

SDXCC Unit Operational Instructions

By **Voodoo Labs** (rev3-09)

This is a short instruction pamphlet to familiarize you with the installation and operation of your new SDXCC Unit for your TS-950SDX.

This Plug-n-Play unit will enable the TS-950SDX to Transmit at a 6.5Kc Bandwidth on SSB. This is accomplished by using a PIC24FJ64GA002 16-bit Microcontroller to reprogram the SDX DSP Unit.

It is easily installed in-line with the Silver DSP-A Connector Cable located on the rear of the TS-950SDX.

On-Off Control of the SDXCC Unit is accomplished with a Remote Switch conveniently installed at the front of the Transceiver. With a touch of a button, you will be instantly transmitting Full 6.5Kc ESSB Bandwidth!

The following will show you how to install the SDXCC Unit to your transceiver.

Remote Switch Installation

Disconnect everything from your rig and gently flip it upside down on a towel. This will prevent scratches and other such evil things from happening to your beloved radio.



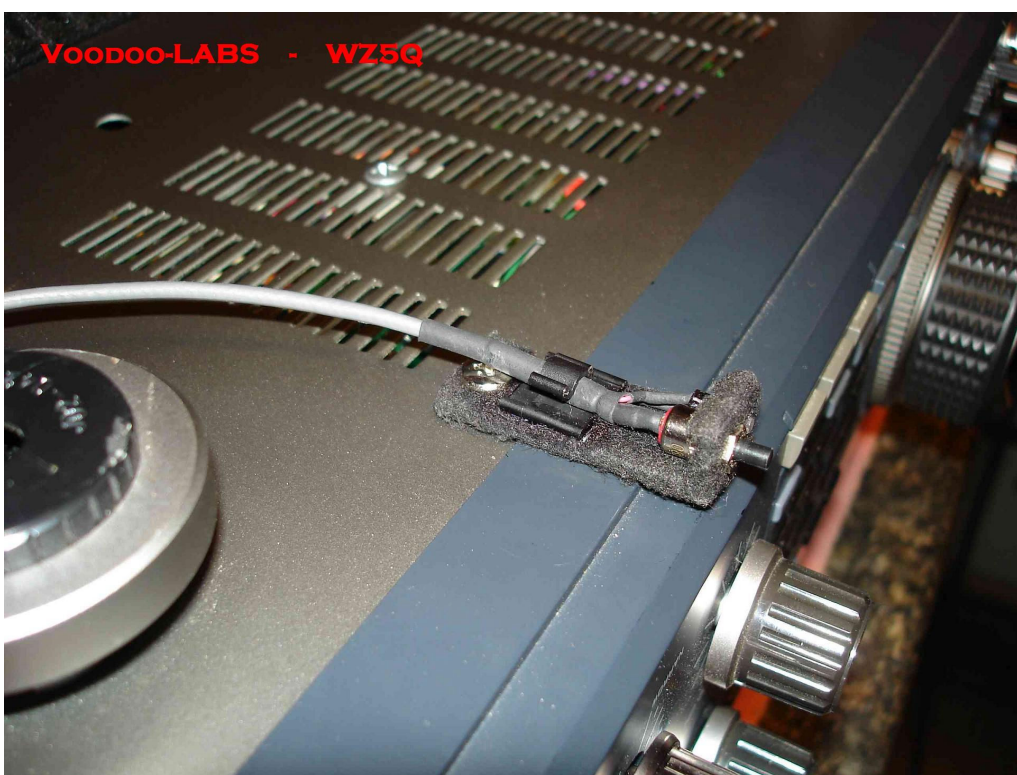
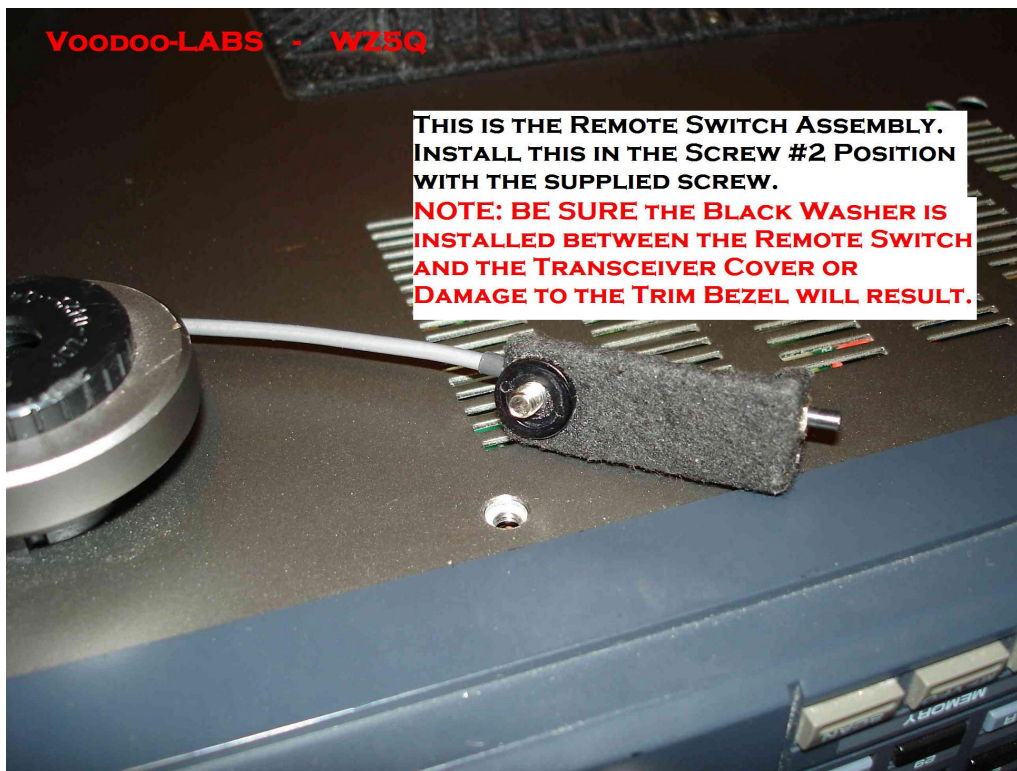
Remove the 2ea screws indicated in the above picture.

