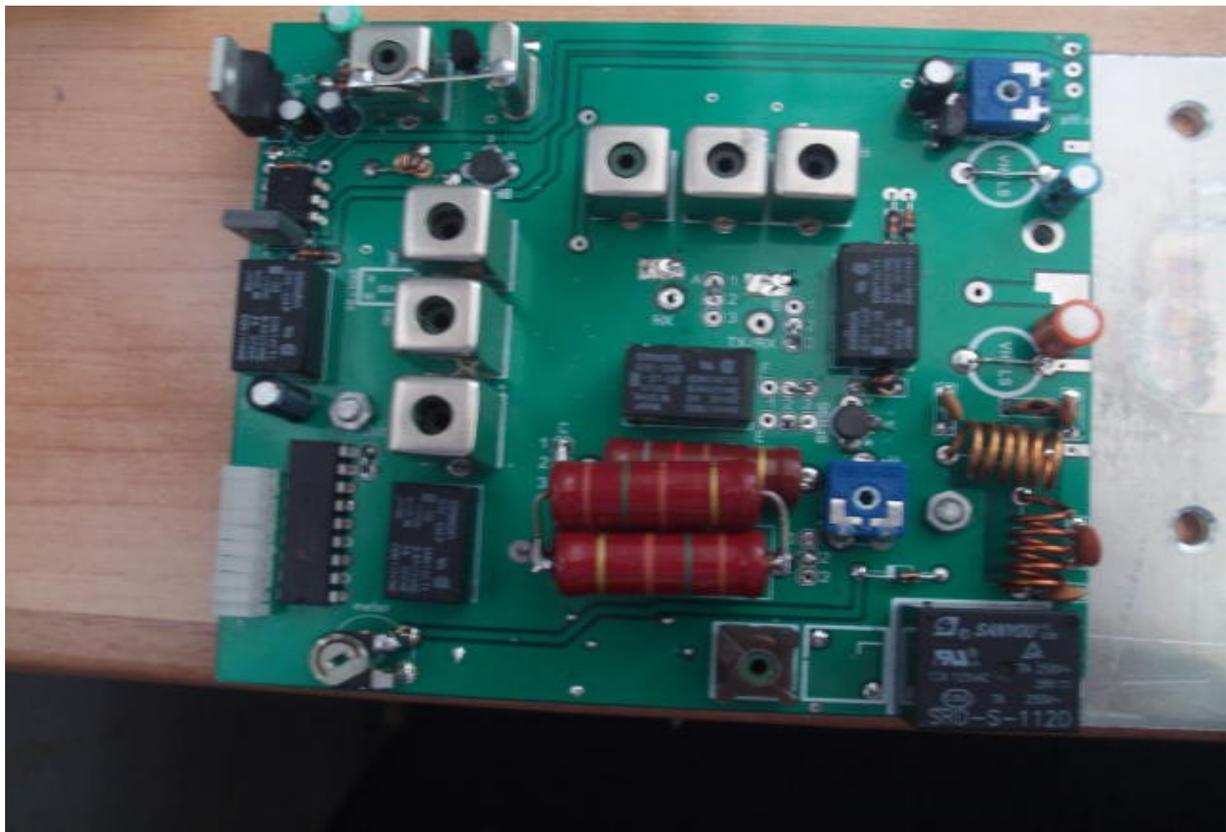


Transverter HG-7028K

TRANSVERTER'S KIT OF 70MHZ WITH FI 28MHZ



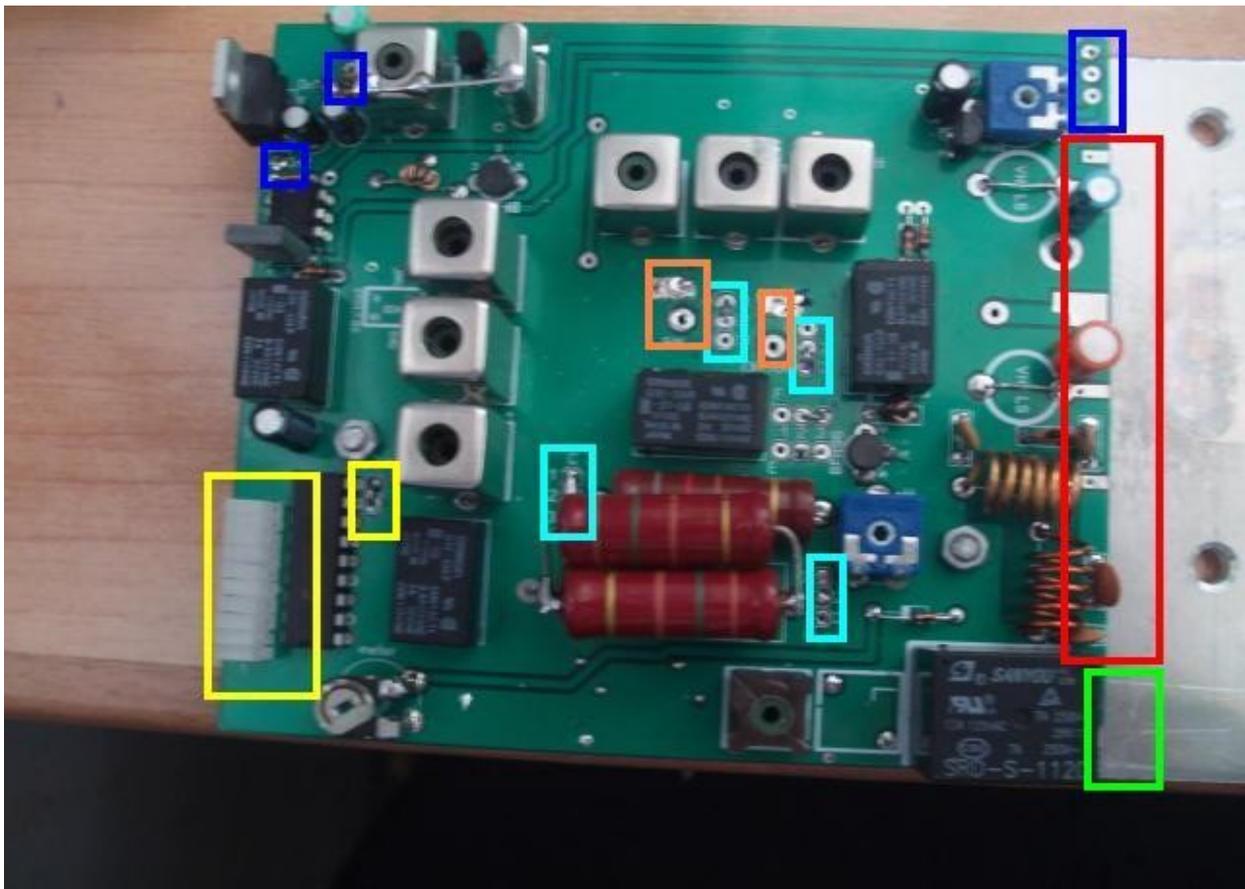
Transverter HG-7028K

The HG-7028K transverter work in 4m band (70Mhz) with FI on 28Mhz (10m) in any mode SSB,CW,etc.Work with any transceiver with different configuration between 1mW and 6W on 28Mhz.The output power on 70Mhz is about 40W with the power module of Mitsubishi RA30H0608M.Without power module the output power is grater of 50mW (>17dBm) .The noise figure of preamplifier is below 1dB with more of 24 db of gain with IP3 greater of +29dBm.

