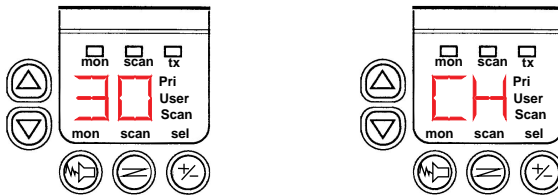## *Control Unit Select Signalling*



### Display of Incoming Identification Numbers

Whenever an operator in the system presses the PTT button, the unit identification number (ID) will be shown on the display for 10 seconds or less if another incoming ID is received.

### Activating the Call List for Sending Selective Messages

Pressing the SELECT button [ ⊕ ] will activate the Call List. The most recently used ID number and the call letters will alternately be displayed. The following call letters may be displayed when using a call list.

**SC** – Voice Selective Call: Call a particular unit or group with a voice message.

**CA –** Call Alert: Select a unit or group and leave a "call-back" indicator.

**CH** – Radio Check: Check to see if a unit is turned on and within range.

These letters will alternate on the display with the unit or group ID number.

### Choosing Call List Letters and ID Numbers

Each press of the SELECT button [ ⊕ ] causes the display to move down the list of call letters which have been programmed in the unit.

Pressing the UP/DOWN buttons [△/▽] will change the ID numbers. All Call List ID numbers will be displayed with each set of call letters. However, some ID's may not be compatible with certain call types. For example, a group ID cannot be Radio Checked. In such cases, pressing the PTT button will result in a low pitched tone to indicate that the function is not available.

### Sending a Signalling Message

Once the desired call letters and ID numbers have been selected, pressing the PTT button will send the message. The display will revert to the preprogrammed transmit channel to send the signalling message and the channel will be briefly displayed while the message is being transmitted.

### Receiving an Acknowledgment

Depending on the signalling format used, the sending radio may look for an acknowledgment from the receiving unit on Call Alert and Radio Check calls.

The sending radio will show an "A" and 4 alert tones will sound if the target unit received and acknowledged the call. If no acknowledge is received, the sending unit will make another 4 tries. If unsuccessful, a "-A" will be displayed and a low pitched tone will sound to indicate no acknowledge.

### Exiting the Call List

The SELECT button [ $\not\!\!\varphi$ ] is used to exit the signalling call list. Repeated pressing of the SELECT button [ $\not\!\!\varphi$ ] takes you through the sequence of call letters to the channel display for normal operations.

### Receiving an Emergency Alarm

When an emergency alarm is received by the control unit, an alert tone will sound. The display will alternate "EE" and the ID number of the radio sending the emergency.

Five different emergency ID's can be queued. However, the first ID to be received will be displayed until it is cleared. Then the next ID in the queue will be displayed until each has been displayed and cleared. Press the PTT button to respond to the emergency alert.

If the sending radio has been programmed for silent emergency it will remain muted and no messages will be heard. However, other radios using the channel will receive transmissions.

### Clearing an Emergency Alarm

To prevent accidentally losing an incoming emergency, the clearing of an emergency alarm has been designed as a two step process. First, the alert tone must be cleared by pressing any button on the radio. Second, press an external switch, such as the footswitch or pushbutton. The Emergency display will then clear.

## *DTMF ANI Phone Access Operating Instructions*
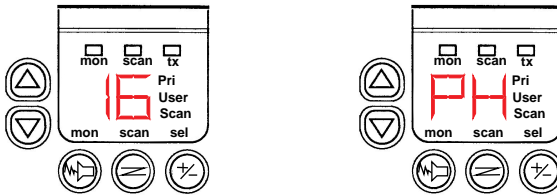
Radio is in normal operating mode.

Check the Busy LED to be sure the channel is free before pressing the SELECT button [ ⊕ ]. See Note 1.

Press the SELECT button [ ⊕ ]. The DTMF access code will automatically be transmitted and "PH" will appear on the display. See Note 2.

A call can be manually dialed using the standard Touch Code microphone. The radio will be in carrier squelch mode.

Press SELECT button [ ⊕ ] after the call is completed to send the deaccess code. The radio returns to normal operating mode and its prior monitor or coded squelch state. See Note 3.

---
**NOTE**
1. If you press the SELECT button [ ⊕ ] when the channel is busy you will hear a low pitched tone. The radio will revert to monitor mode so you can listen for a free channel. Press the Select button again to send the Access code.

---
**NOTE**
2. If the patch missed the Access code when it was sent, the user would have to press the SELECT button [ ⊕ ] twice to reaccess the patch: once to deaccess and again to access. The same case is true for Deaccess.

---
**NOTE**
3. If the radio reverted to monitor mode because of a busy channel for Access, it will return to monitor after Deaccess. Otherwise the radio will return to coded squelch.

