

Transverter HG 144-K

INTERNAL TRANSVERTER'S FOR 144 MHZ FOR ELECRAFT K3



The transverter **HG 144-K** (144 Mhz) has designed for internal use on Elecraft K3, using the 28 Mhz like IF ..

In reception mode, the amplifier has a low noise factor, <1 db and the IP3 >+29 dbm.

No need external power supply and no need tuned.

The installation of the transverter HG 144-K into the Elecraft K3 ,is very easy and fast.Only you need solder 3 wires , connect 2 coaxial wires and install connector for 144 MHZ Antenna Mhz.You need 30 minutes of work.The transverters is fully assembled and ajusted..

The transverter have installed precision crystal heater with temperature $40.8^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$ in 116 Mhz Oscillator.

This transverters is designed only for Elecraft K3. For other transceiver,please ask me.

REQUIREMENTS OF ELECRAFT K3:

K3 WITH INTERFACE TRANSVERTER KXV3A...**The KXV3 is not valid.**

ELECRAFT K3, KXV3, KXV3A and KRX3 is a registered trademark of Elecraft ,Inc.

Transverter HG 144-K

Specifications:

Installation : Internal (Inside ELECRAFT K3)

Full QSK

Measures : 73mmX73mmX30 mm

Supply Voltage: 12 VDC (Get of ELECRAFT K3 internaly)

Current Drain :

Received : 130 mA...With the precision crystal heater

Transmit: About 3 A

Frequency Range:144,000-146,000 MHZ

TRANSMITTER

Power output (50 Ohm load) : 8W at 1.1:1 SWR on Bird 43

Operatinf modes : SBB,FM,CW,Digital,etc

IF range :28,000-30,000 Mhz

TX RF Mixer Mini Circuits ADEX-10H (+17dbm)

IF input powe range :1mW

Full QSK

RECEIVER

Noise Figure : <1 dB

Conversion gain :Typical

RX RF Mixer Mini Circuits ADEX-10H(+17dbm)

3rd-Order Intercept :>+29 dbm

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VERY IMPORTANT

REQUIREMENTS OF ELECRAFT K3:

**K3 WITH INTERFACE TRANSVERTER KXV3A...The
KXV3 is not valid.**

PLEASE :

**Preventing Electrostatic Discharge Damage see your K3
Manual.**

NOTICE

**I do not take responsibility of any damages that you
produce in your transceiver for the installation of this
transverter .**

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trademark of Elecraft ,Inc.**

Transverter HG 144-K

INSTALLATION OF TRANSVERTER INSIDE ELECRAF K3

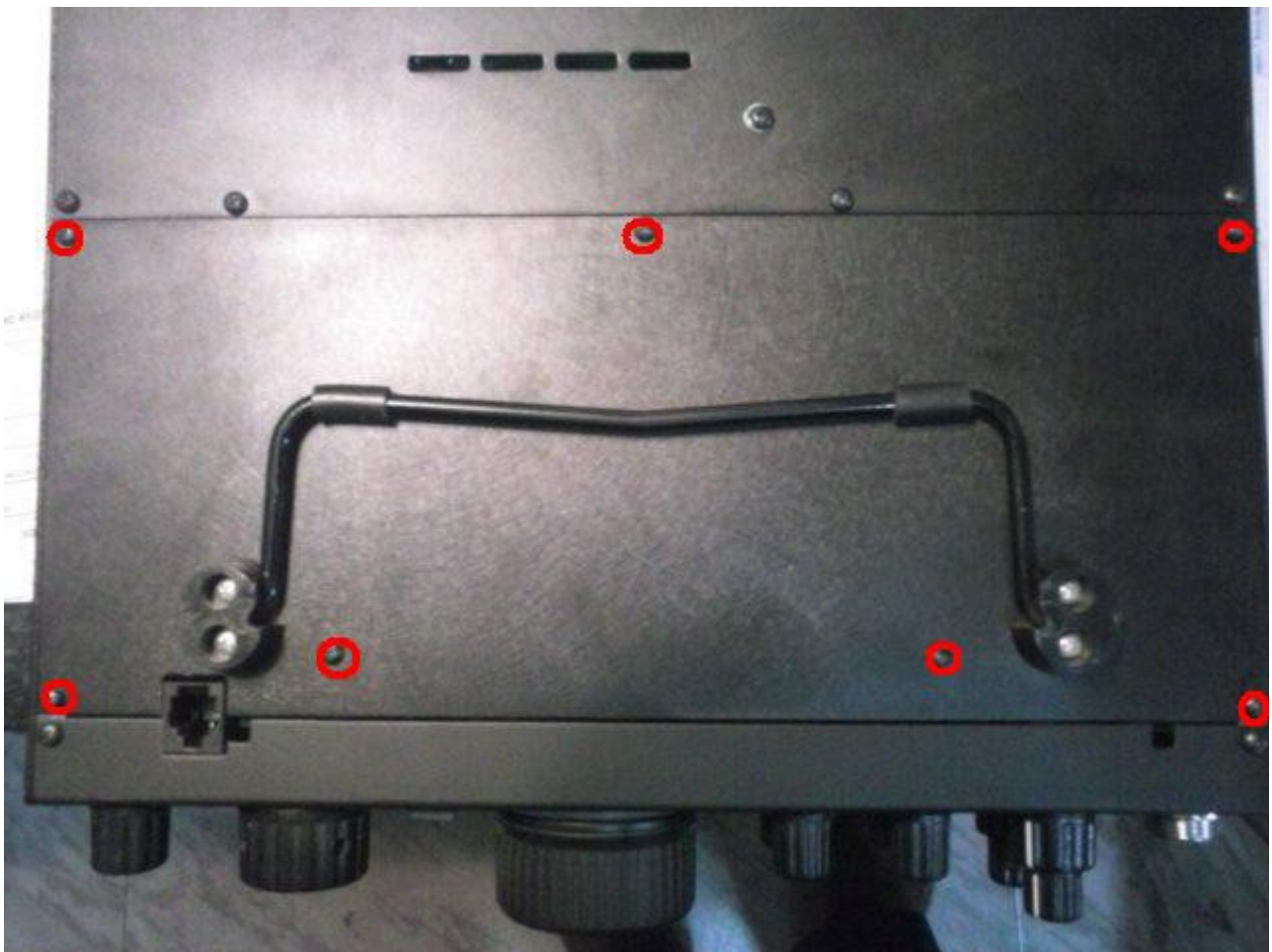
The installation of transverter inside of Elecraft K3 is easy. Only need solder 3 wires for power supply and control, connect to coaxial wire in KXV3A and install antenna connector in rear part of K3.

FIRST :

Disconnect power and all cables from your K3.

SECOND :

Remove the forward section of K3's bottom cover. See next picture.



