



NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION THALES 25 PORTABLE RADIO (RACAL) ANALOG CHANNEL PROGRAMMING

RACAL ANALOG CHANNEL PROGRAMMING GUIDE

1. Select a channel for programming by rotating the Channel Select Knob to one of the sixteen rotary positions.
2. Press the "ENTER" key to bring up the Main Menu screen. (See Figure 1)
3. Scroll up/down using the "O" and "◊" (*up/down arrow keys*) to select "PROGRM" and press the "ENTER" key.
4. Enter a 6-Digit Password if requested and press the "ENTER" key.
Note: NIFC password is "000000".
5. Scroll up/down and select "CHANEL" and press the "ENTER" key to program Channel Parameters. (See Figure 2)
6. Scroll down and select "TAG" and press the "ENTER" key. (See Figure 3)
Change the channel name/label using the keypad and press the "ENTER" key when complete.
Note: "ID" cannot be changed, it is automatically updated when programming a channel.
7. Scroll down and select "MODE" and press the "ENTER" key to program the Channel Mode. (See Figure 4)
Select either "ANALOG" or "DIGITAL" and press the "ENTER" key.
Note: NIFC Default is "ANALOG" for all channels.
8. Scroll down and select "BW" and press the "ENTER" key to program the Channel Bandwidth. (See Figure 4)
Select either "25Khz" or "12.5Khz" and press the "ENTER" key.
Note: 25Khz= Wide-Band, 12.5khz= Narrow-Band.
Note: NIFC Default is "12.5 Khz" for Narrow-Band operation.
9. Scroll down and select "ENCRPT" and press the "ENTER" key to program Encryption. (See Figure 5)
Select either "ENABLD" or "DISABD" and press the "ENTER" key.
Note: If Encryption is enabled, a key must be loaded first into the radio with the PC Programmer.
Note: NIFC Default is "DISABD"
10. Scroll down and select "RX" and press "ENTER" key to program the RX Frequency. (See Figure 6)
Enter a valid RX frequency from 136-174 Mhz using the keypad and press the "ENTER" key.
11. Scroll down and select "RX SQMD" and press the "ENTER" key to program the RX Squelch Mode. (See Figure 7)
Select either "NOISE", "DCS", "CTCSS", or "NONE" and press the "ENTER" key.
Note: If "Noise" is selected, the program will proceed with the Squelch Adjust parameter (SQ=), select a squelch setting and press "ENTER" when done; this setting opens the squelch with any corresponding analog signal. If "CTCSS" is selected, the program will proceed with a SUB Audible Tone menu, select a tone from the menu by scrolling through and then press "ENTER"; this setting will open the squelch with any corresponding analog signal that contains the correct "CTCSS" tone. If "DCS" is selected, the program will proceed with the Digital Coded Squelch tone menu, select a tone from the menu by scrolling through and then press "ENTER"; this setting will open the squelch with any corresponding analog signal that contains the correct "DCS" tone. If "None" is selected, squelch will be open at all times (Constant Open Squelch).
Note: NIFC Default is "Noise" with a "SQ" setting of 8.
12. Scroll down and select "TX" and press the "ENTER" key to program the TX Frequency. (See Figure 8)
Enter a valid TX frequency from 136-174 Mhz using the keypad and press the "ENTER" key.
13. Scroll down and select "TX SQMD" and press the "ENTER" key to program the TX Squelch Mode. (See Figure 9)
Select either "DCS", "CTCSS", or "NONE" and press the "ENTER" key.
Note: If "CTCSS" is selected, the program will proceed with a Sub Audible Tone menu, select a tone from the menu by scrolling through and press "ENTER"; this setting will include a "CTCSS" tone on the analog transmit signal. If "DCS" is selected, the program will proceed with a Digital Coded Squelch menu, select a tone from the menu by scrolling through and then press "ENTER"; this setting will include a "DCS" tone on the analog transmit signal. If "None" is selected, no tones are sent out on the analog transmit signal.
Note: NIFC Default is "None".
14. Scroll down and select "LO PWR" and press "ENTER" to program the Low Power Setting. (See Figure 10)
Select either "0.1", "0.5", "1.0", "2.0", or "5.0" Watts for low power setting and press the "ENTER" key.
Note: NIFC Default for Low Power is 1.0 Watts.
15. Scroll down and select "HI PWR" and press the "ENTER" key to program the High Power Setting. (See Figure 10)
Select either "0.1", "0.5", "1.0", "2.0", or "5.0" Watts for high power setting and press the "ENTER" key.
Note: NIFC Default for Hi Power is 2.0 Watts.
16. If screen reads "SAVE CHANNEL", select "YES" to save. If not, channel information was stored and you can select another channel using the channel select knob and continue programming other channels or press "ESC" a few times to return to the main display.