With the different configuration we can use transceiver with output for transverter with 0dBm (1mw) like Elecraft K2,K3 or FLEX5000A or any transceiver with the output power below of 6W on 28Mhz.We can select input/output of FI on 28Mhz para RX y TX independent.The power meter with 10 led,we can select to light led to led,or all led .

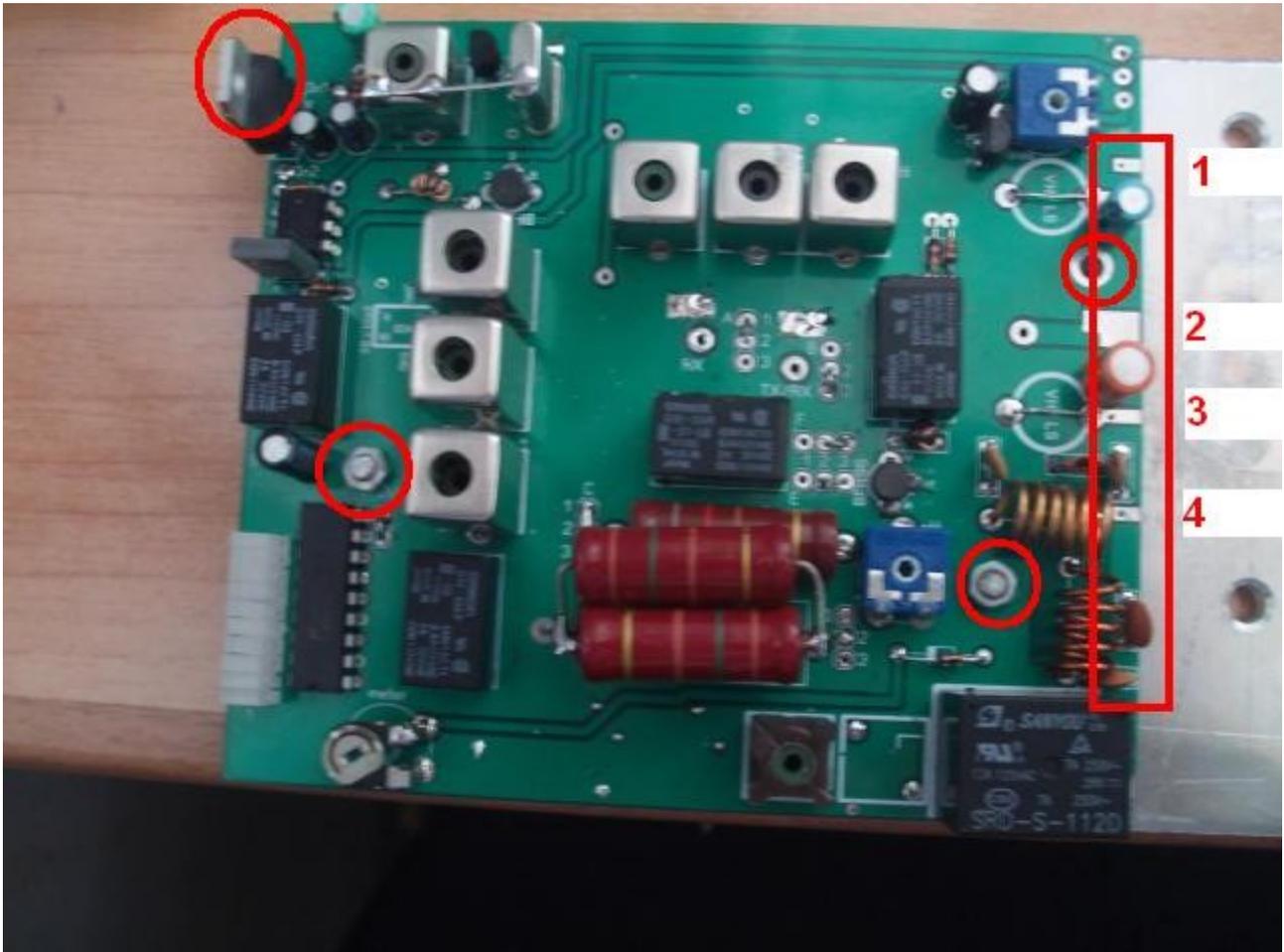
The kit is delivered fully assembled and ajusted.Only need the power module (Mitsubishi RA30H0608M),metal box,radiator, switch for power on/off and connectors for feeding,antenna,PTT and input/output for 28Mhz. The regulator de 12V (7812) we need to screwes to box.