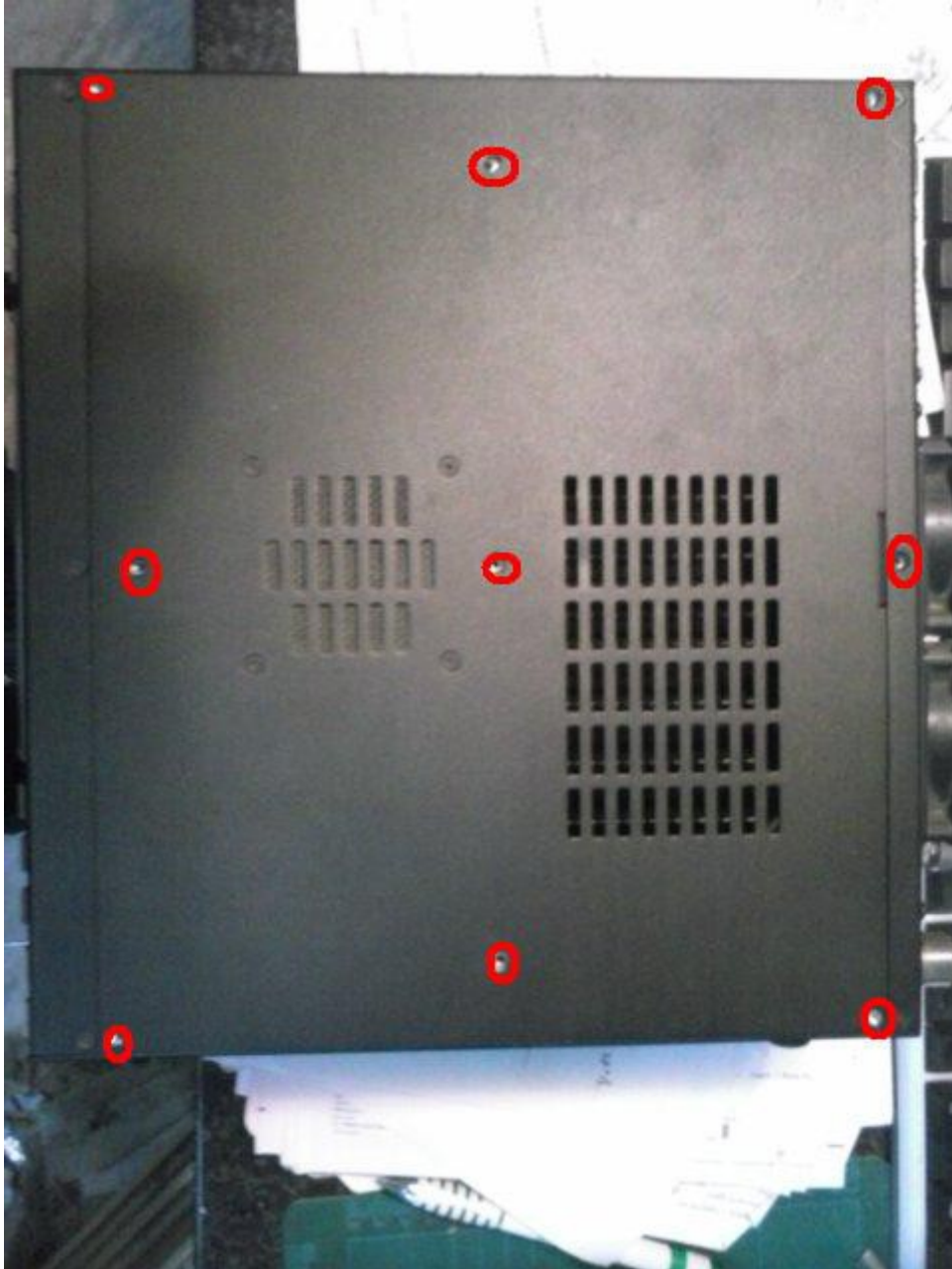
Transverter HG 144-K

THIRD :

Remove the 9 screws of top cover. See next picture.

After the cover is free of 9 screws, lift it gently to reach the speaker wire connector.

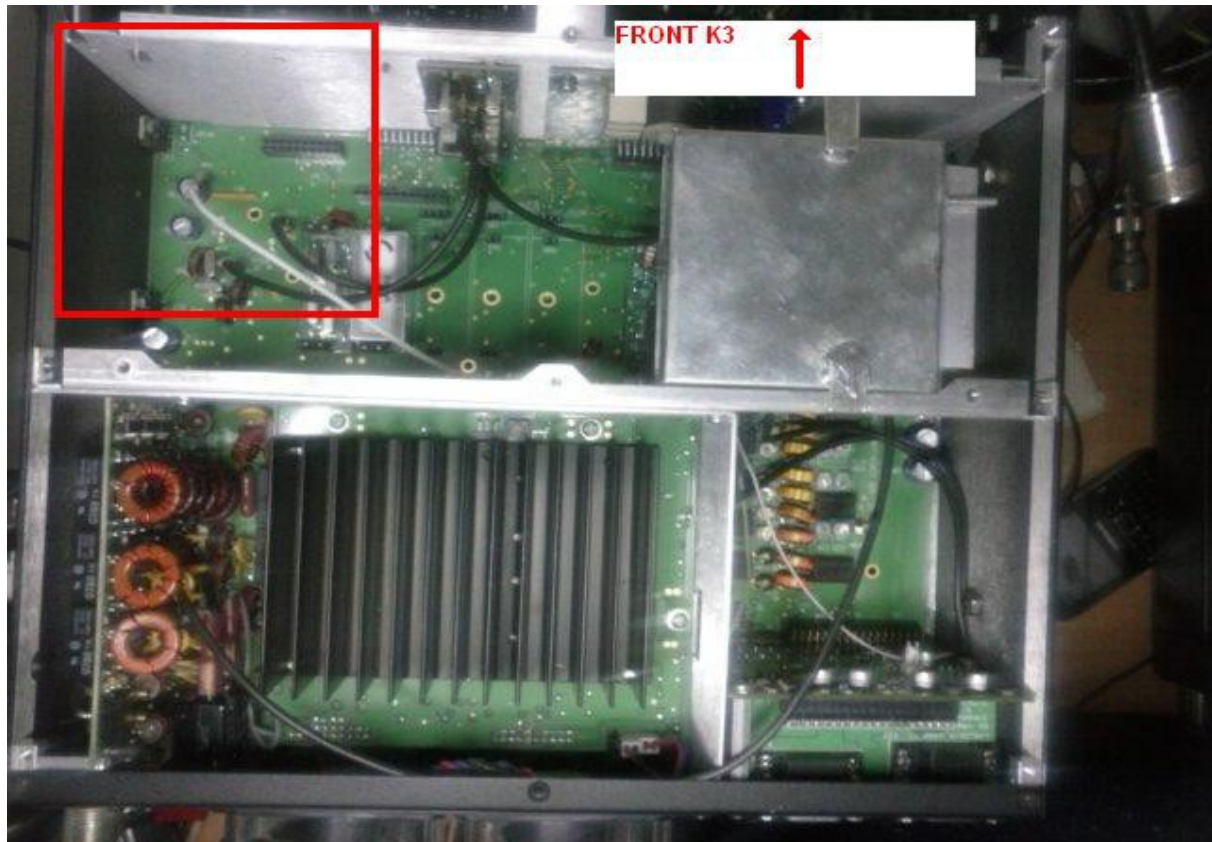
Unplug the speaker connector's.



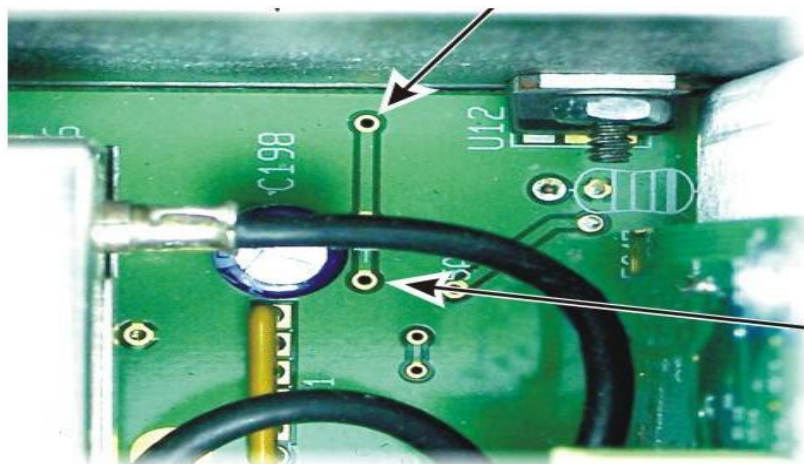
Transverter HG 144-K

FOURTH :

