



# NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION VHF/UHF EF JOHNSON PORTABLE RADIO ANALOG PROGRAMMING GUIDE

## PROGRAMMING ANALOG CHANNELS ON EF JOHNSON RADIOS

1. Select a Zone/Group you wish to program.
2. Press the "F2" key to bring up the Main Menu screen. *(See Figure 1)*  
Scroll up/down to "Keypad Prg" and press the "F2" key to enter Keypad Programming Mode.  
Scroll up/down to "Chan Parm's" and press the "F2" key to enter Channel Parameter Mode.  
Enter a valid 8-digit password if requested and press the "F2" key.  
**Note:** NIFC Default Password is "00000000".
3. Display will indicate "RX Freq" for programming the RX Frequency. *(See Figure 2)*  
Press the "F2" key and enter a valid RX frequency and press the "F2" key when complete.  
**Note:** Enter frequency omitting the first digit, you must enter all 7 digits.  
*(Example: for 168.05000 enter 6805000 then press "F2")*
4. Scroll up/down to "TX Freq" and press the "F2" key for programming the TX Frequency. *(See Figure 3)*  
Enter a valid TX frequency and press the "F2" key when complete.  
**Note:** Enter frequency omitting the first digit, you must enter all 7 digits.  
*(Example: for 168.05000 enter 6805000 then press "F2")*
5. Scroll up/down to "RX Code" and press the "F2" key for programming the RX Code Guard tone. *(See Figure 4)*  
Display will indicate the current CTCSS tone or DCS tone.  
Scroll up/down to select either "Edit CTCSS" or "Edit DCS" and press the "F2" key.  
Enter a valid CTCSS tone or DSC code and press the "F2" key when complete.
6. Scroll up/down to "TX Code" and press the "F2" key for programming the TX Code Guard tone. *(See Figure 5)*  
Display will indicate the current CTCSS tone or DCS tone.  
Scroll up/down to select either "Edit CTCSS" or "Edit DCS" and press the "F2" key.  
Enter a valid CTCSS tone or DSC code and press the "F2" key when complete.
7. Scroll up/down to "TX Power" and press the "F2" key for programming the TX Power Selection. *(See Figure 6)*  
Scroll up/down to select either "Power High", "Power Low", or "Power SW" and press the "F2" key when complete.  
**Note:** Selecting "Power SW" enables the user to select power output with one of the programmable side buttons.
8. Scroll up/down to "TX Timer" and press the "F2" key for programming the TX Out Timer (TOT) Status. *(See Figure 7)*  
Scroll up/down and select either "TX Tmr Off" or "TX Tmr On" and press the "F2" key when complete.  
**Note:** This parameter only select the status of the TOT, it does not select the TOT Delay Timer.  
*The TOT Delay Timer can be set under the "Sys Parm's" Menu.*
9. Scroll up/down to "Chan Alias" and press the "F2" key for programming the Channel Label. *(See Figure 8)*  
Press "F2" to clear the label.  
Use the keypad to select desired character, and press the "F2" to enter character. Repeat this step until all 10 character are displayed and press the "F2" key when complete.
10. Scroll up/down to "Chan Space" and press the "F2" key for programming the Channel Bandwidth. *(See Figure 9)*  
Scroll up/down and select either "Wide" or "Narrow" and press the "F2" key when complete.  
**Note:** NIFC Default is "Narrow" for Narrow Band VHF Channels, and "Wide" for Wide Band UHF Channels.  
*Narrow= 12.5Khz Bandwidth, Wide= 25Khz Bandwidth*
11. Scroll up/down to "Sq Adjust" and press the "F2" key for programming the Squelch Setting. *(See Figure 10)*  
Display will indicate the current squelch setting for that channel.  
Scroll up/down to select the desired squelch setting of "-7" through "+7" and press the "F2" key when complete.  
**Note:** Increasing the number towards +7 causes the squelch to open sooner so that weaker signals can be received.  
*Decreasing the number towards -7 causes the squelch to open later to reduce external noise.*  
*NIFC Default is set to "Squelch 0".*
12. Press the "F1" key once to exit "Chan Parm's" and return to programming parameters.  
Select another zone/channel to program or, press the "F1" again to exit keypad programming.

