ICOM IC-A3 AM PORTABLE RADIO BASIC OPERATION & CONTROLS

1. Turn power ON by turning the ON/OFF Volume knob clockwise.
2. Select a valid AM frequency from one of the memory locations or direct enter a valid AM frequency via the keypad.
3. Adjust the volume by turning the Squelch knob clockwise to open the squelch and set the volume to desired level.
4. Adjust the squelch by turning the Squelch knob counterclockwise until the squelch closes. This is the Threshold Squelch Setting.
   Note: If the Squelch control is set too high, squelch may not open for weak signals.

5. Push the "**ANL**" side button to reduce pulse noise caused by engine ignitions or other outside interference.

   The radio is ready to receive on that current frequency.

6. To Transmit, press and hold the Push-To-Talk (**PTT**).
   Note: The display will indicate the radio is transmitting by displaying a "TX" icon on the top portion of the LCD.

7. 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.

8. Release the PTT to stop transmitting and receive incoming transmissions.

Figure 1: ICOM Front View

Figure 2: ICOM Side View

ICOM IC-A6 AM PORTABLE RADIO BASIC OPERATION & CONTROLS

1. Press and Hold the " PWR "softkey for 3 seconds to turn power "ON".
2. Select a valid AM frequency form one of the memory locations or direct enter a valid AM frequency via the keypad.
3. Adjust the volume by turning the Volume Knob to desired level.
4. Adjust the Squelch by pushing the " SQL " softkey, then rotate the tuning dial to desired squelch level (00 - 24). *(See Figure 1)*
   Note: "SQL -- 0" is open squelch and "SQL -- 24" is tight squelch.
   If the Squelch control is set too high, squelch may not open for weak signals.

SQL - - 20
M1 5
Figure 1

5. Push the " ANL " softkey to reduce pulse noise caused by engine ignitions or other outside interference.

   The radio is ready to operate on that current frequency.

6. To Transmit, press and hold the Push-To-Talk (**PTT**).
   Note: The display will indicate the radio is transmitting by displaying a "TX" icon on the top portion of the LCD.
   (See Figure 2)

TX
132.250
M1 5
Figure 2

7. 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.

8. Release the PTT to stop transmitting and receive incoming transmissions.
   Note: The display will indicate the radio is receiving by displaying a " RX" icon on the top portion of the LCD.
   (See Figure 3)

RX
132.250
M1 5
Figure 3

Antenna
Tuning Dial
Volume Knob
LCD
Active Frequency
Active Memory Channel
Active Bank
PTT
Back Light
Recall Sofkeys
Power Softkey
Function Softkey
Clear/Delete Softkey
Keypad
ANL/Scan Softkey
Enter Softkey
Microphone
Speaker

Figure 4: ICOM A-6 Front View

ICOM IC-A6 PORTABLE AM RADIO PROGRAMMING & OPTIONS GUIDE

MANUAL FREQUENCY ENTRY USING THE KEYPAD
1. Press and Hold the " PWR " softkey for 3 seconds until the power turns ON.
2. Push the " CLR " softkey to select frequency mode.
3. Enter a valid 5 digit AM frequency and press the " ENT " key. *(118.000 through 136.975)*
   Display will indicate the current selected frequency. *(See Figure 1)*
   Note: Pushing the " ENT " key enters consecutive zero digits.
   Only "2", "5", "7", and "0" can be entered as the 5th and final digit.

125.550

Figure 1

MANUAL FREQUENCY ENTRY USING THE TUNING DIAL
1. Press and Hold the " PWR " softkey for 3 seconds until the power turns " **ON**".
2. Push the " CLR " softkey to select frequency mode.
3. Rotate the tuning dial to set the desired frequency. *(See Figure 1)*
   Note: To select 1Mhz tuning step, press the " F " softkey once, Push the " F " softkey again to return to normal tuning.

PROGRAMMING A MEMORY CHANNEL
1. Set the desired frequency using the keypad, the radio must be in frequency mode to enter new frequency.
2. Press the " F " soft key, followed by the " MR " softkeykey .
   The LCD will flash the "**Mx XX**" in the lower display. *(See Figure 2)*
3. Select a memory bank (**0-9**) to program by pressing the " F " softkey followed by the " 0 " softkey, then selecting a desired Bank using the tuning dial. Press the " ENT " softkey once the desired bank is located.   *Note: Default is Bank-0 (See Figure 3)*
4. Select a memory channel (**00-19**) to be programmed using the tuning dial.
5. Press the " ENT " key to enter that frequency into the memory location.   *(See Figure 4) (125.550 is saved in Bank 2, Channel 5)*

125.550
M0 **0**

Figure 2

BANK - - 0
M0 **0**

Figure 3

MEMORY CHANNEL SELECTION
1. Push the " MR " key to select memory mode.
2. Select the desired memory location by rotating the tuning dial to desired memory channel and press the " ENT ".
   Display will indicate the corresponding frequency of the memory location including bank location.   *(See Figure 4)*
   Note: To CLEAR the memory contents, select the memory channel to be cleared. Press the " F ' softkey, then push and hold the " CLR " softkey for 2 seconds.

125.550
M2 **5**

Figure 4

SELECTING A BANK
1. Press the " F " softkey, followed by the " 0 " softkey.
2. Select the desired bank (**0-9**) using the top tuning dial.
3. Press the " ENT " softkey to make that bank active.

RECALL FUNCTION
Recall stores the last 10 frequencies used in the radio.
1. **To recall a used frequency**, press the " ◀ ▶ " softkeys to find the desired used frequency,   *(See Figure 5)*
   Note: To CLEAR the recall contents, select the recall channel to be cleared. Press the " F ' softkey, then push and hold the " CLR " softkey for 2 seconds.

122.900
r **3**

Figure 5

KEYPAD LOCK FUNCTION
1. **To Enable Key Lock**, press the " F " key, then press the " 7 " key (**Key Lock**) to turn ON the function. *(See Figure 6)*
   Display indicates that the key Lock functions is enabled by displaying the " ⌐O ' icon in the upper part of the LCD.
2. **To Disable Key Lock**, repeat the process.
   Note: The lock function prevents accidental frequency changes & accidental function activation.

125.550
M2 **5**

Figure 6

AUTOMATIC NOISE LIMITER (ANL) FUNCTION
1. **To Enable ANL**, press the " ANL " softkey.
   Display indicates that the ANL function is enabled by displaying " **ANL**" icon in the lower part of the LCD.   *(See Figure 7)*
2. **To Disable ANL**, press the " ANL " softkey.
   Note: The ANL function reduces pulse noise such as ignition noise, computer, lights and other outside interference.

125.550
ANL
M2 **5**

Figure 7

BACK LIGHT FUNCTION
1. **To Enable the LCD Back Light**, press the Light side button.   *(Bottom side button)*
2. **To Disable the LCD Back Light**, Press the Light side button.
   Note: The Light button turns on the LCD back light and the keypad lighting.
   The light will stay on until it is disabled.

SETTING SQUELCH LEVEL
1. Push the " SQL " softkey, then rotate the tuning dial to desired squelch level (00 - 24).   *(See Figure 8)*
   Note: "SQL -- 0" is open squelch and "SQL -- 24" is tight squelch. (NIICD suggested level is 20)

SQL - - 20
M2 **5**

Figure 8

MANUAL FREQUENCY ENTRY USING THE KEYPAD

1. Rotate the Volume Knob clockwise to turn the power ON.
2. Push the "CLR" key to select frequency mode.
3. Enter a valid AM frequency and press the " ENT" key.
   Display will indicate the current selected frequency.   *(See Figure 1)*
   Note: Push the "ENT" key to enter consecutive zero digits.
   Push the up/down arrow keys to scroll through frequencies quickly.
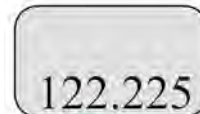   *Decimal is automatically entered.*

122.225

Figure 1

MEMORY CHANNEL SELECTION

1. Push the "MR" key to select memory mode.
2. Select the desired memory location by pressing the appropriate 2-digit number with the keypad # keys and press " ENT".
   Display will indicate the corresponding frequency of the memory location.   *(See Figure 2)*
   Note: NIICD as default contains 6 preprogrammed frequencies in memory locations 1-6.
   Memory locations can also be selected via the tuning dial once in memory mode.

