Introducing the TidRadio H3

Tech Saturday

August 9, 2025

Gloucester County
Amateur Radio Club
W2MMD
Celebrating 60 Years Of Service To Our Community
Established In 1959

Notable Features

- **USB-C Programming**: The TD-H3 features a dedicated USB-C port for programming, allowing users to connect it directly to a computer with any standard USB-C cable. This eliminates the need for proprietary drivers, making it compatible with Windows 10/11, Chirp, and TIDRADIO's own software. This is a significant improvement over radios that require specialized programming cables.
- **Bluetooth Programming (OD Master):** It supports wireless programming via Bluetooth using the OD Master application (available on iOS and Android). This cloud-based programmer allows users to download local repeater lists and configure radio settings on the go without a computer, which is highly beneficial for travelers.
- **Wireless Cloning**: The TD-H3 offers a unique wireless cloning function, enabling users to copy all frequency data and settings from one TD-H3 to another over the air. This eliminates the need for cables or computers for radio-to-radio duplication.
- **Operating Modes**: The TD-H3 can be configured to operate in three distinct modes: amateur radio bands only, GMRS bands only, or "normal mode" which offers full transmit capability from 136 to 600 MHz (with additional menu settings needed to enable wider frequency ranges). This flexibility allows users to adapt the radio to their specific licensing and usage needs.
- **AM Airband Reception**: Unlike the TD-H8, the TD-H3 includes AM airband reception, and the latest firmware even adds 8.33 kHz steps for airband, making it more practical for aviation enthusiasts.

Changing Operating Mode

The TID Radio TD-H3 offers three distinct operating modes:

- **Mode 1: Ham Mode**
- **Mode 2: GMRS Mode**
- **Mode 3: Normal Mode**

Each mode locks the radio to specific frequency bands or allows for a wider range of operation.

To change the operating mode, you must perform a specific key combination during power-on:

1. **Hold down the PTT button**.
2. **Hold down the Star button** (the button in the upper right-hand corner).
3. **Turn the radio on** while holding both buttons.
4. This sequence will bring up a screen displaying the three mode options : "mode one ham," "mode two gmrs," and "mode three normal".
5. **Select the desired mode** (1, 2, or 3).
6. The radio will then **issue a reminder that all data will be erased**, prompting you to confirm by pressing the blue button for "yes".
7. After confirmation, the radio will **reboot**

Understanding the TD-H3 Display

- **Key Indicators:**
  - **Signal Strength Indicator:** Red bar (up to five bars) shows transmit signal strength, generally accurate for TD-H3.
  - **Antenna Strength Indicator:** Champagne glass icon with three bars for incoming signal strength (accuracy is dubious).
  - **Current Power Setting (H/L):** 'H' for high power, 'L' for low power.
  - **Bandwidth Setting (W/N):** 'W' for wide, 'N' for narrow.
  - **Receive & Transmit Frequencies:** Display always shows receive frequency; **pressing PTT shows transmit frequency**.
  - **Channel Slot:** Shows the memory slot number for the current channel.
  - **Dual Watch Mode:** Indicated by **circling arrows**; radio monitors incoming traffic on both displayed lines.
  - **Power Save Mode:** Indicated by an 'S' icon.
  - **CTCSS/DCS Tone Indicator (CT/DCS/Off):** Shows the tone type applied (CTCSS or DCS).
    - "Off" indicates no receive tone, even if a transmit tone is present.
  - **Battery Strength Meter:** Three bars indicate battery level; **lacks digital voltage readout**.

Basic Front Panel Controls

- **Blue Button:**
  - **Short press:** Enters the main menu mode.
  - **In menu:** Selects a menu item or confirms a setting.
- **Orange Button (Exit/VFO/Memory):**
  - **Exits a menu** or stops a scan.
  - **Single tap:** Toggles between VFO mode and Memory mode.
  - **Double tap:** Ensures VFO mode is selected.
- **Number Keys:**
  - Act as **shortcut functions** to quickly navigate to specific menu items.
- **Up/Down Arrow Keys:**
  - Used for **channel navigation** and **menu item navigation**.
  - Provides an alternative to the selector knob (if present).
- **Scan (Button 3 Long Press):**
  - **Long press:** Initiates scan mode.
  - **Up/Down arrows:** Changes the scan direction (ascend/descend).
  - **Orange button or long press 3:** Exits scan mode