GUIDE FOR INTERNAL CONNECTION OF KIT



Transverter HG-7028K

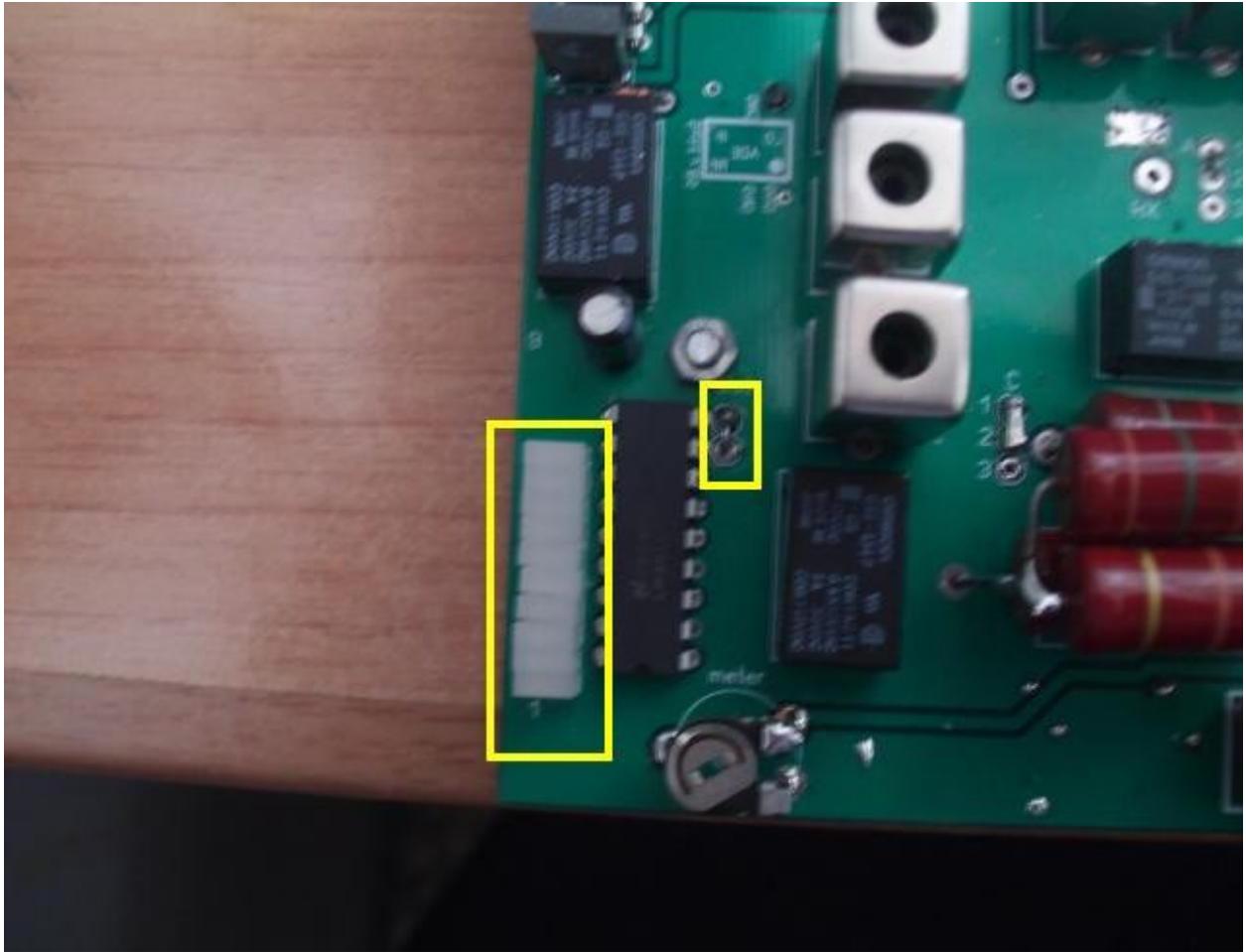
Connection of transverter



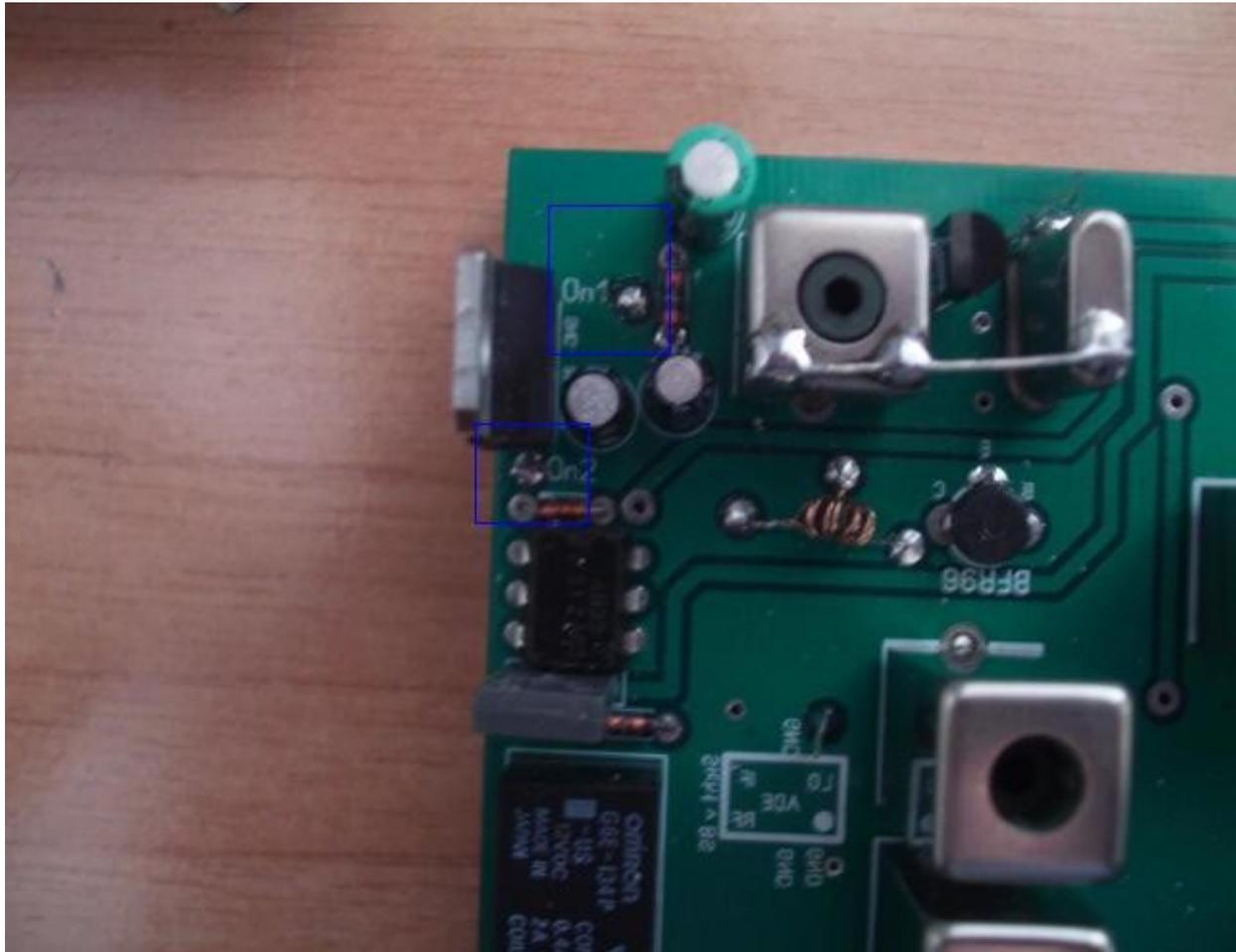
The Mitsubishi RA30H0608M power module be installed on the right of PCB like you can see on photo. Connect each pin in place. Screw the power module to the chassis and the radiator. Screw the PCB to the metal box. The PCB must be separated about 6mm. To fix PCB see the holes marked in red circle .(3mm de diameter). Finally screw the regulator 7812 at metal box.

Transverter HG-7028K

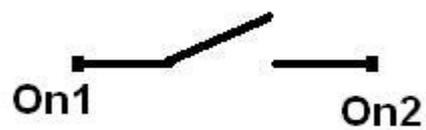
Ten leds indicate the output power found in bottom left on photo. (Large yellow rectangle). The small yellow rectangle indicate the option output light led mode dot or all led. Without bridge :mode dot.



