OTDC-440

4 BAND
BLOCK DOWN CONVERTER

INSTRUCTION MANUAL

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INSTALLATION AND SETUP

- The OTDC-440 is designed to be mounted in a standard 19" equipment rack. Mount it in a rack using 4 screws of the proper size for the rack in use. It is a good idea if possible, to allow 1 empty rack space above and below this unit to allow good flow of cooling air. If it is operated on a bench or table, it is best not to stack other equipment on top of it.

- Connect the OTDC-440 to a source of AC power. It may be powered with 90 to 250VAC at 50 or 60Hz. The AC line fuse is inside the unit in the power supply module. If it becomes necessary to replaces this fuse, replace it with the same type 5x20mm, 2A, 250V fuse. Do not remove the cover of the OTDC-440 with AC power applied.

- The OTDC-440 has an AGC system to maintain relatively constant RF output levels as the optical input signal varies over a range of approximately –8dBm to ±0dBm. The output level of the OTDC-440 is directly related to the RF input level at the upconverter system. For OLSON systems, the RF output level is set at the factory to approximately +35dBmV for an upconverter input level of +15dBmv.

- The system will function well with optical levels as low as –12dBm into the OTDC-440 but the RF output level will go down as the optical input level goes below approximately –8dBm. It is recommended that the optical input level to the OTDC-440 be set between -8dBm and ±0dBm.

- The front panel has two DC test points. Each of these is referenced to chassis ground and should be measured with a DMM.

- The AGC test point allows measurement of the AGC level and will normally be approximately +2.3VDC with an optical input level of –4dBm. Once the system is set-up and in operation, the voltage at this test point can be measured and recorded for historical purposes.

- The OPTICAL POWER test point allows measurement of the optical input level at the optical detector diode inside the unit. This test point is calibrated at 1VDC per mW and may be used as an accurate indication of optical input power. Once the system is set-up and in operation, the voltage at this test point can be measured and recorded for historical purposes.

- The controls on the rear panel marked BAND 1, 2, 3, and 4 MGC are factory-set and should not be adjusted.

- The 5-42MHz RF outputs are marked Band 1 through Band 4 on the rear panel. These band designations are directly related to the designations on any OLSON fixed block upconverter. A signal fed to the BAND 1 input on a block upconverter such as the FRMUC will appear at the BAND 1 output on the OTDC-440.