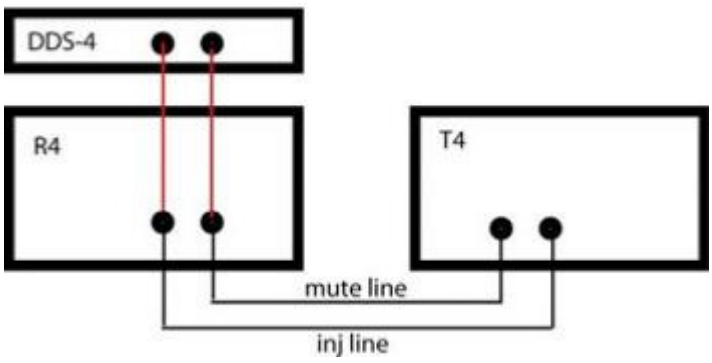
CONNECT DDS-4 TO DRAKE “4” EQUIPMENTS

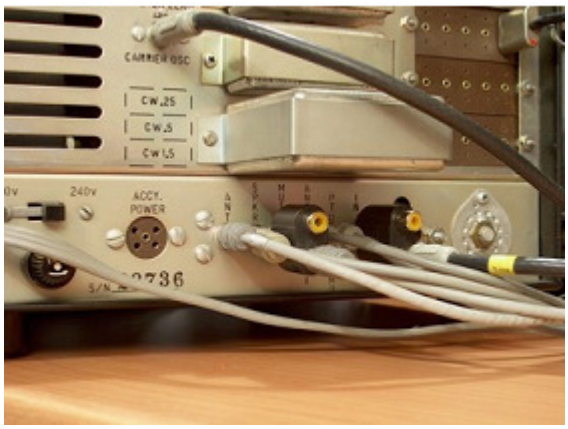
Connection of DDS-4 to R4 receiver:

Connect the output of DDS-4 to INJ input on the rear panel of your receiver and put the R4 XTAL switch in empty position. Turn ON DDS-4, now your R4 is controlled by DDS-4 and the original PTO is disabled. For return to normal use of R4 turn OFF the DDS-4 and return the XTALS switch in normal position.

Connection of DDS-4 to R4/T4 receiver/transmitter:

Connect the output of DDS-4 to INJ input on rear panel of your R4 and share this connection with a Y adaptor to the INJ input of T4. Connect the CONTROL input of DDS-4 to the MUTE line of R4/T4 with a Y adaptor. Put the XTALS switch in empty crystal position, turn ON DDS-4, now your R4/T4 is controlled by DDS-4 and the original PTO is disabled. The T4 TRANSCEIVE switch must be in RCVR position. For return to normal use of R4/T4 turn OFF the DDS-4 and return the XTALS switch in normal position.