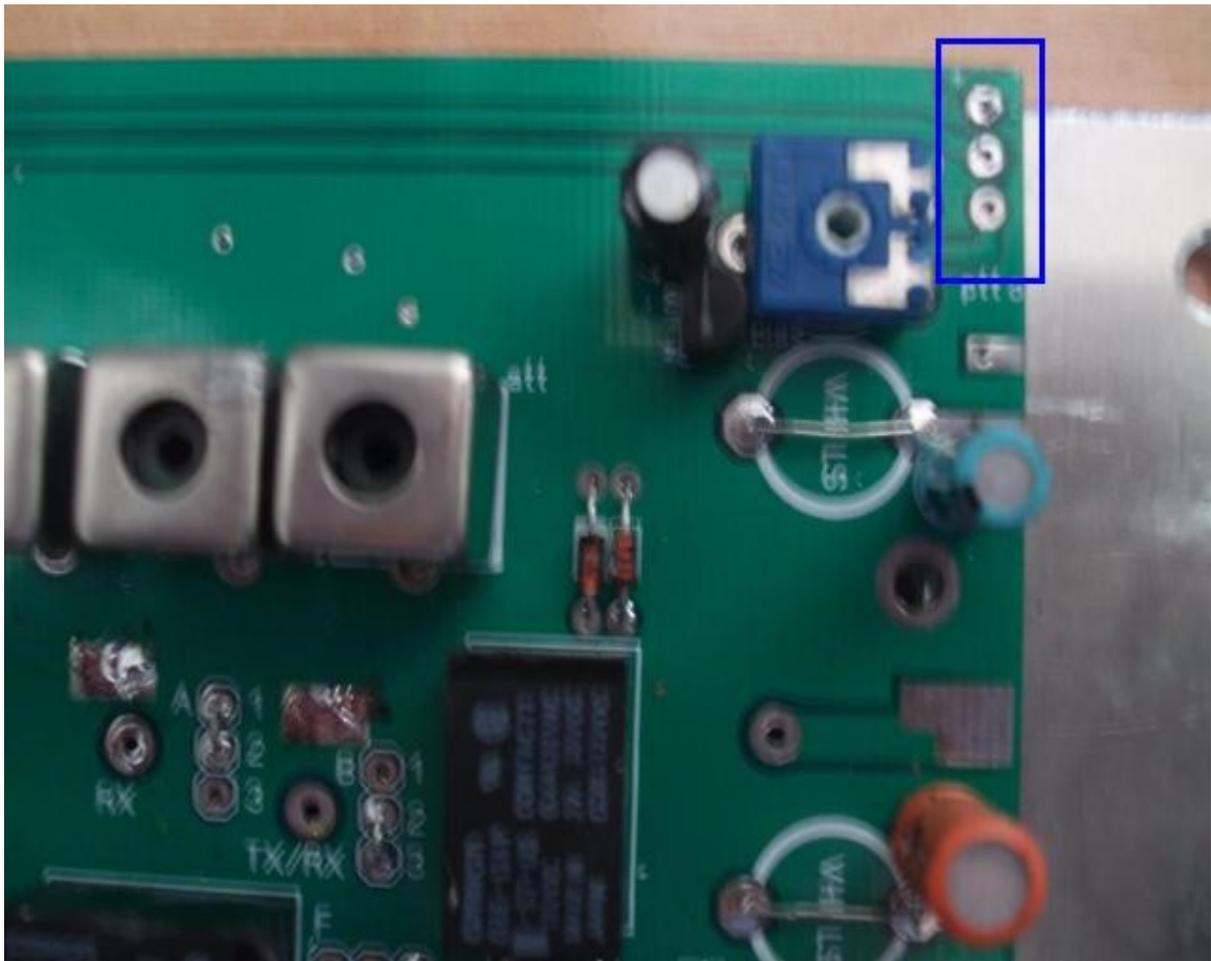
Transverter HG-7028K



Power on switch are connected in the point marked On1 and On2. See point in PCB near of regulator 7812 marked in photo in blue. Does not need a large switch. This switch only power on the transverter part. The power module is connected directly to the connector of power supply of the transverter.



Transverter HG-7028K

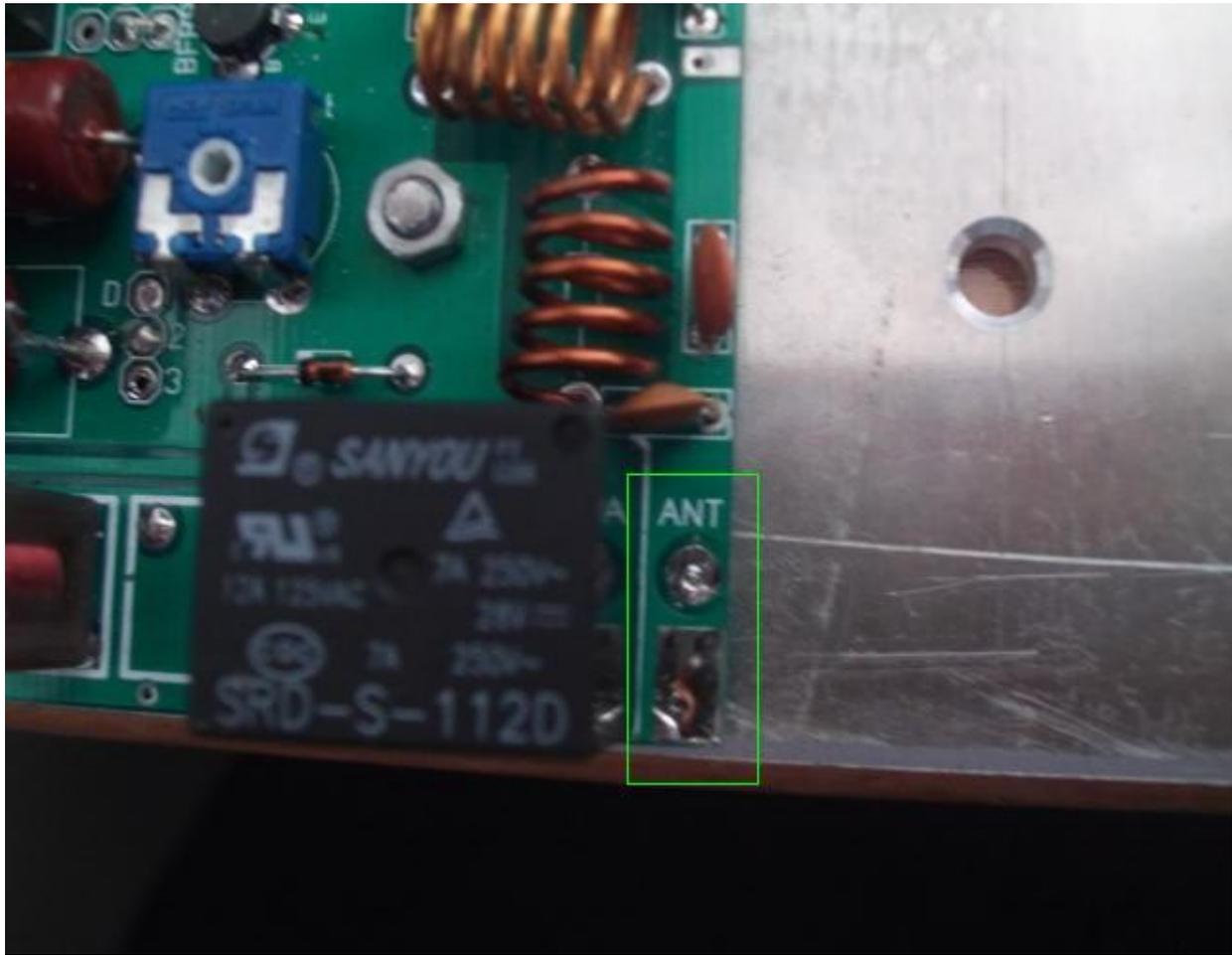


Now we need connect the PTT in/out and power supply from de PCB to connectors. In the upper marked as “+” must be connected the positive lead from the connector of power supply. The center marked as “PTT i “ must be connect to connector for PTT from the transceiver. Ej RCA female connector. The transverter go to TX mode when the PTT i is earthed. The lower marked as “PTT o” must be connected to connector for PTT out. Ej RCA female connector. With the “PTT o” you can activate for example a external amplifier. When the transverter are in mode TX the “PTT o” is earthed

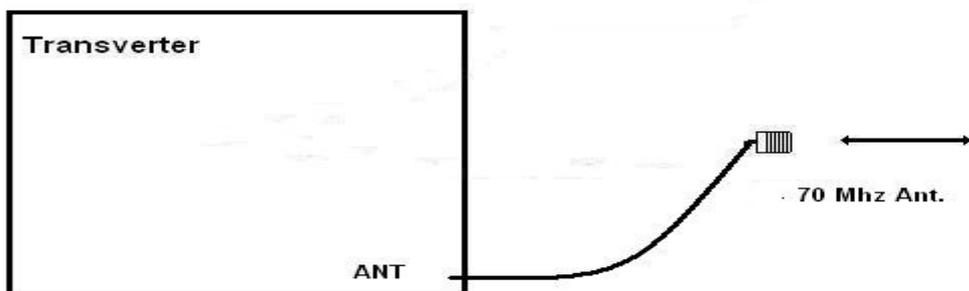
IMPORTANT: The power module of Mitsubishi be fed directly from the connector of power supply of the transverter. Do not use the pad marked in PCB like “+”

