RECEIVING

1. Press and hold the “PWR” softkey for 3 seconds to turn the power “ON”.
2. Select a valid AM frequency from one of the memory locations or direct enter a valid AM frequency via the keypad. (See Manual Frequency Entry)
3. Adjust the volume by turning the Volume Knob to desired level.
4. Adjust the Squelch by pressing the “SQL” softkey, then rotate the tuning dial to desired squelch level (00 - 24). (See Setting Squelch Level)
Note: If the squelch control is set too high, squelch may not open with weak signals.
5. Push the “ANL” side button to reduce pulse noise caused by engine ignitions or other outside interference. (See ANL Function)
4. Release “PTT” to transmit.
5. The radio is ready to RECEIVE on that current frequency.

TRANSMITTING

1. Set the desired frequency.
2. Press and hold the “PTT” to transmit.
3. Speak into the microphone at a normal voice level.
4. Release “PTT” to receive any incoming transmissions.
   Note: Try to shield the microphone from wind and other loud background noises.
Note: If the squelch control is set too high, squelch may not open with weak signals.
5. The radio is ready to RECEIVE on that current frequency.

MANUAL FREQUENCY ENTRY USING THE KEYPAD:

- Press and Hold the “PWR” softkey for 3 seconds until the power turns “ON”.
- Push the “CLR” softkey to select frequency mode.
- Enter a valid 5 digit AM frequency and press the “ENT” key. (118.000 through 136.975)
   Note: Programming over a memory channel also clears the programmed contents. Memory channel 1 cannot be cleared.

MANUAL FREQUENCY ENTRY USING THE TUNING DIAL:

- Press and Hold the “PWR” softkey for 3 seconds until the power turns “ON”.
- Push the “CLR” softkey to select frequency mode.
- Rotate the tuning dial to set the desired frequency. (Scroll 118.000 through 136.975)

KEYPAD LOCK FUNCTION:

To Enable Key Lock, press the “ ” key, then press the “ ” key (Key Lock).
To Disable Key Lock, repeat the process. (LCD displays “ ” when enabled)
   Note: The lock function prevents accidental frequency changes & accidental function activation.

SETTING SQUELCH LEVEL:

To Set Squelch Level, push the “SQL” softkey, then rotate the tuning dial to desired squelch level (00 - 24).
   Note: “SQL -- 0” is open squelch and “SQL -- 24” is tight squelch. (NIRSC suggested SQL level is 20)
   if the squelch is set too high, squelch may not open with weak signals.

AUTOMATIC NOISE LIMITER (ANL) FUNCTION:

To Enable ANL, press the “ANL” softkey.
   (LCD displays an “ANL” icon in the lower part of the LCD indicating ANL is enabled)
To Disable ANL, press the “ANL” softkey.
   Note: The ANL function reduces pulse noise or other outside interference.

Note: “SQL -- 0” is open squelch and “SQL -- 24” is tight squelch. (NIRSC suggested SQL level is 20)
Note: Programming over a memory channel also clears the programmed contents. Memory channel 1 cannot be cleared.

Setting the Squelch Level: (Scroll 118.000 through 136.975)

To Set Squelch Level, push the “SQL” softkey, then rotate the tuning dial to desired squelch level (00 - 24).
   Note: “SQL -- 0” is open squelch and “SQL -- 24” is tight squelch. (NIRSC suggested SQL level is 20)
   if the squelch is set too high, squelch may not open with weak signals.

Automatic Noise Limiter (ANL) Function:

To Enable ANL, press the “ANL” softkey.
   (LCD displays an “ANL” icon in the lower part of the LCD indicating ANL is enabled)
To Disable ANL, press the “ANL” softkey.
   Note: The ANL function reduces pulse noise or other outside interference.
1. Select a desired group and channel to be programmed.

   **Note:** Select a group by pressing the "#" key followed by a 2-digit group and press the "ENT" key. (01-16)

2. Program Access

   - Secure the programming plug onto the radio side accessory connector.
   - Press and hold the master switch on top of the programming plug.
   - While pressing the master switch, press and hold the "FCN" key on the radio key pad for about 3 secs. LCD should display "<-- ID". (NIRSC radio password is "000000")
   - Enter the SIX-DIGIT password via the keypad and press the "ENT" key on the radio key pad. If the correct password was entered, the LCD will display "PRG Ch 00"

3. Programming a Channel

   **(ANALOG ONLY)**

   From the "PRG Ch 00" screen, press a desired 2-digit channel number to program via the keypad.