M 1
122.925
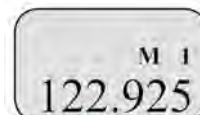
Figure 2

PROGRAMMING A MEMORY CHANNEL

1. Set the desired frequency using the keypad; the radio must be in frequency mode to enter new frequency.
2. Press the "F" key, followed by the " MR" key.
   The LCD will flash the "M" in the upper display. *(See Figure 3)*
3. Select a memory channel (01-50) to be programmed using the keypad or by rotating the tuning dial.
4. Press the "ENT" key to enter that frequency into the memory location.

or

5. Press the "MR" key to change the alpha/numeric label then press the " ENT" key to store the frequency and label into the memory location.   *(See Figure 4)*
   Note: The user must know which keys correspond to the alpha characters; the keypad does not indicate which
   key corresponds to each alpha character. (See Figure 5)
   When entering alpha characters, use the up/down arrow keys to move cursor.
   Keys correspond just like a cell phone with exception to letters Q and Z; these are under the #1 key.
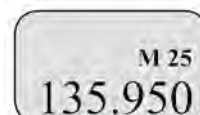   *No special characters are available.*

M 25
135.950

Figure 3

M 25
ROTOR

Figure 4

1 QZ	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PRS	8 TUV	9 WXY

Figure 5

LOCK FUNCTION

1. **To Enable Key Lock**, press the "F" key, then press the " 7" key (**Key Lock**) to turn ON the function.
   Display indicates that the key Lock functions is enabled by displaying the " '🔑 'con in the upper part of the LCD.
2. **To Disable Key Lock**, repeat the process. *(See Figure 6)*
   Note: The lock function prevents accidental frequency changes & accidental function activation.
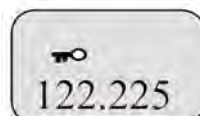
🔑
122.225

Figure 6

AUTOMATIC NOISE LIMITER (ANL)

1. **To Enable ANL**, press the ANL side button. *(Top side button)*
   Display indicates that the ANL function is enabled by displaying " **ANL**" icon in the upper part of the LCD. *(See Figure 7)*
2. **To Disable ANL**, press the ANL side button.
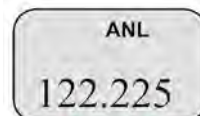   *Note: The ANL function reduces pulse noise such as ignition noise and other outside interference.*

ANL
122.225

Figure 7

LIGHT SWITCH

1. **To Enable the LCD Back Light**, press the Light side button. *(Bottom side button)*
2. T**o Disable the LCD Back Light**, Press the Light side button.
   Note: The Light button turn on the LCD back light and the keypad lighting.
   The light will stay on until it is disabled.

DATRON PORTABLE RADIO 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.

BROADBAND ANTENNA

MICROPHONE

SPEAKER

LCD

Programming/ Multi-Function Keys

KEYPAD

CLAMSHELL

Figure 1: DATRON Front View

ON/OFF VOLUME CONTROL

CHANNEL CONTROL

ANTENNA PORT

TOGGLE SWITCH
A= PRI SCAN ON
B= SCAN ON
C= SCAN OFF

EMERGENCY BUTTON (Disabled)

LED

Figure 2: DATRON Top View

AUXILIARY 1 SQUELCH MONITOR

AUXILIARY 2 (Disabled)

BATTERY RELEASE

AUXILIARY 3 HI/LO POWER

PUSH TO TALK (PTT)

Figure 3:   DATRON Side View

ADD/REMOVE CHANNEL FROM SCAN LIST

1. Set the radio that the channel to be added in the Scan List by using the Channel Select knob.
2. **To Add Channel** , briefly press and release the 3rd Multi-Function key from the left, 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 2nd Multi-Function key from the left. The box " ☐ " will re removed from the "**C**" in the display.

Note: If the 3rd Multi-Function key is pressed to long, it will enable Zone Scan, which will scan other scan channels in different zones/groups.

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 top 3-Position toggle switch must be in the " **A**" position. The display will indicate that the radio 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 Large Green Multi-Function key to bring up the Main Menu screen.
2. Scroll down to "**PROGRM**" and press the "**ENT**" key.
3. Scroll down to "**SCAN**" and press the "**ENT**" key.
4. Scroll down to "**P1**" and press the "**ENT**" key.
5. Select the **P1** Channel by using the Channel select knob and press the "**ENT**" key when done.
6. To add a second priority channel **P2**, scroll down to "**P2**" and press the "**ENT**" key. Select the **P2** Channel by using the Channel Select Knob and the press the "**ENT**" 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 "ENT" key to bring up the Main Menu Screen. Select "SCAN" and press the "ENT" key. Scroll down to "PRIMODE" and press the "ENT" 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)

NIICD default is P1 Enabled.

CHANGING ZONES

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

Note: NIICD has a total of 16 available zones under the NIFC Bank.
Additional 3 zones are available under the Incident Bank.
NIICD default is "NIFC BANK"

CHANGING BANKS

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

Note: NIICD default is "NIFC Bank".
The "INCIDENT Bank" contains 3 additional zones available for programming or cloning.

DISABLE/ENABLE KEYPAD

1. Press and hold the **1st Blue Multi-Function** key while pressing and holding the **Green Multi-Function** key. Display will show "**Keys Disabled**", "**Side Enabled**". (Only the keypad is disabled, while all the side button 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**". *(See Figures 6 & 7)*
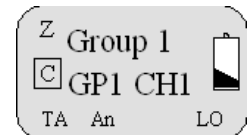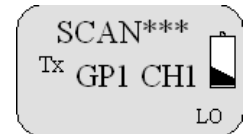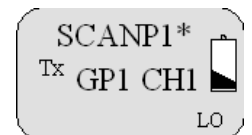

Figure 1

Figure 2

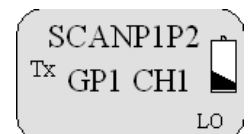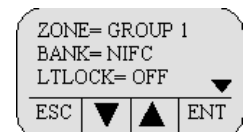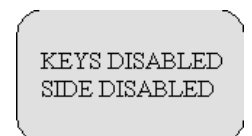**Figure 3**

Figure 4

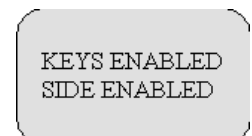**Figure 5**

Figure 6

Figure 7

DATRON PORTABLE RADIO ANALOG CHANNEL PROGRAMMING

1. Select a channel for programming by rotating the Channel Select Knob to one of the sixteen rotary positions.
2. Press the Large Green Multi-Function key to bring up the Main Menu screen.   *(See Figure 1)*
3. Scroll up/down using the Blue Multi-Functions keys (**up/down keys**) to select "PROGRM" and press the "**ENT**" key.
4. Enter a 6-Digit Password if requested and press the " **ENT**" key.
   Note: NIICD password is "000000".

5. Scroll up/down and select " **CHANNEL**" and press the "**ENT**" key. *(See Figure 2)*
6. Scroll down and select " **TAG**" and press the "**ENT**" key. *(See Figure 3)*
   Change the channel name/label using the keypad and press the " **ENT**" 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 "**ENT**" key. *(See Figure 4)*
   Select either " **ANALOG**" or "**DIGITAL**" and press the "**ENT**" key.
   Note: NIICD default is "ANALOG" for all channels.

8. Scroll down and select " **B/W**" and press the "**ENT**" key. *(See Figure 4)*
   Select either " **25Khz**" or "**12.5Khz**" and press the "**ENT**" key.
   Note: 25Khz= Wide-Band, 12.5khz= Narrow-Band. If "DIGITAL" is selected for "MODE", the "B/W" option is not available. Other options are available once "DIGITAL" is selected.
   NIICD default is "12.5 Khz" for Narrow-Band operation.

9. Scroll down and select " **ENCRPT**" and press the "**ENT**" key. *(See Figure 5)*
   Select either " **ENABLD**" or "**DISABD**" and press the "**ENT**" key.
   Note: If Encryption is enabled, a key must be loaded first into the radio with the PC Programmer.
   NIICD default is "DISABD"

10. Scroll down and select " **RX**" and press "**ENT**". *(See Figure 6)*
    Enter a valid RX frequency from 136-174 Mhz using the keypad and press the " **ENT**" key.

11. Scroll down and select " **RX SQMD**" and press the "**ENT**" key. *(See Figure 7)*
    Select either " **NOISE**", "**DCS**", "**CTCSS**", or "**NONE**" and press the "**ENT**" key.
    Note: If "Noise" is selected, the program will proceed with the Squelch Adjust parameter (SQ=), select a squelch setting and press "ENT" 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 "ENT"; this sitting 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 " ENT"; 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: NIICD default is "Noise" with a "SQ" setting of 8.

12. Scroll down and select " **TX**" and press the "**ENT**" key. *(See Figure 8)*
    Enter a valid TX frequency from 136-174 Mhz using the keypad and press the " **ENT**" key.