Breathe LED Settings

- **Function:**
  - A pair of **pale green LEDs** on top of the radio that **flash periodically** (e.g., every 5 seconds).
  - **Purpose:** To indicate the radio is still **on and in standby mode** when the display backlight is off, preventing accidental battery drain.
- **Adjusting the Setting:**
  - Enter menu using the **Blue button**.
  - Navigate to **"Breathe LED"** (Menu option in the upper end).
  - **Options:** 5 seconds (default), 10 seconds, 15 seconds, 30 seconds, or Off.
  - **Note:** This feature **does not activate if the display is set to "Continuous"** backlight

Squelch Adjustment

- **How to Adjust:**
    1. Press the **Blue button** to enter the menu.
    2. Navigate to **Item 1: "Squelch"**.
    3. Press the **Blue button** again.
    4. Use **Up/Down arrows** to select the desired squelch level (e.g., 3 is a common starting point).
    5. Press the **Blue button** to confirm.
    6. Press the **Orange button** to exit.
- **Important Consideration:**
    - **Too high a squelch level** can filter out even strong, desired signals, making the radio seem "deaf"

Alternative Mono-Band Display (Sync Function)

- **Purpose:**
  - Provides a **simplified display** for users who prefer to monitor only one band or line of information at a time.
  - Eliminates the dual PTT operation, allowing **both PTT buttons to transmit on the single active band**.
- **How to Enable/Disable:**
  1. Press the **Blue button** to enter the menu.
  2. Navigate to **Item 36: "Sync"**.
  3. Press the **Blue button** again.
  4. Select **"Off"** to enable the mono-band display.
  5. Press the **Blue button** to confirm.
  6. Press the **Orange button** to exit.
  - To revert to dual-band display, set "Sync" to **"On"**.
- **Display Features in Mono-Band:**
  - Still shows signal strength, antenna, power, bandwidth, battery, channel name, frequency, and memory slot, but **prioritizes the active line**

Understanding Scan Modes

- **Purpose:**
  - Defines how the radio behaves when it **detects an active channel during scanning**.
- **Accessing Scan Mode Settings:**
  1. Press the **Blue key** to enter the menu.
  2. Navigate to **Item 17: "Scan Mode"**.
- **Available Scan Modes:**
  - **Carrier (Co):**
    - **Default setting**.
    - Radio **stops on an active channel and stays there** for the duration of the activity.
    - Resumes scanning once the activity ceases.
    - **Recommended mode** for continuous monitoring.
  - **Timeout (To):**
    - Radio **stops on an active channel for a short period (approx. 5 seconds)**, then resumes scanning.
    - Generally **not recommended** as it may cut off conversations.
  - **Search (Se):**
    - Radio **locks onto the first active channel** it finds and **remains on that channel indefinitely**.
    - Will not resume scanning until manually stopped.
- **Setting the Scan Mode:**
  1. In "Scan Mode" (Item 17), press the **Blue key** again.
  2. Cycle through the options using the **Up/Down arrows**.
  3. Select desired mode (Co, To, Se) and press the **Blue key** to confirm.
  4. Press the **Orange key** to exit

Programming a Simplex Memory Channel

- **Prerequisites:**
  - The radio must be in **VFO (Variable Frequency Oscillator) mode**.
  - If in Memory mode, double-tap the **Orange button** to switch to VFO.
- **Steps to Program:**
  1. **Enter the desired frequency** using the keypad.
  2. Press the **Blue key** to enter the menu.
  3. Navigate to **Menu Item 25: "Memory"**.
  4. Press the **Blue key** again to select the memory slot.
  5. Use the **Up/Down arrow keys** to choose an **empty memory slot** (indicated by no "CH" next to the slot number).
     - You can choose any available slot, not just the next sequential one.
  6. Press the **Blue key** to commit the frequency to the selected memory slot.
     - The radio will automatically exit the menu.
  7. **Verify:** Press the **Orange button** once to switch to Memory mode and confirm the frequency is saved in the chosen channel.
- **Limitation:**
  - **Channel naming** cannot be done from the front panel; requires programming software (e.g., OD Master, Chirp).