If you have installed the KRX3 (SUB receiver), please your manual to remove this.
Locate this part in your K3 in the next picture. (red square)



Locate the next picture in right side panel of your k3



ARROW.....PIN INSTALLATION

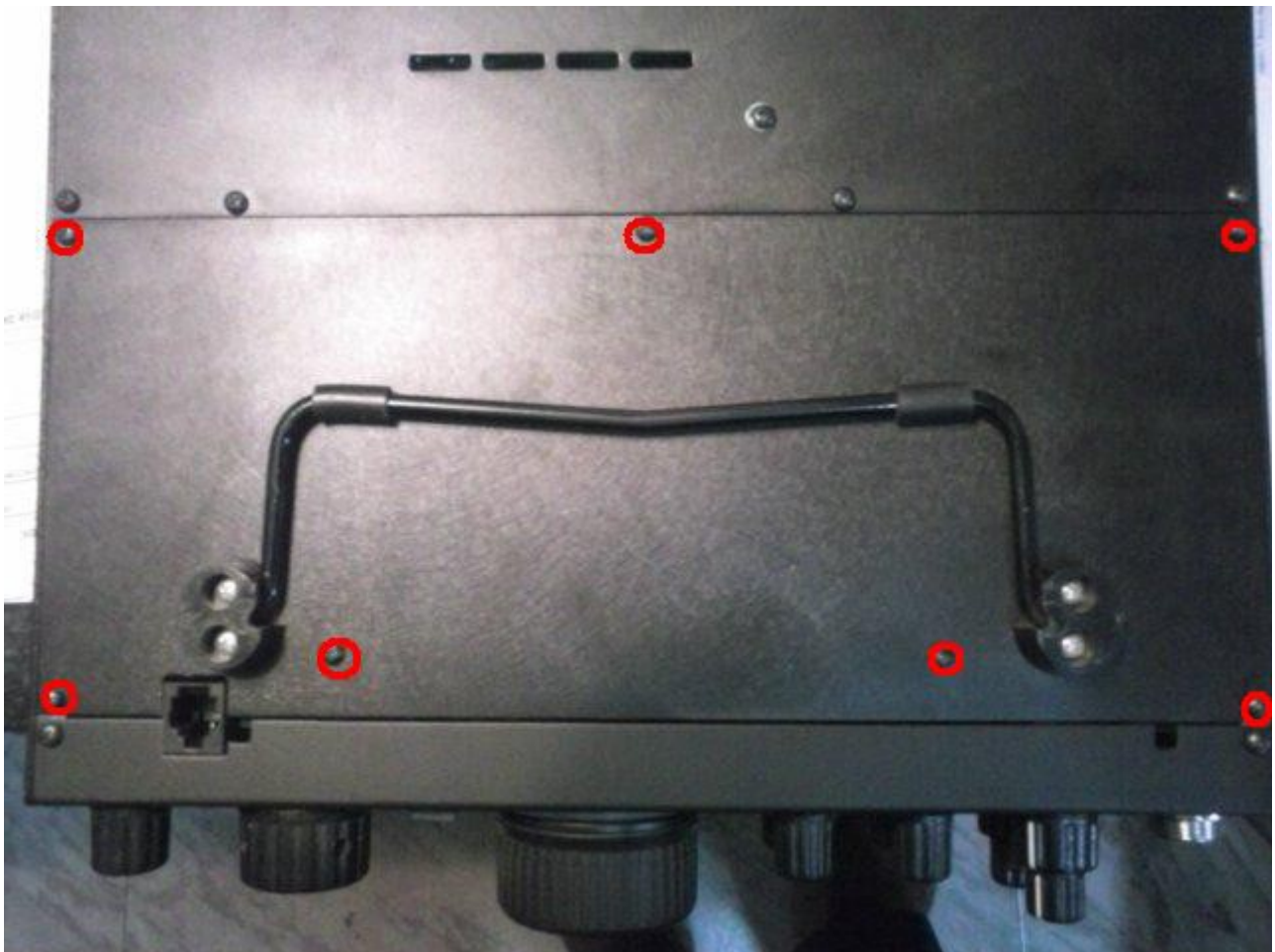
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Get the pin to solder in one of the two positions marked by arrows in the previous picture and solder the pin carefully by the bottom .

Pin picture :



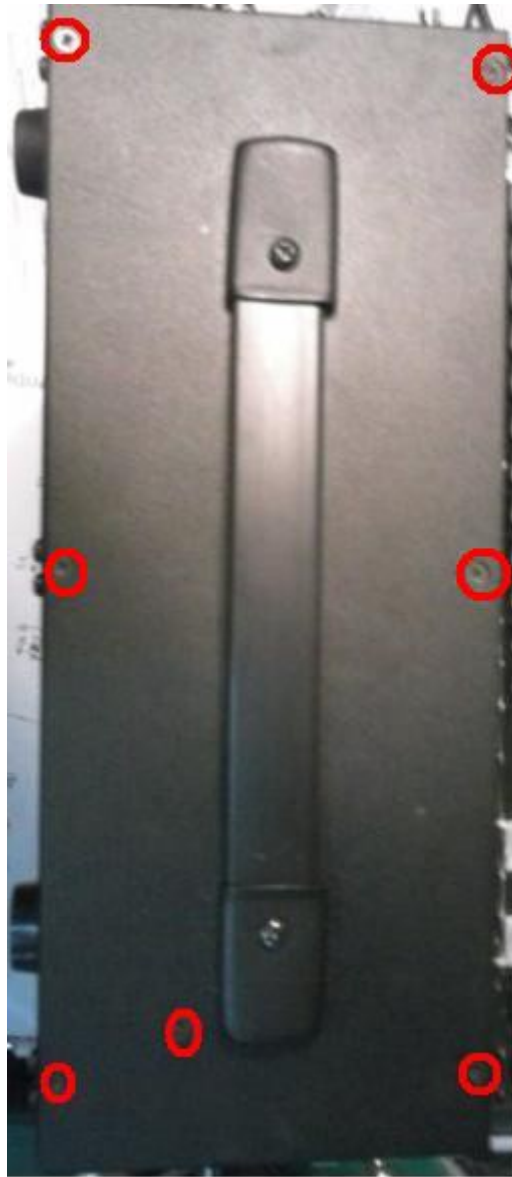
When you have soldered the pin , put the forward section bottom cover and put the 7 screws . See next picture. Later in this pin solder the red wire from the transverter HG 1447K on top part of K3.



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FIFTH :

