

# Quick-Start Guide for the Kenwood TM-D710GA at Holy Cross Germantown Hospital

Version 6  
5/16/2025

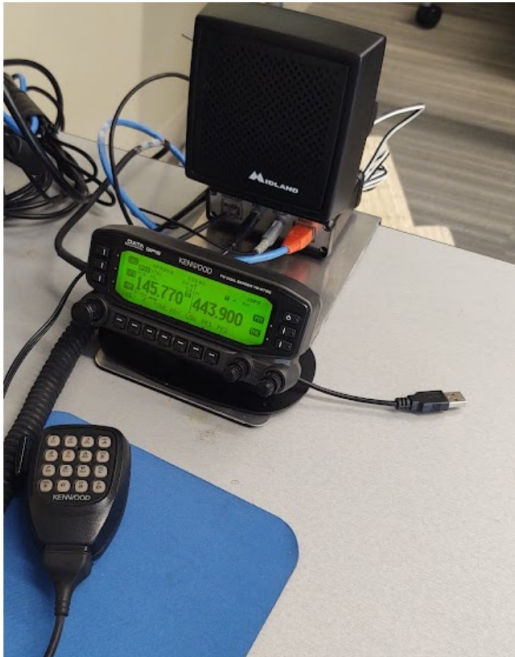


Figure 1

## EOC LOCATION

When standing in the parking lot facing the front of the hospital, the visitor entrance is at the far right, and the emergency room entrance is at the left. Normal protocol is to park in the lot closest to the visitor entrance and check in with the receptionist in the visitor lobby. There is a corridor running along the front of the hospital from the visitor lobby to the emergency room, and the security desk is located at roughly the midpoint of that corridor. If the receptionist in the visitor lobby isn't expecting you, you can ask to be escorted to the security desk for assistance in gaining access.

There is a computer training room in the administrative suite on the second floor at the rear of the building, directly above the cafeteria. The training room is used as the hospital's EOC during emergencies. The operating position for the Amateur Radio operators is in the back of the room. Since you will be sharing the room with hospital staff who are managing the incident, you will be to use headphones and keep you voice down while operating. Use digital modes for communication to the greatest extent possible.

The entrance to the administrative suite is often locked, so you will need to ask at the security desk to be escorted to the facility. On occasion, when we have been working in the EOC after hours, if someone has to step outside the admin suite, it can be difficult to get back in. Knocking on the door doesn't work, as the knocking cannot be heard inside the EOC. To address this situation, we have stored a wireless doorbell system with the radio equipment. The person leaving the suite can take the doorbell with them and use it to signal the operator inside the EOC when they are ready to be readmitted.

## EQUIPMENT SETUP

At Holy Cross Germantown Hospital, a TM-D710GA transceiver is permanently mounted in a wall cabinet with a power supply and a DigiRig USB sound card interface unit. The radio operation panel (often called its control head) is stored in the cabinet and placed on an adjacent tabletop when needed. Also stored in the wall cabinet are the radio's hand microphone, external loudspeaker, headset, footswitch, and a headset junction box. A roof-mounted 2m/70cm base station antenna is cabled to the wall cabinet.

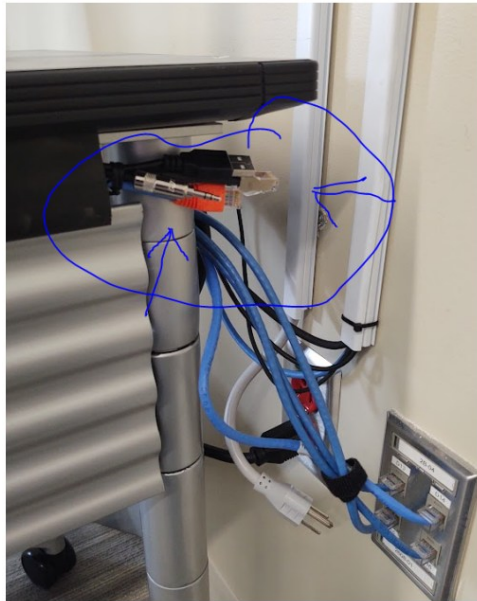
A responding operator must bring a laptop with Winlink Express installed in order to use the radio's digital mode capability.

To operate the station, it is necessary to retrieve the radio control head and associated accessories from the wall cabinet and set them up at the operating position. The antenna cable should be disconnected from the back of the radio when it is not in use as an additional measure of lightning protection, and power cord to the wall cabinet should be unplugged from the AC mains outlet. These connections will need to be restored to place the radio in service.

A plastic storage container containing equipment manuals and a few useful items is stored in a closet outside the EOC. During your first visit to the facility, you will be shown how to access those supplies.

## Connections Between the TX/RX Unit and Remote Operating Position

At the hospital, since the TX/RX unit is remote from the operating position, four extension cables are needed to connect the TX/RX unit to the operating position, one each for the control head data port, remote microphone, external speaker, and DigiRig Lite USB port. Those four cables are prewired to the equipment in the wall cabinet, and tucked underneath the table at the operating position when not in use, as shown in Figure 2(a). The white power cord in Figure 2(a) supplies power to the wall cabinet. Figures 2(b) and (c) show the connecting cables.



(a)



(b)



(c)

Figure 2

For your convenience, Figures 3 through 5 are reproduced from the TM-D710 user manual, along with information about the various connectors.