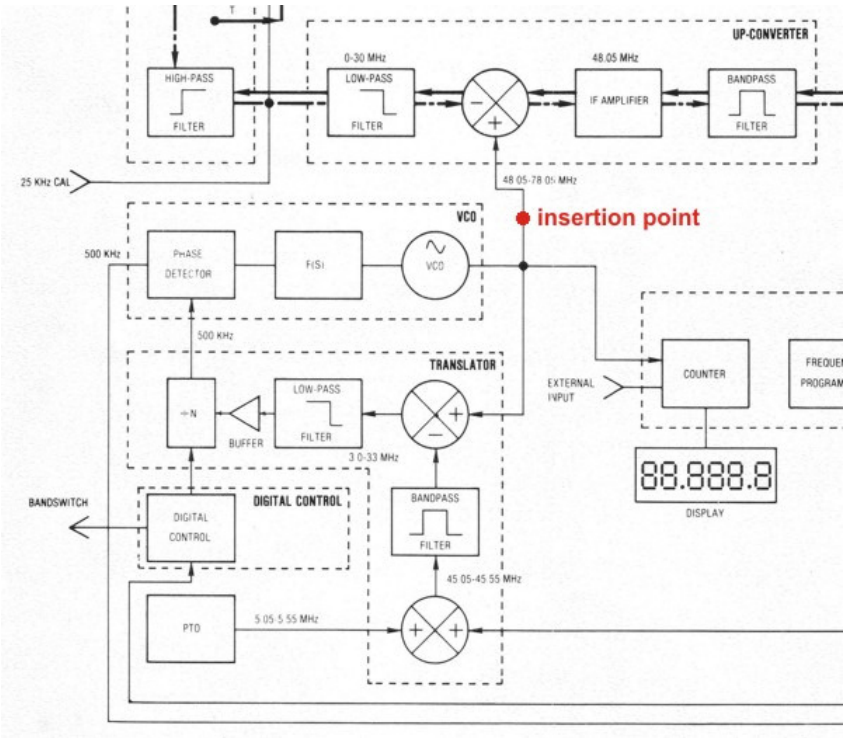


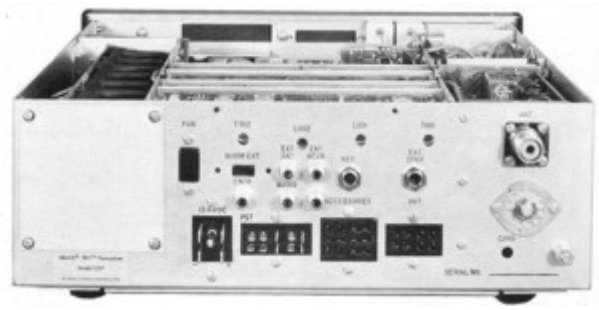


CONNECT DDS-7 TO DRAKE TR7 TRANSCEIVER

DDS-7 substitute all the original tuning system of TR7, generating a frequency range required by first MIXER in UP-CONVERTER module. The signal generated from 48.050 to 78.050 Khz. is applied to this module and the original signal generated by VCO/PTO units is disable. At this point the tuning is performed by DDS-7, the VCO/PTO are active but disconnected, the original RIT function is disable and performed by DDS-7 only.

In TX mode, a voltage of +10 V is present in the PCB of TR7 and we can use it for "tell" to DDS-7 when swicth the TX functions like SPLIT or TX TIME and to generate the correct TX frequency when RIT is active. The +10 V (called 10T in TR7 PCB) is routed to a optoisolator interface wich provide to ground the specified I/O in PIC microcontroller.