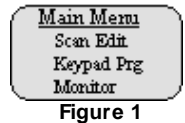


Figure 1



Figure 2

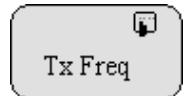


Figure 3

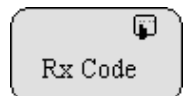


Figure 4

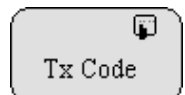


Figure 5

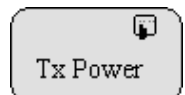


Figure 6

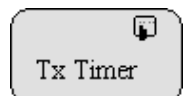


Figure 7



Figure 8

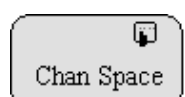


Figure 9

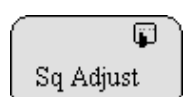


Figure 10



# NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION VHF/UHF EF JOHNSON PORTABLE RADIO SETTINGS/OPTIONS

## ADD/REMOVE CHANNELS FROM SCAN/PRIORITY LIST

1. To add a channel to the Scan List, Press the "F2" key to bring up the "Main Menu" screen. (See Figure 1)
2. Scroll up/down to "Scan Edit" and press the "F2" key. (See Figure 2)
3. Select the Scan List by scrolling through the available lists. **NIFC default is "List 1", only 1 list is available.**
4. Scroll up/down to desired Channel to add to Scan List.
5. Press "F2" to add the channel to the Scan List.  
Display will indicate it was added by displaying ( S ) in the upper part of the LCD. (See Figure 3)  
Press "F2" again to add the channel as the Priority 1 channel.  
Display will indicate it was changed to **PRI 1** by displaying ( P ) in the upper part of the LCD. (See Figure 4)  
Press "F2" again to add the channel as the Priority 2 channel.  
Display will indicate it was changed to **PRI 2** by displaying ( P<sub>2</sub> ) in the upper part of the LCD. (See Figure 5)  
Press "F2" again to remove the channel from the Scan List.  
Display will indicate it was removed by not displaying any indication in the upper part of the LCD.
6. Scroll up/down to select other channels you to scan and repeat the process.
7. When all desired channels are programmed into the scan list, press "F1" to exit.



Figure 1



Figure 2

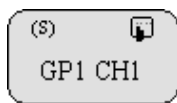


Figure 3

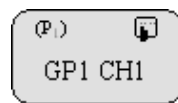


Figure 4

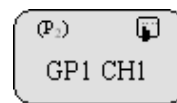


Figure 5

## ENABLE/DISABLE SCAN/PRIORITY SCAN

1. To **Enable Scan**, press the top Auxiliary button on the side of the radio.  
LCD will indicate the radio is in scan mode, by displaying an ( Z ) icon on the upper part of the LCD. (See Figure 6)
2. To **Disable Scan**, press the top Auxiliary button on the side of the radio one more time.  
**Note: Priority Scan is automatically enabled when scan is enabled, as long as there is a Priority Channel in the scan list. (See Figure 7)**

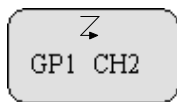


Figure 6

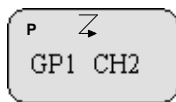


Figure 7

## CHANGING ZONES/GROUPS

1. To Change Zones/Groups scroll up/down using the Rocker Panel Switch on the front of the radio.  
**Note: Both the VHF/UHF EF Johnson radios are preprogrammed with 15 available Zones/Groups. Groups 1-4 contain the standard NIFC frequencies.**

## TONE SELECT LIST

1. Programmed tones may be selected by pressing a corresponding number on the keypad.  
Press # 1-16 using the keypad to select desired tone.  
Display will indicate which tone was selected. (See Figure 8)  
Press the "0" key on the keypad to disable the tone. (See Figure 9)  
Display will indicate Default tone "0".  
**Note: NIFC Default is "0"**  
**Tones available through the Tone Select List are preprogrammed with the 16 standard FS/BLM tone guard frequencies. They can only be changed via the programming software.**