Deleting a Memory Channel

- **Prerequisites:**
  - The radio should be in **Memory mode**.
  - **Navigate to the specific channel** you wish to delete using the Up/Down arrow keys.
- **Steps to Delete:**
  1. Press the **Blue key** to enter the menu.
  2. Navigate to **Menu Item 26: "Delete"**.
  3. (Optional but recommended: Confirm the channel number displayed is the one yo u intend to delete. You can cycle through channels here if needed, but it's safer to navigate beforehand).
  4. Press the **Blue key** again to confirm the deletion of the highlighted channel.
  5. Press the **Orange key** to exit the menu.
- **Result:** The selected memory channel is **permanently removed** from the radio

Firmware Upgrade Process

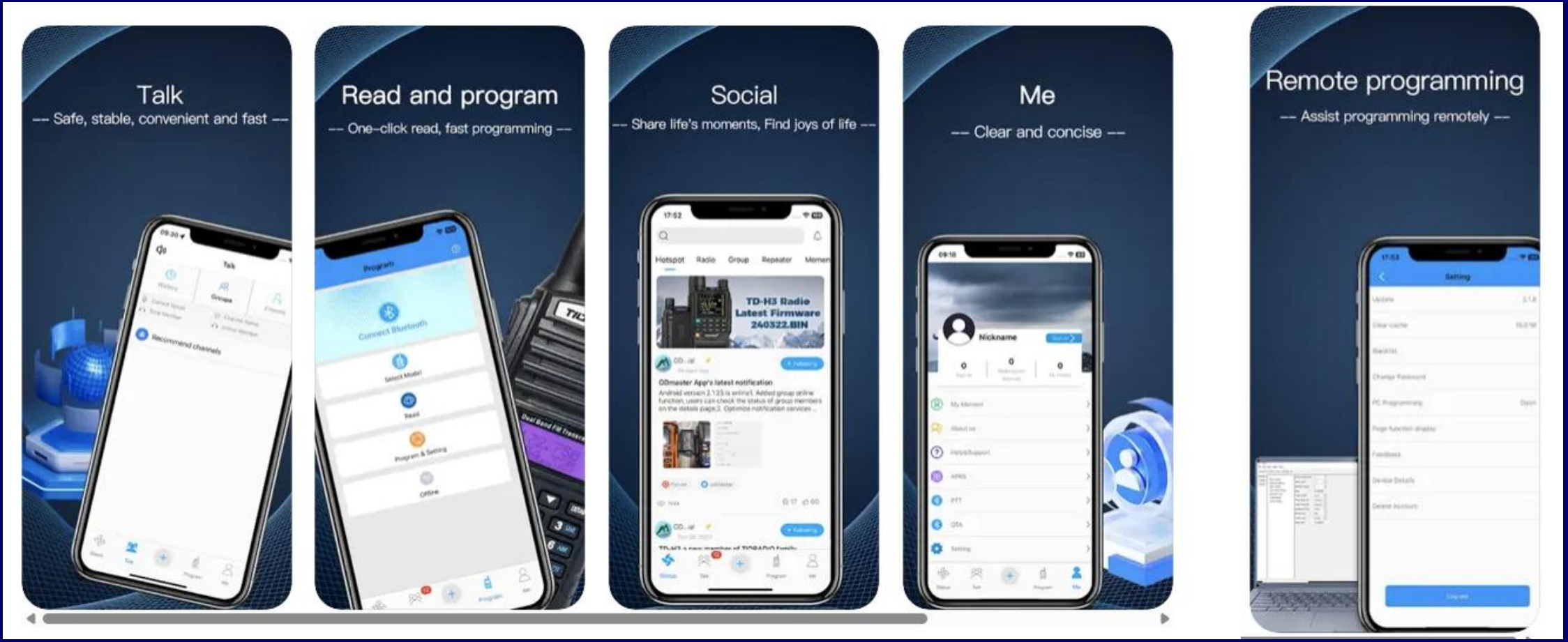
Upgrade Steps:

1. **Turn off the radio**.
2. **Open the flashing program** (e.g., tdh3 IAP) on your computer.
3. **Select the corresponding port** for your connected radio.
4. **Locate and open the firmware .bin file** within the software.
5. Click **"Start"** in the software.
6. While the software is waiting, **press and hold the PTT key** on the radio.
7. **Turn on the radio while still holding the PTT key**.
8. **Keep the PTT key pressed down the entire time** during the installation.
9. Wait patiently for the **progress bar to complete** and for a "download successful" message.
10. Once successful, **release the PTT, disconnect the radio, and restart it**.