13. Scroll down and select " **TX SQMD**" and press the "**ENT**" key. *(See Figure 9)*
    Select either " **DCS**", "**CTCSS**", or "**NONE**" and press the "**ENT**" 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 "ENT" ; this sitting 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 "ENT"; 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: NIICD default is "None".

14. Scroll down and select "**LO PWR**" and press "**ENT**". *(See Figure 10)*
    Select either " **0.1**", "**0.5**", "**1.0**", "**2.0**", or "**5.0**" Watts for low power setting and press the " **ENT**" key.
    Note: NIFC Default for Low Power is 1.0 Watts.

15. Scroll down and select " **HI PWR**" and press the "**ENT**" key. *(See Figure 10)*
    Select either " **0.1**", "**0.5**", "**1.0**", "**2.0**", or "**5.0**" Watts for high power setting and press the" **ENT**" key.
    Note: NIICD 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

DATRON PORTABLE RADIO CLONING INSTRUCTIONS

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 " ▼ " softkey through the Cloning Main Menu.
5. Use the " √ " softkey 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 Invent 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 where cloned over.
   (See Figure 7)
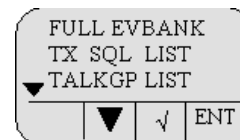8. Disconnect "**Target**" radio and connect any other " **Target**" radios that need to be cloned.
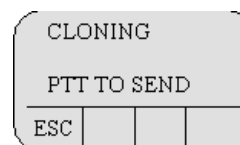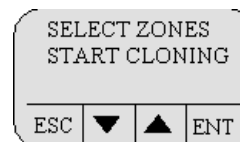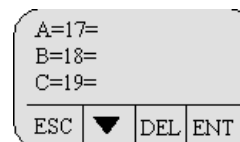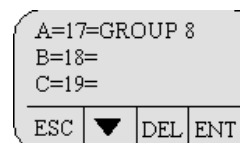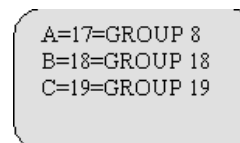

Fig. 8: Cloning Cable Connections

Cloning Cable
(2 cables)
RED= MASTER

Master Radio

Clone Radio

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

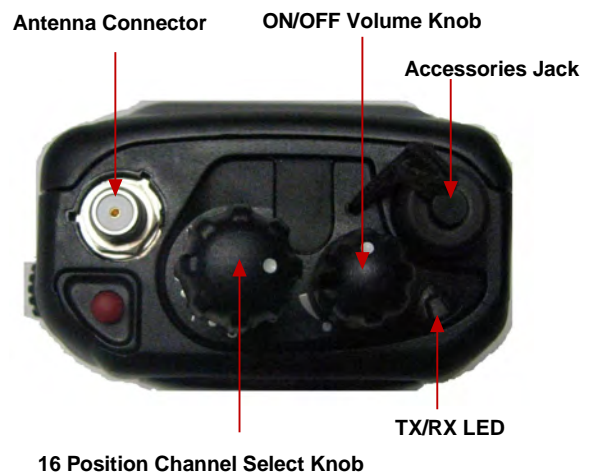**Figure 6**

Figure 7

1. Turn power **ON** by turning the ON/OFF Volume Knob clockwise.
   The LCD will indicate the current channel label.

2. Select a zone number by pressing the appropriate the *"Zone"* softkey. Enter the zone number via the key pad and press the " **OK**" softkey.

   OR

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

3. Select a channel by turning the Channel Select Knob to one of the 16 available positions.

4. Adjust the volume by pressing the " **F2 Squelch**" button once to open the squelch and set the volume to desired level, press the " **F2 Squelch**" key once more to close Squelch. The radio will display " **CHANNEL MONITOR ON or OFF**". To exit, press the " **Exit**" softkey or wait 3 seconds and the radio will return to it's default operating display. **The radio is now ready to operate on that current group and channel.**

   Note: Holding down the "F2 Squelch" button will open the "Squelch Adjust" parameter of the radio. This setting allows the user to adjust the squelch setting for each individual channel. To exit, press the "Exit" softkey or wait 3 seconds and the radio will return to it's default operating display. (See Radio Settings for more detail)

6. To transmit, press and hold the Push-To-Talk (**PTT**) button on the side of the radio.
   Note: The Transmit Indicator Light should glow red while transmitting.
   If not, the battery may be low or the channel is RX only or busy.

7. 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.

8. Release the PTT to stop transmitting and receive incoming transmissions.

Figure 1: Front View Midland

Figure 2: Top View Midland

CHANGING ZONES

To change groups, press the " **Zone**" softkey. Enter the zone number via the key pad and press the "   **OK**" softkey. *(See Figure 1)*

OR

Press the "**Zone**" softkey. Press the UP/Down keypad keys to desired zone and press the "   **OK**" softkey. *(See Figure 2)*
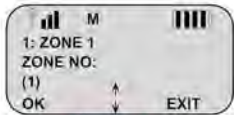
Figure 1

Figure 2

ENABLING/DISABLING SCAN

To Enable Scan - Press the " " softkey. The display 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 scan.

If no channels are in the scan list, the user will get the following error "Enter Scan List" on the display.

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 to "**Channel Scan**" and press the "**Select**" softkey.

Scroll down/up 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**".

Note: Holding down the "#" key will also bring up the Edit Scan List menu.

TX POWER SELECTION

Press the "**F1**" side button to cycle between

HI/MID/LOW power settings.

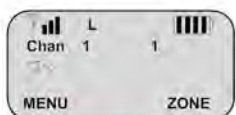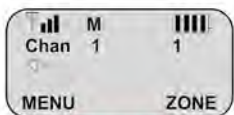*Note: H= HI Power/ M=Medium Power/ L=Low Power (See Figures 3, 4 and 5)*
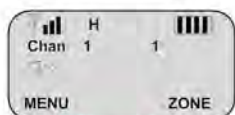
Figure 3   **Figure 4**   **Figure 5**

LOCKING KEYPAD

Press the " " softkey once to lock key pad.

Press the " " softkey once more then press the " **Unlock**" softkey to unlock keypad.

SQUELCH ADJUSTMENT

Press and hold the " **F2 Sqluech**" button to open the " **Squelch Adjust**" parameter. *(See Figure 6)*

Adjust the squelch setting by using the up/down softkeys and press the "**OK**" softkey.

Note: Setting squelch to the far left, completely opens the squelch sensitivity setting (Open Squelch).   (See Figure 7)
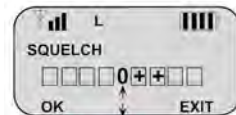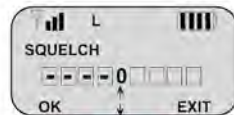
Figure 6   **Figure 7**

1. Select a group and channel you wish to program   *(See Figure 1)*
    Note: To change groups, press the "Zone" softkey. Enter the zone number via the key pad and press the "OK" softkey.
                                                    OR
    Press the "Zone" softkey. Press the UP/Down keypad keys to desired zone and press the "OK" softkey.

Figure 1

2. Select the "**Menu**" softkey, scroll down/up to "**Channel Paramaters**" and press the "**Select**" softkey. *(See Figure 2)*

3. Scroll down/up to "**Channel**" and press the "**Select**" softkey to enter channel programming mode.

Figure 2

4. Enter a 5-Digit Password and press the "**OK**" softkey. *NIICD Password is "00000"   (See Figure 3)*

5. Scroll up/down to desired channel and press the "**Select**" sofkey to enter channel parameters. *(See Figure 4)*

Figure 3

Channel Parameters
6. **Channel Mode: Default is set to "Analog".**   *(See Figure 5)*
    To change setting, press the "**Edit**" softkey and scroll up/down to select "**Analog, Digital, or Multi**" and press the "**OK**" softkey.

7. **RX Frequency:** Press the "**Edit**" softkey to edit the RX Frequency. Press the " C " key several times to clear the frequency and enter the new RX Frequency and press the "**OK'** softkey. *(See Figure 6)*

Figure 4

8. **TX Frequency:** Press the "**Edit**" softkey to edit the TX Frequency. Press the '" C " key several times to clear the frequency and enter the new TX Frequency and press the "**OK'** softkey. *(See Figure 7)*

9. **TX Power:** Default is set to Medium (2 Watts).
    To change setting, press the "**Edit**" softkey and scroll up/down to select "**Low, Medium", or "High**" Power and press the "**OK**" softkey.

Figure 5

10. **Channel Name:**
    To change the channel name, press the "**Edit**" softkey and press the " C " key several time to clear the channel name.
    Enter a new channel name via the numeric key pad and press the "**OK**" softkey.