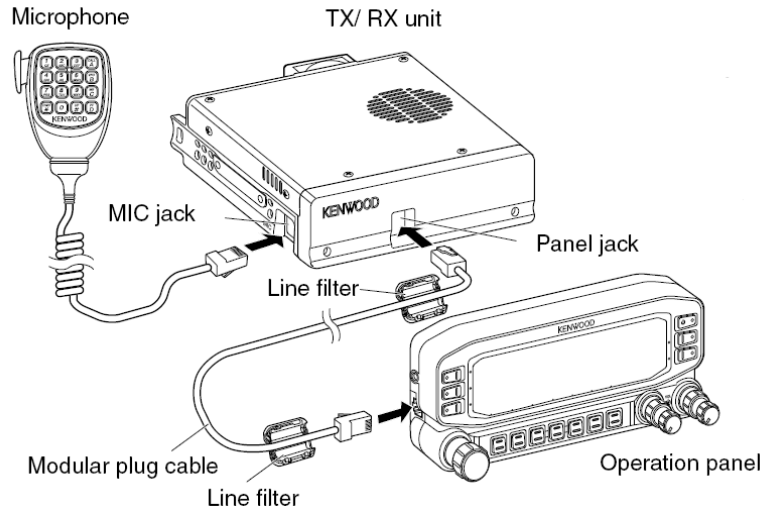


Figure 3

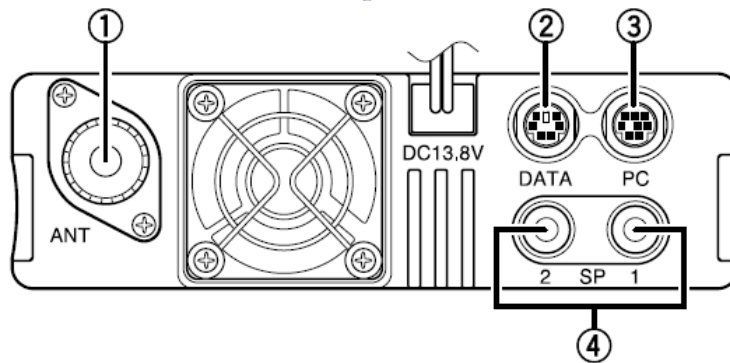


Figure 4

① Antenna connection SO-239

② The DATA port is for connection to an external TNC. It is a 6-pin DIN connector with the standard pinout used by most major manufacturers. At the hospital, it is permanently connected to a DigiRig USB sound card interface. A USB cable runs from the wall cabinet to the operating position, where it is plugged into a user-supplied laptop PC running Winlink Express and/or Fldigi.

③ The PC port is used only for programming the radio using a Kenwood PG-5G serial cable or compatible USB programming cable. It is not needed for normal operations.

④ External speaker connections. 3.5 mm mono jacks. A single external speaker (or headphones) plugged into SP 1 mutes the built-in speaker and provides both Band 1 and Band 2 audio on the external speaker. (Check Menu Item 002 if both bands are not heard. It should be set to MODE 1.) When using stereo headphones, you will hear audio in only one ear, unless you use an adapter (which we provide). We don't use SP 2 in our setup.

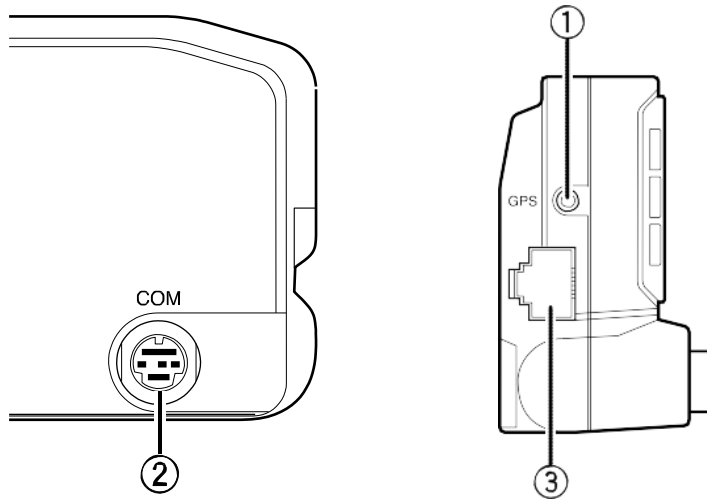


Figure 5

- ① Newer radios in the TM-D710 series have an internal GPS receiver. An external GPS can be connected if the radio is used indoors. We don't use the GPS feature at our hospital stations. (They tend to remain in one place!)
- ② It is possible to use the radio's internal 1200 baud TNC for data communications (e.g., Winlink Packet mode or APRS). We now recommend using software modems, but in the event that it becomes necessary to use the internal modem, you can use the COM terminal on the radio's control head to connect a laptop computer for Winlink operation. You will need to supply a USB-to-RS-232 converter with the matching DIN plug.
- ③ Connect the TX/RX unit to the operation panel jack using the supplied modular plug cable.

## Using a headset with boom microphone

A headset is a very useful accessory when operating in a busy EOC. At each of the hospital stations equipped with TM-D710 radio, we have provided a Yamaha CM-500 headset<sup>1</sup>, footswitch, and junction box for connecting these accessories to the radio. See Figures 5 and 6.

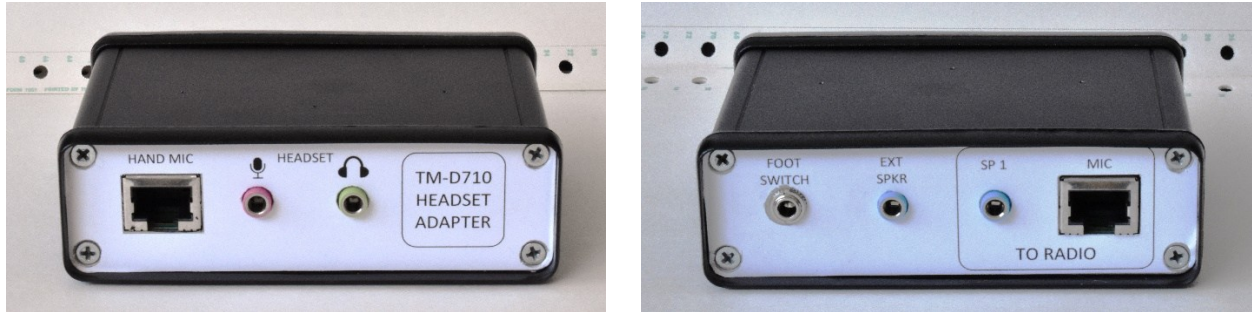


Figure 5

There are three connectors on the front panel of the junction box. From left to right:

- |             |                                                            |
|-------------|------------------------------------------------------------|
| HAND MIC    | Plug the radio's hand microphone in here.                  |
| HEADSET MIC | Plug the headset's microphone connector in here.           |
| HEADSET EAR | Plug the headset's headphone (earpiece) connector in here. |

There are four connectors on the rear panel of the junction box. From left to right:

- |          |                                                                                                                            |
|----------|----------------------------------------------------------------------------------------------------------------------------|
| FOOTSW   | Plug the footswitch in here.                                                                                               |
| EXT SPKR | Plug the external speaker in here.                                                                                         |
| SP 1     | Plug a 3.5 mm mono or stereo cable in here and plug the other end into the SP1 jack on the back of the radio's TX/RX Unit. |
| MIC      | Plug a CAT-5 or CAT-6 cable in here and plug the other end into the mic jack on the side of the TX/RX Unit.                |

Note the toggle switch on the side of the Midland external speaker. With the switch up, received audio is heard in both the speaker and the attached headset. With the switch down, sound is heard only in the headset.

