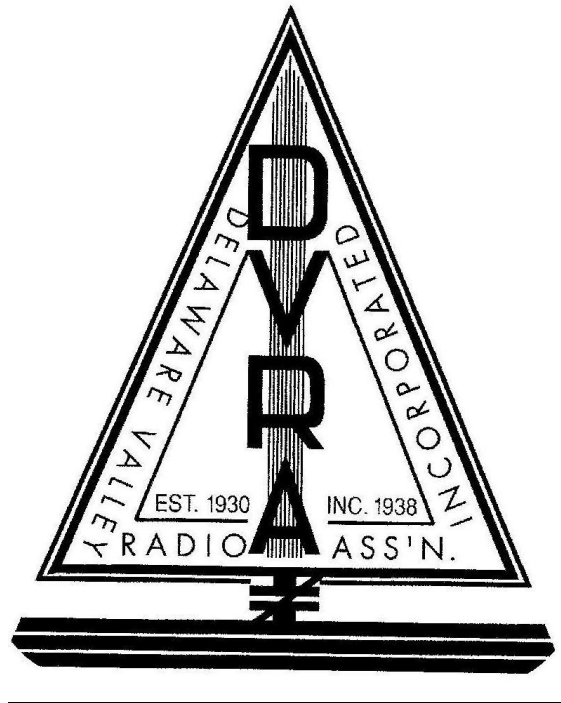


# W2ZQ STATION MANUAL



**DELAWARE VALLEY RADIO ASSOCIATION**

July 2024

## **Purpose**

The purpose of the Delaware Valley Radio Association Club Station W2ZQ is to promote the aims of the Association, namely *“To extend knowledge of the Radio Art to its members, promote good will between associated persons of the radio fraternity and the general public, and to serve as a means of social contact among its members.”*

To this end, the station is designed to be used for all types of operations, casual use, DX'ing, contesting, etc. No one use is to be dominant, but the use of the station to introduce Amateur Radio to newcomers, and especially students and youth, shall be given preference. To use the station for a specific event, contact the shack director to have it scheduled to reduce conflicts.

## **Liability**

***There is no obligation for any person to ever visit the property. Thus, all persons entering the property do so at their own risk and agree to hold harmless the DVRA and its officers and members. The club cannot be held liable for personal injuries or damage to any personal equipment on site. If you cannot agree to this, then stay away.***

## **Parking**

All vehicles are to be parked atop the hill, south of the barrier cable. The only vehicles to be driven onto the property are specifically designated trucks transporting club equipment to and from remote club events such as Field Day or the Hamfest, or fuel delivery trucks.

## **Sign-in Procedures**

When visiting the station, members must sign-in the member log and sign out at the end of the day. This keeps track of who was there in case a question arises later. Non-club members should sign the visitors log and include an e-mail address for use by the membership and training directors.

## **Maintenance Log Book**

The Station Director will maintain a maintenance log book for all Stations.

Notify the Station Director of any problems with the station equipment, computers or antennas ASAP.

## **Notices Bulletin Board**

Check the Notices Bulletin Board located as you walk into the shack for any recent instructions regarding the station.

### **Who can authorize shack modifications**

Modifications to the HF Station must be authorized in advance by Station Director. Modifications to the Repeater must be authorized in advance by Repeater Manager. Failure to do this may result in immediate revocation of shack privileges.

### **Station Availability**

The Station Director shall make the station available for club member's use. Such availability shall be posted on the website and/or other appropriate means.

Non-members and visitors to the shack must be accompanied by a club member who will assume responsibility for their actions.

### **Pertinent FCC Part 97 Rules**

#### **Club station callsign use.**

The callsign W2ZQ is to be used at the shack. When it is used make sure that all contacts are adequately logged. You may use your own callsign at the shack for such purposes as chasing DX. Such contacts are NOT logged in the club's logs. Use of the club station for a non-DVRA sponsored special event by a club member must be approved in advance by the Board of Directors.

#### **Operator license frequency/mode/power privileges**

When using the equipment operators must stay within the limits of their license unless a control operator who has greater privileges than the operator is present.

Control Operators are responsible to ensure that the operator is using the equipment properly and conforming to all FCC regulations.