---

## *Phone Memory List*
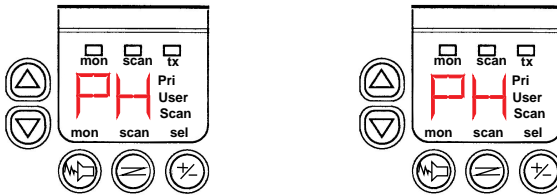
Up to 16 telephone numbers can be programmed by the dealer. One or two digit identifiers will then be used to represent these phone numbers.

Press the SELECT button [ $\oplus$ ] to enter Phone mode. Select the Phone Memory List by using the UP/DOWN buttons [$\triangle$/$\triangledown$]. The first press of the UP/DOWN button [$\triangle$/$\triangledown$] will recall the last phone number dialed. (This is not saved if the radio has been turned off.)

Subsequent or extended presses of the UP/DOWN buttons [$\triangle$/$\triangledown$] will step through the list.

Press the PTT button to send a call to the selected number from the list. Radio reverts back to Phone mode after memory dialing is complete.

# Licensing And Safety Information

Your Radius radio operates on FM radio communication frequencies and is subject to the Rules and Regulations of the Local Communications Governing Agencies. These agencies may require that all operators using Private Land Mobile or General Mobile Radio frequencies obtain a radio license before operating their equipment. The operator receives a license for use of the radio equipment under a specific eligibility and on a particular frequency or set of frequencies. To determine eligibility for use of Private Land Mobile Service frequencies contact your local communications governing agency. They will be able to supply information required to properly obtain and complete the license application form.

**Agency addresses for several countries are listed below:**

**In the United States contact:**

Federal Communications Commission
Consumer Assistance
Branch License Division
Gettysburg, PA 17326
Tel (717) 337-1212

**In Canada contact:**

Head Equipment Approval Unit
Department of Communications
1241 Clyde Avenue
Ottawa, Ontario K2C-1Y3
Canada
Tel (613) 998-5968

**In the United Kingdom contact:**

Radio communications Agency
P.O. Box 20
London
SE1 8TZ
Tel 71 215 2152

**In Mexico contact:**

Secretaria De Comunicaciones Y Transportes
Direccion General De Politicas
Y Normas De Comunicaciones
Av. Eugenia No. 197-5o. Piso
Mexico, D.F. 06700

This document was created with FrameMaker 4.0.4

**In Singapore contact:**

> Telecommunications Authority of Singapore
> 3rd Storey Comcenter
> 31 Exeter Road
> Singapore, 0923
> Singapore

**In Japan contact:**

> Communications Research Laboratory
> Ministry of Posts & Telecommunications
> MKK Building
> 7-2, 5-chome
> Yashio, Shinagawaku
> Tokyo, 140 Japan

**In Hong Kong contact:**

> Hong Kong Telecommunications Authority
> Telecommunications Branch
> Post Office, Hong Kong
> 6/F Sincere Building
> 173 Des Voeux Road Central
> Hong Kong

## *Safety Standards*

The FCC, with its action in General Docket 79-144, March 13, 1986, has adopted a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. Motorola subscribes to the same safety standard for the use of its products. Proper use of this radio will result in exposure below government limits.

**The following precautions are recommended:**

- **DO NOT** operate the transmitter of a mobile radio when someone outside the vehicle is within two feet (0.6 meter) of the antenna.

- **DO NOT** operate the transmitter of a fixed radio (base station, microwave, the rural telephone RF equipment) or marine radio when someone is within two feet (0.6 meter) of the antenna.

- **DO NOT** operate the transmitter of any radio unless all RF connectors are secure and any open connectors are properly terminated.

- **DO NOT** operate the equipment near electrical blasting caps or in an explosive atmosphere.

- All equipment must be properly grounded according to Motorola installation instructions for safe operation.

- All equipment should be serviced only by a qualified technician.

## *Safety Guidelines*

### Installation Safety Warning

Consider the occupants' safety when you choose a location for the radio. Do not mount the radio overhead or on a side wall unless you take special precautions.

If someone were to remove the radio and fail to replace it properly, road shock could bump the radio loose, and the falling radio could, in some circumstances, cause serious injury to the driver or a passenger. In a crash, even when properly installed, the radio could break loose and become a dangerous projectile.

If you must mount the radio overhead or on a side wall, give it the added protection of a retaining strap.

### Operational Safety Warnings

**WARNING**
For vehicles equipped with electronic anti-skid systems, see "ANTI-SKID BRAKING PRECAUTIONS" Publication, Motorola Number 68P81109E34.

**WARNING**
For vehicles equipped with electronic ignition systems, check the service manual for warnings about the use of two-way radio equipment in the vehicle.

**WARNING**
It is mandatory that radio installations in vehicles fueled by liquefied petroleum gas conform to the following standard:

National Fire Protection Association standard NFPA 58 applies to radio installations in vehicles fueled by liquefied petroleum (LP) gas with LP gas container in the trunk or other sealed-off space within the interior of the vehicles. This standard requires that:

1. Any space containing radio equipment shall be isolated by a seal from the space in which the LP-gas container and its fittings are located.

2. Remote (outside) fitting connections shall be used.

3. The container space shall be vented to the outside.