- ← +13.8 V
- ← PTT In
- ← PTT Out

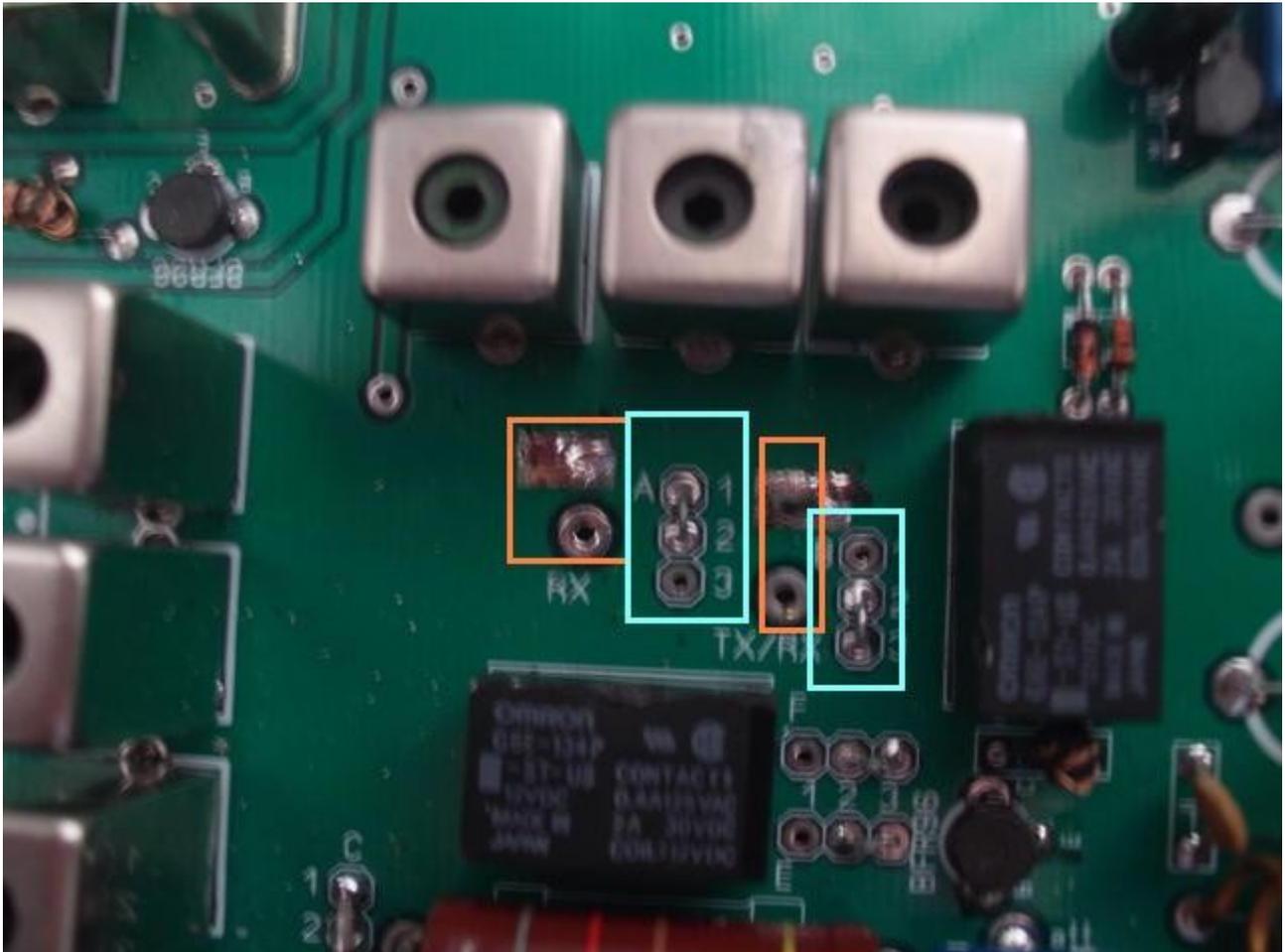
Transverter HG-7028K



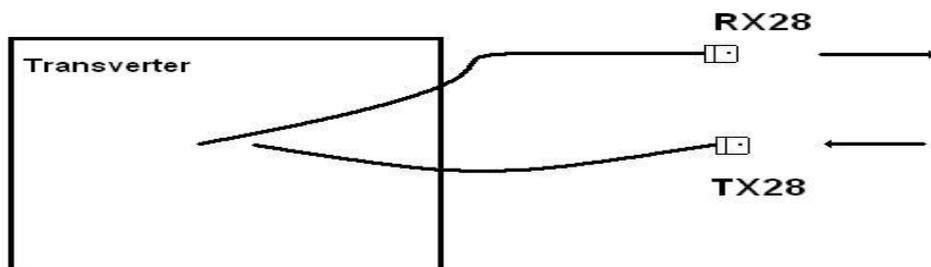
On the pad marked as ANT solder the central conductor of coaxial cable coaxial (RG58,RG174) to the antenna connector. The coaxial cable shield must be solder from the pad to antenna connector.