Figure 1



Figure 2

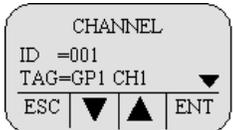


Figure 3

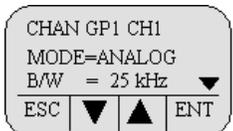


Figure 4

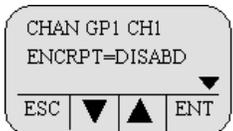


Figure 5

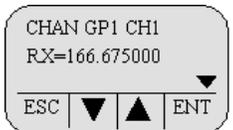


Figure 6

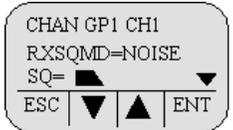


Figure 7

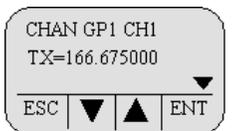


Figure 8

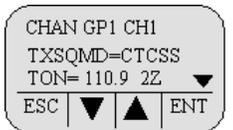


Figure 9

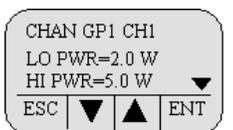


Figure 10



NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION THALES 25 PORTABLE RADIO (RACAL) SETTINGS/OPTIONS GUIDE

ADD/REMOVE CHANNEL FROM SCAN LIST

1. Select a channel to be added to the Scan List by using the Channel Select knob.
2. **To Add Channel**, briefly press and release the "◇" key, when released a box "□" will enclose the "C" in the display, indicating that the channel is in the scan list. (See Figure 1)
3. **To Remove**, briefly press and release the "O" key. The box "□" will be removed from the "C" in the display.

Note: If the "◇" key is pressed to long, it will enable Zone Scan, which will scan other scan channels in different zones/groups. The LCD will display a box around the "Z". If this happens, disable the function by pressing and holding the "O" key for about 3 seconds.

SCAN/PRIORITY SCAN MODE

1. **To Enable SCAN**, the 3-position toggle switch must be in the "B" position. The display will indicate that the radio is scanning. (See figure 2)
2. **To Enable PRI SCAN**, the 3-Position toggle switch must be in the "A" position. The display will indicate that Priority Scan is enabled. (See Figure 3)
3. **To Disable SCAN/PRI SCAN**, the 3-position toggle switch must be in the "C" position.

Note: In order for Priority Scan to function properly, the user must add a priority scan channel. (See Add Priority Scan Channel)

ADD PRIORITY SCAN CHANNEL

1. Press the "ENTER" key to bring up the Main Menu Screen.
2. Scroll down to "PROGRAM" and press the "ENTER" key.
3. Scroll down to "SCAN" and press the "ENTER" key.
4. Scroll down to "P1" and press the "ENTER" key.
5. Select the P1 Channel by using the Channel select knob and press the "ENTER" key when done.
6. To add a second priority channel P2, scroll down to "P2" and press the "ENTER" key. Select the P2 Channel by using the Channel Select Knob and the press the "ENTER" key when done.
7. Press the "ESC" key a few times to reach the main screen.

Note: In order for P2 channel to function properly, the user must enable the P2 function under the scan options. Press the "ENTER" key to bring up the Main Menu Screen. Select "SCAN" and press the "ENTER" key. Scroll down to "PRIM MODE" and press the "ENTER" key. Select "PR1+2" to enable P2 scan function. Once P2 scan function is enabled, when the radio is set to Priority Scan, the display will indicate that both Priority Channels are being scanned. (See Figure 4)

NIFC Default is P1 and P2 Disabled.

CHANGING ZONES

1. Press the "ENTER" key to bring up the Main Menu Screen.
2. Scroll down to "SELECT" and press the "ENTER" key.
3. Scroll down to "ZONE" and press the "ENTER" key. (See Figure 5)
4. Scroll to the desired zone/group and press the "ENTER" key to select the zone. Press the "ESC" key a few times to reach the main screen.