Wireless Cloning

- The wireless cloning function on the TIDRADIO TD-H3 allows users to copy all frequency data and radio settings from one TD-H3 (the sending radio) to another TD-H3 (the receiving radio) over the air, without the need for cables or computers. This is a significant convenience for setting up multiple radios quickly.
- **How to perform wireless cloning:**
- **Enter Wireless Copy Mode:** For both the sending and receiving radios, press and hold the bottom custom key (programmable button on the side) and the star (*) key simultaneously while turning on the device. Both radios should display "Wireless Copy."
- **Start Data Transmission:** On the *sending* radio, short press the bottom custom key. The radio will begin to transmit data, indicated by sounds and the red LED (transmitting) while the receiving radio will show the green LED (receiving).
- **Monitor Progress:** During the transmission, the radios will make sounds, which is normal. The volume can be lowered if it's too loud. The displays will show progress of the data transfer.
- **Confirm Success:** Once the data transfer is complete, both radios should display "Success."
- **Restart and Verify:** Turn both radios off, then turn them back on. Check the receiving radio's memory channels and settings to ensure all data has been accurately copied from the original.
- This feature is incredibly useful for quickly configuring new radios or synchronizing settings across a group of TD-H3 devices.

Odmaster iPhone Software



Tid Firmware in Chirp

Tone options for TX and RX

Transmits DTMF

Inhibits transmit if busy

CHIRP (TidStemUnlocked.img)

File Edit View Radio Help

TidStemUnlocked.img

Memories Settings

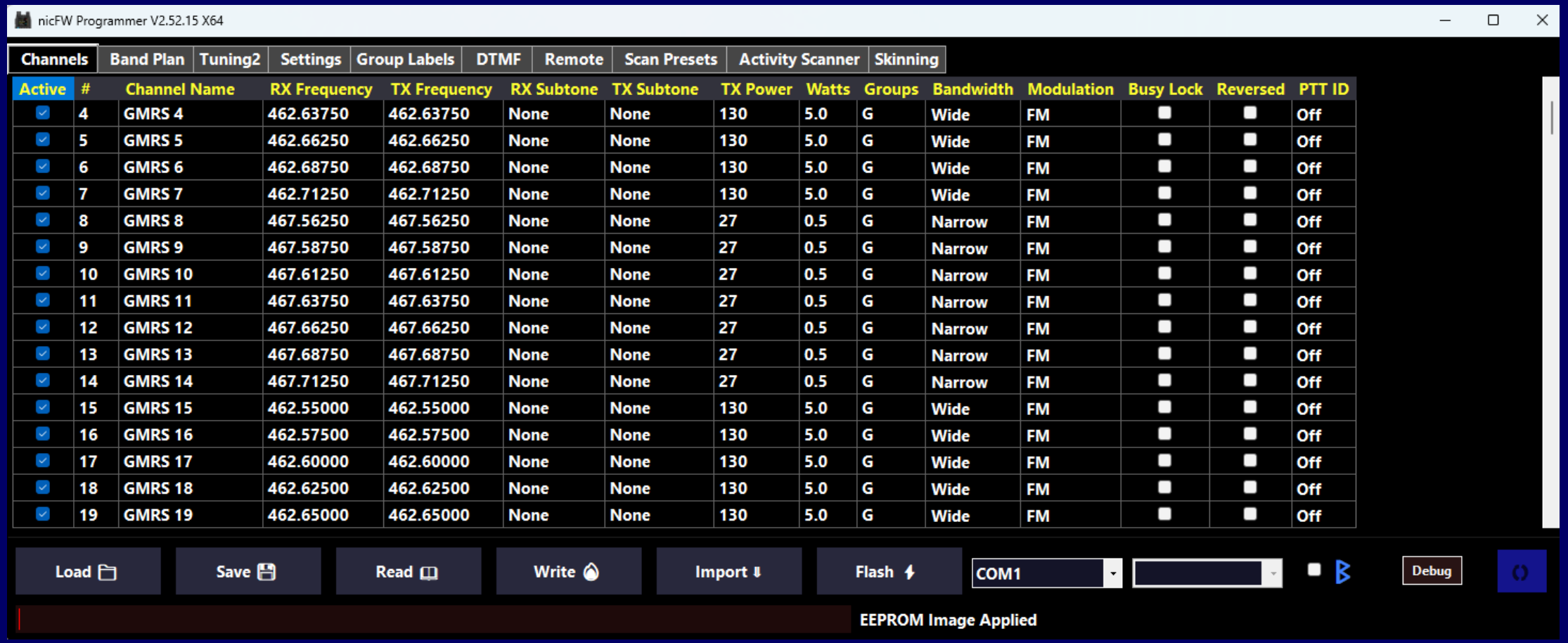
Filter...