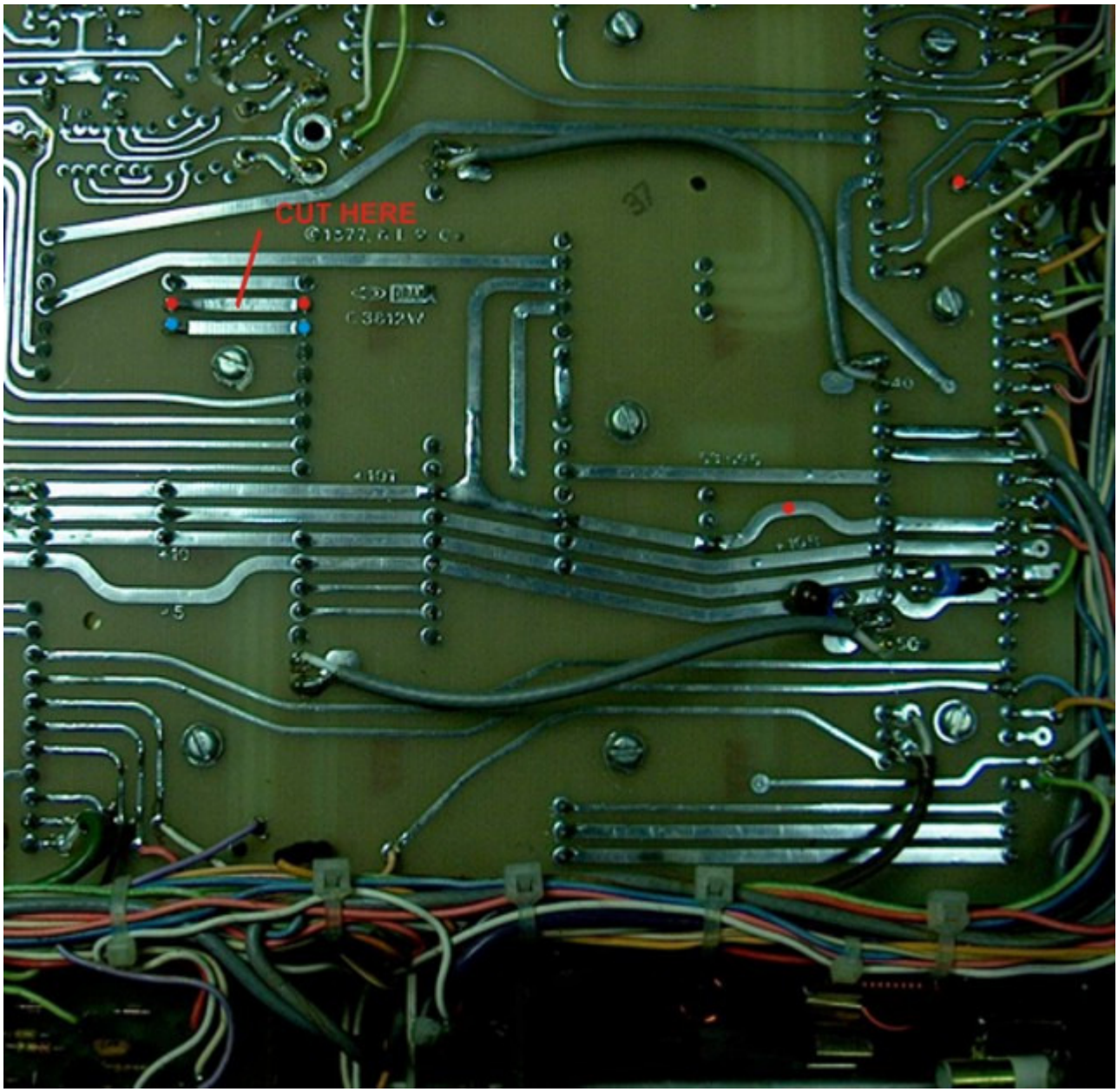
Use the supplied connection/switch box used to interface TR7 with DDS-7.
It is fitted in TR7 rear panel using one or two original screws and the ground contact.

There are 3 RCA female and 1 two position switch:

* DDS-7 IN: the signal coming from DDS-7
* 13.8 V: the power source for DDS-7
* TX-CNT: the +10 V routed to optoisolator int.
* SWITCH: used to change from internal tuning system or the external DDS-7

Using the little ole marked C1901 we can get out the four cable used for connections, they are:

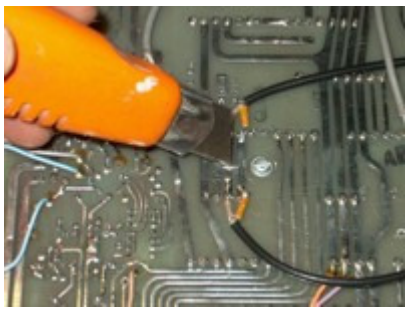
* VCO OUT: black coax cable
* DDS IN: black coax cable
* 13.8 V: red wire
* 10 V: green wire