Screw #1 will be retained for future re-installation through a cable clamp.

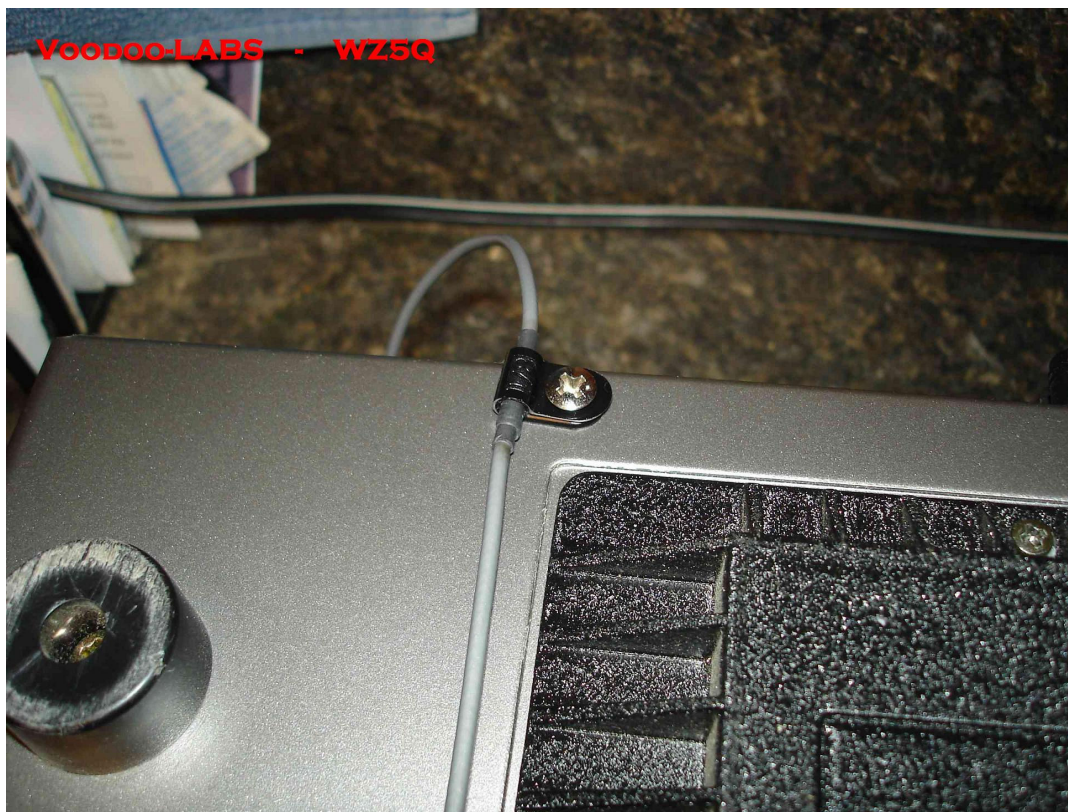
Screw #2 is replaced with a longer screw, which has been supplied with the Remote Switch to allow for its installation.