	Frequency	Name	Tone Mode	Tone	Tone Squelch	DTCS	RX DTCS	DTCS Polarity	Duplex	Offset/ TX Freq	Cross Mode	Mode	Skip	Power	PTT ID	Busy Lock	Frequency Hop	Comment
1	147.180000	W2MMD 2m	TSQL		131.8				+	0.600000		FM		High	Off	Off	Off	
2	147.360000	KB2KJH	TSQL		131.8				+	0.600000		FM		High	Off	Off	Off	
3	145.490000	WA2WUN	TSQL		192.8				-	0.600000		FM		High	Off	Off	Off	
4	147.255000	KC2TXB	TSQL		179.9				+	0.600000		FM		High	Off	Off	Off	
5	447.275000	N2YIR	TSQL		131.8				-	5.000000		FM		High	Off	Off	Off	
6	448.125000	KE2CK	TSQL		131.8				-	5.000000		FM		High	Off	Off	Off	
7	146.880000	W2LI	TSQL		131.8				-	0.600000		FM		High	Off	Off	Off	
8	146.910000	N2KEG	TSQL		77.0				-	0.600000		FM		High	Off	Off	Off	
9	442.100000	W2MMD 70	TSQL		131.8				+	5.000000		FM		High	Off	Off	Off	
10	444.900000	W2LI	TSQL		131.8				+	5.000000		FM		High	Off	Off	Off	
11	146.520000	Simplex										FM		High	Off	Off	Off	
12	147.450000	Foxhunt										FM		High	Off	Off	Off	
13	442.350000	FoxhntU										FM		High	Off	Off	Off	
14	119.150000	MIVTowr							off			AM		High	Off	Off	Off	
15	121.600000	MIVGrnd							off			AM		High	Off	Off	Off	
16	121.500000	AirEmer							off			AM		High	Off	Off	Off	
17	122.800000	CTAF							off			AM		High	Off	Off	Off	
18	118.500000	PHLTowr							off			AM		High	Off	Off	Off	
19	121.900000	PHLGrnd							off			AM		High	Off	Off	Off	
20	133.400000	PHLATIS							off			AM		High	Off	Off	Off	