With the junction box in line, the hand microphone works normally (including all of its buttons). When the footswitch is depressed, transmit audio is taken from the headset's microphone rather than the hand microphone, but the PTT button and DTMF keys on the hand microphone remain functional. This enables you, for example, to use the handheld mic to dial an autopatch call while the headset is in use.

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<sup>1</sup> Other computer headsets equipped with electret microphones and dual 3.5 mm plugs will also work.

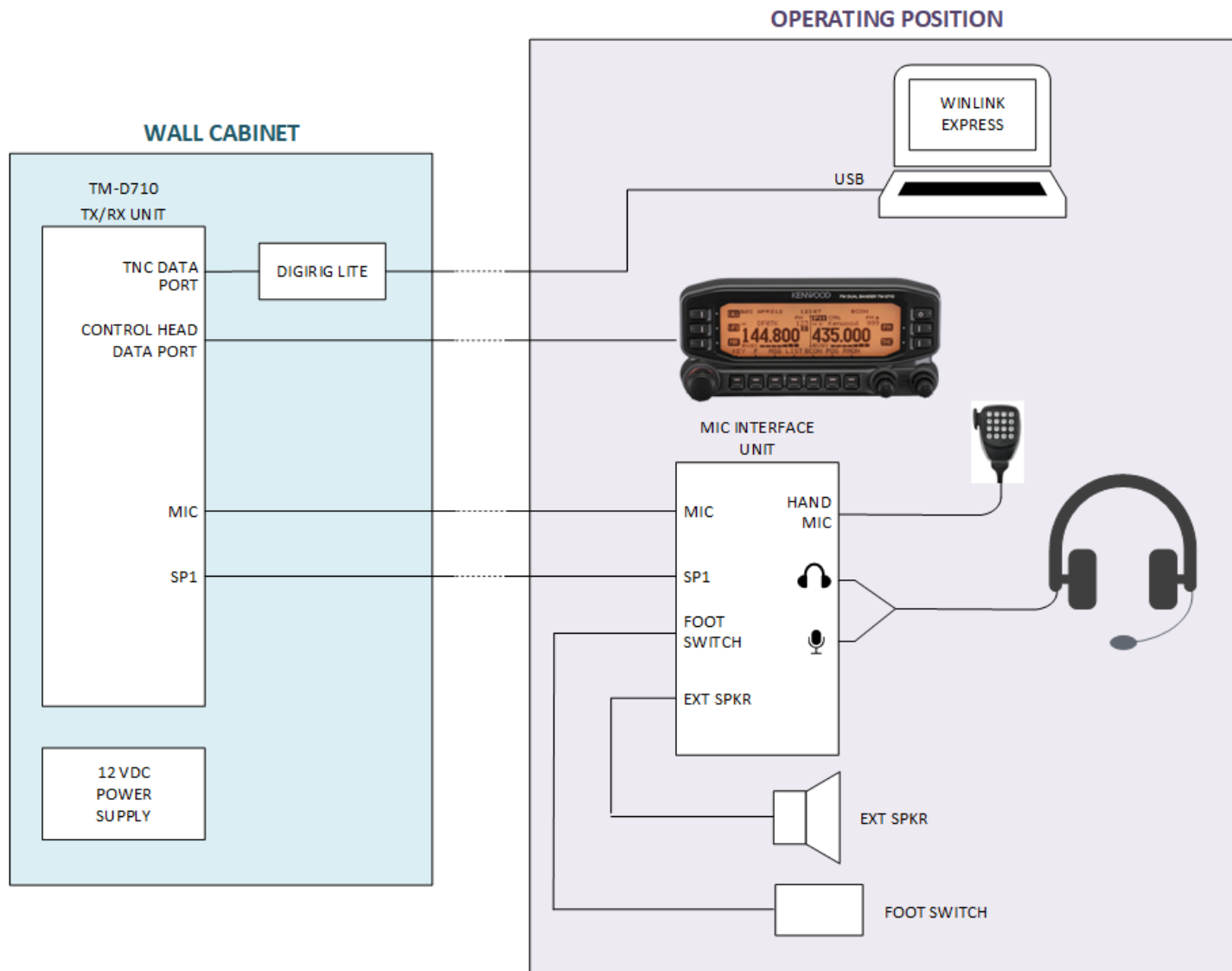


Figure 6 System Interconnections

## BASIC RADIO OPERATIONS

### TM-D710 front panel

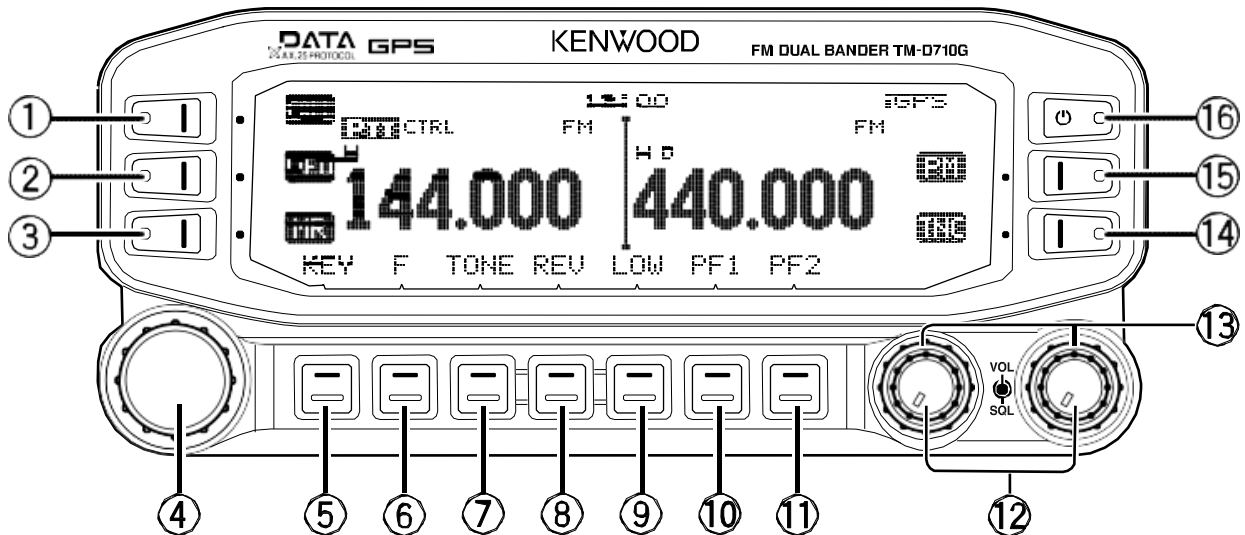


Figure 7

Press the top right button [P] ⑯ to turn the transceiver power **ON and OFF**.