Note: NIFC has a total of 16 available zones under the NIFC Bank. Additional 3 zones are available under the Incident Bank. NIFC Default is set to Bank "NIFC"

CHANGING BANKS

1. Press the "ENTER" key to bring up the Main Menu Screen.
2. Scroll down to "SELECT" and press the "ENTER" key.
3. Scroll down to "BANK" and press the "ENTER" key. (See Figure 5)
4. Scroll to the desired bank and press the "ENTER" key to select a bank. Press the "ESC" key a few times to reach the main screen.

Note: NIFC Default in "NIFC Bank".

The "INCIDENT Bank" contains 3 additional zones available for programming or cloning.

DISABLE/ENABLE KEYPAD (See Figures 6 & 7)

1. Press and hold the "□" key while pressing and holding the "ENTER" key. Display will show "Keys Disabled", "Side Enabled". (Only the keypad is disabled, while all the side buttons are still enabled)
2. Repeat the process, display shows "Keys Disabled", "Side Disabled". (Both the keypad and the side buttons are disabled)
3. To Enable Keypad and Side buttons, repeat the process on more time and display will show "Keys Enabled", "Side Enabled".

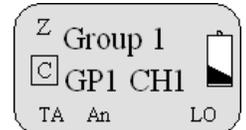


Figure 1

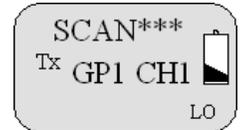


Figure 2

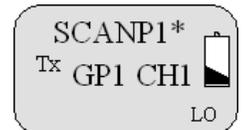


Figure 3

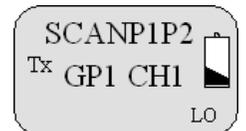


Figure 4

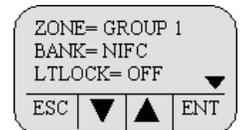


Figure 5

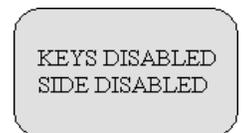


Figure 6

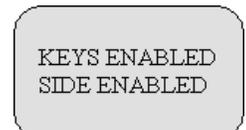


Figure 7



NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION THALES 25 PORTABLE RADIO (RACAL) CLONING INSTRUCTIONS

CLONING PROCEDURES

1. Turn both radios on.
2. Connect Source end of cloning cable to Master Radio. (See Figure 8)
3. Connect Target end of cloning cable to Slave/Target Radio.
Master radio automatically detects the target radio, and brings up the Cloning Main Menu. (See Figure 1)
Note: If a non-Fire Feature target radio is connected, the only cloning option is to clone all channels, zones, and banks.

4. Scroll down using the "O" key through the Cloning Main Menu.
5. Use the "◇" (√) key to select or de-select cloning features.

Selectable Cloning Features: (See Figure 1 & 2)

- GLOBAL DATA:** Clones all buttons, toggle switch settings, and scan configurations.
ALL ZONE: Clones all Bank and Zone information in radio, including the "Event Bank"
EVENT CLONE: Clones either one of the event zones (17, 18, or 19) or can select all event zones to clone.
FULL EVBANK: Clones all zones, channels in the event zones (17, 18, 19).
TX SQL LIST: Clones Analog/Digital Transmit Squelch tone pick list.
TALKGP LIST: Clones talk group list (DIGITAL Only).

6. Select desired cloning process; "GLOBAL DATA", "ALL ZONE", "EVENT CLONE", "FULL EVBANK", "TX SQL LIST", or "TALKGP LIST" and press the "ENTER" key.

Cloning Procedure For Each Cloning Feature

- GLOBAL DATA:** Press the "PTT" button to send data to clone radio. (See Figure 3)
ALL ZONES: Press the "PTT" button to send data to clone radio. (See Figure 3)
EVENT CLONE: Press the "ENTER" key. (See Figure 3)
 Select "SELECT ZONES" and press the "ENTER" key. (See Figure 4)
 Select which Invert Zone will be cloned in the "Target" radio and press "ENTER". (See Figure 5)
 Select which Zone will be cloned from the "Source" radio to the "Target" radio by scrolling through the available zones and press the "ENTER" key. (See Figure 6)
 Press "ESC" once to return to the "Start Cloning" menu.
 Select "START CLONING" and press the "ENTER" key.
 Press the "PTT" to download to the "Target" radio.
Note: When performing an "EVENT CLONE", the user can only select zones for that current bank. If Zones 17, 18, or 19 need to be cloned over to the "Target" radio, the user must first select the "Event Bank" on the Master radio before connecting the cloning cable in order to select these zones.