nicSure Firmware

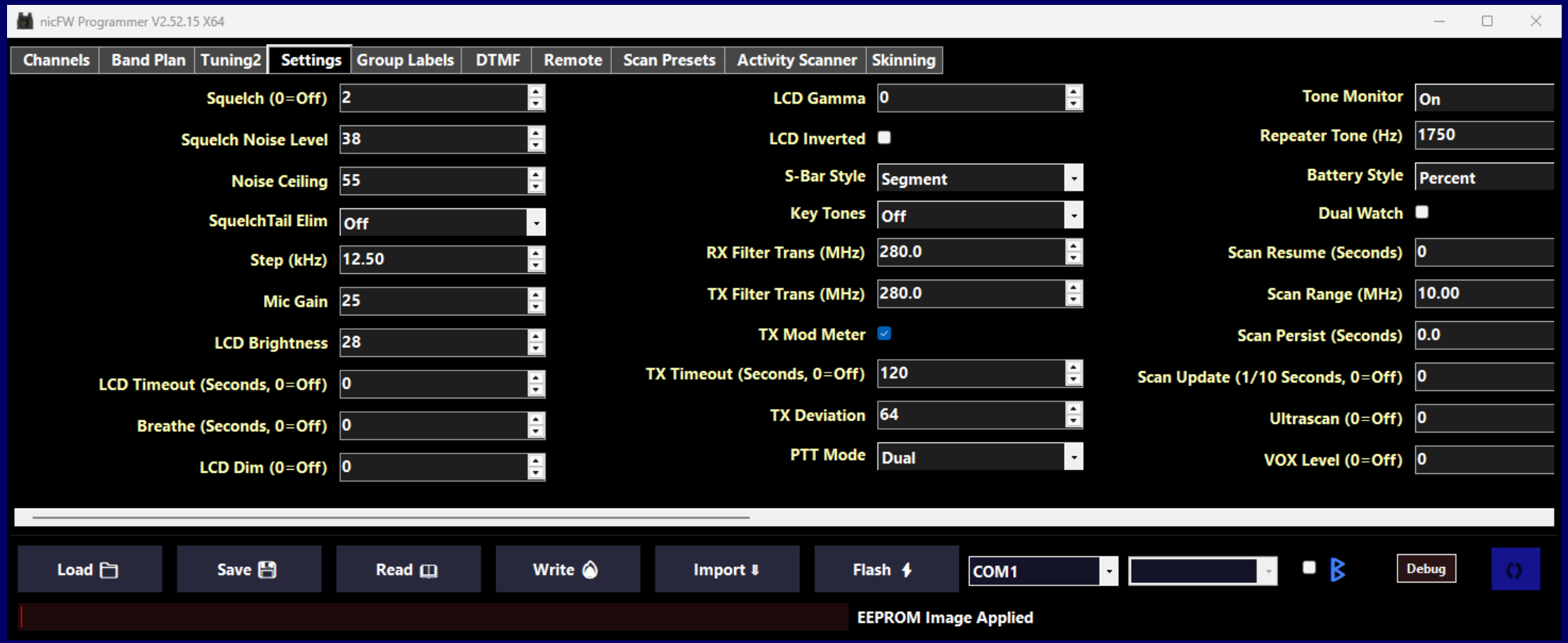
- **Extensive Display Personalization & "Skinning“**
- An **improved S-meter** provides a numeric value of actual S-points in addition to the traditional bar graph for receive signal strength.
- The firmware attempts to **decode and display CTCSS/DCS tones** of incoming transmissions, which is highly useful for identifying repeater tones.
- New beta firmware versions introduce **"Single," "Dual," and "Classic" display configurations**, offering more flexible layout options
- The firmware adds **8.33 kHz steps for airband frequencies**, correctly addressing the stepping issue for aviation bands.
- It enables **expanded transmit capabilities** beyond standard ham and GMRS bands, including 220 MHz, 350 MHz, and 500 MHz, via specific menu options.
- For the H3 Plus model, the latest custom firmware allows for **sending SMS messages** between compatible radios or via the OD Master app, in a digital format

nicFW Programmer



Active	#	Channel Name	RX Frequency	TX Frequency	RX Subtone	TX Subtone	TX Power	Watts	Groups	Bandwidth	Modulation	Busy Lock	Reversed	PTT ID
☑	4	GMRS 4	462.63750	462.63750	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	5	GMRS 5	462.66250	462.66250	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	6	GMRS 6	462.68750	462.68750	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	7	GMRS 7	462.71250	462.71250	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	8	GMRS 8	467.56250	467.56250	None	None	27	0.5	G	Narrow	FM	☐	☐	Off
☑	9	GMRS 9	467.58750	467.58750	None	None	27	0.5	G	Narrow	FM	☐	☐	Off
☑	10	GMRS 10	467.61250	467.61250	None	None	27	0.5	G	Narrow	FM	☐	☐	Off
☑	11	GMRS 11	467.63750	467.63750	None	None	27	0.5	G	Narrow	FM	☐	☐	Off
☑	12	GMRS 12	467.66250	467.66250	None	None	27	0.5	G	Narrow	FM	☐	☐	Off
☑	13	GMRS 13	467.68750	467.68750	None	None	27	0.5	G	Narrow	FM	☐	☐	Off
☑	14	GMRS 14	467.71250	467.71250	None	None	27	0.5	G	Narrow	FM	☐	☐	Off
☑	15	GMRS 15	462.55000	462.55000	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	16	GMRS 16	462.57500	462.57500	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	17	GMRS 17	462.60000	462.60000	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	18	GMRS 18	462.62500	462.62500	None	None	130	5.0	G	Wide	FM	☐	☐	Off
☑	19	GMRS 19	462.65000	462.65000	None	None	130	5.0	G	Wide	FM	☐	☐	Off