   - Press "PRG Ch 00". Channel 01 Settings is currently selected.
   - Press # to toggle between Narrow/Wide Band and press the "FCN" key.
   - Press "TX ID CG", DIGITAL ONLY, press the "ENT" key to skip to next field.
   - Press "TX Code Guard" with "GROUP XX".
   - Press "TX Frequency" and press the "ENT" key.
   - Press "TX Mode" with "PRI" key to "A" for Analog and press the "ENT" key.
   - Press "TX ON PRI 1" and press the "ENT" key for Analog and press the "ENT" key.
   - Press "TX Off PRI 1" and press the "ENT" key for Analog and press the "ENT" key.
   - Add Channel to Scan List:
   - Press "ADD PRI Scan Channel" to toggle between Narrow/Wide Band and press the "TX Mode" with "PRI" key to "A"

4. Channel Programming is complete. At this point the user may select another channel to program or exit the program mode by cycling power to the radio.

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**D/P DPH/DPHx POCKET CARD**

**Note:** Select a group by pressing the "#" key followed by a 2-digit group and press the "ENT" key. (01-16)

**Program Access**

- Secure the programming plug onto the radio side accessory connector.
- Press and hold the master switch on top of the programming plug.
- While pressing the master switch, press and hold the "FCN" key on the radio key pad for about 3 secs.
- LCD should display "<-- ID". (NIRSC radio password is "000000")
- Enter the SIX-DIGIT password via the keypad and press the "ENT" key to enter program mode.
- If the correct password was entered, the LCD will display "PRG Ch 00"

3. Programming a Channel

   **(ANALOG ONLY)**

   From the "PRG Ch 00" screen, press a desired 2-digit channel number to program via the keypad.

   - Press "PRG Ch 00". Channel 01 Settings is currently selected.
   - Press # to toggle between Narrow/Wide Band and press the "FCN" key.
   - Press "TX ID CG", DIGITAL ONLY, press the "ENT" key to skip to next field.
   - Press "TX Code Guard" with "GROUP XX".
   - Press "TX Frequency" and press the "ENT" key.
   - Press "TX Mode" with "PRI" key to "A" for Analog and press the "ENT" key.
   - Press "TX ON PRI 1" and press the "ENT" key for Analog and press the "ENT" key.
   - Add Channel to Scan List:
   - Press "ADD PRI Scan Channel" to toggle between Narrow/Wide Band and press the "TX Mode" with "PRI" key to "A"

4. Channel Programming is complete. At this point the user may select another channel to program or exit the program mode by cycling power to the radio.
1. Turn on the radio and access the Program Mode.
   - Press the “Menu” softkey, highlight “Keypad Prog” and press the “ENT” softkey.
   - Highlight “Keypad Prog” and press the “ENT” softkey again.
   - Enter the 7-digit NiCD radio password and press the “ENT” softkey. (NIRSC Radio default is 0000000)
   2. Highlight “Channels” and press the “ENT” softkey.
   3. Highlight and select desired Zone/Group and press the “ENT” softkey.
   4. Highlight and select desired Channel to program and press the “ENT” softkey.
   5. Highlight “RX Freq” and press “ENT”, then press “CLR” and enter a valid RX Frequency and press “ENT”.
   6. Highlight “RX Mode” and press “ENT” select “Analog” and press the “ENT” softkey.
      Note: “RX NAC” is a Digital function and should be skipped when programming an Analog Channel.
      Note: “TX NAC” and “TGID” are digital functions and should be skipped when programming an Analog Channel.
   7. Highlight “TX Guard” and press “ENT”, press “CLR” and enter a valid TX Tone and press “ENT”.
   8. Highlight “TX Freq” and press “ENT”, press “CLR” and enter a valid TX Frequency and press “ENT”.
   11. Highlight “TX Guard” and press “ENT”, press “CLR” and enter a valid TX Tone and press “ENT”.
      Note: “TX NAC” and “TGID” are digital functions and should be skipped when programming an Analog Channel.
      Note: “Key” and “Key Lock” are for encryption only and should be skipped when programming an Analog Channel.
      Note: Selecting “ON” will enable low power at all times for that particular channel.
   15. Press “ESC” once and select another channel to program repeating steps 4 through 14, or press “ESC” several times to exit the programming mode.

Changing Groups/Zones:
Select a group by pressing the “ZONE” softkey, then scroll to the desired zone using the “Down/Up” softkeys, press the “ENT” softkey to enable that desired zone.

HI/LOW Power Selection:
Low Power - Press the “LPW” softkey. Once enabled a black background around the “LPW” softkey will be displayed on the LCD.
High Power - Press the “LPW” softkey once to disable low power.