Rotate the [BAND SEL] ⑫ to adjust the speaker volume. Press the left [BAND SEL] to select the A band. Press the right [BAND SEL] to select the B band.

Press [BAND SEL] (1s) to toggle between single and dual-band mode.

Rotate the [SQL] control ring ⑬ to adjust the squelch level. Clockwise tightens the squelch and counterclockwise opens the squelch.

Press [CALL] ① to select the Call channel.

Press [VFO] ② to enter VFO mode, then rotate the **Tuning control** ④ to select an operating frequency.

Press [MR] ③ to enter Memory Channel mode, then rotate the **Tuning control** ④ to select a Memory channel.

Press [F] ⑥ to enter Function mode. Press [F] (1s) to turn the transceiver key **lock** function ON and OFF.

Press **[TONE]** **(7)** to turn the Tone function ON. Each time you press **[TONE]**, the function cycles through the following: Tone ON → CTCSS ON → DCS ON → Cross Tone ON → OFF.

Press **[REV]** **(8)** to turn the Reverse function ON or OFF. Press **[REV]** (1s) to turn the Automatic Simplex Checker ON.

Press **[LOW]** **(9)** to toggle the transmit output power as follows: Middle Power → Low Power → High Power.

Press **[TNC]** **(14)** to turn the built-in TNC ON and the APRS (or NAVITRA) mode ON. Each time you press **[TNC]**, the mode toggles as follows:

APRS mode ON → PACKET mode ON → TNC OFF.

- When the built-in TNC turns on, “OPENING TNC” appears on the display.
- When “OPENING TNC” appears on the display, the mode cannot be changed.

## Selecting an operating mode

There are 3 operating modes available to choose from: VFO mode **[VFO]**, Memory Channel mode **[MR]**, and Call Channel mode **[CALL]** (see Figure 7). For most operations, the Memory Channels will be programmed with all the frequencies needed to operate.

VFO mode allows you to manually change the operating frequency. Press **[VFO]** to enter VFO mode. Rotate the **Tuning** control to select your desired operating frequency. The radio automatically selects the appropriate repeater shift, in accordance with the ARRL Band Plan, when tuned to a repeater output frequency. A CTCSS Tone can also be set. Once the information is set, it can be moved to a memory channel by pressing **[F]**, selecting a memory channel number, and pressing **[M.IN]**.

*Note: Please don't overwrite the existing memory channels. We try to keep these standardized county-wide. If you want to store a frequency in memory, choose an unused channel greater than 100.*

Memory Channel mode allows you to quickly select a frequently used frequency and related data which you have saved in the transceiver memory. Press **[MR]** to enter Memory Channel mode. Rotate the **Tuning** control to select your desired Memory channel. Frequencies and associated information must be entered in VFO mode before it can be placed in a memory channel.

When you select a memory channel, the radio chooses the saved frequency, repeater shift, operating mode, transmit power, and tone or digital squelch encode/decode parameters. You can change any of these settings on the fly, but reselecting the same memory a second time will restore the original (saved) settings.

Call Channel mode allows you to quickly select a preset channel to allow immediate calls on that frequency. The Call channel can be conveniently used as an emergency channel within your group. Select your desired band (A or B). The Call channel has a dedicated frequency for both bands A and B. The default frequency for band A is 144 MHz. The default frequency for band B is 430/440 MHz. Press **[CALL]** to enter Call Channel mode. The icon appears on the display. Press **[CALL]** again to return to your previous operating frequency.

## Menu mode

Many functions on this transceiver are selected or configured through the Menu instead of physical controls.

1. Press **[F]**, **Tuning** control to access the Menu.
2. Rotate the **Tuning** control to select your desired setup category.
3. Press the **Tuning** control to set the selected category. The Menu name and number appear on the display.
4. Rotate the **Tuning** control to select your desired Menu.
5. Press the **Tuning** control to set the selected Menu.
6. Rotate the **Tuning** control to select your desired value for the selected Menu.
7. Press the **Tuning** control to set the selected value.
8. Repeat steps 2 to 7 to set up additional Menus. Press **[ESC]** at any time to exit Menu mode. Press **[BACK]** at any time to cancel the Menu setup and return to the Menu selection.

## Winlink VHF Operation

We recommend using the Vara FM and/or UZ7HO Soundmodem software-based modems for Winlink.

Configure the radio with the following settings. With this configuration, setting, you will set your Winlink operating frequency on Band B. You can carry on a voice conversation on Band A on 70 cm while running Winlink on Band B on a 2m channel or vice versa. With this arrangement, the two bands function as two independent single-band radios.<sup>2</sup>

**TM-D710GA menu settings**

| Menu Group | Item | Value  |
|------------|------|--------|
| Audio      | 002  | Mode 1 |
| AUX2       | 918  | B-BAND |
|            | 919  | 9600   |

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<sup>2</sup> The Kenwood TM-D710 and TM-V71A were the only two dual-band transceivers on the Amateur Radio market that had the capability for simultaneous voice and data operation.

## Laptop Setup

We are currently operating in the BYOL (bring your own laptop) mode. Winlink Express is the only Winlink client that takes full advantage of the emcomm features offered by Winlink. Unfortunately, it is only available for the Windows operating system, which makes a Windows PC a virtual requirement for using Winlink. We strongly recommend that you obtain a license for the Vara Software modem, as its throughput on an FM channel is up to 18 times faster than 1200 baud packet. We also recommend that you also have Fldigi installed. Some ARES groups in Maryland also train to use VarAC during emcomm operations, so consider that as well.

You will need to download and install the latest version of the Winlink Express program and associated apps on your laptop. Here's where to get them.

<https://winlink.org/WinlinkExpress>

While you are there, set up a user account for your personal call sign at Winlink.org, if you don't already have one. Be sure to create a password and record it in a safe place. The software is under active development, with frequent upgrades, so please run the Winlink program frequently to keep it up to date. Look on the MCACS website for a list of established tactical Winlink addresses and other useful operating information.