Install the Remote Switch Assembly at the Screw #2 Location as shown in the picture below. Use the supplied longer screw for attachment. The screw is pre-installed for your convenience, just gently move the cable assembly out of the way with the screwdriver for installation.

NOTE: Be sure the Black Spacer Washer is installed between the Remote Switch and the Transceiver Cover or Damage or the Plastic Trim Bezel will result. This Black Spacer is glued to the Remote Switch Assembly, just double check it is there.



Install the Cable Clamp at the Screw #1 position as shown in the picture below. Use the original screw removed from there.



This is what it should look like after the Remote Switch Assembly is installed.



SDXCC Unit Installation

The SDXCC Unit is installed on the rear of the SDX. Carefully flip the transceiver up side up, and rotate it to view the rear of the rig.

Remove the Silver DSP-A Connector Cable from the rear DSP Jack as shown in the picture below.



The SDXCC Unit has a strip of Velcro attached to it. These pieces of Velcro are pre-aligned to assist you in installation. Do not remove them.

You will also notice a Felt Anti-Vibration strip on the edge of the SDXCC Unit; this is to prevent any rattling or vibration from the unit when the unit is placed against the Heat Sink of the transceiver.

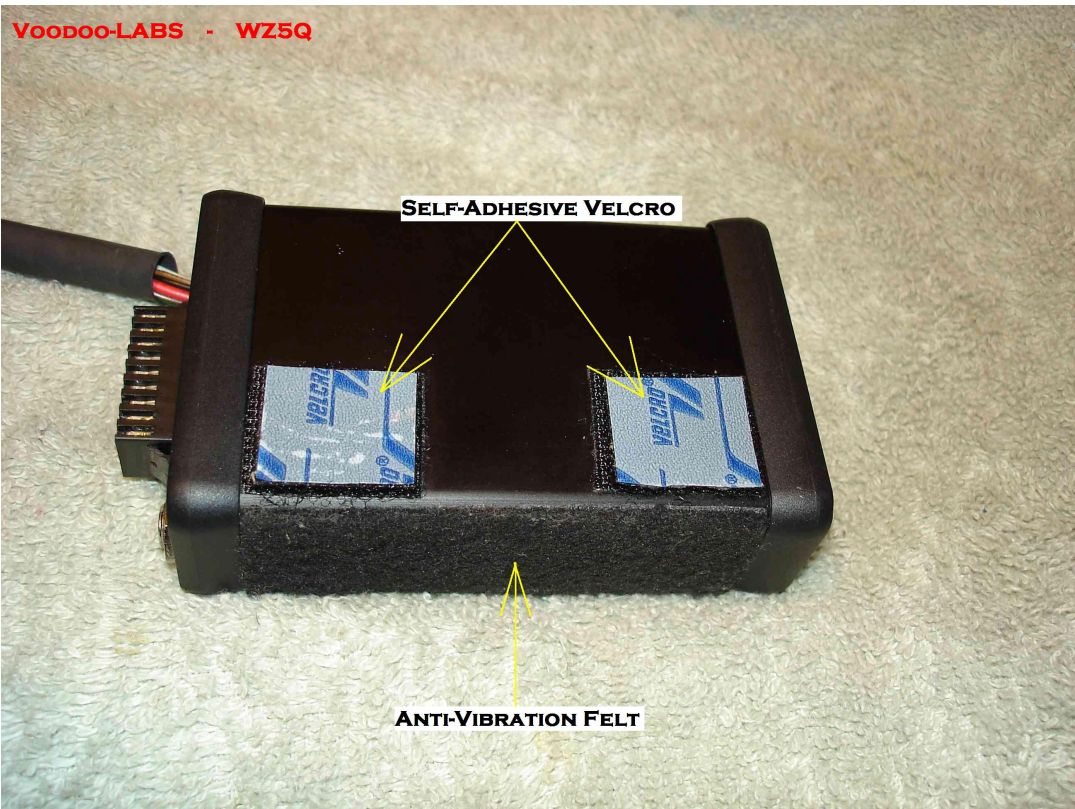
Try positioning the Unit for placement **WITHOUT** removing the adhesive protection strips on the Velcro first.

