



IC-756 pro II IF output for IF panadapter

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IC-756 pro II IF output for IF Panadpter

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This paper describes how to provide an IF output (64.455 MHz) on Icom IC-756proII to use with a RTL SDR panadapter or other SDR receiver or any other application where IF output is needed.

I have to extend my appreciation and thanks to two italian hams that help me to implement this easy mod IK0OZD for describing the mod on IC-756PROIII on the forum and I5JXX for providing me the TMP connector.

The idea of providing IC-756 pro II transceiver comes from italian ham forum where a identical mod for IC-756 pro III was presented by some users; anyway I have written this note because I didn't find an easy to find documentation that describes the mod.

First of all this is not a real mod since no solder is needed since IC-756PROIII, and IC-756PROII as well as I have verified, is equipped with internally a small coaxial connector where IF is available.

The "mod" is completely reversible and non-invasive.

On the IC-756 pro II Service Manual appears that this connector is provided to be used for connection to a Spectrum Analyzer for transceiver calibration and alignment purpose.

This connector (J711) is PCB mounted on RF-A unit; it's a TMP-J01X-V6 (Figure 2 and Figure 3).

A short piece of coaxial cable like RG-174, or equivalent diameter teflon insulator RG-316, is needed terminated at one end with a male coax connector TMP K01X-A1 and on the other end with a BNC or SMA or whatever any other coaxial connector.

TMP connector are designed to be crimped but the crimping tool is hard to find and really expensive, however the connector can be easily soldered instead.

In order to avoid any ground loop between transceiver and RTL SDR dongle an RF transformer was installed on the coaxial cable. I used a wideband RF transformer by Coilcraft P/N WB1010-PCL, however any RF transformer with low insertion loss and adequate bandwidth can be used.