You will also need the Vara FM application, available here:

<https://rosmodem.wordpress.com/>

and the Soundmodem application, available here:

<http://uz7.ho.ua/packetradio.htm>

While on the UZ7HO website, also download the **ptt-dll.zip** file and the latest documentation. Unlike the Windows Express download, which is a typical Windows installation file, the Soundmodem application does not need to be 'installed.' Simply unzip and copy the **Soundmodem.exe** file into a folder on your hard drive. We recommend that you save it in **C:\UZ7HO**. Also unzip and save the program documentation and the **ptt.dll** file in the same folder. The latter is required for use with some soundcard interfaces.

The detailed configuration of these software applications is installation-specific, and MCACS offers Winlink training that should help to get you going. But if you have the applications pre-loaded on your laptop, you will be ahead of the game.

## Winlink Express Operation

Guides to using Winlink Express can be found on the Internet. So, I'll just share a few helpful tips here that are specific to our installation. This is not a comprehensive guide to setting up Winlink, but we hope that we have provided enough detail here to serve as a refresher once you have obtained Winlink training.

The first time you run Winlink Express, you will have to configure some settings. Start the program and choose **Settings...Winlink Express Setup** from the menu. Enter your callsign (with no suffix) and the password you created when you registered at Winlink.org.

Auxiliary Callsigns and Tactical Addresses. MCACS will use Tactical Addresses for hospital operations. Tactical addresses are created from the RMS Express Setup screen. In the tactical address box, click "Add entry." Type in your hospital's tactical address. Everyone operating at a Montgomery County hospital needs to use the same password: "MCACSMMD". Don't substitute a different password. The following table lists some established tactical addresses. Check the MCACS website for the latest information.

| Tactical Address | Entity                                         |
|------------------|------------------------------------------------|
| MDMONTEOC        | Montgomery County EOC                          |
| MDMONTHC-GMTN    | Holy Cross Germantown Hospital                 |
| MDMONTHCH-SS     | Holy Cross Hospital (Silver Spring)            |
| MDMONTMMMC       | Medstar Montgomery Medical Center (Olney)      |
| MDMONTNIHRAC     | NIH Radio Amateur Club Station (Bethesda)      |
| MDMONTMCACSVAN   | MCACS Comm Van                                 |
| MDMONTEC         | Montgomery County Emergency Coordinator        |
|                  | OTHER USEFUL TACTICAL ADDRESSES                |
| MDCSM            | ARRL Maryland-DC Section Manager               |
| MDCSEC           | ARRL Maryland-DC Section Emergency Coordinator |

While it is optional, I recommend filling in your contact information and hospital's grid square. The grid square for Holy Cross Germantown Hospital is FM19JE. Latitude/longitude coordinates are 39.1818, -77.2412 (39° 10' 54" N, 77° 14' 28" W). That information is required on some of the Winlink templates. If you have Internet access, Winlink Express will use your grid square to provide a list of local gateway stations.

Leave the Service Code as PUBLIC. (I'm not aware of any EMCOMM gateways operating in the local area.) Save and close the setup window.

Now, you are ready to tell Winlink Express what TNC you are using. Using the **Open Session:** dropdown in the menu bar, select the session type as **PACKET Winlink** then click on **Open Session**. This brings up a new session window. Click on **Settings**.

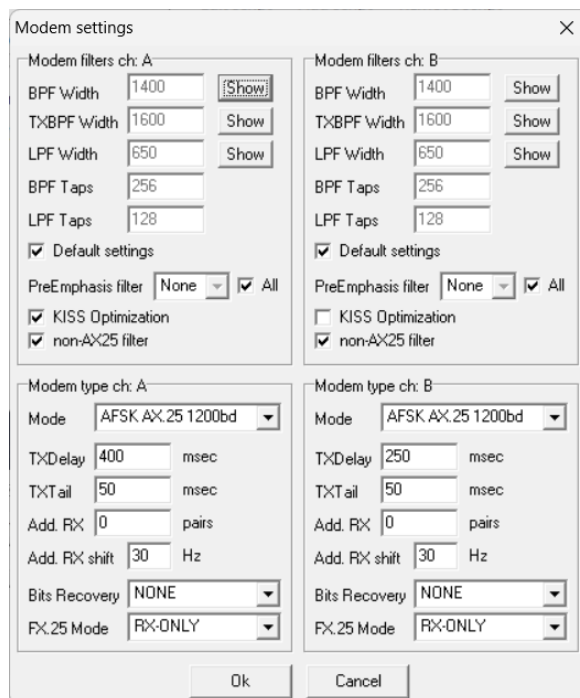
For the **Packet TNC Type**, choose **KISS**. Under **Serial Port:** select **TCP**. Leave the **TCP Host/Port** at the default (127.0.0.1/8100). Select **Disabled** under **AutoConnect Time**. The other parameters can be left at default. Check “Automatically launch packet sound modem” and browse to the folder where you installed Soundmodem (usually **C:\UZ7HO\soundmodem.exe**).

When you click on the Update button, the program will attempt to initialize the TNC. If successful, you will see a “**Ready**” message. Otherwise, you’ll have to do some troubleshooting.

Now shift your attention to the Soundmodem window. (It may be minimized, so look for it on the Taskbar.) Open the menu item **Settings → Devices**. Select your soundcard interface device from the input and output device dropdowns. Check to enable the KISS Server Port. The port number should match what you entered in the Winlink Express configuration.

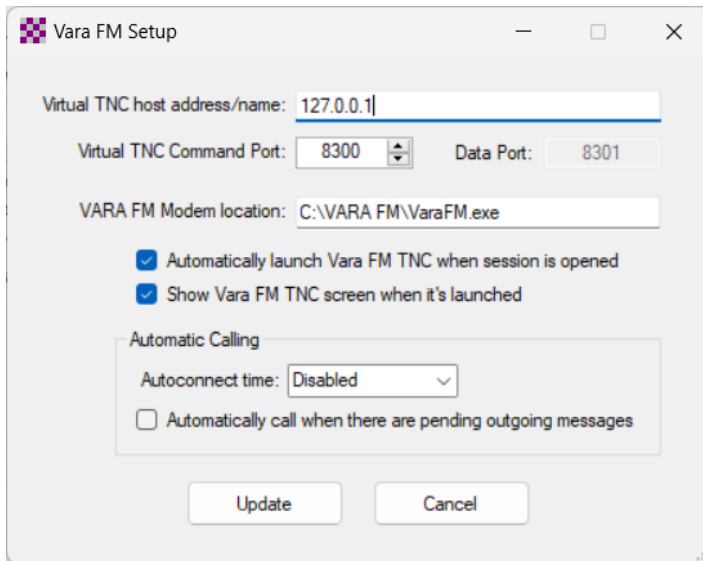
Here, you might want to make a side trip to the Windows Sound Control panel and make sure your soundcard interface is NOT the default audio device for playback. You don’t want Windows’ beeps and boops to be transmitted over the air.