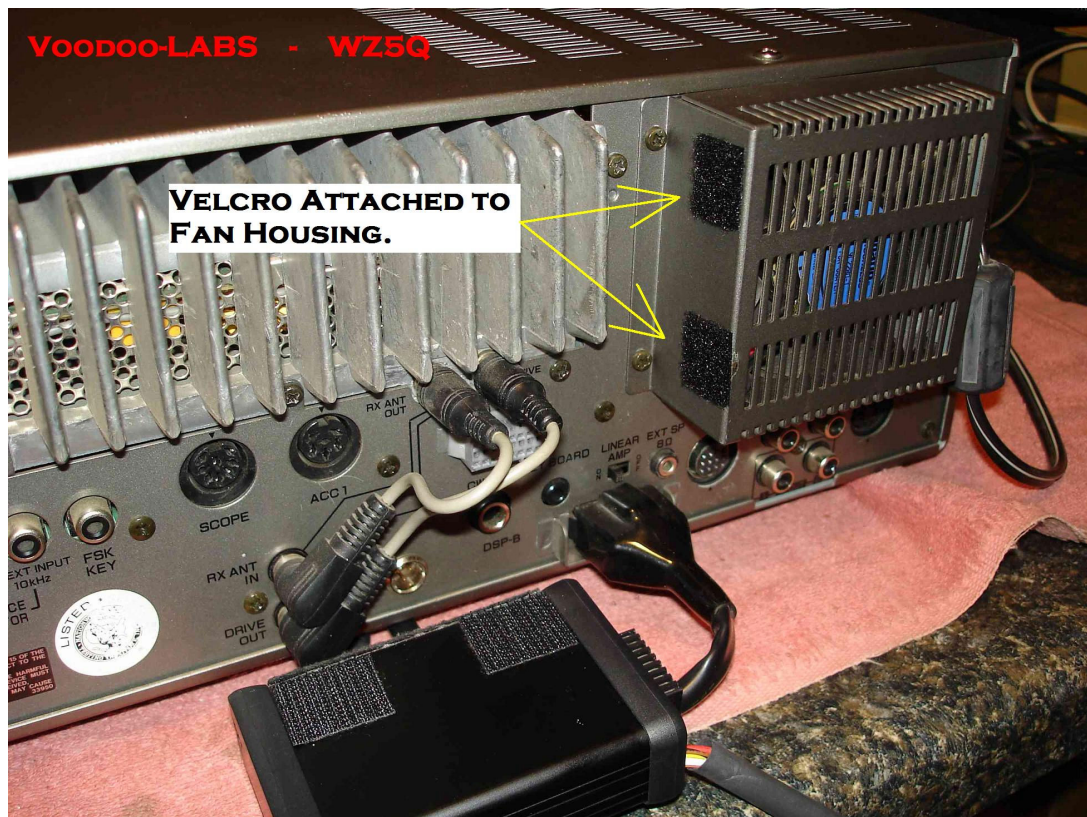
The SDXCC Unit will be attached to the side of the Fan Housing on the rear of the TS-950SDX. Align the top of the SDXCC Unit with the top cover of the Transceiver, while placing the Felt Anti-Vibration felt against the Heat Sink as shown in the following pictures.