#### **Third-Party traffic regulations**

Before letting a non-licensed person speak to a foreign country, make sure that third party traffic to that country is permitted by current US treaty.

### **Physical Plant**

#### **Locks**

The building is protected by both a physical key lock and a cypher lock. To obtain a key lock to enable entry by oneself, a person must be a member in good standing for six months with a General Class license or higher and agree to be available to open the station during the posted station availability times and have been given an orientation (including understanding of this manual) by the Station

Director. The physical key must be turned in when so requested by the shack director or when the member is no longer a member in good standing with the club. Club Officers and selected Directors by the President shall also have key privileges.

The cypher lock code is changed annually on January 1<sup>st</sup> and is told to the key holder by the Station Director when their annual dues are paid. Key holders are expected to use the shack and/or participate in club station activities at least twice per year. Failure to do so may lead to revocation of shack privileges by the Station Director and the Board of Directors.

### **HVAC**

The shack is heated by electric baseboard heaters controlled by two thermostats. When leaving the shack set thermostats per the instructions on each of them.

The large air conditioner on the North wall may be used for cooling when needed in the summer. It should be turned off when the shack is unoccupied.

### **Electrical System**

Electric power to the shack is mapped and located in the Circuit Breaker Panel near Station A. The Main breaker panel is located in the furnace room. A remote contactor relay supplies power to the sub panel within the shack itself. This sub-panel controls power to the operating positions except for the three outlet boxes with brown covers near the north wall which are wired directly to the furnace room.

When leaving the shack, power down all operating position equipment, and then turn the main contactor power switch near the door to off to protect the equipment from problems and to reduce electricity expense. Power to the brown outlets and the refrigerator, repeater cabinet, security system, LAN, and telephone will remain on.

### **Telephone**

As most members now have cell phones, there is little need to ever use the shack telephone. Do not use it to make overseas calls. Also note that it is a VOIP phone using the "Magic Jack", so dialing 911 won't get assistance.

In an emergency, dial 609-989-6111 to contact the Mercer County Sheriff's Dispatcher. Tell the dispatcher that the nature of your emergency and ask him to dispatch the Airport Police to the amateur radio station across the driveway from the State Highway Maintenance Department (796 Bear Tavern Rd, Near I-95 Exit 2)

## **Rodent Control**

A major problem with unoccupied rural buildings is infestation by white-footed mice. This can lead to odor, and more dangerously, exposure to Hantavirus. The mice are attracted by warmth, nesting sites, and food.

To exclude mice, any building opening greater than ½ inch needs to be closed with hardware cloth or cement. Notify the Station Director if you suspect there is a rodent entry point in the shack or evidence of rodents. Additionally, no food or trash will be stored within the building and any food should normally be consumed at the outside picnic table.

## **Refreshments**

The club will maintain a selection of drinks. The shack has a Keurig coffee/tea machine for coffee, a water cooler, and a stocked refrigerator with soft drinks in single serving sizes. Payment is on the honor system. You may elect to bring your own beverages, but only in single serving sizes to avoid storage of opened food containers.

There will be no food preparation in the shack. Bringing in pre-prepared food is fine but you must clean up and remove any waste to the outdoor waste cans when the meal is finished.

## **Cleanliness**

### **The station is a NON SMOKING Facility**

With every visit, you are obligated to leave the facility cleaner than you found it. That means either vacuuming the floor, dusting the equipment and horizontal surfaces.

### **Trash**

Place any trash and recyclables in the containers on the patio. If the containers are more than half full, place the trash in the dumpster and take the recyclables home with you.

### **Postings**

Nothing is to be hung or posted without the prior approval of the Station Director

### **Storage**

Nothing is to be stored within the club station. All tools and other items are to be stored in the furnace room, workshop or mower shed. The keys to those rooms are in the first cabinet. Make sure those rooms are locked when leaving, even if you didn't open them.

## **Antenna Farm**

The following Antennas are available:

### **North Tower**

The North Tower has a 2 element Yagi for 40 meters (M2 40M2L), and a 14 element 20, 15 and 10 meter (Force 12 C-19XR) full sized Yagi.