Next, visit the **Settings → Modem** menu item in Soundmodem. All the defaults should work here, except you’ll want to check Kiss Optimization if it isn’t already checked. When using the TM-D710, the TXDelay parameter can be reduced to 250 ms.

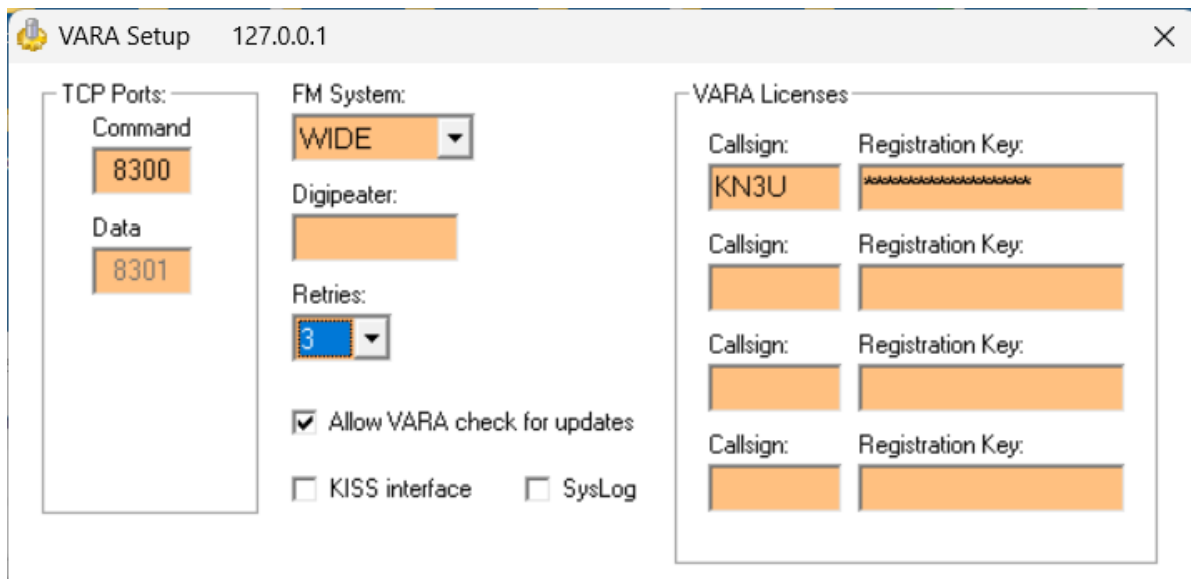


Finally, you'll need to adjust the transmit and receive audio levels, using the Windows Sound Control Panel. In the Soundmodem window, you can use the **Calibration** menu item to key the transmitter with either the low or high FSK tone, or both.

To use Vara, you need to go through a similar configuration procedure. Close the Winlink Packet session and open a Vara FM Winlink session. You'll first open the VARA TNC Settings in the Winlink session window. The settings shown below are typical.



Next, choose **Vara Setup...** in the Vara FM application window. (If you don't see it, look for it on the Taskbar.) All the radios at our Montgomery county hospitals are equipped for Vara Wide (high-speed) operation, so assuming you have purchased the Vara license, select that mode after entering your call sign and registration code. If you don't have a Vara license, you will have to select the Vara Narrow mode. It is still faster than AX.25 packet and will provide access to Vara RMS Gateway stations.



Again, you'll have to go the VARA FM SoundCard settings and select your soundcard interface device from the dropdown list. And you'll have to set your transmit and receive audio levels. Assuming that you have already set your levels correctly for UZ7HO Soundmodem, you should not need to change the Windows Sound Control Panel settings. Any adjustments you make to the slider in the VARA FM SoundCard window will not affect the levels you have already set for Soundmodem. Your best bet is to use the Vara FM Autotune feature.

Now, you are ready to make a connection. In the Winlink Express session window, the connection type should be "Direct" (in other words, we are not using digipeaters to reach the gateway since these gateways are within simplex range of the hospital). Type the callsign into the connection box, and click **Start**. (Alternately, click **Channel Selection** which will open a window listing the closest nodes based on the grid square information you entered above. Double click a channel or click on one and click **Select Channel** at the top of the window. Don't forget to enter the correct frequency into the radio's B-Band.) Most mobile radios, including the TM-D710, are not designed for computer control.

After a few seconds, the radio should begin transmitting and establish a connection with the Gateway. You are off to the races!

Here are a few of the most useful gateway stations:

| Call Sign | Frequency | Location                                 |
|-----------|-----------|------------------------------------------|
| WM3M-10   | 145.090   | White Flint neighborhood, North Bethesda |
| WA3YOO-9  | 145.750   | Ashton, MD                               |
| W3LRC-10  | 145.750   | Laurel, MD                               |
| W3PGC-10  | 145.750   | Landover Hills, MD                       |
| W3AAC-10  | 145.010   | Millersville, MD (AA Co)                 |
| KF3AK-10  | 145.770   | Frederick, MD (Gambrill Mt.)             |

In a pinch, you should be able to establish a packet peer-to-peer (P2P) connection with another local station to relay any critical message traffic. It is also possible to make a Winlink connection by digipeating through most the RMS Gateway stations listed above, or even establish a P2P connection over a conventional FM repeater. (You may need to increase the TxDelay setting to several hundred milliseconds when operating over a voice repeater.) In an emergency, when the MCACS station at the Montgomery County EOC is activated, you can contact WA3YOO to request assistance in relaying Winlink messages.

## APPENDIX A MENU CONFIGURATION

### MENU MODE

Many functions on this transceiver are selected or configured through the Menu instead of physical controls. Once you become familiar with the Menu system, you will appreciate the versatility it offers.

#### MENU ACCESS

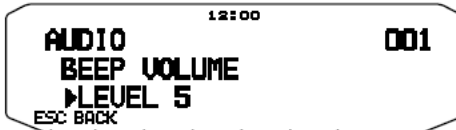
- 1 Press **[F]**, **Tuning** control to access the Menu.
  - The setup category name appears on the display.



- 2 Rotate the **Tuning** control to select your desired setup category.
- 3 Press the **Tuning** control to set the selected category.
  - The Menu name and number appear on the display.



- 4 Rotate the **Tuning** control to select your desired Menu.
- 5 Press the **Tuning** control to set the selected Menu.