Once you are confident in the placement, remove the adhesive protection strip from the Velcro and place the SDXCC in its final position against the Fan Housing and aligned as described above. Press firmly to set the Velcro.

The finished installation should look like the following pictures.

You can now remove the SDXCC Unit from the Transceiver and the Velcro strip will remain on the side of the Fan Housing.





While referencing the pictures below, plug the Silver DSP-A Connector Cable from the Transceiver's DSP into the SDXCC Unit plug. Then plug the black cable coming from the SDXCC Unit into the connector marked as DSP-A on the rear of the Transceiver.

Now carefully connect the 1/8" plug from the Remote Switch Assembly into the SDXCC Unit. Place the SDXCC Unit back into position onto the Velcro Strips with the felt against the Heat Sink.



Operation Instructions

Now that your rig is back in it's operation position, you can try out the ESSB 6.5Kc Transmit Bandwidth!

But first, you must be sure that the TS-950SDX has all the correct settings in the Menu and Power-On Menu's.

Set the transceiver to the following:

Menu, Hidden Menu, Power-On Menu Settings

This is a list of the different Menu settings that need to be enabled for the maximum Transmit Audiophile Experience from the TS-950SDX. More then likely they are already set in this configuration, so you can just verify these.

MENU Settings:

Turn OFF the SDX.

Turn the SDX ON.

Press the 'MENU' button.

Turn the 'M.CH/VFO.CH knob to change the Menu selection.

Press the 'DOWN' & 'UP' buttons to change the selections.

Menu 18 – dsp.cFil = off (this is the SSB Comb Filter)

Menu 20 – dsp.t.HPF = off (this is the Transmit High Pass Filter)

Menu 21 – dsp.t.LPF = 3100 (this is the Transmit Low Pass Filter)

Press the 'MENU' button to exit and save the settings.

Filter Select Power-On Menu Settings

Turn OFF the SDX.

Turn the SDX ON while pressing in on the 'MENU' button.

Menu 73 – Fil SEL = off (this turns off the automatic filter selector)

Press the 'MENU' button to exit and save the settings.

TX Filter Select Power-On Menu Settings

Turn OFF the SDX.

Turn the SDX ON while pressing in on the 'SCAN' & the right 'M.CH' buttons simultaneously.

Menu 01 = ON

Press the 'CLR' button to exit.

OK, now that the Menu's are set, you will have to set the Analog 8.83 Filters to pass the Maximum Transmit Bandwidth. This is accomplished by keying the Transmitter, then pressing the '8.83' Filter Button on the front of the rig. You will notice the Filter Indicator changes when you press it. You want it to show the 'No Indication' position. In other words, there will be no filter indication when you are on the correct setting. This means the 8.83 IF is in the 12Kc Filter Position.

Un-key the Transmitter.

You are now configured for Maximum ESSB Transmit Bandwidth!!

To activate the SDXCC Unit, push the button on the Remote Switch Unit. You will see the Purple ESSB Indicator light up. When this indicator is on, you will be transmitting in 6.5Kc SSB while the menu setting are in the above configuration.



Changing the 8.83 Analog Filters while in the Transmit mode can narrow the TX Bandwidth; or you can also narrow the TX Bandwidth by changing Menu 21 – the DSP Low Pass Filter.

While the SDXCC Unit is engaged, anytime you are in the Menu 21 '3100' setting, the DSP will be transmitting at 6.5Kc. When the SDXCC Unit is disengaged, the Menu 21 '3100' setting will be normal.

Also, while the SDXCC Unit is engaged, all other functions of the transceiver will be unchanged.

Well that should do it.

If you have any questions or comments, please feel free to email us at voodoo-labs@wz5q.net.

Thank You,

Voodoo-Labs

<http://www.voodoo-labs.com/>