TrueTime XL-DC

Up-Convert Antenna Input Model ("-1")

Conversion to Standard Antenna Input

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On the T/F Module (with all the standard BNC jacks, including the Antenna connector), at a location near the center of the outside edge, just forward of the RF connector P6 (of the P1/P6 pair) for the GPS receiver daughter card and inline about 2" directly behind the rear-panel Antenna connector, is an "L"-shaped grouping of 3 rectangular solder pads on the top of the board.

At the two pads inline Left to Right on the "L", R25 (330 ohm) is installed on models that use the special TrueTime 142-602 antenna assembly with built-in Down Converter (which requires a matching Up-Converter circuit inside the XL-DC just prior to the internal GPS receiver board). XL-DC GPS Receivers configured in this way have a "-1" suffix appended to their part number and have a "Down Conv. Req'd" label next to the rear-panel Antenna BNC connector as well as internally on the GPS receiver daughter-card.

At the two pads inline Front to Back on the "L", C8 (20pF) is installed on models that are configured for direct antenna connection to the internal GPS receiver board. R25 & C8 should NEVER be installed together since they both determine a configuration that is not compatible with the other.

C41 was called out on the Bottom Jumper drawing (as C8 and R25 are called out on the Top Jumper drawing) but with no additional mentions anywhere else. The standard antenna unit had no C41 (0.1uF) but it was installed on the Upconverting unit. The 16Mhz clock signal was found to be leaking all over the antenna input signal (Volts of signal!) when C41 was in place but the unit reacts the same as the standard unit when C41 is removed (very little 16Mhz clock leakage).