- 6 Rotate the **Tuning** control to select your desired value for the selected Menu.
- 7 Press the **Tuning** control to set the selected value.
- 8 Repeat steps 2 to 7 to set up additional Menus.
  - Press **[ESC]** at any time to exit Menu mode.
  - Press **[BACK]** at any time to cancel the Menu setup and return to the Menu selection.

| AUDIO            |                      |                               |                      |                 |
|------------------|----------------------|-------------------------------|----------------------|-----------------|
| Menu No.         | Display              | Description                   | Setting Values       | Default Setting |
| 000              | KEY BEEP             | Beep sound                    | OFF/ ON              | ON              |
| 001              | BEEP VOLUME          | Beep volume level             | LEVEL 1 ~ LEVEL 7    | LEVEL 5         |
| 002              | EXT.SPEAKER          | External speaker output mode  | MODE 1/<br>MODE 2    | MODE 1          |
| 003 <sup>1</sup> | ANNOUNCE             | Voice announcement mode       | OFF/ AUTO/<br>MANUAL | AUTO            |
| 004 <sup>1</sup> | ANNOUNCE LANGUAGE    | Voice announcement language   | ENGLISH/<br>JAPANESE | ENGLISH         |
| 005 <sup>1</sup> | ANNOUNCE VOLUME      | Voice announcement volume     | LEVEL 1 ~ LEVEL 7    | LEVEL 5         |
| 006 <sup>1</sup> | ANNOUNCE SPEED       | Voice announcement speed      | SPEED 0 ~ SPEED 4    | SPEED 1         |
| 007 <sup>1</sup> | PLAYBACK REPEAT      | Recording playback repeat     | OFF/ ON              | OFF             |
| 008 <sup>1</sup> | PLAYBACK INTERVAL    | Playback repeat interval time | 0 ~ 60 s             | 10 s            |
| 009 <sup>1</sup> | CONTINUOUS RECORDING | Continuous Recording          | OFF/ ON              | OFF             |

| TX/RX    |                         |                              |                                         |                 |
|----------|-------------------------|------------------------------|-----------------------------------------|-----------------|
| Menu No. | Display                 | Description                  | Setting Values                          | Default Setting |
| 100      | PROGRAMMABLE VFO        | Programmable VFO setup       | Varies with the selected frequency band | –               |
| 101      | STEP                    | Step frequency               | Varies with the selected frequency band | –               |
| 102      | MODULATION              | Modulation/demodulation mode | Varies with the selected frequency band | –               |
| 103      | VHF AIP                 | VHF band AIP                 | OFF/ ON                                 | OFF             |
| 104      | UHF AIP                 | UHF band AIP                 | OFF/ ON                                 | OFF             |
| 105      | S-METER SQUELCH         | S-meter squelch              | OFF/ ON                                 | OFF             |
| 106      | S-METER SQL HANGUP TIME | S-meter squelch hang up time | OFF/ 125/ 250/<br>500 ms                | OFF             |
| 107      | MUTE HANGUP TIME        | Mute hang up time setup      | OFF/ 125/ 250/<br>500/ 750/ 1000 ms     | OFF             |
| 108      | BEAT SHIFT              | Beat shift                   | OFF/ ON                                 | OFF             |

| TX/RX            |                        |                                |                         |                                              |
|------------------|------------------------|--------------------------------|-------------------------|----------------------------------------------|
| Menu No.         | Display                | Description                    | Setting Values          | Default Setting                              |
| 109              | TOT                    | Time-out timer                 | 3/ 5/ 10 min            | 10 min                                       |
| 110              | MICROPHONE SENSITIVITY | Microphone Sensitivity         | HIGH/<br>MEDIUM/ LOW    | HIGH<br>(TM-D710GE)<br>MEDIUM<br>(TM-D710GA) |
| 111 <sup>2</sup> | WEATHER ALERT          | Weather alert                  | OFF/ ON                 | OFF                                          |
| 112 <sup>2</sup> | AUTO WEATHER SCAN      | Auto weather channel scan time | OFF/ 15/ 30 /<br>60 min | OFF                                          |

| MEMORY   |                 |                                    |                                                                                          |                 |
|----------|-----------------|------------------------------------|------------------------------------------------------------------------------------------|-----------------|
| Menu No. | Display         | Description                        | Setting Values                                                                           | Default Setting |
| 200      | MEMORY NAME     | Memory name setup                  | Up to 8 characters                                                                       | –               |
| 201      | RECALL METHOD   | Memory channel recall method       | ALL BANDS/<br>CURRENT                                                                    | ALL BANDS       |
| 202      | LOCKOUT         | Memory channel lockout             | OFF/ ON                                                                                  | OFF             |
| 203      | GROUP LINK      | Memory group link registration     | Up to 10 digits<br>(0 ~ 9)                                                               | –               |
| 204      | EchoLink MEMORY | EchoLink memory setting            | Up to 8 characters<br>for EchoLink<br>memory name<br><br>Up to 8 digits<br>for DTMF code | –               |
| 205      | EchoLink SPEED  | EchoLink memory transmission speed | FAST/ SLOW                                                                               | FAST            |

| DTMF     |               |                                |                                                                                       |                 |
|----------|---------------|--------------------------------|---------------------------------------------------------------------------------------|-----------------|
| Menu No. | Display       | Description                    | Setting Values                                                                        | Default Setting |
| 300      | DTMF HOLD     | DTMF transmission hold         | OFF/ ON                                                                               | OFF             |
| 301      | DTMF MEMORY   | DTMF memory                    | Up to 8 characters for<br>DTMF memory<br>name<br><br>Up to 16 digits<br>for DTMF code | –               |
| 302      | DTMF SPEED    | DTMF memory transmission speed | FAST/ SLOW                                                                            | FAST            |
| 303      | DTMF PAUSE    | DTMF pause code time           | 100/ 250/ 500/<br>750/ 1000/<br>1500/ 2000 ms                                         | 500 ms          |
| 304      | DTMF KEY LOCK | DTMF key lock                  | OFF/ ON                                                                               | OFF             |