11. **TX Timeout: Default is set to "Yes". Timer is set to 120 seconds.**
    To change setting, press the "**Edit**" softkey and scroll up/down to select "**No or Yes**" and press the "**OK**" softkey.

Figure 6

12. **RX Tone Type: Default is set to "CCS".**
    To change setting, press the "**Edit**" softkey and scroll up/down to select "**CCS" or "DCS**" and press the "**OK**" softkey.

13. **RX Tone: Default is set to "None".**
    To change setting, press the "**Edit**" softkey and scroll up/down to select desired tone from list and press the "**OK**" softkey.

14. **TX Tone Type: Default is set to "CCS".**
    To change setting, press the "**Edit**" softkey and scroll up/down to select "**CCS" or "DCS**" and press the "**OK**" softkey.

Figure 7

15. **TX Tone: Default is set to "None".**
    To change setting, press the "**Edit**" softkey and scroll up/down to select desired tone from list and press the "**OK**" softkey.

16. **Chan. Spacing: Default is set to "12.5Khz". Narrowband**
    To change setting, press the "**Edit**" softkey and scroll up/down to select either "**12.5Khz" or "15Khz**" and press the "**OK**" softkey.

17. **ANI Type: Default is set to "None".**
    To change setting, press the "**Edit**" softkey and scroll up/down to select either "**None, "5-Tone", or "DTMF**" and press the "**OK**" softkey.

Figure 8

18. **Selcall Type: Default is set to "None".**
    To change settins, press the "**Edit**" sofkey and scroll up/down to select "**None", "2-Tone", or "5-Tone**" and press the "**OK**" softkey.

19. Once all parameters are entered, press the "**Exit**" softkey. *(See Figure 8)*
    Display will show "**Save Changes Permanently**?", press the "**Yes**" softkey key to save all the entered channel parameters.
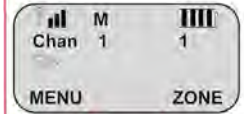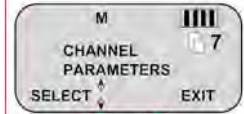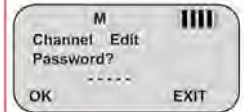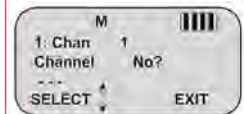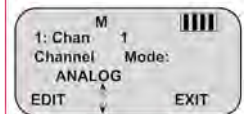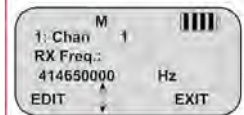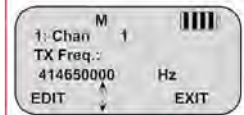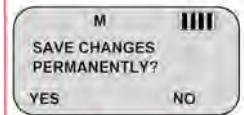
1. Turn both radios ON.

2. Attach each end of the cloning cable to each Accessories Jack on top of the radio.   *(See Figure 8)*
   There is no master or slave connections on the cloning cable.
   Note: The Master radio will clone from it's current group into the Slaves current group, verify the Master and the Slave radios are in the appropriate groups before cloning.

3. On the Master radio, select " **Menu**" using the left radio softkey.   *(See Figure 1)*
   Scroll down to " **Channel Parameters**" via the up/down arrow softkeys and press the " **Select**" softkey.   *(See Figure 2)*
   Scroll down to " **Cloner**" and press the " **Select**" softkey.   *(See Figure 3)*
   Select " **Single Zone**" via the up/down arrow softkeys and press the " **Select**" softkey.   *(See Figure 4)*
   Press the " **Prog**" softkey to send the clone over to the Slave radio.   *(See Figure 5)*
   The Master radio will communicate with the slave radio and write the cloned group.   *(See Figure 6)*

4. Once the cloning is successful, press the " **Exit**" softkey three times to exit out of the programming/cloning mode.
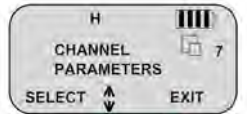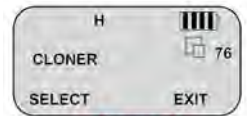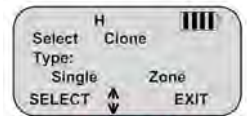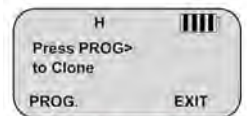   *(See Figure 7)*

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Midland Cloning Cable ⟶

Figure 8: Midland Cloning Connections

1. Turn power **ON** by turning the ON/OFF Volume Knob clockwise.
   The LCD will indicate the current group and channel label.
2. Select a zone number by pressing the appropriate Menu Select soft key labeled "**ZONE**", then select a zone by pressing the 4-Way Navigation switch to the right or left; or direct enter a 2 digit group/zone number via the keypad and press the "**Home**" key when finished.
3. Select a channel by turning the Channel Select Knob to one of the 16 available positions.
4. Adjust the volume by pressing/hold the "**Monito**r" key until it beeps and set the volume to desired level, press the "**Monitor**" key once more to close Squelch. **The radio is now ready to RECEIVE on that current group and channel.**

6. To transmit, press and hold the Push-To-Talk (**PTT**) button on the side of the radio.
   Note: The Transmit Indicator Light should glow red while transmitting.
   If not, the battery may be low or the channel is RX only or busy.

7. 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.

8. Release the PTT to stop transmitting and receive incoming transmissions.

UHF Antenna

Microphone

Speaker

16 Position Channel Select Switch

ON/OFF Volume Knob

Antenna Connector

3-Position Rotary Switch
A=Scan OFF
B/C= Scan ON

Figure 3: Top View XTS 2500

5 Line LCD

3 Menu Select Soft Keys

Home Button

4-Way Navigation Switch

Keypad

Clamshell Magazine Release Latch (Both Sides)

Monitor (Open Squelch)

Clamshell Cover Release Tabs

Push To Talk (PTT)

Clamshell

Unassigned

Figure 1: Front View XTS 2500
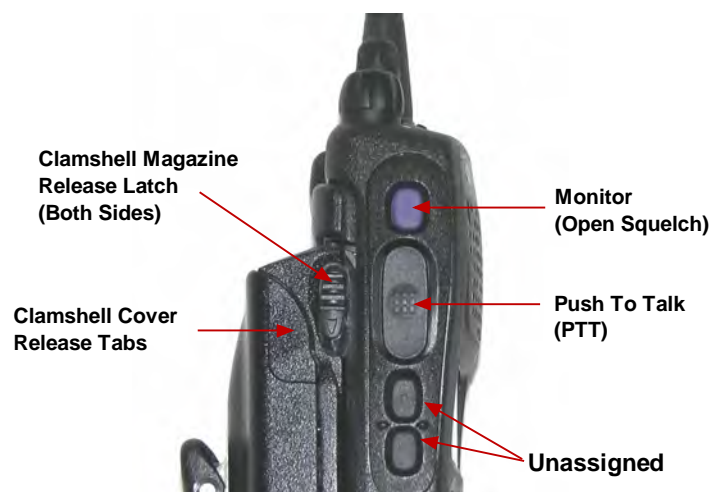
Figure 2: Side View XTS 2500

1. Turn power **ON** by turning the ON/OFF Volume Knob clockwise.
   The LCD will indicate the current group and channel label.
2. Select a zone number by pressing the appropriate Menu Select soft key labeled " **ZONE**", then select a zone by pressing the 4-Way Navigation switch to the right or left; or direct enter a 2 digit group/zone number via the keypad and press the " **Home**" key when finished.
3. Select a channel by turning the Channel Select Knob to one of the 16 available positions.
4. Adjust the volume by pressing/hold the " **Monitor**" key until it beeps and set the volume to desired level, press the " **Monitor**" key once more to close Squelch.   **The radio is now ready to RECEIVE on that current group and channel.**

6. To transmit, press and hold the Push-To-Talk (**PTT**) button on the side of the radio.
   Note: The Transmit Indicator Light should glow red while transmitting.
   If not, the battery may be low or the channel is RX only or busy.

7. 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.

8. Release the PTT to stop transmitting and receive incoming transmissions.

Microphone

Speaker

ON/OFF
Volume Knob

16 Position Channel Select Switch

Antenna Connector

3-Position Toggle Switch
A/B=Scan ON
C= Scan OFF

Figure 3: Top View XTS 5000

5 Line LCD

G1 CHAN 10
FPP
ZONE   PWR

3 Menu Select Soft Keys

Home Button

4-Way Navigation Switch

Keypad

Clamshell

Clamshell Cover
Release Tabs

Monitor
(Open Squelch)

Unassigned

Push To Talk
(PTT)

Figure 1: Front View XTS 5000

Figure 2: Side View XTS 5000

NIICD/NIRSC Radio Help File 2015

MOTOROLA XTS 2500/5000 PORTABLE RADIO SETTINGS/OPTIONS

CHANGING ZONES/GROUPS
1. To change zones/groups, press the " **ZONE**" softkey from the default screen/display.   *(See Figure 1)*
2. Select the desired zone/group by scrolling right/left with the 4-Way Navigation Switch.   *(See Figure 2)*
   (or direct enter a 2 digit zone/group number via the key)
3. Once a desired zone/group is selected, press the " **HOME**" button to make that zone/group active.