Locking Keypad:
To Lock Keypad - Press the “Menu” softkey, scroll down to and select “Keypad Lock” using the “Down/Up” softkeys and press the “ENT” softkey. Select “Locked” using the “Down/Up” softkeys and press “ENT”.
Press “ESC” to return to normal operation.
To Unlock Keypad - Repeat process and select “Unlocked” from the Keypad Lock Menu.

Adding/Deleting Channels from Scan List:
Press the “Menu” softkey, scroll down to “Scan List” using the “Down/Up” softkeys and press the “ENT” softkey. Select the Channel to scan using the “Arrow” softkey and press the “+/−” softkey to add or delete from the scan list.
Note: An “+” indicates the channel is in the scan list.
Press “ESC” softkey twice to return to normal operation.

Enabling/Disabling Scan:
To Enable Scan - Toggle the top “Scan Toggle” switch towards the front of the radio. Display will indicate the radio is in scan mode by displaying “SCN” icon on the LCD.
To Disable Scan - Toggle the top “Scan Toggle” switch towards the back of the radio.
1. Select a desired group and channel to be programmed. (See Changing Zones)
2. Programming a Channel (ANALOG ONLY)
   • Select "Menu" softkey, scroll up/down to "Channel Parameters" and press the "Select" softkey.
   • Scroll up/down to "channel" and press the "Select" softkey.
   • Enter a 5-Digit password and press "OK". (NIRSC Radio Password is "00000")
   • Scroll up/down to desired channel and press the "Select" softkey to enter channel parameters.

Channel Parameters:
- **Channel Mode:** Press "Edit" and scroll up/down to select "Analog" and press "OK".
- **RX Freq:** Press "Edit", then press "4" several times to clear and enter a new RX Frequency and press "OK".
- **TX Freq:** Press "Edit", then press "5" several times to clear and enter a new TX Frequency and press "OK".
- **TX Power:** Press "Edit" and scroll up/down to select either "Low", "Medium", or "High" and press "OK".
- **Channel Name:** Press "Edit", then press "6" several times to clear and enter new name via the keypad and press "OK".
- **TX Timeout:** Press "Edit" and scroll up/down to select "Yes" and press "OK". (Default = 120 Sec)
- **RX Tone:** Press "Edit" and scroll up/down to select "CCS" and press "OK".
- **TX Tone:** Press "Edit" and scroll up/down to select desired tone from list or select "NONE" and press "OK".
- **TX Tone Type:** Press "Edit" and scroll up/down to select desired tone from list or select "NONE" and press "OK".
- **Channel Spacing:** Press "Edit" and scroll up/down to select "00,12.5kHz or 15KHz" and press "OK".
- **ANI Type:** Press "Edit" and scroll up/down to select either "None", "5-Tone", DTMF and press "OK".
- **Seldcall Type:** Press "Edit" and scroll up/down to select "None" and press "OK".

Once all parameters are entered, press the "Exit" key. Press "Yes" when display shows "Save Changes Permanently?".

**MIDLAND SETTINGS AND OPTIONS**

**CHANGING ZONES:**
To change groups, press the "Zone" softkey. Enter the zone number via the keypad and press the "OK" softkey.

Press the "Zone" softkey. Press the UP/Down keypad keys to desired zone and press "OK".

**ENABLING/DISABLING SCAN:**
To Enable Scan - Press the "" softkey. The LCD will indicate the radio is scanning by a " " icon in the upper right corner.

To Disable Scan - Press the "" softkey.

Note: Pressing the "Menu" softkey while scanning will also disable scanning.

**ADD/REMOVE CHANNEL FROM SCAN LIST:**
To Add a Channel -

- Press the "Menu" softkey, scroll down to "Channel Parameter" using the up/down softkeys and press the "Select" softkey.
- Scroll down to "Channel Scan" and press the "Select" softkey.
- Scroll up/down to desired channel and press the "Select" softkey. Scroll to "Add to List", "1st Priority" or "2nd Priority" and press the "OK" softkey.
- Press the "Exit" softkey, and continue adding more channels to the scan list.
- Once complete, press "Exit" twice to close scan edit list.

To Remove a Channel - Repeat the process and select "Remove".

**HI/MID/LOW Power Selection:** (H= 5W High Power, M= 2W Medium Power, L=1W Low Power)
Press the "FI" side button to cycle between HI/MID/LOW power settings.