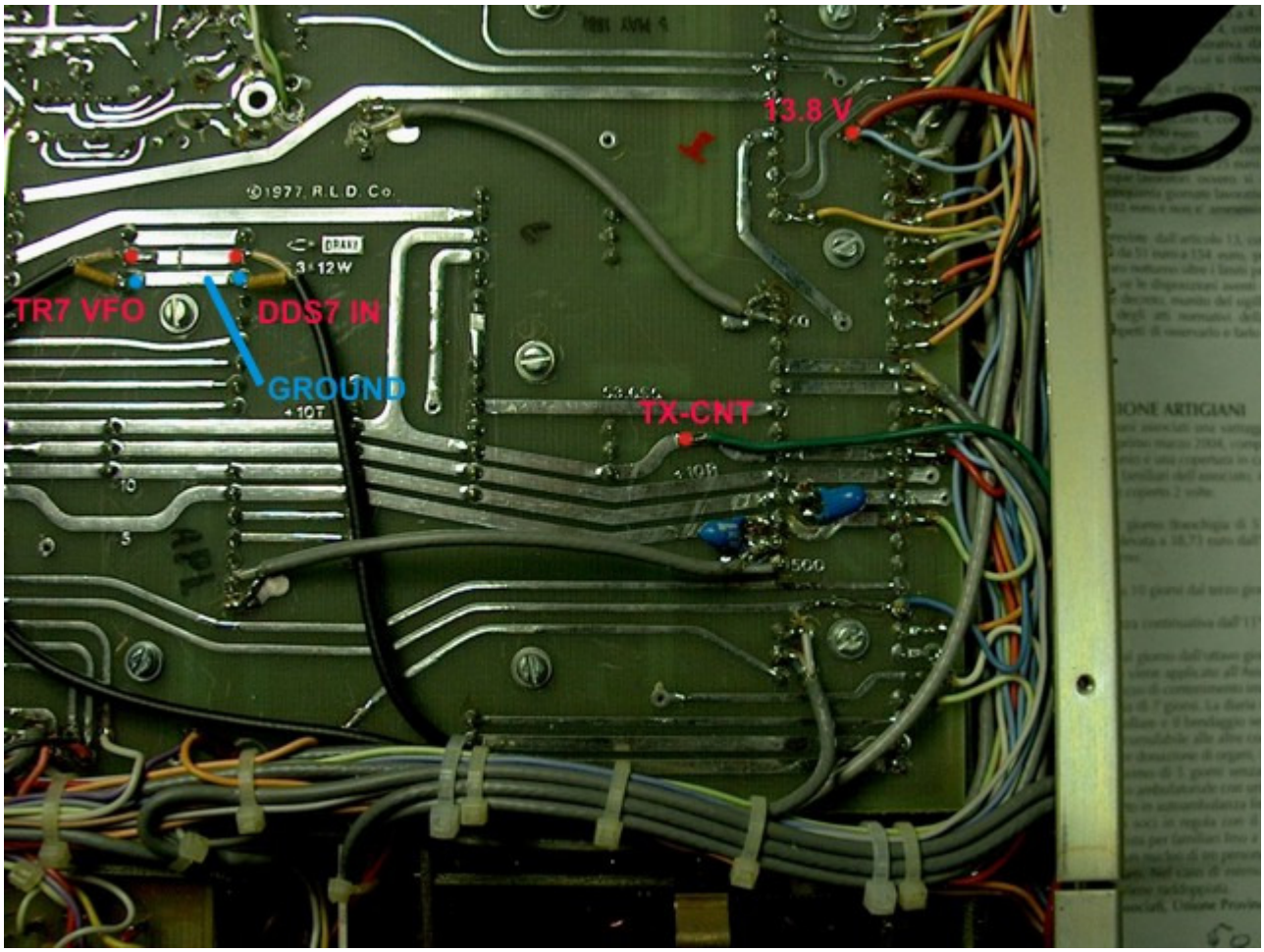


This is the bottom of the main PCB BUS of TR7, acces it removing the bottom enclosure's panel after the main slide top cover.

In the picture you can see some RED and BLUE dots, they are the solder point for the cables coming from the connection box, through the C1901 hole. Is necessary to cut the trace indicated in the picture in order to break the signal coming from VCO module to UP-CONVERTER module.

This operation is easy to do with a common CUTTER.





Solder the two coax cable coming from connections box to the indicated positions by the RED and BLUE dot:

* in the RED dot the center pole of coaxial cable
* in the BLUE dot the shield

Solder the RED and GREEN wires in the indicated position by the red dot.

After a general control of all operations you can reassemble the TR7 enclosure and connect the cables supplied with DDS-7:

* the signal coaxial cable to DDS-7 IN RCA female
* the power supply cable to 13.8 V RCA female
* the control cable to TX-CNT RCA female

Turn ON the TR7 and after the DDS-7, put the switch in DDS-7 position, and tune.