Figure 1   **Figure 2**


ENABLE/DISABLE SCAN/PRIORITY SCAN
1. **To Enable Scan**, turn the 3-Position Rotary/Toggle Switch to the " **B**" or "**C**" position.
   LCD will indicate the radio is in scan mode, by displaying an ( ) on on the upper part of the LCD.   *(See Figure 3)*
2. **To Disable Scan**, turn the 3-Position Rotary/Toggle Switch to the " **A**" position.
   Note: If no channels are in the Scan List, the radio will beep and indicate empty scan list on the LCD when scan is enabled.

Figure 3


ADD/REMOVE CHANNELS FROM SCAN/PRIORITY LIST
1. To add a channel to the Scan List, press the " **PROG**" softkey from the default screen/display.   *(See Figure 4)*
2. Press the "**SCAN**" softkey to enter into the scan list.   *(See Figure 5)*
3. Select the desired channel to scan with the top 16 Channel Select Knob.
4. Press the "**SEL**" softkey once to enter that selected channel in the scan list.   *(See Figure 6)*
   LCD will indicate the channel is in the scan list, by displaying an ( ):on on the upper part of the LCD.
5. 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.
6. 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.   *(Note Flashing DOT on end)*
7. 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.
8. Press the "**HOME**" button to return to the main screen.

Figure 4

Figure 5

Figure 6

MOTOROLA XTS 2500/5000 PORTABLE RADIO PROGRAMMING GUIDE
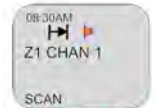
1. Turn radio ON and select a Zone/Group you wish to program.

2. Press the 4-Way Navigation key to the right once or until the " **FPP**" softkey is visible on the display. *(See figure 1)*
   Press the "**FPP**" softkey to proceed into programming mode.
   Radio will indicate or ask for programming password, press the " **OK**" softkey to enter program mode. *(See Figure 2)*
   Radio will display active zone, select the desired zone by pressing the 4-Way Navigation key left or right. *(See Figure 3)*
   Once the desired zone is reached, press the " **VIEW**" softkey to change the channel programming information. *(See Figure 4)*

3. Select the desired channel to program, by pressing the 4-Way Navigation key left or right.
   Once the desired channel is reached, press the " **VIEW**" softkey to change that particular channel programming information.

4. The display will indicate " **TX:xxx.xxxxxx**", press the "**EDIT**" softkey to change the TX frequency. *(See Figure 5)*
   Enter the desired TX frequency and press the " **OK**" softkey, then press the 4-Way Navigation key to the right to enter the   RX frequency.

5. The display will indicate " **RX:xxx.xxxxxx**", press the "**EDIT**" softkey to change the RX frequency. *(See Figure 6)*
   Enter the desired RX frequency and press the " **OK**" softkey, then press the 4-Way Navigation key to the right to enter the TX tone.

6. The display will indicate " **TX PL: 0 CSQ**", press the "**EDIT**" softkey to change the TX tone.   *(See Figure 7)*
   Enter a valid TX tone via the keypad and press the " **OK**" softkey, <u>or</u>
   Press the 4-Way Navigation key up or down and select the desired tone and press the " **OK**" softkey.
   Press the 4-Way Navigation key to the right to enter the   RX tone.
   Note: If an invalid tone is entered, radio will default to the closest valid tone.
   *   "0 CSQ" is default for NO TONE.*

7. The display will indicate " **RX PL: 0 CSQ**", press the "**EDIT**" softkey to change the RX tone. *(See Figure 8)*
   Enter a valid RX tone via the keypad and press the " **OK**" softkey, <u>or</u>
   Press the 4-Way Navigation Key up or down and select the desired tone and press the " **OK**" softkey.
   Press the 4-way Navigation key to the right to enter the TX   DPL.
   Note: If an invalid tone is entered, radio will default to the closest valid tone.
   *   "0 CSQ" is default for NO TONE.*

9. The display will indicate " **TX DPL: 0 CSQ**", do not change, press the 4-Way Navigation Key to the right to enter the   RX DPL.
10. The display will indicate " **RX DPL: 0 CSQ**", do not change, press the 4-Way Navigation Key to the right to enter the TX   NAC.
11. The display will indicate " **TX NAC: $293**", no not change, press the 4-Way Navigation Key to the right to enter the   RX NAC.
12. The display will indicate " **RX NAC: $293**", do not change, press the 4-Way Navigation key to the right to enter the   RX Type.
    Note: Do not change TX/RX DPL, or TX/RX NAC for analog channels, these parameters are used for digital channels only.
    *   TX/RX DPL and TX/RX NAC will display analog equivalent information.*

13. The display will indicate " **RX Type: ANALOG**", press the "**EDIT**" softkey to change the RX type. *(See Figure 9)*
    Toggle between " **ANALOG**", "**MIXED**", or "**DIGITAL**" by pressing the 4-Way Navigation Switch up or down.
    For Analog channels, select " **ANALOG**" and press the "**OK**" softkey, then press the 4-Way Key to the right to enter TX Type.

14. The display will indicate " **TX Type: ANALOG**". *(See Figure 10)*
    Note: If the "RX Type" is set to ANALOG or DIGITAL, the TX MODE can not be changed, it will default to the RX setting.
    Press the 4-way Navigation Key to the right to enter the   Bandwith.

15. The display will indicate " **Bandwidth: 12.5 Khz**", press the "**EDIT**" softkey to change the channel bandwidth.   *(See Figure 11)*
    Toggle between either " **12.5 Khz**" for Narrowband or " **25.0 Khz**" for Wideband by pressing the 4- Way Navigation Switch up or down
    and press the "**OK**" key. Press the 4-Way Navigation Key to the right to enter the Channel Name.
    Note: UHF models are capable of selecting "20.0 Khz" for bandwidth, DO NOT SELECT THIS OPTION.

16. The display will indicate " **Chan Name: CHAN 1** ", press the "**EDIT**" softkey to change the Channel Name.
    Enter the desired channel name using the alpha numeric keypad and press the " **OK**" softkey when done.
    Press the 4-Way Navigation Key to the right, to enter the Zone Name.
    Note: For Space Character, press the 4-Way Navigation Switch to the Right.

17. The display will indicate " **Zone Name: Z1**", press the "**EDIT**" softkey to change the Zone Name.
    Enter the desired Zone Name using the alpha numeric keypad and press the " **OK**" softkey when done.
    Note: NIICD does not recommend changing the Zone Name.

18. Once the Zone Name is edited, pressing the 4-way Navigation Switch to the right will bring up the TX Frequency option.

19. 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**" Button to exit programming mode.

Figure 1

Figure 2

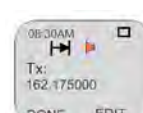Figure 3

Figure 4

Figure 5
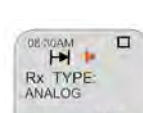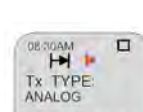

Figure 6

Figure 7

Figure 8
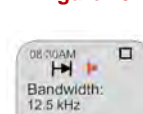

Figure 9

Figure 10

Figure 11

MOTOROLA XTS 2500/5000 PORTABLE RADIO CLONING INSTRUCTIONS

1. Connect the cloning cable to both the Master and Slave radios.   *(See Figure 7)*

2. Turn both radios on.

3. On the MASTER RADIO, press the "**CLON**" softkey from the default screen to bring up the cloning menu.   *(See Figure 1)*
    Note: The Master radio will momentarily display " **TARGET RADIO CONNECTED**" if a slave radio is connected correctly.
          The Slave radio will display " **CLONE MODE**" on the LCD.