**LOCKING KEYPAD:**
To Lock Keypad, press the "" softkey once to lock keypad.
To Unlock Keypad, Press the "" softkey once more then press the "Unlock" softkey to unlock keypad.
1. **Programming Access:**
   - Press the 4-Way Navigation Key to the right until "FPP" softkey is displayed.
   - Press the "FPP" softkey to proceed into programming mode.
   - Radio will prompt for "Password", press the "OK" softkey to enter program mode.
   - Radio will display active zone, select the desired zone by pressing the 4-Way Navigation key left or right.
   - Once desired zone is reached, press the "VIEW" softkey to select that zone channel information.

2. **Programming a Channel (ANALOG Only):**
   - Once the zone is selected, select the desired channel, by pressing the 4-Way Navigation key left or right.
   - Press the "Edit" softkey to change that particular channel information.
   - Press the "Edit" softkey to change the "TX frequency", press the "OK" key when done.
   - Press the 4-Way key to the right to enter the RX frequency.
   - Press the "Edit" softkey to change the "RX frequency", press the "OK" key when done.
   - Press the 4-Way key to the right several times until "RX Type" is displayed.
   - Press the "Edit" softkey to change the "RX type", press the 4-way key up/down to toggle between "ANALOG", "MIXED" or "DIGITAL", select "ANALOG" and press the "OK" key when done.
   - Press the 4-way key to the right several times until "Bandwidth" is displayed.
   - Press the "Edit" softkey to change the "Bandwidth", press the 4-Way key up/down to toggle between "12.5Khz", "20.0Khz", or "25.0Khz", select "12.5Khz" for narrow-band and press the "OK" key.

Once all the programming parameters have been entered for that channel, press the "Done" softkey and select another channel to program or press the "HOME" key to exit programming mode.

**Note:** Do not change TX/RX DPL, or TX/RX NAC for analog channels, these parameters are used for digital channel only.

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**MOTOROLA XTS 2500/5000 SETTINGS AND OPTIONS**

**CHANGING ZONES/GROUPS:**
- To change zones/groups, press the "ZONE" softkey from the default screen/display.
- Select the desired zone/group by scrolling right/left with the 4-Way Navigation Switch.
- (or direct enter a 2 digit zone/group number via the key)
- Once a desired zone/group is selected, press the "HOME" button to make that zone/group active.

**ENABLE/DISABLE SCAN/PRIORITY SCAN:**
- To Enable Scan, place the 3-Position Rotary/Toggle Switch to the "B" or "C" position.
- To Disable Scan, place the 3-Position Rotary/Toggle Switch to the "A" position.

**ADD/REMOVE CHANNELS FROM SCAN/PRIORITY LIST:**

**To add a channel to the Scan List:**
- Press the "PROG" softkey from the default screen/display.
- Press the "SCAN" softkey to enter into the scan list programming mode.
- Select the desired channel to scan with the top 16 Channel Select Knob.
- Press the "SEL" softkey once to enter that selected channel in the scan list.
- LCD will indicate the channel is in the scan list, by displaying an ( ) icon on the upper LCD.
- Press the "SEL" softkey once more to enter that selected channel as the scan priority 1 channel.
- LCD will indicate the radio is PRI 1 by displaying an ( ) icon on the upper part of the LCD.
- Press the "SEL" softkey once more to enter that selected channel as the scan priority 2 channel.
- LCD will indicate the radio is PRI 2 by displaying an ( ) icon on the upper part of the LCD.
- Press the "SEL" softkey once more to remove the channel from the scan list completely.
- Or press the "DEL" softkey to remove the channel from the scan list.

Press the "HOME" button to return to the main screen.

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**ADD/REMOVE CHANNELS FROM SCAN/PRIORITY LIST:**

**To add a channel to the Scan List:**
- Press the "PROG" softkey from the default screen/display.
- Press the "SCAN" softkey to enter into the scan list programming mode.
- Select the desired channel to scan with the top 16 Channel Select Knob.
- Press the "SEL" softkey once to enter that selected channel in the scan list.
- LCD will indicate the channel is in the scan list, by displaying an ( ) icon on the upper LCD.
- Press the "SEL" softkey once more to enter that selected channel as the scan priority 1 channel.
- LCD will indicate the radio is PRI 1 by displaying an ( ) icon on the upper part of the LCD.
- Press the "SEL" softkey once more to enter that selected channel as the scan priority 2 channel.
- LCD will indicate the radio is PRI 2 by displaying an ( ) icon on the upper part of the LCD.
- Press the "SEL" softkey once more to remove the channel from the scan list completely.
- Or press the "DEL" softkey to remove the channel from the scan list.

Press the "HOME" button to return to the main screen.