

## Antenna Switching 102



**IGNORE THE RED AUTO BUTTONS.** Those are used to program the switch boxes and should not be touched by the operators.

You work the antenna switching from the top down. First select either the left bank of low band antennas or the right bank of high band antennas with the toggle switch.

Next - In the selected bank press a push button for the antenna or the system of antennas you want. You should not use the “Tribander” selection during a contest since that would block other stations from using the tri-band Yagis. Choosing the 80M Ridge antenna requires coordination with other stations who may be using the Ridge Tribander and then switching the Ridge Antenna Switch controller to 80 meter inverted Vee (see instructions below).

Note the lights - There are three states to the LEDs. Off means the antenna is available for selection. Red means that someone else has selected the antenna and it is in use. Green means that you have selected the antenna. To release the antenna, select one of the "SPARE" antenna selections.

But wait there's more! On the High Band push buttons there are 10M System, 15M System, and 20M System. Each of these buttons selects a MicroStack controller and its associated tri-bander switch.



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These three boxes will be placed at the 20M, 15M, and 10M operating positions. They are enabled when you push the 20M System or 15M System or 10M System buttons on the high band switch described on the previous page.

This is where the real flexibility comes in! The top box is the control for a Stack Match to power split. To select multiple antennas to power split you simply push their selector buttons simultaneously.

You can power split:

US/JA and Europe,

US/JA and one of the four tri-banders,

EU and one of the four tri-banders,

or US/JA and EU and a tri-bander.

For EU you have control with the toggle switch on the left whether you use the Ridge EU tri-bander or the Yard EU Tower (except for 20 meters where the Bencher Europe Yard tri-bander must be used).

Great for managing pileups!!! However, you need to be mindful of interstation interference issues, especially on harmonically related bands.

The tri-bander button on the top selects the tri-band antenna you have selected on the box below.

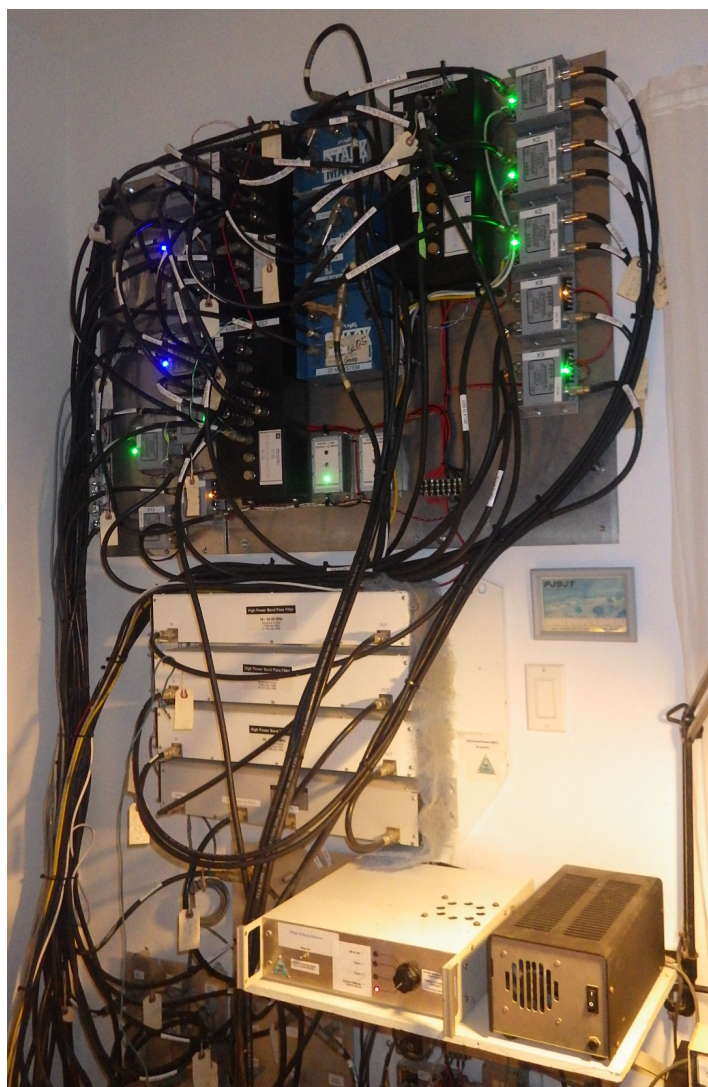
The same LED color scheme applies to the tri-bander box as the main antenna switch controllers.

Off - available

Red - in use by other position

Green - in use by this position

Press any other available (off) button to release the currently selected tri-bander.



Antenna switching panel as installed before CQ WW SSB 2015.

Control of the ridge remote antenna switch is done with the control box on the shelf sitting below the triplexer and its associated band-pass filters.

The control box power switch should be set to on.

The dummy load fan switch should be on.

Check to make sure the input coax to the control box is attached to the “Hardline Ridge” port on the bulkhead panel. It is sometimes disconnected during thunder storms.

The rotary switch has four positions only two of which are used: Ridge Tribander and 80 meter dipole. The latter position may be labelled Legacy or Other.

### **IMPORTANT!**

**Before using a new band at an operating position several checks need to be done.**

Check the correct bandpass filter is installed for the band selected (stations 1 and 2 are automatic).

Check for the correct harmonic stubs on the output of the amplifier (80, 40 and 20 meter positions).

Check the SWR by putting the amplifier in Standby and transmitting at low power with the transceiver.

**The last check should also be done the first time a new antenna is used at a station.**





Multi-op station choice switches on the panel. This image shows the normal multi-multi settings. Under less than ideal conditions STATION 3 would also be set to ALL BANDS.



The “Tribanders Direct” system controls the choice of tribander when not in a contest situation and Tribander has been selected on the station’s High Band controller. The tribander controller is placed between stations 1 and 2. Another tribander has been added to the matrix at position 4: Bencher Europe Yard. Same warning as above on **IGNORE THE RED AUTO BUTTON.**