

'ALY' SKYWARN RADIO OPERATOR'S MANUAL



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Purpose

The purpose of this document is to assist the SKYWARN radio operators in arriving, performing their SKYWARN severe weather tasks, and documenting their experiences.

This manual is maintained by the Albany Weather Service Regional SKYWARN Coordinator. Please direct all suggestions, questions, and/or comments to the Regional SKYWARN Coordinator.

Arriving at the Albany Weather Service Office

The NWS is located in the CESTM building (251 Fuller Road, Albany)

Parking

Parking is very difficult during working hours of week days. Parking in a reserved parking spot will likely produce a very expensive ‘ticket’ and possibly being towed. If you arrive during the day it is very likely that the only place to park is a distance away (approximately a 7 minute walk). Once you turn into the complex from the traffic circle continue straight to the last parking lot on the left (F- Lot) at the end of the road.

Entering the Building

The outside door is usually open during ‘normal’ business hours. Otherwise it is locked. If locked you will need to call the weather service (use the phone by the door in a white weather proof case (inside



the cover is the number for the NWS—7-0249)) and they will send someone down to let you in.

If the door is open, enter and use the elevator to go to the third floor. Once on the third floor, turn left and continue past the rest rooms (There are no restrooms inside the National Weather Service Office, so it might be a good idea to stop first).

Once at the National Weather Service Office you will find that the door is locked. To the right of the door, behind the support column is a door bell button. Someone will come and let you in. Sign in (specify 'SKYWARN' and your callsign as the visit reason) by the guard bears and follow the hallway until you arrive at the main operations room on the left. The SKYWARN desk is in the front left hand corner which is next to the Severe Weather operations desk.



SKYWARN Operations



Figure 1 SKYWARN Operations Desk

Notes:

1. It is important to maintain a very **quiet** presence. Side conversations should not disturb the NWS personnel.
2. The computer on the SKYWARN desk is NOT accessible for SKYWARN operations. There is **NO internet** access for SKYWARN operators.

3. The position of the power supply on the floor shown above is not good. It is too easy for an operator to turn the supply off with their toe. (If found in this position, it is highly advised to turn it sideways)



Figure 2 Showing the SKYWARN operator (WA3AFS) and the associated Severe Weather Operations desk



Figure 3 SKYWARN Operations desk (K2QY) showing desk layout

SKYWARN Operations

The power supply (for the VHF/UHF radio and the HF LDG antenna tuner) is on the floor under the operating table. Verify that it is turned on and that it is placed so that your foot does not turn it off!

Documentation

Please keep a log of your operations. There should be a pad of lined paper available. If not, please ask for one.

The following is the information that should be tracked:

- Your name and callsign with the start and end times.
- The callsign (and operator's name if available) of the station(s) providing weather information including:
 - The QTH of the reporting station
 - The time of observation
 - The weather conditions being reported.

At the end of the SKYWARN operation, the log sheet(s) should be left at the SKYWARN operating position and any other scrap paper removed.

VHF/UHF Operations

D700A Operation

There is a Heil Traveler microphone/headset connected with a splitter for a second set of headphones. (Second set of headphones presently not kept at NWS)

Note that the Heil Traveler has a push to talk with a 'hold' option. The PTT may stick (hold) if not pushed STRAIGHT into the housing. In time this will wear the switch a little and it will stop being a problem. But as we already found out, just hit the switch again and it will release. The Kenwood handheld microphone is stored on the shelf above the radio.

There is an audio splitter that can be used on the VHF/UHF radio so that a 2nd operator can also use a pair of headphones.

A chart of the County primary and secondary repeater information and memory number information is located in Appendix A of this document.

Since the D700A is a dual VFO radio, you can use one side with the repeater where the most active weather is occurring and the other side to 'rove' between the other SKYWARN repeaters. If you wish to use both VFOs, then you may need to turn off the APRS Beacon Function. This is accomplished by:

- Press "F" (for a couple of seconds) to get the alternative functions for the bottom row of buttons. Press "BCON" and the BCON will go out in the top right row of the display. The radio will no longer APRS BECON.

The D700A operations manual is located on the shelf above the SKYWARN desk.

SKYWARN Operations

- The Severe Weather Operations forecaster(s) will point out which areas are of concern and what information they are currently interested.
- There should be a list of the repeaters with their memory location on the D700A.
- The SKYWARN scripts are located in the appendix of the SKYWARN Operations Manual which is stored on the shelf above the SKYWARN desk.
- Some counties may only be accessible via IRLP. The Albany County ACACES repeater (147.120) has IRLP. Use the following procedure:
 - Switch to the handheld microphone
 - Identify yourself (WX2ALY) and key in 73 on the handheld microphone which will shut down any previous set IRLP (The default is the 9050 IRLP link). If IRLP was active, the repeater will reply "Link Clear".
 - Key in the number: **9054** which should result in the message "Link Active".
 - To verify node number: key in: **123**
- At the end of the SKYWARN activation/event perform the following:

- Key in **73** which should result of “Link Clear”
- Key in **9050** which should place the 147.120 repeater back to its normal IRLP connection.

HF Operations

HF operations are performed using a Ten-Tec Delta II transceiver along with a LDG AT-11MP automatic tuner. The antenna is an OCF (Off Center Fed dipole).

HF Set up

If not already set up, the Ten-Tec HF radio, power supply, microphone, LDG tuner, and Ten-Tec manual are stored in the IT room.

The Ten-Tec radio has its own power supply.