4. Select a desired zone/group by pressing the 4-Way Navigation Key to the left or right.   *(See Figure 2)*

5. Once a zone is selected, press the " **SEL**" softkey to enable that zone to be sent over to the slave radio.
    The display will indicate the zone is enabled by an " **C**" icon on the right side of the LCD.   *(See Figure 3)*

6. Press the "**DONE**" softkey to select a target zone/group.   *(See Figure 4)*

7. The display will indicate " **Target: Zx:**", select a desired group/zone that the Master radio will write/clone over the Slave radio.
    Press the "**SEL**" softkey when desired target group/zone is selected.
    The display will indicate the target zone is enabled by an " **C**" icon on the right side of the LCD.   *(See Figure 4)*

8. Press the "**OK**" softkey to begin cloning.
    Display on Master will indicate " **Wait: Cloning.....**".
    Display on Master will indicate " **CLONE SUCCESSFUL**" once clone is complete.   *(See Figure 6)*

9. Press the "**EXIT**" softkey to exit clone mode and return to default screen.

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Master Radio

Cloning Cable

Target/Slave Radio
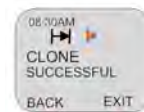
Figure 7: Motorola XTS2500/5000 Cloning Connections

**Clamshell Magazine
Release Latch**

Squeeze Clamshell Cover
Release Tabs

**Clamshell Cover
Release Tabs**

Push the radio with
Thumb through the
bottom opening

Figure 1

Slide Clamshell Cover
down until removed
from radio

Note: Once the Clamshell
cover is removed, batteries
can be easily replaced
without removing the
Clamshell Magazine.

Figure 2

Slide down the Clamshell
Magazine Release Latches

Figure 3

Pull the top end of the
Clamshell Magazine
slightly away from radio

Figure 4

Push radio slightly down and
out to release from bottom
portion of the Clamshell Magazine

Figure 5

Pull radio away from
Clamshell Magazine
and replace batteries

Figure 6

THALES 25 PORTABLE RADIO (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 1: RACAL Front View

Figure 2: RACAL Top View

Figure 3: RACAL Side View

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 re 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 " **PROGRM**" 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 "PRIMODE" 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)

NIICD 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: NIICD has a total of 16 available zones under the NIFC Bank. Additional 3 zones are available under the Incident Bank. NIICD 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: NIICD 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 button 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**".
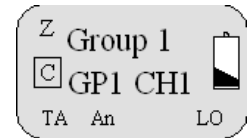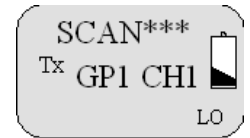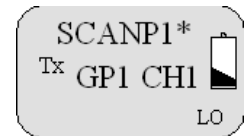

Figure 1

Figure 2

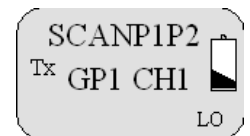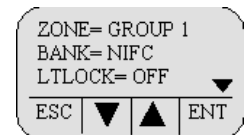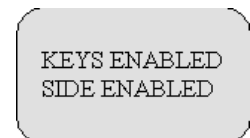**Figure 3**

Figure 4

Figure 5

Figure 6

Figure 7

THALES 25 PORTABLE (RACAL) ANALOG CHANNEL PROGRAMMING

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: NIICD 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: NIICD default is "ANALOG" for all channels.

8. Scroll down and select "**B/W**" and press the "**ENTER**" key to program the **Channel Bandwidth**. *(See Figure 4)*
   Select either "**25Khz**" or "**12.5Kh**z" and press the "**ENTER**" key.
   Note: 25Khz= Wide-Band, 12.5khz= Narrow-Band.
   NIICD 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.
   NIICD 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 sitting 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: NIICD 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 sitting 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: NIICD 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: NIICD 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: NIICD 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

NIICD/NIRSC Radio Help File 2015

THALES 25 PORTABLE RADIO (RACAL) CLONING INSTRUCTIONS

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 CLON**E", **FULL EVBANK**", "**TX SQL LIST**", or "**TALKGP LIST**" and press the "**ENTER**" key.

   Cloning Procedure For Each Cloning Feature

   GLOBAL DATA:
   ALL ZONES: Press the "**PTT**" button to send data to clone radio.   *(See Figure 3)*
   EVENT CLONE: Press the "**PTT**" button to send data to clone radio.   *(See Figure 3)*
   Press the "**ENTER**" key.   *(See Figure 3)*
   Select "**SELECT ZONES**" and press the "**ENTER**" key.   *(See Figure 4)*
   Select which Invent 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:
   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)*
   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 where cloned over.   *(See Figure 7)*

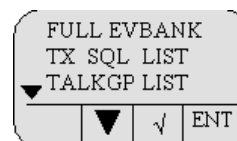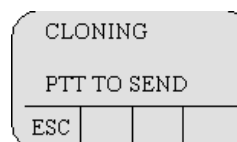8. Disconnect "**Target**" radio and connect any other "**Target**" radios that need to be cloned.

√ GLOBAL DATA
√ ALL ZONES
▼ EVENT CLONE
| ▼ | √ | ENT |

Figure 1

FULL EVBANK
TX SQL LIST
▼ TALKGP LIST
| ▼ | √ | ENT |

Figure 2

CLONING

PTT TO SEND

| ESC | | | |

Figure 3

SELECT ZONES
START CLONING

| ESC | ▼ | ▲ | ENT |

Figure 4

A=17=
B=18=
C=19=

| ESC | ▼ | DEL | ENT |

Figure 5

A=17=GROUP 8
B=18=
C=19=

| ESC | ▼ | DEL | ENT |

Figure 6

A=17=GROUP 8
B=18=GROUP 18
C=19=GROUP 19

Figure 7

Cloning Cable →

Source/Master Radio →

← Target/Slave Radio

Figure 8: Racal Cloning Connections

1. Turn power **ON** by turning the ON/OFF Volume Knob clockwise.
   A beep indicates the radio is operational. The LCD will briefly indicate the current group before indicating the current channel.
2. Select a group number by pressing the " **#**" key and entering a 2-digit number followed by the " **ENT**" key.
3. Select a channel by turning the Channel Select Knob to one of the 16 available positions.
4. Adjust the volume by turning the Squelch Knob clockwise to open the squelch and set the volume to desired level.
5. Adjust the Squelch by turning the Squelch Knob counterclockwise until the squelch closes.
     Note: This is the Threshold Squelch Setting.
     Turn the squelch Knob fully counterclockwise into the detent position to place the RX in Code Guard. RX must have a tone programmed in order for RX Code Guard to function properly. Putting the RX in Code Guard, will enable the RX not to open squelch unless the it receives the correct tone.

The radio is now ready to RECEIVE on that current group and channel.

6. To transmit, press and hold the Push-To-Talk (**PTT**) button on the side of the radio.
     Note: The Transmit Indicator Light should glow red while transmitting. If not, the battery may be low or the channel is   RX only or busy.

7. 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.

8. Release the PTT to stop transmitting and receive incoming transmissions.

Figure 1: DPH/DPHx Front View

Figure 2: DPH/DPHx Top View

KING DPH/DPHx PORTABLE RADIO SETTINGS/OPTIONS

ADD/REMOVE CHANNELS FROM SCAN LIST

1. To **ADD** channel to **Scan List**, select a channel to scan with the channel select knob and press the "**ENT**" key.
   LCD will display "**SCN**" in the upper section, indicating that the current displayed channel is in the scan list.   *(See Figure 1)*
2. To REMOVE channel from **Scan List**, select the channel to remove with the channel select knob and press the "**CLR**" key.
   "**SCN**" will be removed from the upper section of the LCD.
   Note: Scan must be disabled in order to add or remove channels from the scan list, by toggling the "SCAN" and
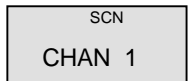   *"PRI" toggle switches in the down position. (Toward the front of the radio)*

```
            SCN
    CHAN  1
```
Figure 1

ADD PRIORITY SCAN CHANNEL

1. **To select a channel as a Priority Scan Channel,** select a channel and press the "**PRI**" key. *(See Figure 2)*
   LCD will display "**PR**" in the upper section, indicating that the current displayed channel is now the Priority 1 Channel.
   Note: Scan must be disabled in order to add or remove the Priority 1 Channel, by toggling the "SCAN" and
   "PRI" toggle switches in the down position. (Toward the front of the radio)
   Priority 2 Channel can only be changed in the "CH 00" parameters. (See "CH 00" Settings)

   Note: Enabling PRI Scan will only scan the Priority Channel(s). In order to scan the scan list channels and the
   Priority Channel(s), both the Scan and PRI Toggle switches must be enabled.
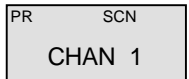
   In order to set the Priority Channel with the keypad, Priority Mode must be either set to B, C, or D.
   NIICD default is Priority Mode A; Priority Channel follows the position of the channel select switch,
   so the user can not change the Priority Channel via the keypad.

```
PR          SCN
    CHAN  1
```
Figure 2