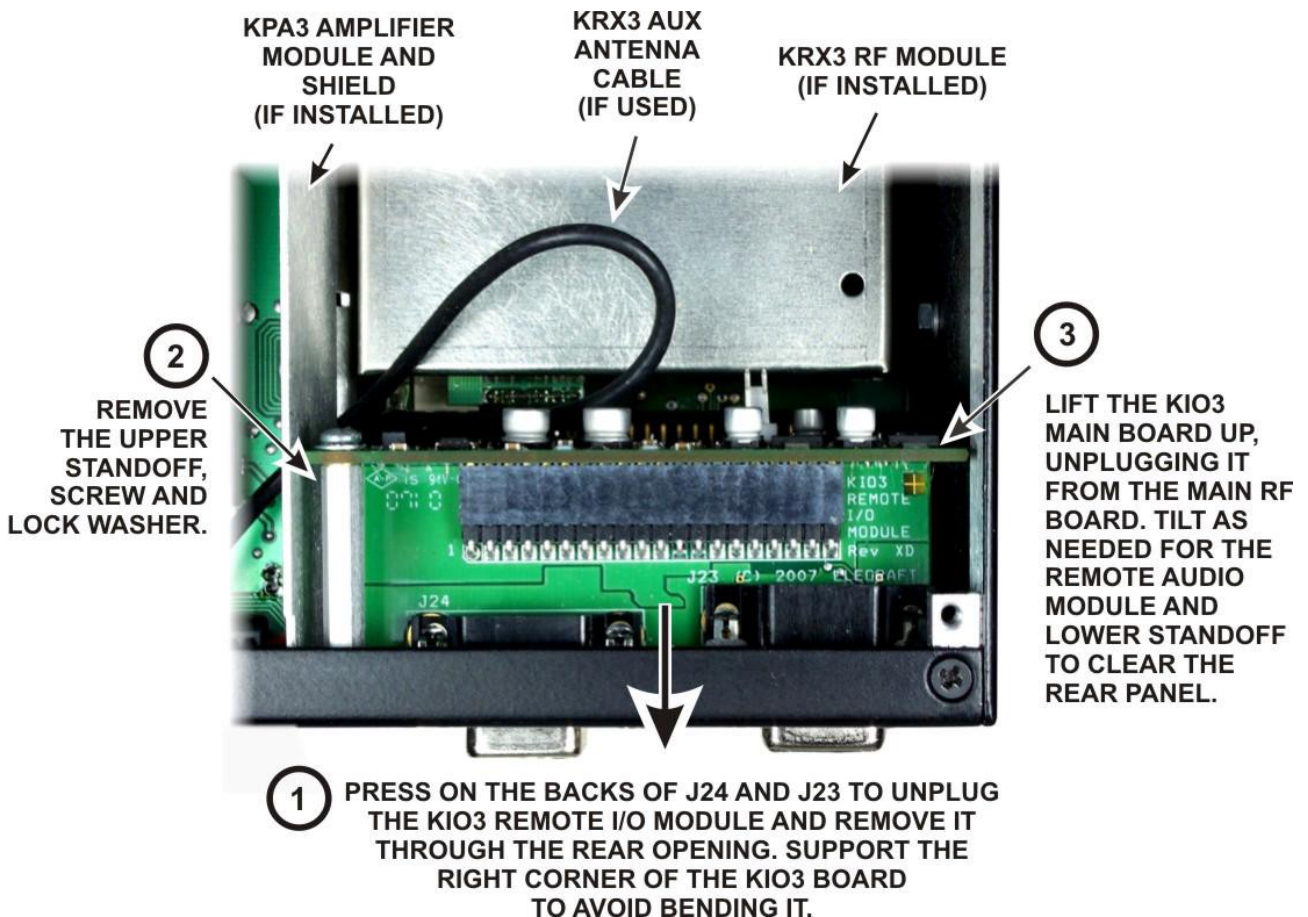
Remove the 7 screws of lateral .See picture.



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SIXTH :

Remove the screws like next picture and remove KIO3 Board.



Transverter HG 144-K

Now, we have free the K VX3A board ready to solder 2 wires from transverter HG 144K.

The yellow wire of the transverter HG 144K must be soldered on the pin 7 of P66 connector . Pin 1 is on the left of P66 .See picture.



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The white wire of the transverter HG 144K must be soldered on the pin of relay near OUT RF connector .Soldering pin is the first from the left .See picture

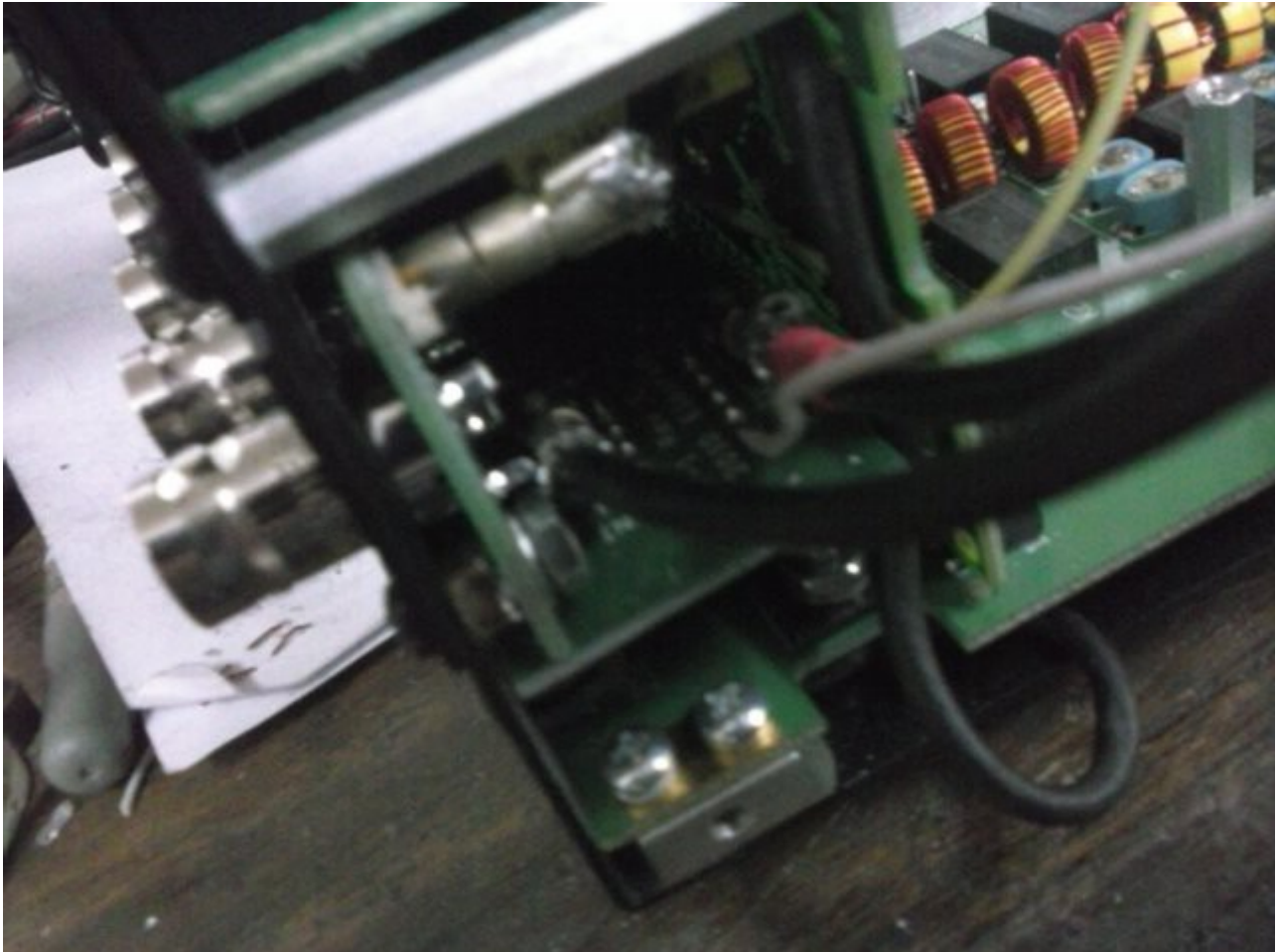


Transverter HG 144-K

Now we reassembling the KIO3 board. Once mounted we connect the 2 coaxial cables on KXV3A female connector.