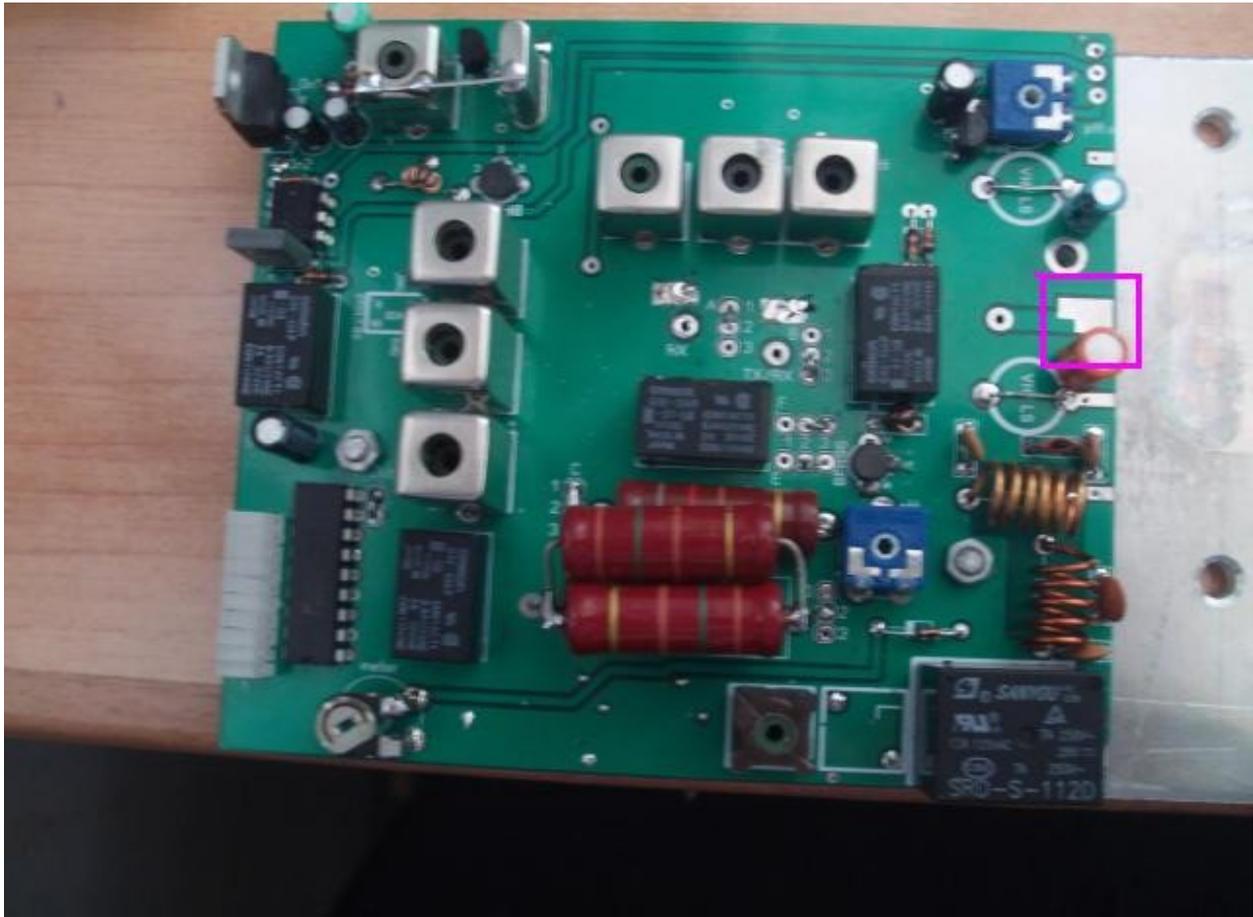
Transverter HG-7028K



The pad marked in orange in the picture called RX and TX/RX are for input/output wiring for 28 Mhz FI. Solder a coaxial cable from the pad marked as RX to the connector (Ej BNC female). Another coaxial from the pad marked as RX/TX to the connector (Ej BNC female).



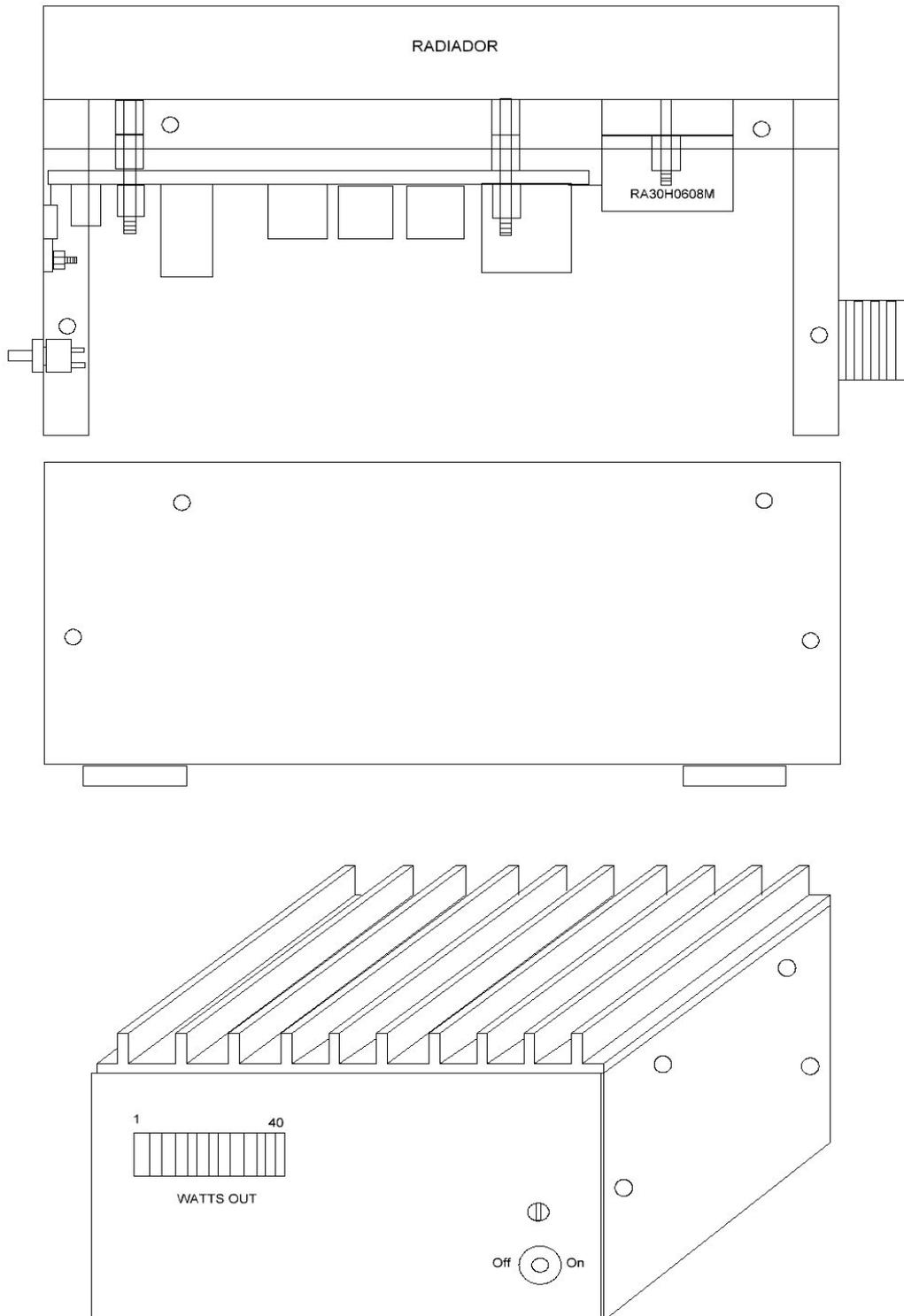
Transverter HG-7028K



The pad marked in picture in purple violet, is the pad of power supply of the power module Mitsubishi. Must be solder a wire about 1,5 mm of diameter between this point and positive (+) pin of the power supply connector of transverter .Must be solder another wire between negative (-) pin from the power supply connector to earth (Metal box).
Internal wiring is finished.

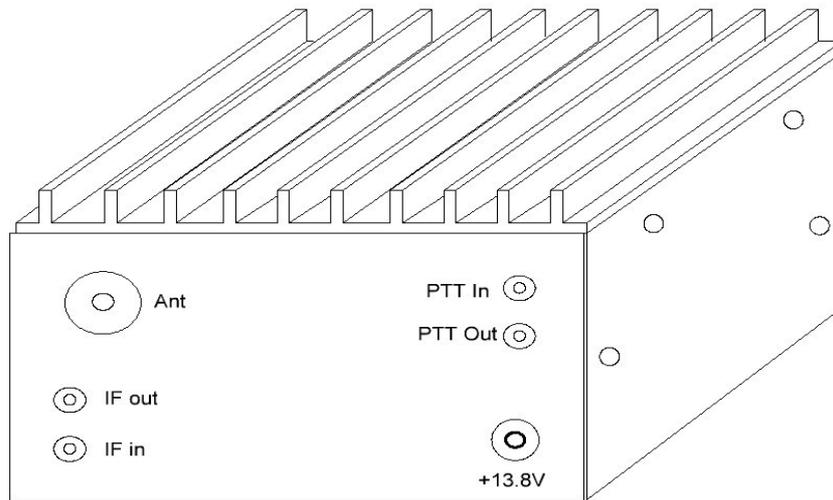
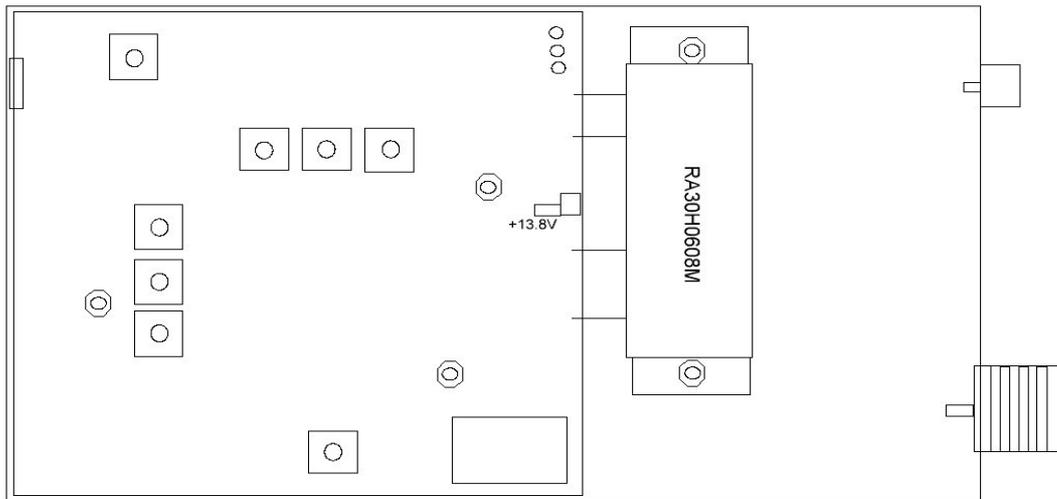
Transceptor HG-7028K