| REPEATER         |                      |                                                    |                                                             |                 |
|------------------|----------------------|----------------------------------------------------|-------------------------------------------------------------|-----------------|
| Menu No.         | Display              | Description                                        | Setting Values                                              | Default Setting |
| 400              | OFFSET FREQUENCY     | Offset frequency                                   | See explanation                                             | –               |
| 401              | AUTO REPEATER OFFSET | Auto Repeater Offset                               | OFF/ ON                                                     | ON              |
| 402              | 1750 TX HOLD         | Transmission hold when transmitting a 1750 Hz tone | OFF/ ON                                                     | OFF             |
| 403 <sup>2</sup> | REPEATER MODE        | Repeater mode                                      | CROSS BAND/<br>LOCKED<br>TX:A-BAND/<br>LOCKED TX:B-<br>BAND | CROSS BAND      |
| 404 <sup>2</sup> | REPEATER TX HOLD     | Repeater transmission hold                         | ON/ OFF                                                     | OFF             |
| 405 <sup>2</sup> | REPEATER ID          | Repeater ID registration                           | Up to 12 characters                                         | –               |
| 406 <sup>2</sup> | REPEATER ID TX       | Repeater ID transmission                           | OFF/ MORSE/<br>VOICE                                        | OFF             |

| AUX 2    |                      |                                                |                                                                      |                                           |
|----------|----------------------|------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------|
| Menu No. | Display              | Description                                    | Setting Values                                                       | Default Setting                           |
| 900      | POWER ON MESSAGE     | Power on message setup                         | Up to 8 characters                                                   | HELLO !!                                  |
| 901      | BRIGHTNESS           | Display brightness                             | OFF/ LEVEL 1 ~ LEVEL 8                                               | LEVEL 8                                   |
| 902      | AUTO BRIGHTNESS      | Display auto brightness                        | OFF/ ON                                                              | OFF                                       |
| 903      | BACKLIGHT COLOR      | Backlight color                                | AMBER/ GREEN                                                         | AMBER                                     |
| 904      | CONTRAST             | Display contrast                               | LEVEL 1 ~ LEVEL 16                                                   | LEVEL 8                                   |
| 905      | DISPLAY REVERSE MODE | Display reverse mode                           | POSITIVE/ NEGATIVE                                                   | POSITIVE                                  |
| 906      | PANEL PF1            | PF1 key programmable function value            | See explanation                                                      | WX CH (TM-D710GA)<br>FRQ.BAND (TM-D710GE) |
| 907      | PANEL PF2            | PF2 key programmable function value            | See explanation                                                      | CTRL                                      |
| 908      | MIC PF1(PF)          | Microphone PF1 key programmable function value | See explanation                                                      | A/B                                       |
| 909      | MIC PF2(MR)          | Microphone PF2 key programmable function value | See explanation                                                      | MR                                        |
| 910      | MIC PF3(VFO)         | Microphone PF3 key programmable function value | See explanation                                                      | VFO                                       |
| 911      | MIC PF4(CALL)        | Microphone PF4 key programmable function value | See explanation                                                      | CALL (TM-D710GA)<br>1750 (TM-D710GE)      |
| 912      | MIC KEY LOCK         | Microphone key lock                            | OFF/ ON                                                              | OFF                                       |
| 913      | SCAN RESUME          | Scan resume method                             | TIME/ CARRIER/ SEEK                                                  | TIME                                      |
| 914      | SCAN TIME RESTART    | Time operate restart time                      | 1 ~ 10 sec                                                           | 5 sec                                     |
| 915      | SCAN CARRIER RESTART | Carrier operate restart time                   | 1 ~ 10 sec                                                           | 2 sec                                     |
| 916      | VISUAL SCAN          | Number of Channels for Visual Scan             | MODE 1 : 31ch/<br>MODE 2 : 61ch/<br>MODE 3 : 91ch/<br>MODE 4 : 181ch | MODE 2 : 61ch                             |

| AUX 2            |                         |                                        |                                                                         |                 |
|------------------|-------------------------|----------------------------------------|-------------------------------------------------------------------------|-----------------|
| Menu No.         | Display                 | Description                            | Setting Values                                                          | Default Setting |
| 917              | AP0                     | Auto Power Off time                    | OFF/ 30/ 60/ 90/ 120/ 180 min                                           | OFF             |
| 918              | EXT. DATA BAND          | External TNC data band type            | A-BAND/<br>B-BAND/<br>TX:A-BAND<br>RX:B-BAND/<br>RX:A-BAND<br>TX:B-BAND | B-BAND          |
| 919              | EXT. DATA SPEED         | External TNC data communications speed | 1200/ 9600 bps                                                          | 1200 bps        |
| 920              | PC PORT BAUDRATE        | PC terminal baud rate speed            | 9600/ 19200/ 38400/ 57600 bps                                           | 9600 bps        |
| 921              | SQC SOURCE              | SQC output type                        | OFF/ BUSY/<br>SQL/ TX/<br>BUSY or TX/<br>SQL or TX                      | BUSY or TX      |
| 922              | AUTO PM STORE           | Automatic PM entry                     | OFF/ ON                                                                 | ON              |
| 923 <sup>2</sup> | REMOTE ID               | Personal Identification Number         | 000 ~ 999                                                               | 000             |
| 924 <sup>2</sup> | REMOTE ANSWER BACK      | Answer back                            | OFF/ ON                                                                 | ON              |
| 925              | DATE                    | Date                                   | See explanation                                                         | –               |
| 926              | TIME                    | Clock time                             | See explanation                                                         | –               |
| 927              | TIME ZONE               | Time zone                              | UTC + 14:00 ~ UTC – 14:00                                               | UTC             |
| 928              | DISPLAY PARTITION BAR   | Display partition bar                  | OFF/ ON                                                                 | ON              |
| 929              | COM PORT BAUDRATE       | COM terminal baud rate speed           | 9600/ 19200/ 38400/ 57600 bps                                           | 9600 bps        |
| 930              | INT. DATA BAND (PACKET) | Internal TNC data band (PACKET)        | A-BAND/<br>B-BAND/<br>TX:A-BAND<br>RX:B-BAND/<br>RX:A-BAND<br>TX:B-BAND | A-BAND          |
| 998              | POWER ON PASSWORD       | Power on password                      | OFF/ ON                                                                 | OFF             |
| 999              | RESET                   | Reset                                  | VFO RESET/<br>PARTIAL RESET/<br>PM RESET/<br>FULL RESET                 | VFO RESET       |

## A FINAL NOTE

The TM-D710 has five different programmable “personalities.” I once got into a situation where every time I turned off the radio, when I turned it back on, it had “forgotten” what frequencies I was using and a whole lot of other settings as well. I finally realized that I had inadvertently switched the radio from the “normal” personality to an alternate setting. To correct the problem, I needed to press the PM button on the front of the radio, then press the “off” button. That restored the radio to normal operation.