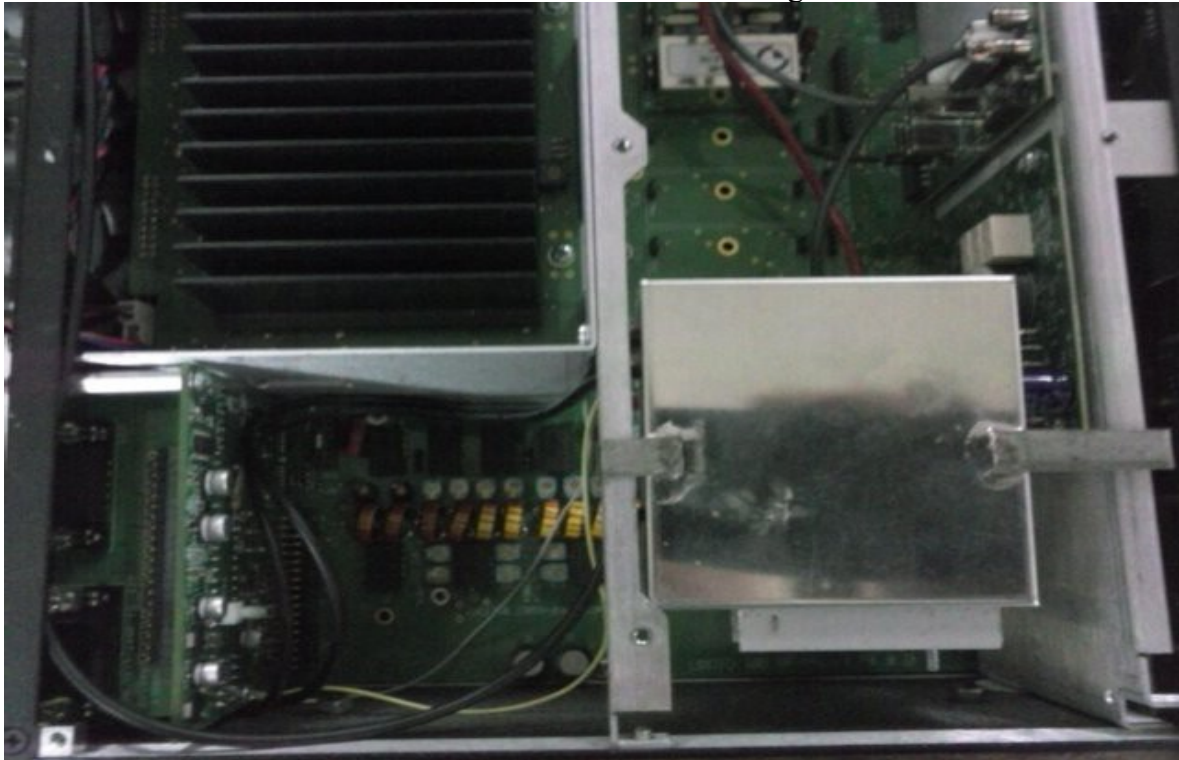
The coaxial cables are black but one of them has a red ring.

The all black coaxial cable must be connected to the female connector marked IN in KXV3A board. The coaxial cable with the red ring must be connected to the female connector marked OUT in KXV3A. Install them carefully.



Transverter HG 144-K

Place the transverter HG 144K in the bracket as shown in the image

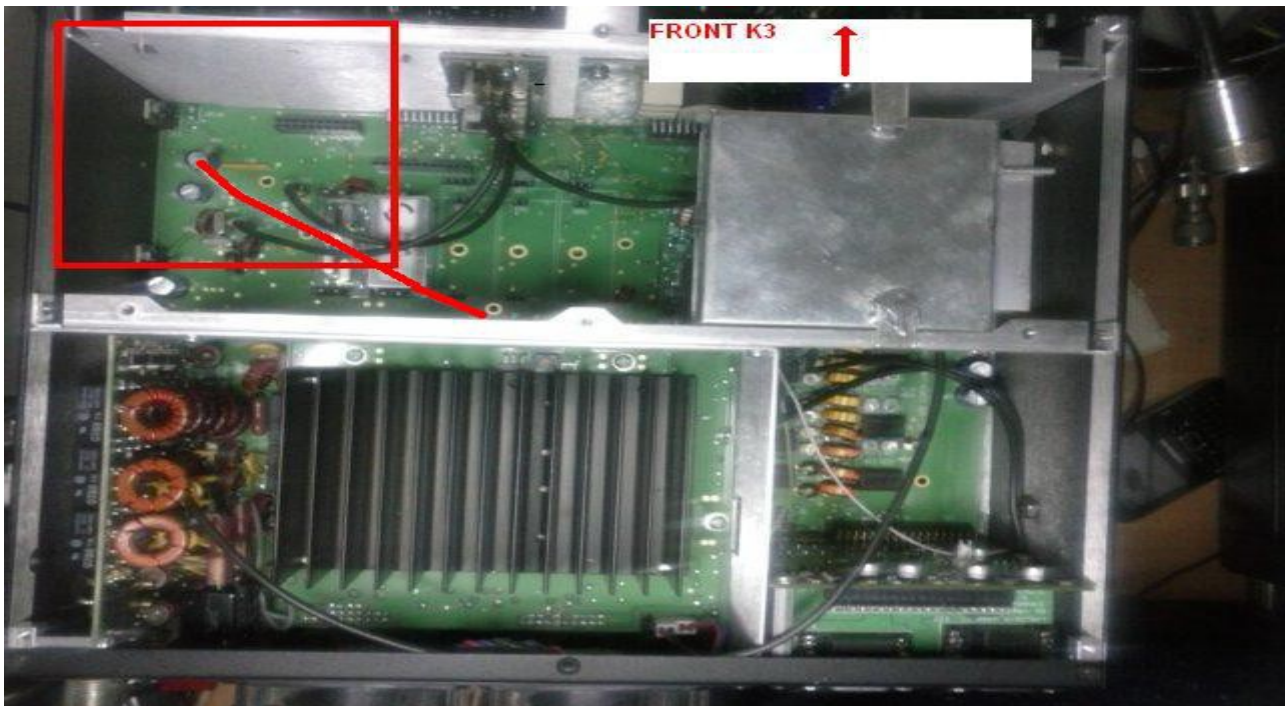


Mount the lateral panel with the 7 screws and beware with all cables from KXV3A.



Transverter HG 144-K

Now, solder the red wire of transverter HG 144K on pin solder above in fourth step.Near of U12 and C198 on board.After this,if you have the KRX3 Sub receiver,please reassembling it.

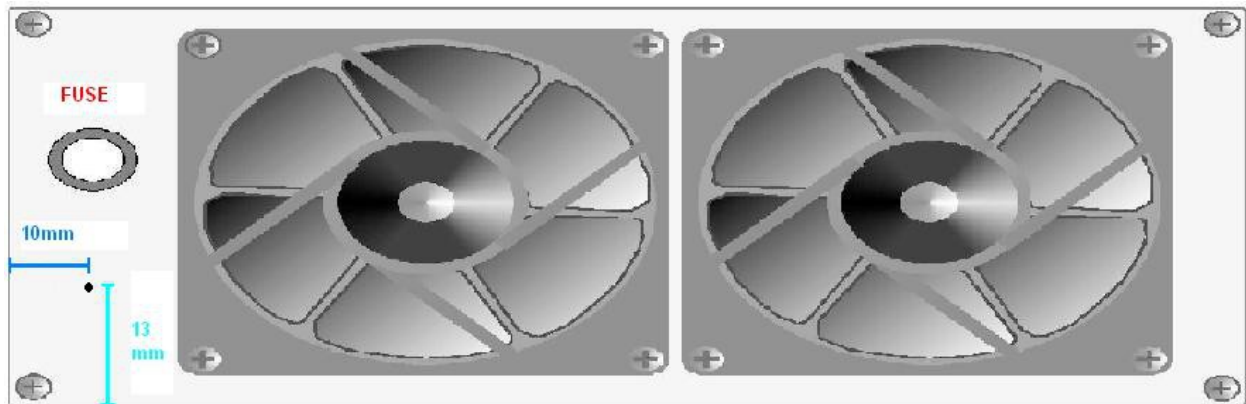


Transverter HG 144K installed with the KRX3 Sub receiver.

