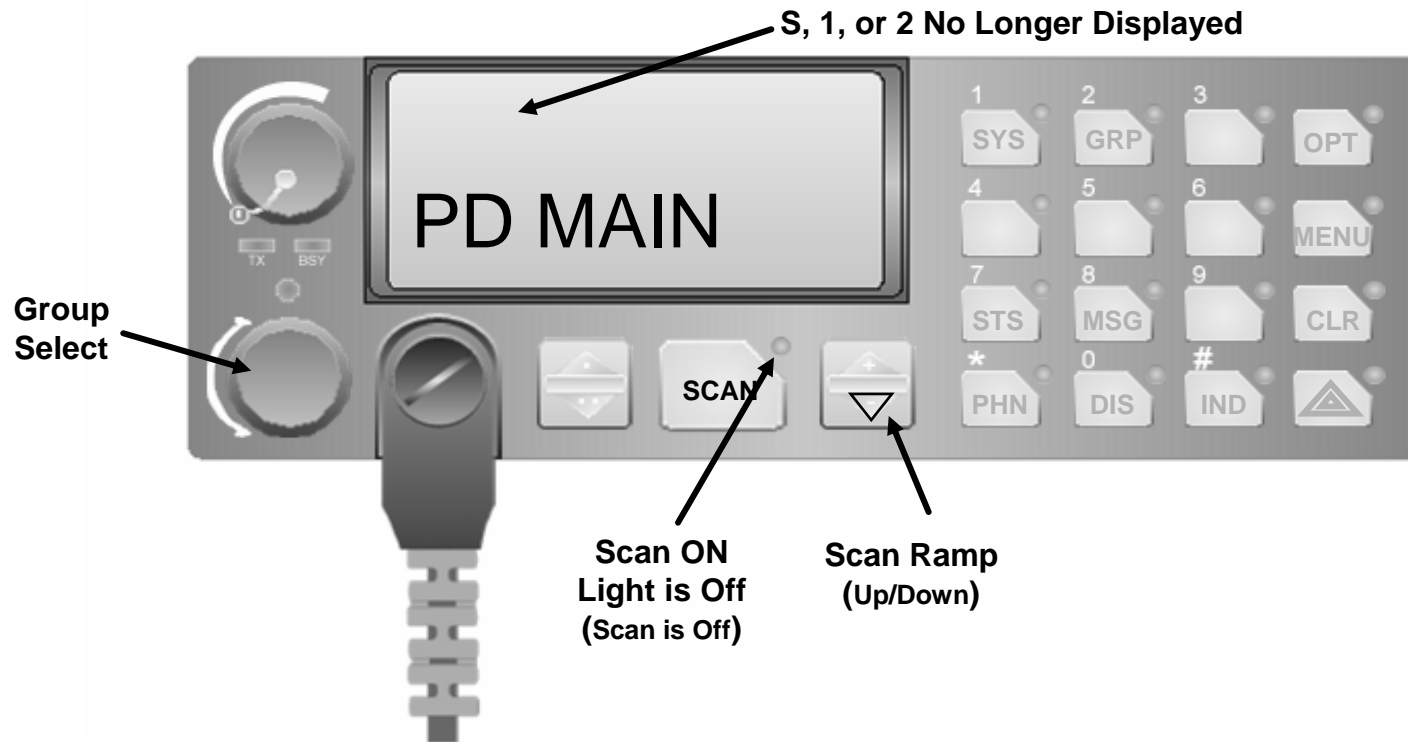
- Press **SCAN** to turn on the scan function; any group in the scan list will be scanned.
 - The light above the **SCAN** key indicates **SCAN** on/off.
 - Press **SCAN** again to turn off the scan function (light off).
- Note:** The microphone must be on hook for the scanning to function.