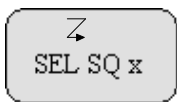


Figure 8

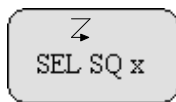


Figure 9



# NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION VHF/UHF EF JOHNSON PORTABLE CLONING PROCEDURE

## CLONING PROCEDURE FOR EF JOHNSON RADIOS (VHF/UHF). (See Figure 7)

1. Turn both radios on.
2. Connect one end of the cloning cable to the side connector of the Master radio. (See Figure 1)
3. Connect the other end of the cloning cable to the side connector of the clone/slave radio, and select the corresponding zone to be cloned.
4. Press the "F2" key on the Master Radio to bring up the Main Menu screen. (See Figure 2)
5. Scroll up/down to "Clone" and press the "F2" key.
6. Scroll up/down to "Clone N" and press the "F2" key. (See Figure 3)
7. Select either "Zone" or "Complete" and press the "F2" key. (See Figure 4)

**ZONE:** After selecting "Zone" a the Zone Menu will be displayed.

Scroll up/down through the available zones/groups and press the " F2" key when the desired group is selected.

An asterisk mark will appear in front of the selected zone/group.

Scroll up/down to "OK" and press the "F2" key. (See Figure 5)

Display will indicate "TX Clone" indicating the information is being downloaded to the clone/slave radio. (See Figure 6)

**Note:** Only one zone/group can be selected to clone.

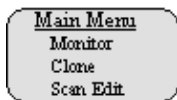


Figure 2

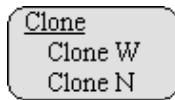


Figure 3

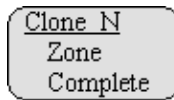


Figure 4

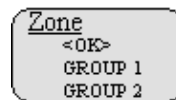


Figure 5

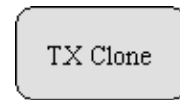


Figure 6

**COMPLETE:** After selecting "Complete" the radio will begin downloading to the clone/slave radio.

Display will indicate "TX Clone" indicating the information is being sent to the clone/slave radio.

8. When cloning is complete, radios will power down and then power up
9. Disconnect clone/slave radio from the cloning cable.
10. Master radio can be used to clone another radio, but must start cloning process from the beginning.



Figure 7



# NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION VHF EF JOHNSON PORTABLE BASIC OPERATION AND RADIO CONTROLS

## VHF EF JOHNSON 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 the desired group by scrolling through the available groups using the Rocker Switch on the front of the radio.
3. Select the desired channel by turning the Channel Select knob to one of the 16 available positions.
4. Adjust the volume by performing the following steps:
  - o Press the "F2" key to bring up the "Main Menu" screen.
  - o Scroll up/down to "Monitor" and press the "F2" key.
  - o Scroll up/down to "Sqlch Ovr" and press the "F2" key to open the squelch.
  - o Adjust the volume using the ON/OFF Volume Knob to desired level.
  - o Scroll up/down to "Off" and press the "F2" key to turn the squelch off and press "F1" to return to the main screen.

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.
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.