Installation orientation boxed kit (Advisable box from RetexBox (Spain) Mod. RM-09)



Side and front of the box (not to scale)

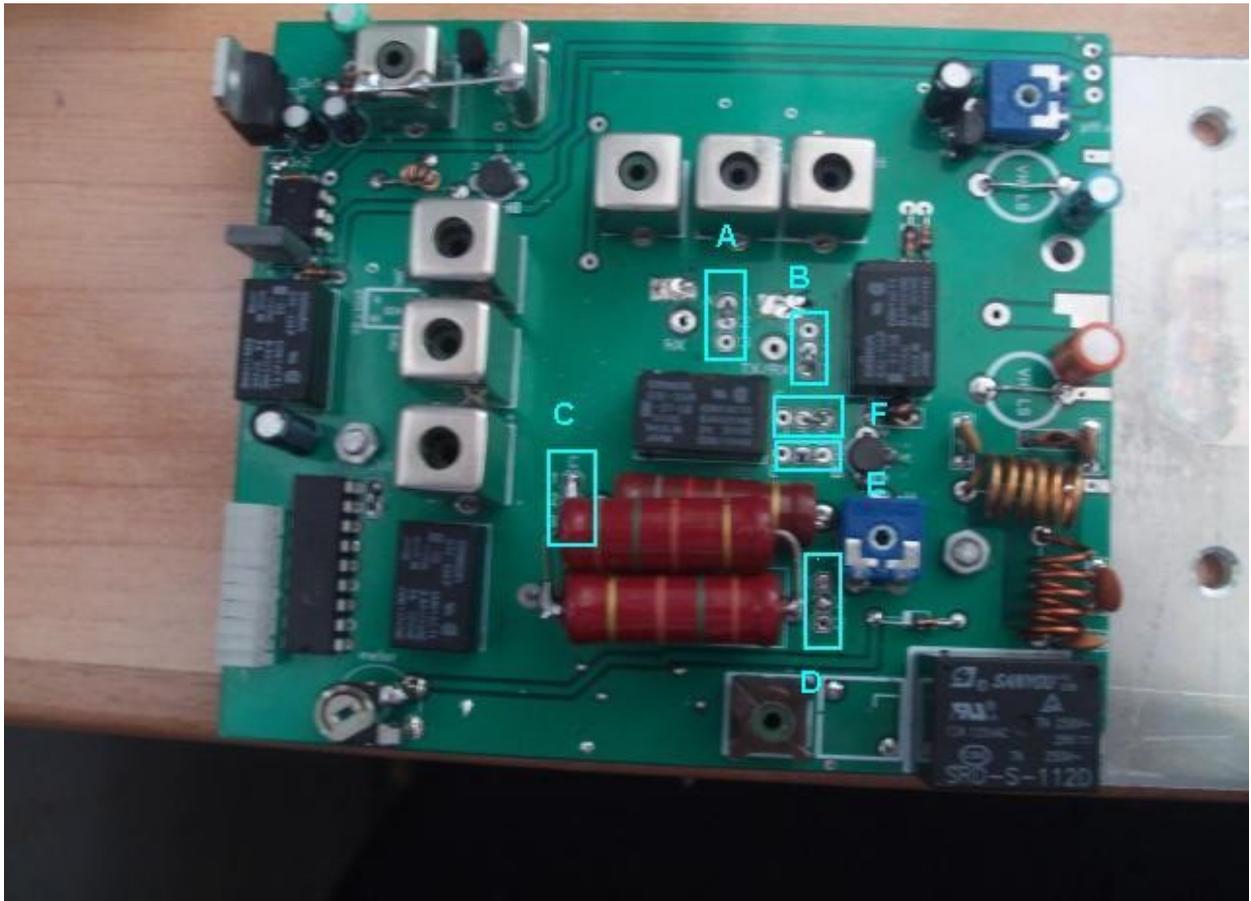
Transverter HG-7028K



Top and back of the box (not to scale)

Transverter HG-7028K

CONFIG OPTIONS



There are 6 bridges to set the transverter to the input power on 28 Mhz, one or two connector input/output to IF on 28 Mhz. Bypassing should be done according to the numbers indicated in the next table according to your transceiver.

Input power on 28 Mhz

	C	D	E	F
1mW (0dbm)	2-3	2-3	2-3	2-3
10 mW (10dBm)	2-3	2-3	1-3	1-3
6W (38 dBm)	1-2	1-2	2-3	2-3

Connector to IF

	A	B
One connector in/out	2-3	1-2
Two connector in/out	1-2	2-3

Transverter HG-7028K

Examples of configuration

FlexRadio 5000A

Output power for transverter in FlexRadio 5000A is de 1mW (0dBm) we to by pass:

C = 2-3 D= 2-3 E=2-3 F=2-3

Like Flex5000A have one input and one output we to bypass A=1-2 B=2-3. If you use only the connector on Flex5000A XVTX/COM we to bypass A=2-3, B=1-2

The wire PTT In on transverter will be connected to any 3 outputs of PTT of Flex5000A configuring on FLEX5000A the output chosen.

Connect the coaxial between FlexRadio5000A XVTX/COM connector to TX/RX of transverter. Connect the coaxial between FlexRadio 5000A XVRX connector and RX connector of transverter.

ELECRAFT K2 y K3 con salida para transverter

If you have the adapter transverter in your K2 or K3 the output power is 1mW (0dBm) we to by pass:

C = 2-3 D= 2-3 E=2-3 F=2-3

Like K2,K3 have one input (RX out/if 2) and one output (TX in/if 1) we to bypass A=1-2 B=2-3. If you use only the connector on K2,K3 Txin/if 1 we to bypass A=2-3, B=1-2

The wire PTT In on transverter will be connected to Key out connector K3 and PTT Mic pin on K2.

Connect the coaxial between K2/K3 Out connector and connector to TX/RX of transverter. Connect the coaxial between K2,K3 IN connector and RX connector of transverter.