The LDG tuner has bare wires at the end of its power cord. They can be connected to the DC power strip that is under the desktop on the rear wall. Make sure that the power supply that is on the floor is powered on and that the power supply is placed so that the on-off switch cannot be accidentally kicked off!



Figure 4 SKYWARN HF Radio

HF Power and Microphone settings

The following figure shows the optimum settings for the PWR (RF power) and MIC (microphone volume). It is NOT advisable to change them. You can adjust the AF (audio to your comfort – the speaker is located on the top rear of the transceiver).



Figure 5 Ten-Tec RF and Microphone settings

Tuning the Ten-Tec

The Ten-Tec is extremely sensitive to SWR. If it gets unhappy, it will lock up and you must turn off the Ten-Tec power supply and wait a couple of seconds and then turn the power back on.

Make sure that power is turned on for the LDG tuner and the tuner placed in the 'Auto' mode.



Figure 6 LDG AT-11MP Autotuner Switch Settings

Once at the desired frequency, press the 'TUNE' button on the Ten-Tec



Figure 7 Tuning the Ten-Tec

Once tuned (The LDG tuner is quiet), press the 'TUNE' button again to place the Ten-Tec back into receive mode.

Changing the HF Band

If you are not familiar with Ten-Tec then the easiest method to change the band is:

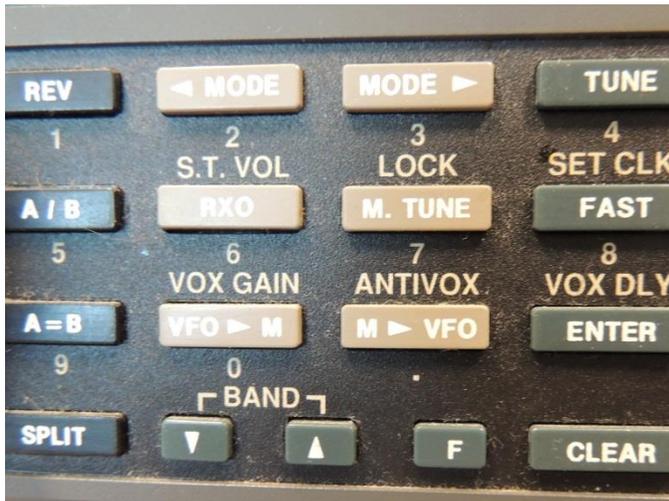


Figure 8 Band Changes on HF

- Press the 'F' (function) key and then the 'UP' or 'Down' key (labeled "BAND"). This will place the transceiver up or down to the next ham band. The 'F' key must be pressed before each band change (for example: If you wish to switch from 80M to 20M then you will be pressing the 'F' key and 'UP' three times)

Leaving the NWS Office

Remember to sign out.

To open the door, you need to press the red button to the left of the door and AT THE SAME TIME, push the door open.

Appendix A – VHF/UHF County Contact Information

County	Pri/Sec	Frequency	Tone	Channel Number	Comments
Albany Rensselaer Schenectady	Secondary	147.12+	PL100.0	100	IRLP 9054
Albany Rensselaer Schenectady	Primary	145.19-	PL103.5	101	
Bennington	Primary	146.835-		102	
Bennington	Secondary	145.390-	PL100.0	103	
Berkshire	Primary	146.910-	PL162.2	104	
Berkshire	Secondary	145.270-	PL136.5	105	
Columbia Greene Ulster	Primary	147.210+		106	
Columbia Greene	Secondary	147.090+		107	
Dutchess	Primary	146.970-	PL100.0	108	If no access, use Columbia (mem 106)
Dutchess	Secondary	146.895-	PL100.0	109	
Fulton	Primary	146.700-		110	
Herkimer	Primary	145.110-	PL167.9	111	
Herkimer	Secondary	147.090+		112	No access from NWS ????? (Radio memory not changed as of 4/11/2015)
Litchfield	Primary	147.285+	PL77.0	113	IRLP 4395
Litchfield	Secondary	147.345+	PL77.0	114	
Montgomery	Primary	147.195+		115	No access from NWS
Montgomery	Secondary	146.700-		116	No access from NWS
Saratoga	Primary	147.360+		117	
Saratoga	Secondary	147.000	PL91.5	118	

Schoharie	Primary	146.610-	PL123.0	119	
Schoharie	Secondary	145.350-	PL167.9	120	
Warren Washington	Primary	146.730-	PL100	121	Linked to Hamilton, Herkimer
Warren Washington	Secondary	147.135+	PL123.0	122	
Windham	Primary	147.015+	PL100	123	
Windham	Secondary	444.7000+	PL110.9	124	
N2ACF		445.125+	PL114.8	125	ENY Command/Control
Hamilton	Primary	147.165+		150	
Hamilton	Secondary	147.135+	PL123.0	151	Linked to Warren 145.730
Washington	Primary	146.730-	PL100	152	Linked to Hamilton, Herkimer
Greene	Primary	147.150	PL114.8	153	
Greene	Secondary	449.025	PL114.8	154	
Rensselaer	Primary	147.180		155	
Rensselaer	Secondary	145.170	PL127.3	156	
Schenectady	Primary	147.060		157	
Schenectady	Secondary	147.240	PL91.5	158	
Ulster	Secondary	147.255+		159	No access from NWS – Use Mem 106 –(147.255 presently DOWN—May go to 146.805-)

Your Comments Please

Please place your positive comments and/or suggestions in the box below:

Please place your negative comments in the box below using a number 2 turquoise Crayola. Be specific with page and paragraph references along with a detailed description of the problem.



Comments may be emailed in a plain brown wrapper to wa3afs@arrl.net