These are controlled with the Green Heron Rotator at Station A.

It also has an Omni directional 50 Mhz Halo antenna for 6M.

### **Sinclair Tower**

WARC Band (30/17/12m) Dipole

### **South Tower.**

Tri Band 10, 15,20 meter Three element Yagi

2 meter, 70cm Dual Band Vertical

Five element 6 meter Yagi

These are controlled with the controller located at the Station B operating location

### **Repeater Tower**

80 Meter Dipole

160 Meter Dipole

### **Vertical**

BigIR 40-10M Vertical

### **EME**

Three meter Dish

Five meter Dish

## **Basic Operation – ALL STATIONS**

*Ensure that the antenna cable that is marked for the appropriate operating Station is attached to the patch panel for the antenna and band you wish to operate. A copy of the transceiver instruction manual is on the desktop of the station computer for your reference.*

### **Primary HF Operating position - Station A**

The Primary station is for use for all DVRA members to promote the club, and progress efforts towards DVRA goals such as DXCC and WAS and general club operating. This station should be available at all times for a member to use.

The Primary HF Operating position has a Yaesu FT-DX 101D transceiver, a Tokyo Hy-Power 1.5hfx, 1kW linear amplifier and an LDG 1000ProII antenna tuner used with the North Tower rotor control. The antenna tuner is interfaced with the FT-DX 101D and is operated using the **tuner's** TUNE button. Make sure the antenna is tuned before operating the linear amplifier

### **Secondary HF Operating Position – Station B**

The Secondary station should be used for all other operations such as personal or non-DVRA nets, using the beam to check out personal equipment, etc. This will make it fair to all members who wish to use the Primary station on high usage times during the weekend. Any personal equipment that is brought into the shack must be removed when you leave. The station must be left connected as you found it.

The Secondary station has the ICOM IC -7600 with a matching 500w linear amplifier and antenna tuner. This equipment is set to AUTO mode so when the Linear and Antenna Tuner is ON it is designed to track and follow band changes and will automatically tune the attached antenna. A copy of the transceiver instruction manual is on the desktop of the station computer for your reference.

In addition, the Yaesu FTM-400 2m/70cm analog and C4FM transceiver for VHF/UHF use is at this location.

Also at this location is a 12v Power Supply and separate antenna cable for members who wish to bring their own radios to the station for use.

### **Auxiliary Operating Position – Station C**

The station is primarily used for EME contacts. Members must be checked out by the Station Director or by a designated EME Control Operator

### **Digital Modes**

Station A and B have complete Digital Mode capabilities using HRD. Start the program then start DM-780 and access the mode you would like to use. See the Shack Director for further details on using this program. Both stations also have WSJT-X installed for FT-8 or similar modes.

### **Logging of contacts**

All W2ZQ QSO's must be logged

HAM RADIO DELUXE (HRD) is the logging program on each of the station computers.

There is an icon on the computer to start the program. The logging window will open and the fields will be self-explanatory. Make sure you put your call sign in the "Comments" field for our reference. See the Station Director for further details on the use of this program.

### **Rotator Usage**

**Excessive turning of the rotator should be avoided. These antennas have a relatively wide beam width so "fine tuning" of direction will yield little effect.**

### **Repeaters**

#### **Cabinet Access**

Please do not access the 2 meter repeater cabinet unless directed to do so by the Repeater Director.



### Station PC's

Computers are provided at all Stations. Please do not add any software to the station computers

### QSLing

The Station Director will be responsible for uploading/downloading the HRD log files for primary QSO confirmation to LoTW . He will also send out paper cards when required and be responsible for submitting logs for any Operating Awards

### Securing the shack upon exit

- Turn off all radios
- Disconnect all HF antennas at the patch panel after all station use.
- Shut down all computers after station use.
- Remove all trash and recyclables from the site.
- **Ensure the station and carpeting is cleaner than when you entered.**
- In winter, set the thermostat as required.
- Upon leaving, please turn the Master Switch (first light switch) off. This kills all power to the station.
- Ensure that the generator and furnace room doors are locked and the key ring is inside the building.
- Ensure Porta-Potty is locked
- Note exit time in the log.
- Ensure the main door is secure