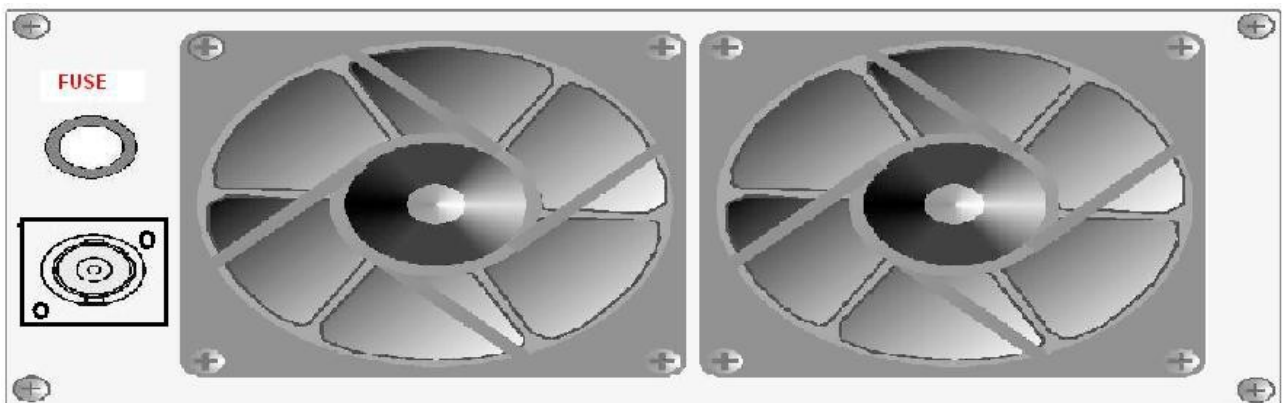


Transverter HG 144-K

Remove the 4 screws of Fan panel and remove it. Disconnect the wires of fan carefully.
Install BNC Female Connector for 144 Mhz Antenna at the rear of K3. In some versions of K3 hole for the connector is covered with a plastic



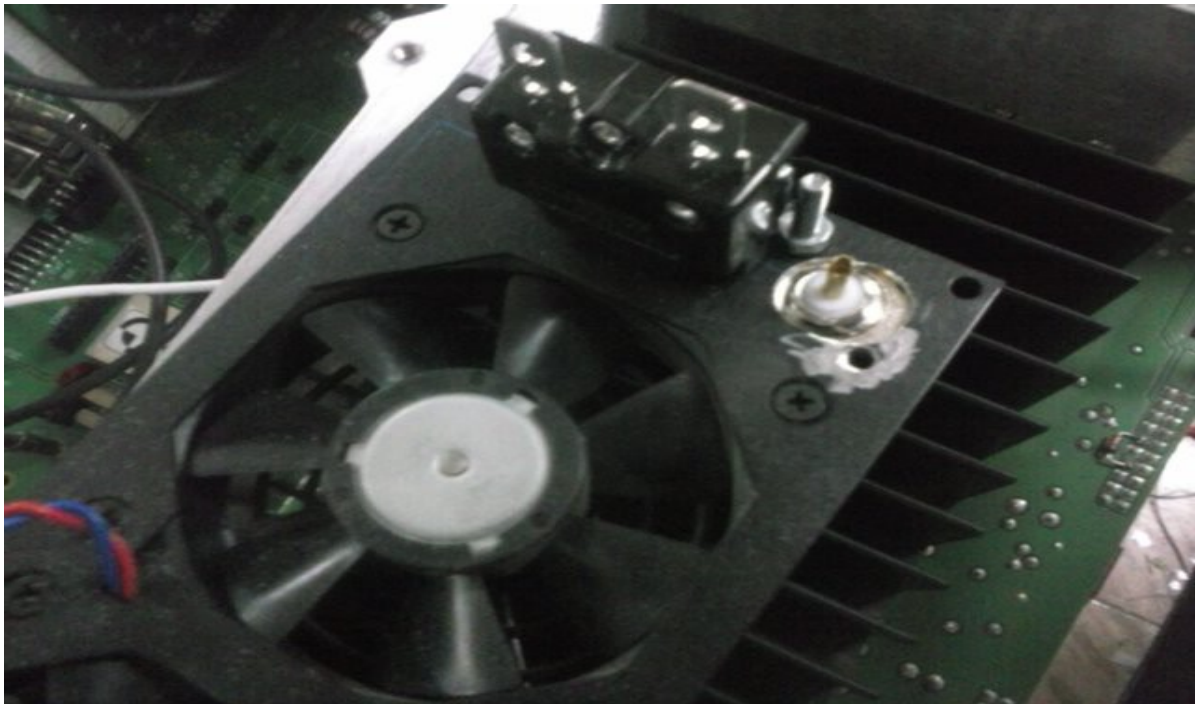
Make a hole of 11mm of diameter in fan panel K3. See you the distances. After 2 hole of 3mm for screws of connector.



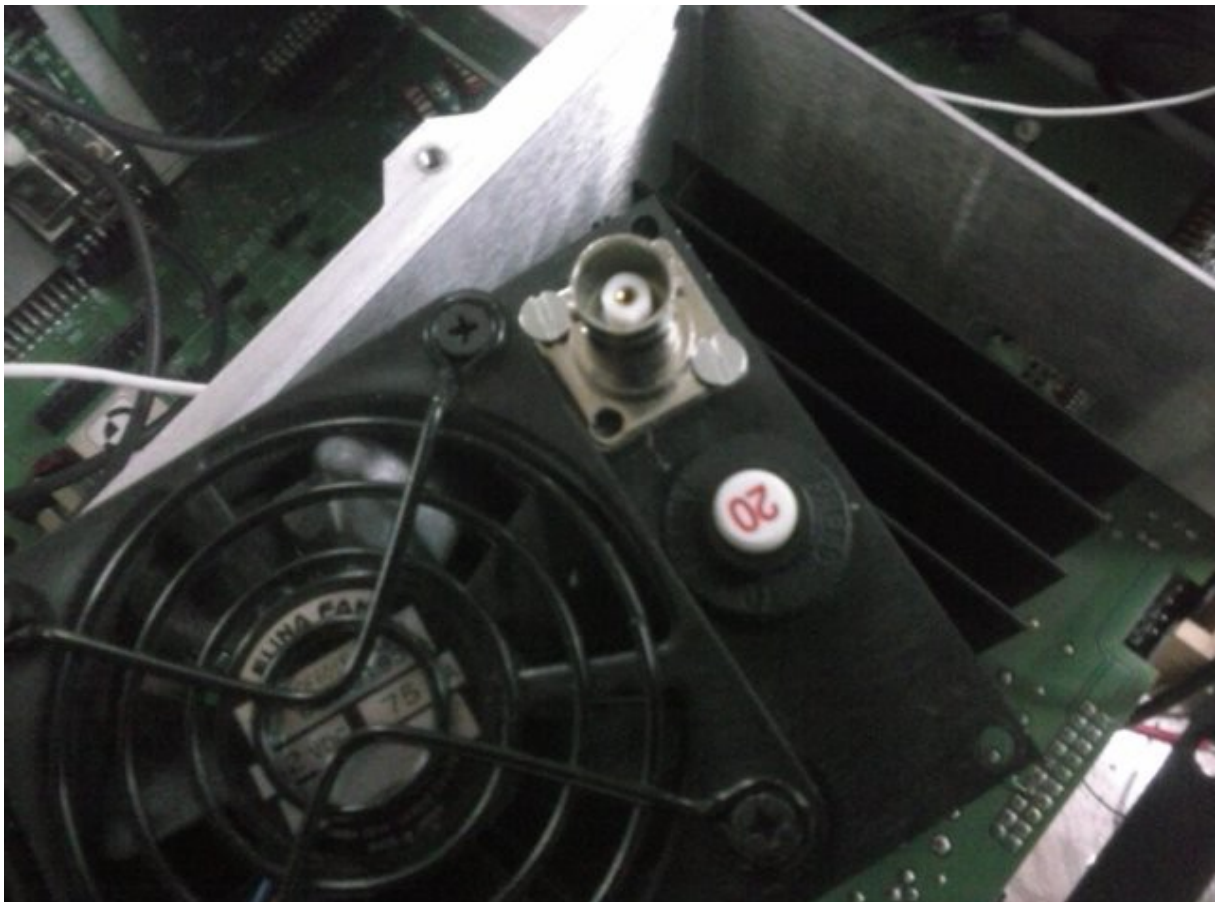
Scrape the paint in hole of 3mm in rear part of fan panel for better contact and screws the BNC female connector.