- FULL EVBANK:** Press the "PTT" button to send data to clone radio. (See Figure 3)
TX SQL LIST: Press the "PTT" button to send data to clone radio. (See Figure 3)
TALKGP LIST: Press the "PTT" button to send data to clone radio. (See Figure 3)

7. Once the clone is complete, the "Target" radio will indicate which zone or zones were cloned over. (See Figure 7)
8. Disconnect "Target" radio and connect any other "Target" radios that need to be cloned.



Figure 8



Figure 1



Figure 2

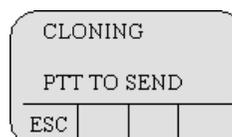


Figure 3

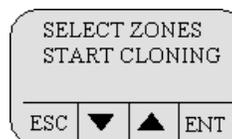


Figure 4

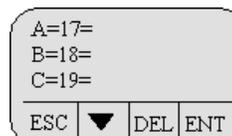


Figure 5

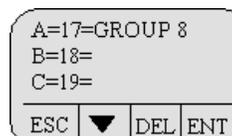


Figure 6

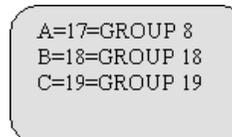


Figure 7



NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION RACAL BASIC OPERATION AND RADIO CONTROLS

RACAL BASIC OPERATION AND RADIO CONTROLS

1. Turn power ON by turning the ON/OFF Volume knob clockwise.
A beep indicates the radio is operational. The LCD will indicate the current group and channel.
2. Select a channel by turning the Channel Select Knob to one of the 16 available positions.
3. Adjust the volume by pressing the Squelch Monitor Button to open the squelch and set the volume to desired level.
Press the Squelch Monitor Button once more to close the squelch.

The radio is ready to receive on that current channel.

5. To Transmit, press and hold the Push-To-Talk (PTT).
Note: *The Transmit Indicator should light RED. If not, the battery may be low or the channel is busy.*
6. Pause 1 Second and talk in a normal voice into the microphone.
Note: *Try to shield the microphone from wind and other loud background noises for clearer transmissions.*
7. Release the PTT to stop transmitting and receive incoming transmissions.



Figure 2: RACAL Front View

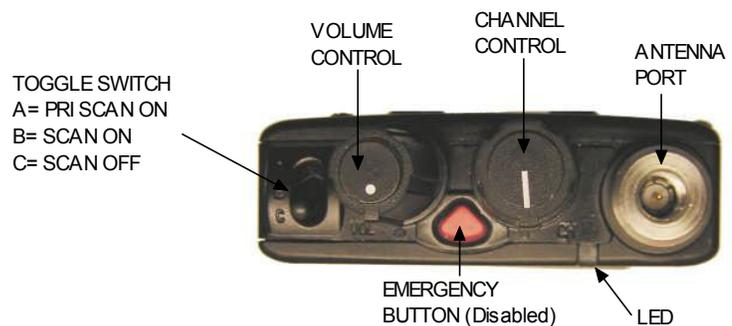


Figure 1: RACAL Top View

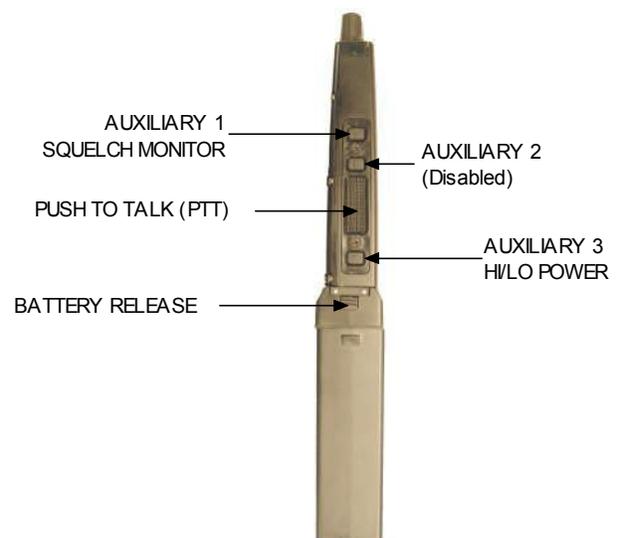


Figure 3: RACAL Side View