ENABLE/DISABLE SCAN/PRIORITY SCAN

1. **Enable Scan,** by toggling the Scan Toggle Switch to the up position.   *(Toward the back of the radio)*
   LCD will indicate scan is enabled by flashing "**-- --**" in the right side of the display if alphanumeric mode in disabled.   *(See Figure 3)*

   <div align="center">**or**</div>

   LCD will indicate scan is enabled by flashing "**SCN**" in the upper part of the display if alphanumeric mode is enabled.
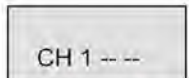
```
    CH 1 -- --
```
Figure 3

2. **Disable Scan,** by toggling the Scan Toggle Switch to the down position.   *(Toward the front of the radio)*
3. **Enable Priority Scan,** by toggling the PRI Toggle Switch to the up position.   *(Toward the back of the radio)*
   LCD will indicate Priority Scan is enabled by flashing "**-- --**" in the right side of the display and with a "**PR**" icon in the top
   portion of the display if alphanumeric mode is disabled.   *(See Figure 4)*

   <div align="center">**or**</div>

   LCD will indicate Priority Scan is enabled by flashing "**SCN**" in the upper part of the display if alphanumeric mode is enabled.
4. **Disable Priority Scan**, by toggling the PRI Toggle Switch to the down position.   *(Toward the front of the radio)*
   Note: Depending on what type of Priority Scan Mode is enabled, the LCD will display and operate differently for
   each priority mode. Check the priority mode in the "CH 00" Group Settings.
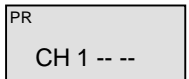   *NIICD Default is set to Priority Mode A.*

```
PR
    CH 1 -- --
```
Figure 4

CHANGING GROUPS

1. Press the "**#**" key followed with the 2-digit number of the desired group and press "**ENT**" or wait 3 seconds. *(See Figure 5)*
   Note: All DPH/DPHx NIICD model radios have a 25 group capacity.
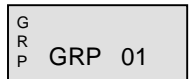   *Groups 1-4 contain the Standard NIICD Frequencies.*

```
G
R
P   GRP  01
```
Figure 5

TX USER SELECTABLE TONES

1. **To Enable Selectable Tone**, press one of number keys (1-9) to select a preprogrammed TX User Selectable Tone.
   Display will indicate a TX User Selectable Tone is enabled by displaying the "**CG**" icon in the top portion of the LCD.
   If Alphanumeric Mode is Disabled, display will also indicate the selected TX User Tone. *(See Figure 6)*
2. **To Disable Selectable Tone**, press the "**0**" key on the keypad.
   Note: NIICD default is TX User Selectable Tones Disabled. Tones can be enabled through the "CH 00" functions.

```
            CG
    CH  1  9
```
Figure 6

HI/LOW POWER SETTINGS

1. **Select Low Power** by toggling the LO/HI Toggle Switch to the up position.   *(Toward the back of the radio)*
2. **Select High Power** by toggling the LO/HI Toggle Switch to the down position.   *(Toward the front of the radio)*
   Note: NIICD Low Power setting is set to 2.0 Watts, High Power setting is set to 5.0 Watts. (Current draw dependent)

ENABLE/DISABLE KEYPAD

1. **To Disable keypad**, press and hold the "**FNC**" key until the LCD displays "**LOCKED**". *(See Figure 7)*
2. **To Enable keypad**, press and hold the "**FNC**" key until the LCD displays "**UNLOCKED**". *(See Figure 8)*

```
    LOCKED
```
Figure 7

```
    UNLOCKED
```
Figure 8

NIICD/NIRSC Radio Help File 2015

1. Turn on radio and select a group and channel you wish to program
- Select a group number by pressing the " **#**" key and entering a 2-digit number followed by the " **ENT**" key.
- Select a channel number by turning the Channel Select Knob to one of the 16 available positions.

2. **Access Program Mode** *(See Figures 1 and 2)*
- Insert a programming plug into the side connector of the radio.
- Press and hold the red Master Switch on the programming plug.
- Simultaneously Press and hold the " **FCN**" key for approximately three seconds until the LCD displays " **-- -- -- ID**".
- Enter a valid password. *NIICD default password is set to "000000"*
- Press the "**ENT**" key to proceed into the programming mode.
- If the correct password was entered, the LCD displays " ^{PRG} **CH00**".

3. Once in Program Mode, select a 2-digit channel number (**01-16**) to program using the keypad.
   Note: Once a channel is entered, pressing the " FNC" key will scroll through that particular channel settings.

4. Once the desired channel is entered and displayed, the **Bandwidth Setting** can be set.
   Press the "**#**" key to toggle between Wide-Band and Narrow-Band.   *(See Figure 3)*
   Note: The "N" indicates that the channel is set for Narrow-Band operation, No indication for Wide-Band operation.

5. Once the Bandwidth is set, press the " **FCN**" key to scroll to the next programming parameter.
   The LCD will display " ^{PRG RX} **162.5500**" for programming the **RX Frequency**. *(See Figure 4)*
   Press the "**CLR**" key to clear the current frequency and enter a valid VHF   RX frequency and press the " **ENT**" key.

6. The LCD will display " ^{PRG RX} **MODE-A**" for programming the RX Mode. *(See Figure 5)*
   Press the "**PRI**" key to toggle between " **A**", "**D**", or "**M**". Select "**A**" press the "**ENT**" key.
   Note: A=Analog Channel, D=Digital Channel, and M=Mixed Mode Channel

7. The LCD will display " ^{PRG RX CG} **000.0**" for programming the **RX Code Guard**. *(See Figure 6)*
   Press the "**CLR**" key to clear the tone and enter a valid tone using the keypad and press the " **ENT**" key.
   Note: Enter "000.0" for no tone.

8. LCD will display " ^{PRG RX IDCG} **NAC0659**" for programming the **RX Network Access Code**.
   This is a Digital Channel Function, press the " **ENT**" key to skip to the next programming parameter.

9. The LCD will display " ^{PRG RX ID} **SQL--NRM**" for programming the Squelch Setting.   *(See Figure 7)*
   Press the "**PRI**" key to toggle between " **NRM**", or "**SEL**". Select "**NRM**" and press the "**ENT**" key.
   Note: "SEL" is used only in Digital or Mixed Mode to use Talk Groups or Individual Call Functions.

10. LCD will display " ^{PRG TX} **168.05000**" for programming the **TX Frequency**. *(See Figure 8)*
    Press the "**CLR**" key to clear the current frequency and enter a valid VHF TX frequency and press the " **ENT**" key.

11. LCD will Display " ^{PRG TX} **MODE-A**" for programming the **TX Mode**. *(See Figure 9)*
    Press the "**PRI**" key to toggle between " **A**", "**D**", or "**M**". Select "**A**" and press the "**ENT**" key.
    Note: A=Analog Channel, D=Digital Channel, and M=Mixed Mode Channel

12. LCD will display " ^{PRG TX CG} **110.9**" for programming **TX Code Guard**. *(See Figure 10)*
    Press the "**CLR**" key to clear the current tone and enter a valid tone using the keypad and press the " **ENT**" key.
    Note: Enter "000.0" for no tone.

13. LCD will display " ^{PRG TX IDCG} **NAC0659**" for programming the **TX Network Access Code**.
    This is a Digital Channel Function, press the " **ENT**" key to skip to the next programming parameter.

14. LCD will display the " ^{PRG ID} **TG00001**" for programming the **TX Talk Group ID**.
    This is a Digital Channel Function, press the " **ENT**" key to skip to the next programming parameter.

15. LCD will display the channel name/label, press the " **ENT**" key to keep name/label and finish programing the channel
    or press the "**CLR**" key to change the name/label for that channel.   *(See figure 11)*

16. **Changing Channel Label**
- Press the "**CLR**" key to clear the label.
- Press the "**PRI**" key to scroll through available Alphanumeric Characters.
- Press the "**FCN**" key to enter a character and shift to the left for the next character.
- Repeat the process until desired name/label is entered and press the " **ENT**" key.
   Note: LCD is an 8 character display.   NIICD default is set to display the numeric characters only in the "CH 00" parameters.

17. Once the label is entered, the program will bring the first channel parameter up, channel programming is complete.
    At this point the user may select another channel to program by starting on step 3 or exit the program mode by
    cycling power to the radio.

PRG
-- -- -- ID

Figure 1

PRG
CH 00

Figure 2

PRG
CH 01N

Figure 3

PRG   RX
162.55000

Figure 4

PRG   RX
MODE -- A

Figure 5

PRG   RX   CG
000.0

Figure 6

PRG   RX   ID
SQL-- NRM

Figure 7

PRG TX
168.05000

Figure 8

PRG TX
MODE -- A

Figure 9

PRG TX   CG
110.9

Figure 10

PRG
CHAN 1

Figure 11

CLONING RADIO SETTINGS *(See Figure 5)*

1. Assure that both radios are off and attach the Master end of the cloning cable to the side connector of the Master radio.
   Attach the Clone/Slave end of the cloning cable to the side connector of the radio being cloned to.

