

Repeater Reverse for the Yaesu FT-730R

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The Yaesu FT-730R is a popular FM-only UHF mobile rig, and in common with its cousin the FT-290R, lacks a repeater reverse facility, and incorporates a redundant CALL button instead.

This article shows how to adapt the famous modification for the FT-290R that turns the CALL button into a repeater reverse button. It is assumed that the reader is familiar with this modification. Perhaps it is not well-known that the tone call is still operative merely by pressing the PTT at the same time.

A quick summary of the modification is in order. When the CALL button is pressed burst switch Q2018 is switched on. This in turn activates the burst oscillator Q2019 and PTT switch Q2020. Whenever the PTT line is enabled pin 4 on the microprocessor Q2001 common to all the series is grounded via diode D2006, thereby shifting frequency by the appropriate offset. The modification grounds pin 4 through the CALL switch via an extra diode and prevents the tone oscillator from enabling PTT.

Now for the practical side. Unscrew the

bottom cover of the rig and disconnect the speaker wires to get them out of the way. The microprocessor is now quite visible. With the knobs facing you look for the wire coming from the pad marked B next to connector J04. Follow this to where it terminates close to the microprocessor. This wire is the CALL line. Locate the diode D2006 and solder the anode of another diode, 1N914 or similar, to the anode of D2006. The cathode is terminated on the pad of the aforementioned wire next to the microprocessor. Now, locate the connector in the top left hand corner, J01. Counting from the right there is one capacitor and three resistors just under it. Grit your teeth and cut the lead on the second resistor, R2080. Reassemble and test. Repeater reverse is now activated with the CALL button and if the tone call is desired it can be obtained by pressing PTT as well.

It is also worth mentioning that there is a simpler version of this modification if the tone call is not desired at all. Simply move that wire from where it terminates close to the microprocessor to the anode of diode D2006. This is the essence of the modification for the FT-230R that appeared in another place, but retaining the tone call is almost as easy.

Technical Editor's Note:

The technique of simulating PTT to the micro-

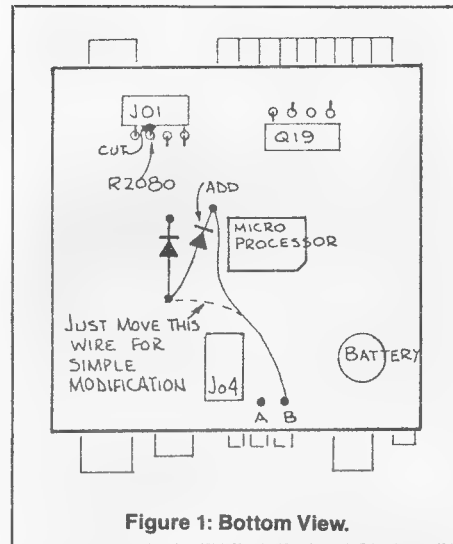


Figure 1: Bottom View.

processor to give reverse repeater on receive can be used on other brands and models. Many rigs use PTT information to cause the microprocessor to shift the PLL frequency for repeater operation.