Others transceiver

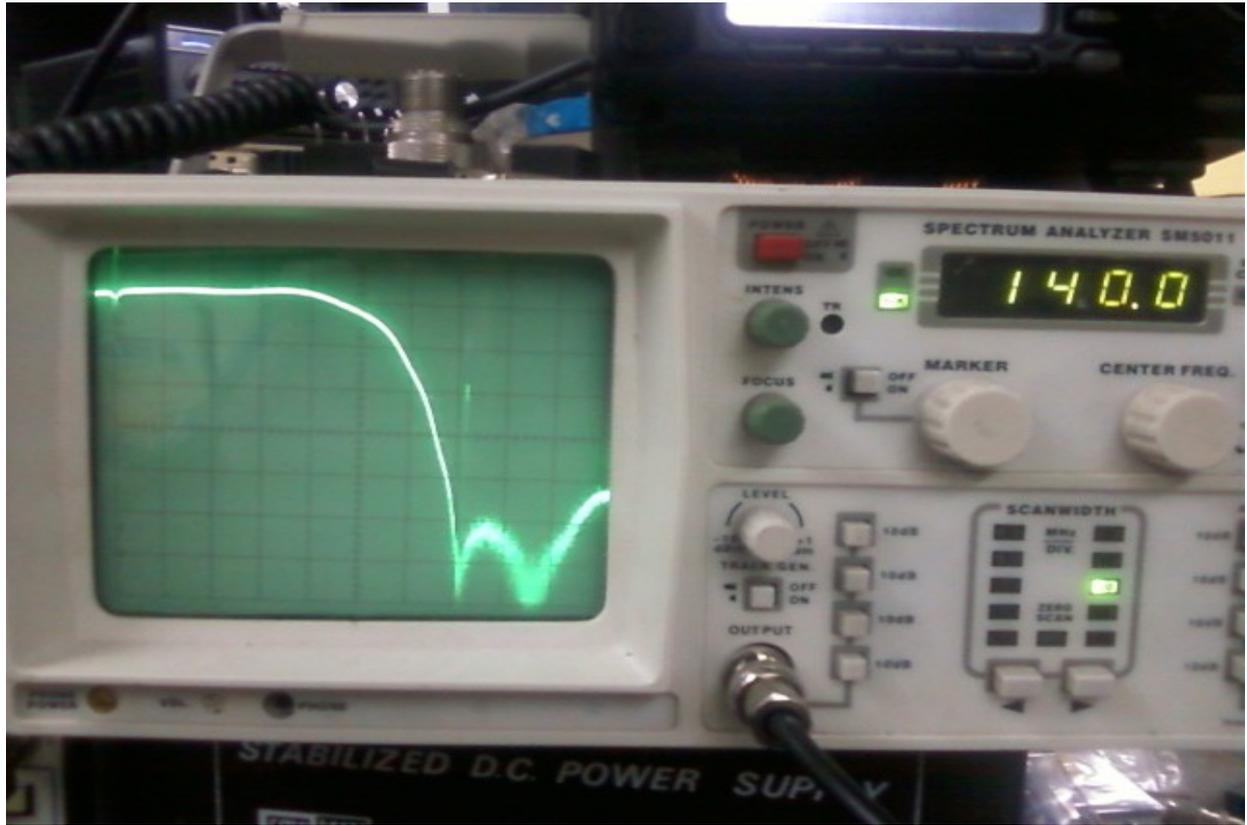
If your transceiver not have input/output for transverter connect the coaxial between connector TX/RX of transverter and the antenna connecot of your transceiver. Must be connect the PTT in on transverter with the output in your transceiver like Key output PTT for lineal amplifier, Microphone, etc

REMEBER : MAX.OUTPUT POWER ON 28MHZ IS 6W. More power can damaged the transverter.

More infor

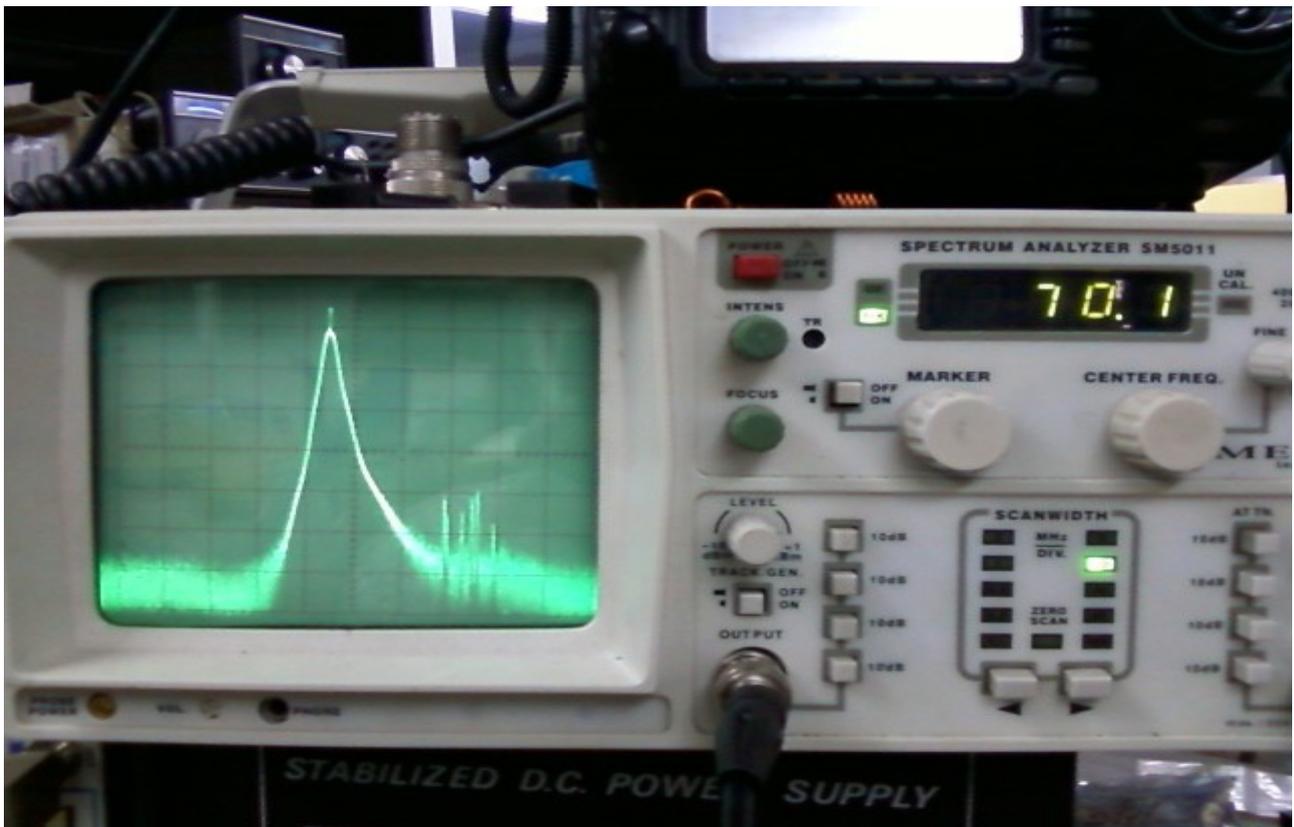
EA7HG, EA7HG@hotmail.com

**Transverter HG-7028K
SPECTRUM ANALYSER :70 MHZ LOW-PASS FILTER**



Transverter HG-7028K

SPECTRUM ANALYSER :70 MHZ BAND-PASS FILTER PICTURE



Transverter HG-7028K

SPECTRUM ANALYSER :28MHZ BAND-PASS FILTER