Figure 1: TMP K01X-A1 connector and Coilcraft P/N WB1010-PCL

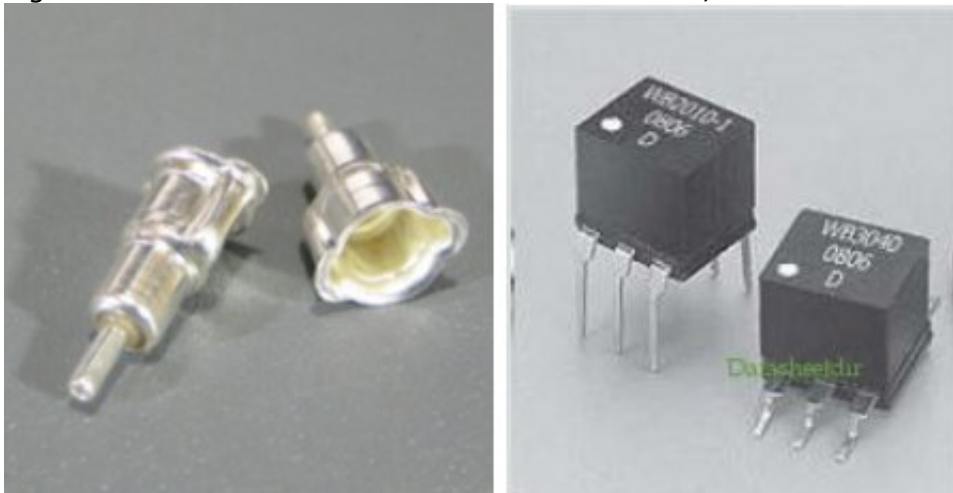


Figure 2: J711 TMP connector located on RF-A unit

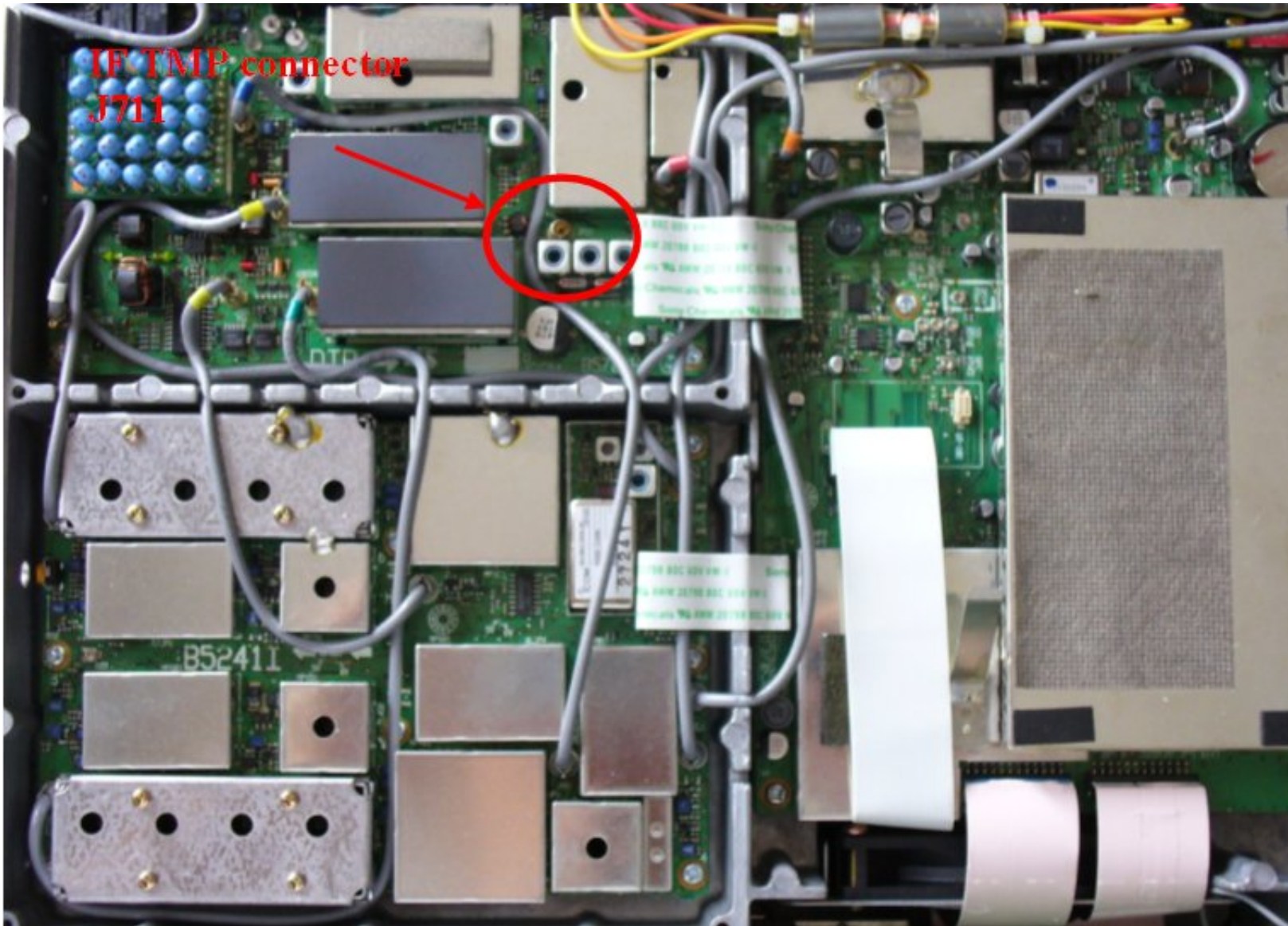
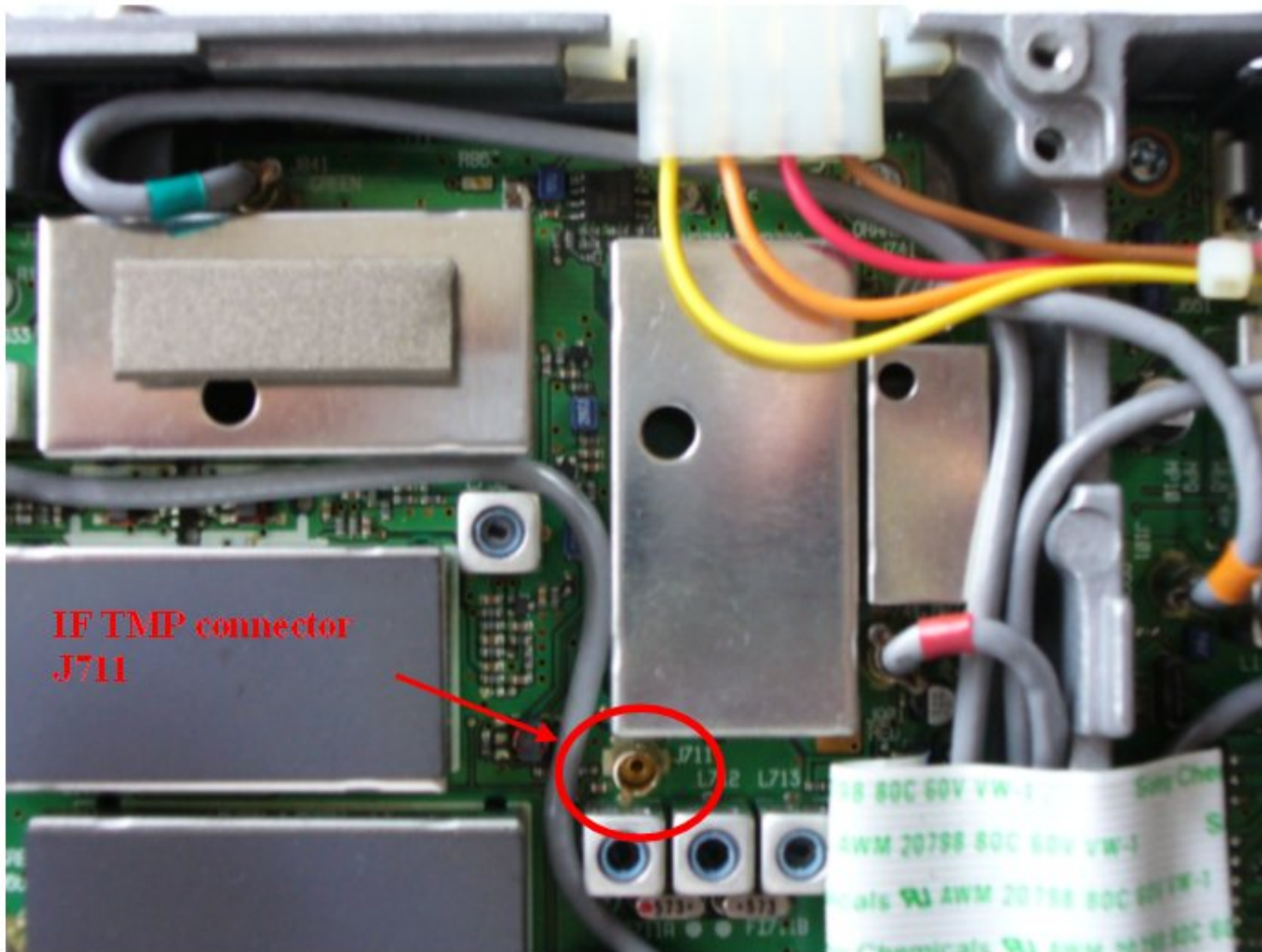
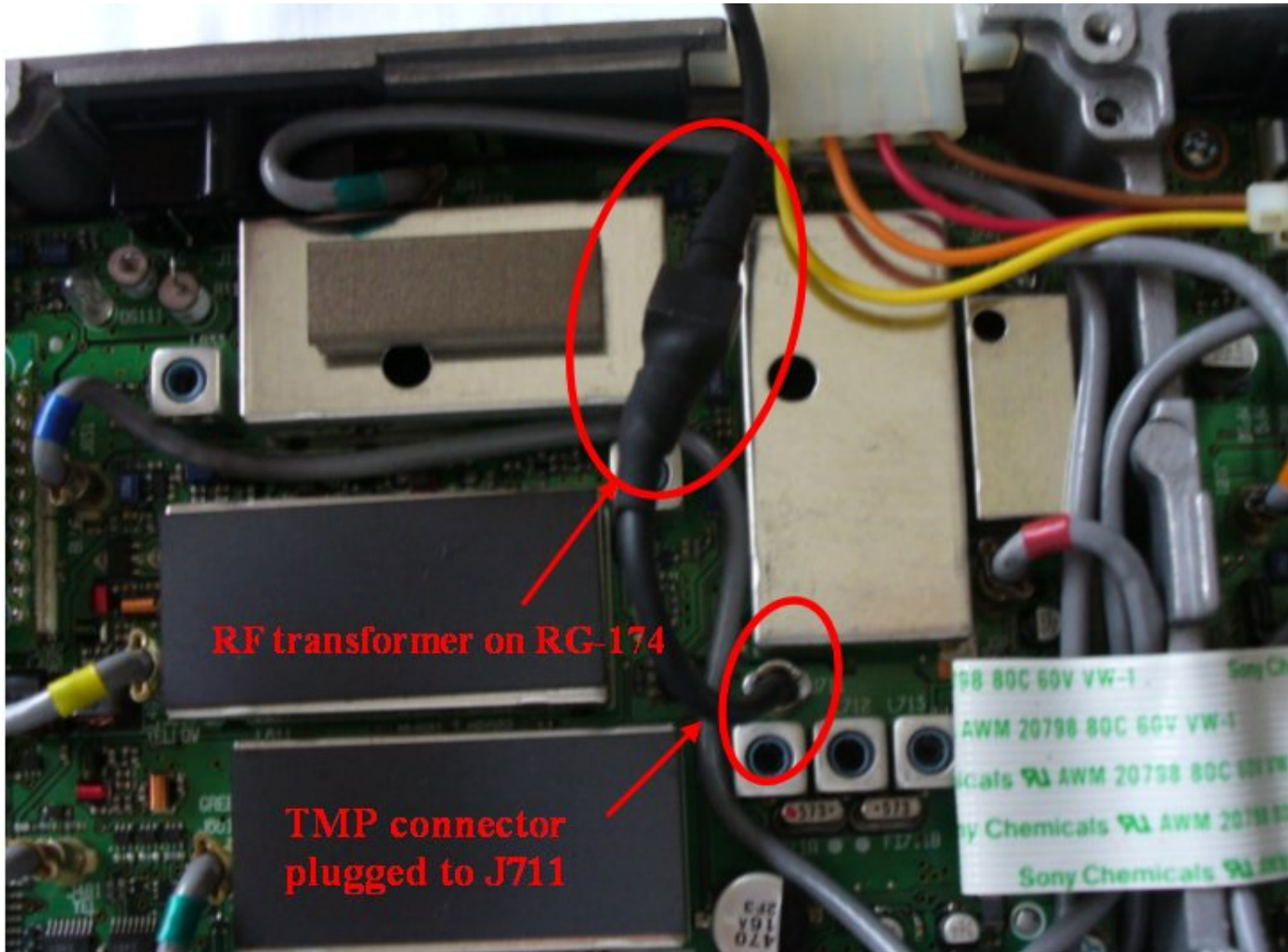


Figure 3: J711 TMP connector located on RF-A unit (detail)



Coaxial cable was routed near external automatic tuner connector since there is enough space to close the transceiver cabinet with the cable installed. (Figure 4).

Figure 4: RG-174 with TMP connector and RF transformer installed



Reference:

[1] Harry Tankin, WE1X "Icom IC-7600 IF Scope Display Using An RTL-SDR Dongle and HSDR for Point and Click Tuning" June 22, 2013 Rev 3.0

[2] Stefan Wagener, VE4NSA "IC-7600 Scope IF tap for RTL-SDRs" February 2013 Rev.2

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