Establishing a Scan List



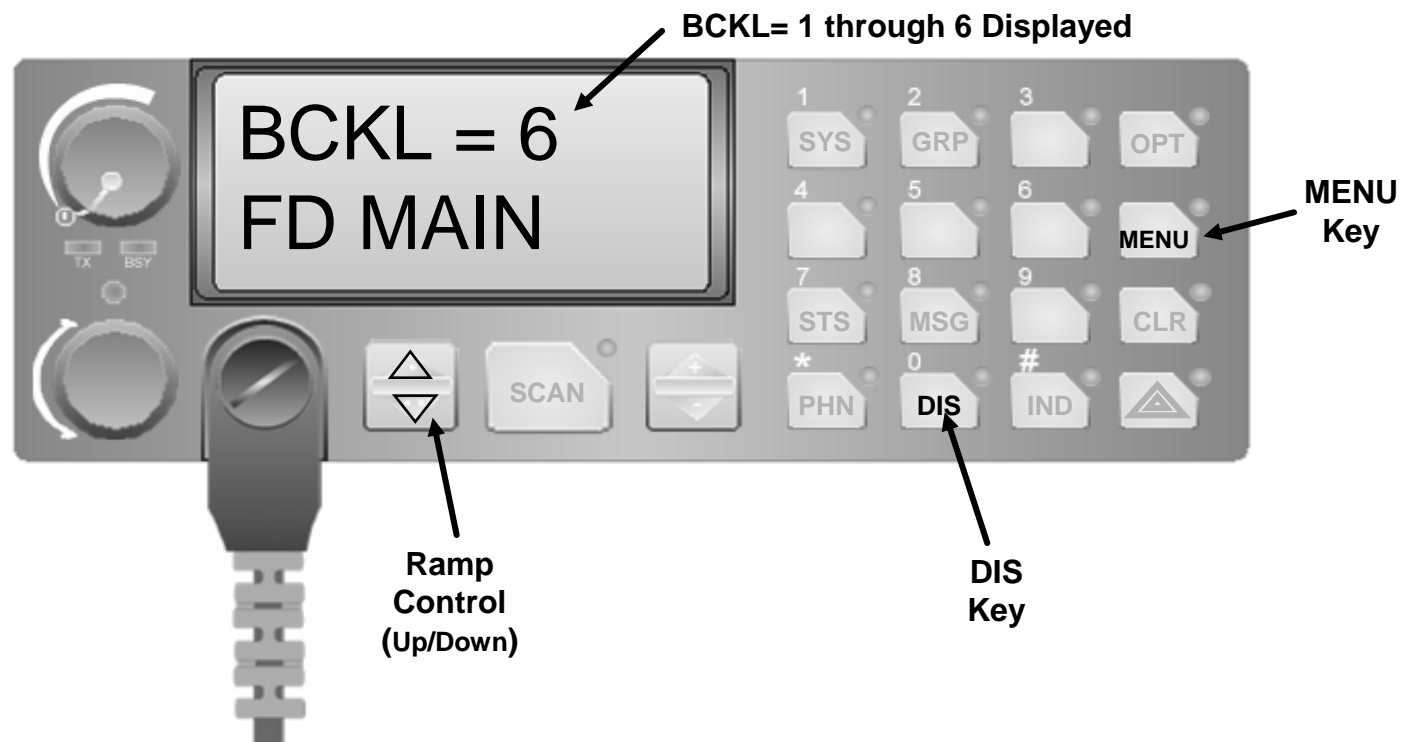
- Select the group you wish to scan.
- Make sure Scan is turned OFF.
- Press scan ramp up (Δ) to add the group to the scan list
- S,1, or 2 will appear based on user's desired priority level.

Deleting Groups from a Scan List



- **Select the group you wish to delete from the Scan List.**
- **Make sure Scan is turned OFF.**
- **Press scan ramp down (-) to delete the group from the Scan List.**
- **Notice the S, 1, or 2 disappears from the display.**

Changing the Display Brightness



- Press DIS to adjust the DISPLAY BRIGHTNESS.
- BCKL = 1, 2, 3, 4, 5, 6 will appear in the display with the current setting.
- Use the RAMP CONTROL to change the brightness increasing in intensity from 1 to 6.
- Press the MENU key.

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