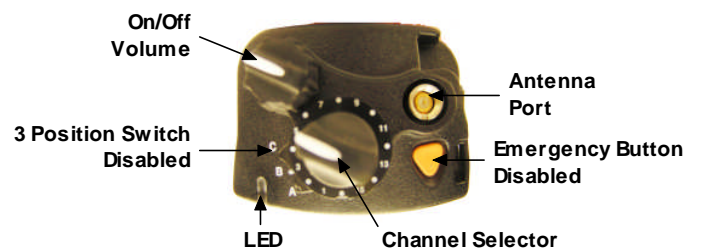


Fig. 1: VHF EF Johnson Top View



Fig. 2: VHF EF Johnson Front View

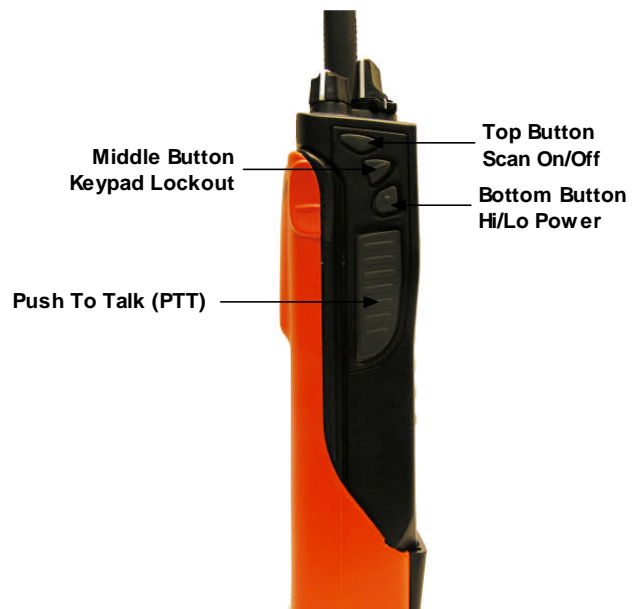


Fig. 3: VHF EF Johnson Side View



# NATIONAL INTERAGENCY INCIDENT COMMUNICATIONS DIVISION UHF EF JOHNSON PORTABLE BASIC OPERATION AND RADIO CONTROLS

## UHF EF JOHNSON 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 the desired group by scrolling through the available groups using the Rocker Switch on the front of the radio.
3. Select the desired channel by turning the Channel Select knob to one of the 16 available positions.
4. Adjust the volume by performing the following steps:
  - o Press the "F2" key to bring up the "Main Menu" screen.
  - o Scroll up/down to "Monitor" and press the "F2" key.
  - o Scroll up/down to "Sqlch Ovr" and press the "F2" key to open the squelch.
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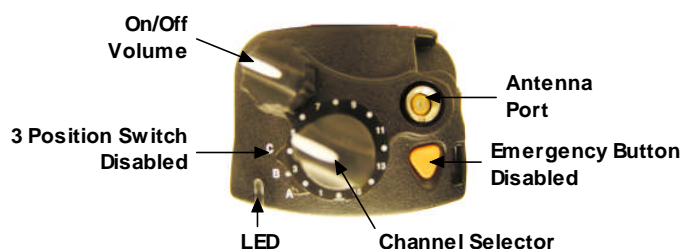


Fig. 1: UHF EF Johnson Top View



Fig. 2: UHF EF Johnson Front View

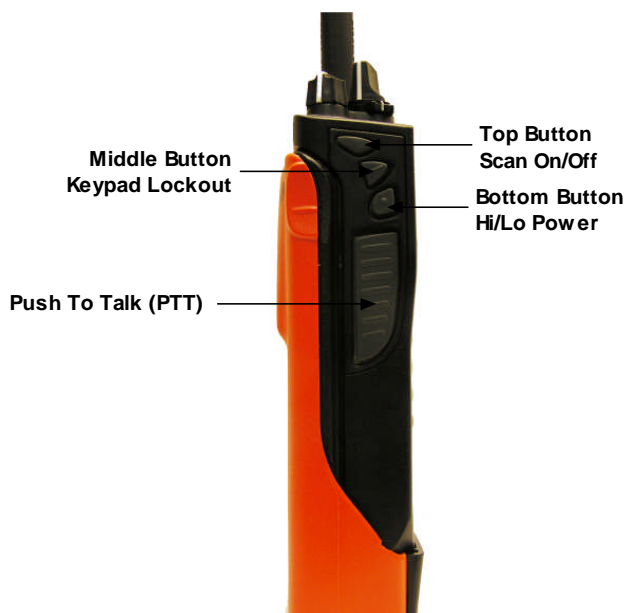


Fig. 3: UHF EF Johnson Side View