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Scrape the paint in hole of 3mm in rear part of fan panel for better contact and screws the BNC female connector.



And solder the coaxial cable on BNC Female connector for 70 Mhz Antenna



Transverter HG 144-K

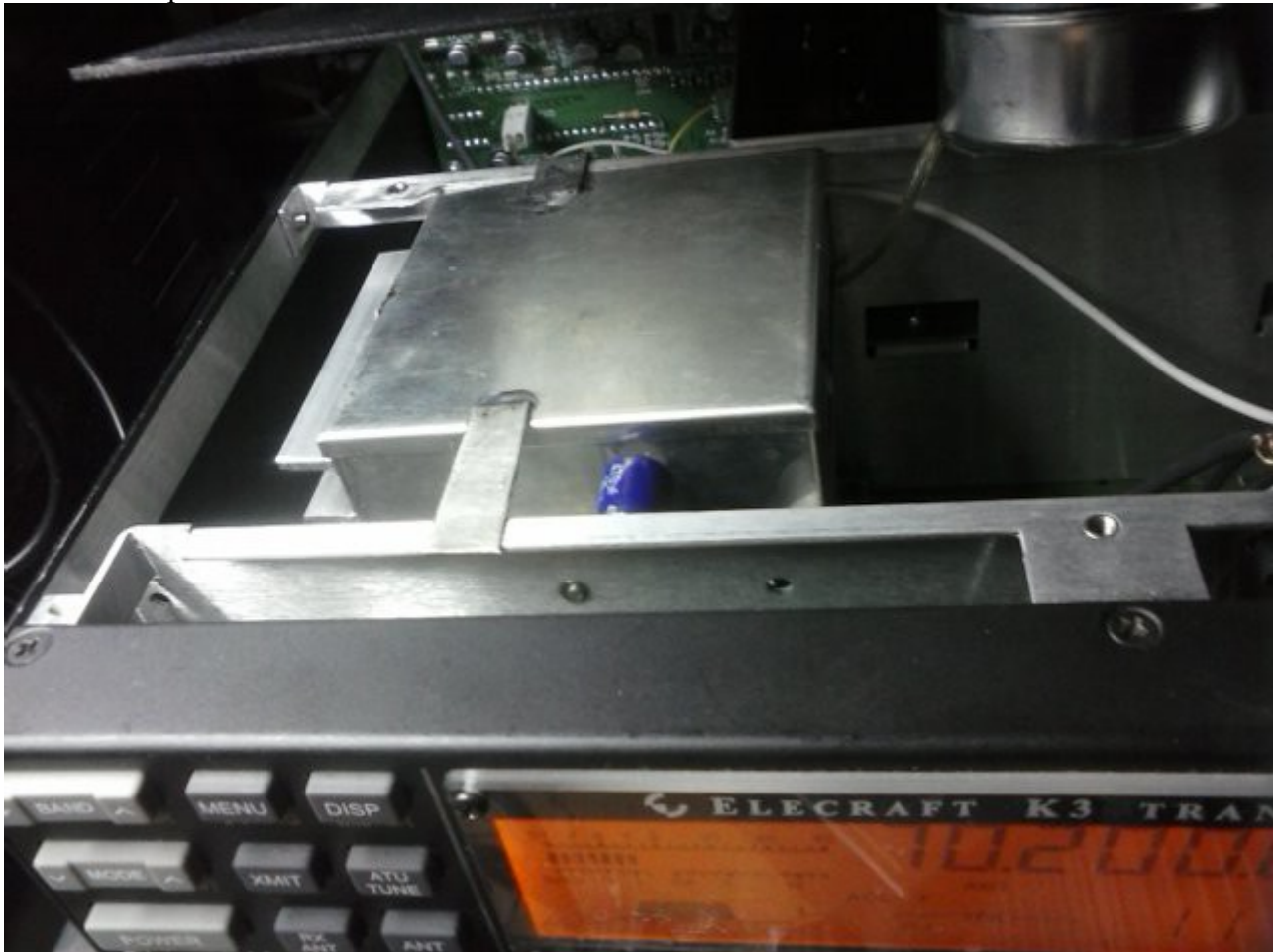
Now connect the fan wires and fuse wire and reassembling the fan panel.



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Check all installation one more time.

Pass the speaker wire below the transverter HG 144K and connect it on KIO3 board and close and screws the top cover. Your transverter is installed.



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K3 SETUP FOR HG 144-K TRANSVERTER

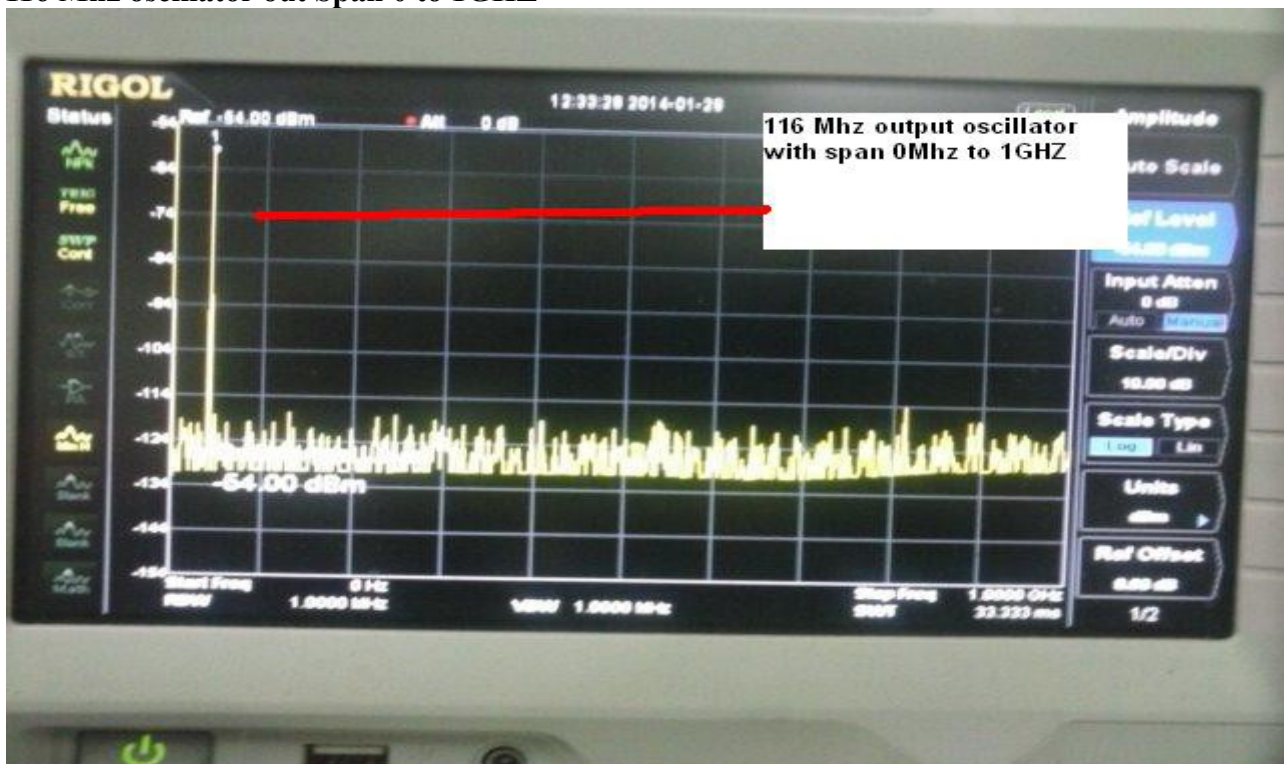
MENU :