nicFW Settings



Using Grok to Create Chirp CSV Files

- here's the import file format for this radio. create a CSV file of the frequencies above in this format
- the maximum name field is 7 characters. shorten the names while keeping them meaningful
- shorten the comment field to 12 characters while keeping it meaningful
- add the W2MMD repeaters at 147.18 and at 442.100. The 443.45 and 146.67 repeaters are not W2MMD.
- add the frequencies from the PHL airport. add any military aircraft frequencies used in this area that are within the range of the radio. . set power to 0 for non-ham frequencies
- add a simplex frequency of 147.450 and its third harmonic to the list as Foxhunt. change Mar16 to MarCal, CHange Mar9 to MarBot, CHange Mar22A to USCG, change Mar13 to MarNav, change Mar14 to MarPrt.
- correct the two W2MMD repeaters to be located in Pittman NJ. add back the PHL approach control frequencies.

```
Location,Name,Frequency,Duplex,Offset,Tone,rToneFreq,cToneFreq,DtcsCode,DtcsPolarity,RxDtcsCode,CrossMode,Mode,TStep,Skip,Power,Comment,URCALL,RPT1CALL,RPT2CALL,DVCODE
1,W2MMD2m,147.180000,+,0.600000,Tone,131.8,131.8,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Pitman Rptr,,,,,
2,KB2KJH2,147.360000,+,0.600000,Tone,131.8,131.8,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Vineland Rptr,,,,,
3,WA2WUN2,145.490000,-,0.600000,Tone,179.9,179.9,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Vineland Rptr,,,,,
4,W2LI2m,146.880000,-,0.600000,Tone,131.8,131.8,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Gibbstown Rptr,,,,,
5,N2KEG2m,146.910000,-,0.600000,Tone,77.0,77.0,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Salem Rptr,,,,,
6,W2MMD7c,442.100000,+,5.000000,Tone,131.8,131.8,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Pitman Rptr,,,,,
7,W2LI7cm,444.900000,+,5.000000,Tone,131.8,131.8,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Gibbstown Rptr,,,,,
8,Simplex2,146.520000,,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,,5.0W,2m Simplex,,,,,
9,Foxhunt,147.450000,,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Foxhunt VHF,,,,,
10,FoxhntU,442.350000,,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,,5.0W,Foxhunt UHF,,,,,
11,MIVTowr,119.150000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,Airport Tower,,,,,
12,MIVGrnd,121.600000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,Airport Ground,,,,,
13,AirEmer,121.500000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,Air Distress,,,,,
14,CTAF,122.800000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,Traffic Advis,,,,,
15,PHLTowr,118.500000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,PHL Tower,,,,,
16,PHLGrnd,121.900000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,PHL Ground,,,,,
17,PHLATIS,133.400000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,PHL ATIS,,,,,
18,PHLApp1,124.350000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,PHL Approach,,,,,
19,PHLApp2,119.750000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,PHL Approach,,,,,
20,MilAir1,123.100000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,AM,5.00,S,0.0W,Search Rescue,,,,,
21,MilAir2,138.100000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Military VHF,,,,,
22,NOAA,162.450000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,NOAA Weather,,,,,
23,JailOps,155.085000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Jail Simplex,,,,,
24,JailRpt,151.445000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Jail Repeater,,,,,
25,BridgPD,155.550000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,PD Dispatch,,,,,
26,BridgTC,155.820000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,PD Tactical,,,,,
27,NJSP_A,154.680000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,State Police,,,,,
28,NJSPEmr,155.475000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Police Emerg,,,,,
29,Fire,154.965000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Fire Dispatch,,,,,
30,Rescue,155.160000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Search Rescue,,,,,
31,MarCal,156.800000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Marine Call,,,,,
32,MarBot,156.450000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Marine Boat,,,,,
33,USCG,157.100000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Coast Guard,,,,,
34,MarNav,156.650000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Marine Nav,,,,,
35,MarPrt,156.700000,off,0.000000,,88.5,88.5,023,NN,023,Tone->Tone,FM,5.00,S,0.0W,Marine Port,,,,,
```