2. Turn both radios on.
   Assure each radio is in the corresponding group before continuing with the cloning process.

3. Put the Master radio in programming mode by holding down the Master Switch and simultaneously pressing the " **FCN**" key on the radio until the LCD displays (**-- -- -- ID**). *(See Figure 1)*

4. Enter a valid password, if requested, and press the " **ENT**" key. *(NIICD default Password is set to "000000")*
   The LCD will display " **CH 00**" if the correct password was entered. *(See Figure 2)*

5. Press the "*" key on the Master radio.
   The LCD will flash "**PROG**", indicating that the radio is ready to download. *(See Figure 3)*

6. Press the "**FCN**" key to download to clone/slave radio.
   If the clone was successful, the Master radio will resume flashing " **PROG**" on the display.
   If the clone was not successful, the Master radio will flash " **FAIL**" followed by continuous beeps. *(See Figure 4)*
   Note: To stop "FAIL" mode, press the "CLR" key, turn off the radios, and start the cloning process again.
   When the Master radio downloads to a clone, the Scan List and Priority Channel designations are also downloaded to the clone radio.
   Group Password are also downloaded between DPH and GPH Model radios, NIICD recommends not modifying the Group Password when programming radios.
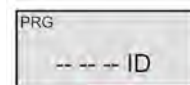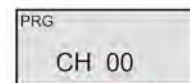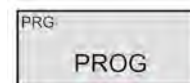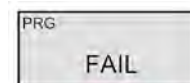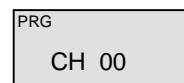

Figure 1

Figure 2

Figure 3

Figure 4

Cloning Cable

Master Programming Switch

Master Radio

Function Key

Clone/Slave Radio

Figure 5: King DPH Cloning Connections

1. Select a group you wish to program.
2. Access the Program Mode to enter the " **CH 00**" Settings. *(See Figure 1)*   *(See Access Program Mode on page 1)*
3. Once "**CH 00**" is displayed, press the " **FNC**" key to scroll to the fist " **CH 00**" parameter.

4. The display will indicate " ^{PRG} P000000" for the **Group Password**. *(See Figure 2)*
   Press the "**ENT**" if no change is required and advance to the next programming parameter
   Note: NIICD does not recommend changing the group password, default password is set to "P000000"

5. The display will indicate " ^{PRG ID} 0000000" for the **Group Automatic Numeric Identification** parameter (**ANI**). *(See Figure 3)*
   This is used as either a radio management number or transmitted as a   DTMF tone. Press the " **ENT**" or "**FNC**" key to
   advance to the next field.   *(NIICD default is set to "0000000")*

5. The display will indicate " ^{PRG TX} 160 SEC" for the **Transmit Tim-Out Timer** (**TOT**) duration. *(See Figure 4)*
   To change the TOT, press the "**PRI**" key to increase the TOT duration and press the " **ENT**" to store value and advance to
   the next field. *(NIICD default is set to "120 SEC") A TOT value of 0.0 Seconds, disables the TOT.*

6. The display will indicate " ^{PRG SCN} 2.0 SEC" for the **Scan Delay Time**. *(See Figure 5)*
   To change the Scan Delay Time, press the " **PRI**" key to increase the duration and press the " **ENT**" key to store and
   advance to the next field. *(NIICD default is set to "2.0 SEC")*

7. The display will indicate " ^{PRG} PR1 OFF" for programming a **Priority 1 Channel**. *(See Figure 6)*
   To change the Priority 1 Channel, press the " **PRI**" key to select a channel or turn OFF the function and press the " **ENT**"
   key to store and advance to the next field.   **NIFC Default is set to "OFF"**
   Note: Priority 1 Channel can be programmed as a fixed channel, selected by the channel select knob, or OFF.
   If the PRI 1 is set as fixed, it can be changed through the front keypad by pressing the "PRI" key.

8. The display will indicate " ^{PRG} PR2 OFF" for programming the **Priority 2 Channel**. *(See Figure 7)*
   To change the Priority 2 Channel, press the " **PRI**" key to select a channel or turn OFF the function and press the " **ENT**"
   key to store and advance to the next field.   **NIFC Default is set to "OFF"**
   Note: Priority 2 Channel can only be changed via the "CH 00" parameters.

7. The display will indicate " ^{PRG} 1--12345" for the **Group 1 Functions**. *(See Figure 8)*
   The group functions can be enabled or disabled by pressing the number key corresponding to that function.

CH 00 Group 1 Functions   NIICD default is **"1-12345"**   *(See Figure 8)*
- 1-**1**2345.....**Battery Saver** (Disables the Battery Saver Function for current drain on battery life.)
- 1-1**2**345.....**Group Scan** (Enables the current group to be scanned while in Group Scan Mode.)
- 1-12**3**45.....**TX on PRI 1** Enables transmission on PRI 1 when PRI Scan is Enabled.)
- 1-123**4**5.....**Priority Key Lockout** (Enables the Lock out of the "PRI" key, so user can not change the Priority 1 Channel.)
- 1-1234**5**.....**Scan List Lockout** (Enables the Scan List Lock out, so user can not add/remove channels from the scan list.)

CH 00 Group 2 Functions   NIICD default is **"2-12345"**   *(See Figure 9)*
- 2-**1**2345.....**User Code Guard** (Enables keypad to independently select a Channel Code Guard value from programmed channels.)
- 2-1**2**345.....**Busy Channel Indicator** (Yellow LED illuminates when signal is received on selected channel.)
- 2-1**2**345.....**Busy Channel Lockout** (Yellow LED illuminates and PTT is disabled when a signal is received on selected channel.)
- 2-1**2**345.....**Busy Channel Lockout/Over-ride** (Same as Busy Channel Lockout, but PTT can be activating the Squelch Code Guard.)
- 2-123**4**5.....**ANI** (Enables the ANI ID number to be transmitted with each press of the PTT as a DTMF tone.)
- 2-1234**5**.....**Manual DTMF Encoder** (Enables keypad for manual DTMF operation.)
- 2-123**45**.....**Manual DTMF/ANI Encoder** (Enables the ANI ID number to be transmitted only after the " ENT" key is pressed during TX.)

CH 00 Group 3 Functions   NIICD default is **"3-12345"**   *(See Figure 10)*
- 3-**1**2345.....**Reserved**
- 3-1**2**345.....**Reserved**
- 3-12**3**45.....**LCD Back light ON Display Change** (LCD back light will illuminate each time the display receives an input.)
- 3-123**4**5.....**LCD Back light ON Key Press** (LCD back light will illuminate each time a key is pressed.)
- 3-1234**5**.....**Alphanumeric Mode** (LCD will display Alphanumeric Characters.)

10. After "CH 00" Group 3 Functions, the display will indicate " ^{PRG} LITE OFF" for the **LCD Back light Duration Setting**.
    To change the back light duration, press the " **PRI**" key to select an available setting and press the " **ENT**" key to store
    and advance to the next field.   *(NIICD default is "OFF") (See Figure 11)*

11. The display will indicate the current **group label**. *(See Figure 12)*
    Press the "**ENT**" key to advance back to the " **CH 00**" starting point.
    At this point, pressing the "**FNC**" key repeatedly will scroll down each value of the " **CH 00**" settings for that channel.
    If no changes are needed, exit the program mode by cycling power to the radio or continue with channel programming.
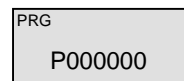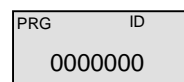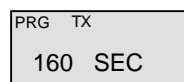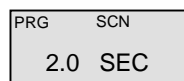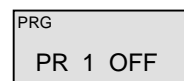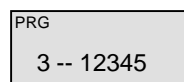
| PRG |
| CH 00 |

Figure 1

| PRG |
| P000000 |

Figure 2

| PRG   ID |
| 0000000 |

Figure 3

| PRG   TX |
| 160 SEC |

Figure 4

| PRG   SCN |
| 2.0   SEC |

Figure 5

| PRG |
| PR 1 OFF |

Figure 6

| PRG |
| PR 2 OFF |

Figure 7

| PRG |
| 1 -- 12345 |

Figure 8

| PRG |
| 2 -- 12345 |

Figure 9

| PRG |
| 3 -- 12345 |

Figure 10

| PRG |
| LITE OFF |

Figure 11

| PRG |
| GROUP 01 |

Figure 12