XV1 ON YES
XV1 RF 144
XV1 IF 28
XV1 PWR..... L 1.00
XV1 OFS 0.00
XV1 ADR..... Int. Trn0

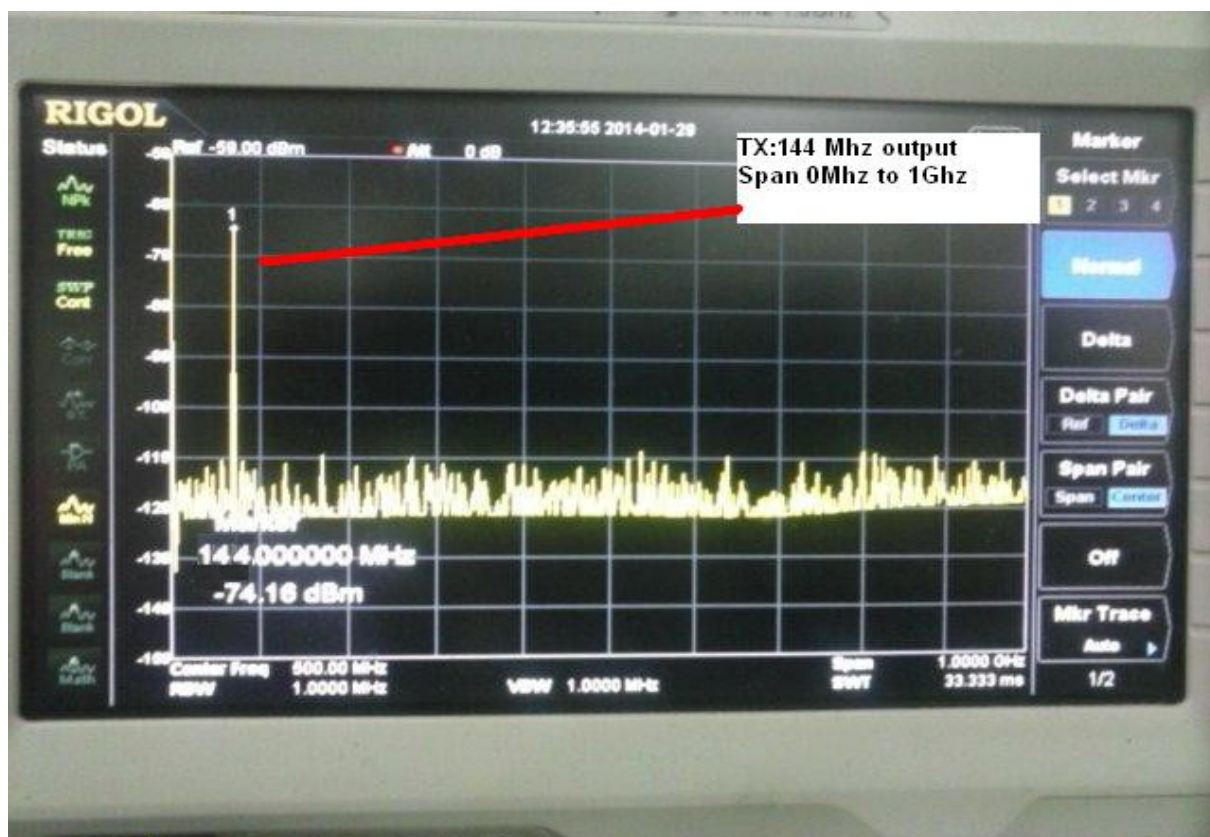
When you select by band button and change for transverter you have 144 Mhz and the transverter is power on.If you change of band for example at 50 Mhz the transverter is power off.
CONNECT YOUR ANTENNA AND ENJOY ON 144 MHZ.

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Some measures in spectrum analyser: NOT SIMULATION... REAL MEASURES
116 Mhz oscillator out Span 0 to 1GHZ

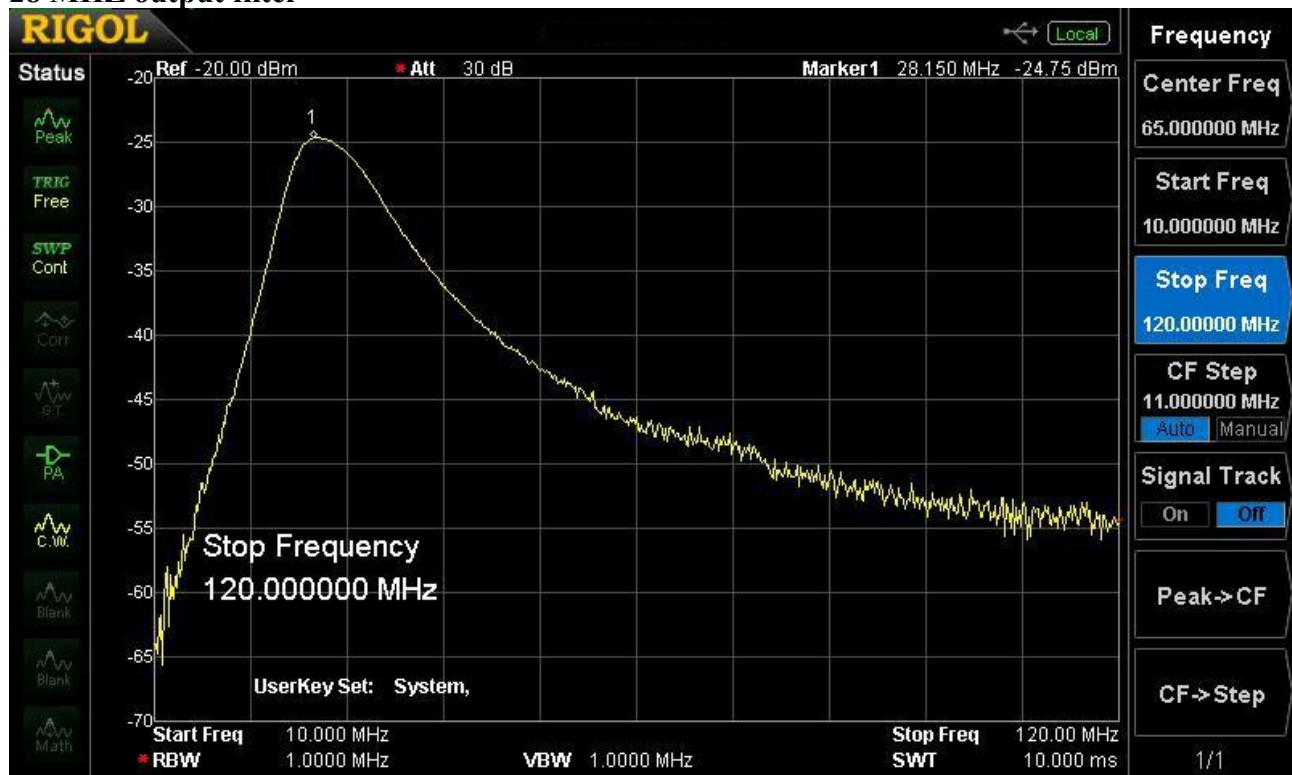


144 Mhz output transverter Span 0 to 1 GHZ



Transverter HG 144-K

28 MHz output filter



more info:

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MANUAL Rev 1.0

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