

## INSTALLATION OF THE BLT TRANSCEIVER

MODEL NUMBER: 26-0288 & 26-0166

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **WARNING**

In order to comply with FCC RF Exposure requirements, this device must be installed in such a way as to ensure that a minimum separation distance of 20 cm is always maintained between the antenna and all persons.

Installers and end-users must follow the installation instructions provided in this guide.

The module is not modified

The module is only used or configured with antennas provided. Do not use other antennas that have not been approved or tested. Doing so will violate the grant of authorization approval and could result in a system exceeding the RF Exposure Requirements or the FCC radiation limits.

The module is properly label and if being installed inside a product, were the Module's FCC ID is not visible, then an external label must be place on the outside of the device, stating the following:

*“Contains Transmitter Module FCC ID: F9C26-0288”*

The FCC warning statements and compliance statements found in this installation manual for the module must be replicated in the manual for the host equipment, specifically those related to RF exposure.

The module is approved only as a mobile device. The final configuration, where the module will be installed, must meet the 20-cm requirement for it to be classified as mobile. The final configuration must, also, be in compliance with the RF exposure requirements. The module is not approved for portable applications. If portable application is desired, then a separate FCC equipment authorization is required.



The module is installed inside an enclosure that cannot be easily open or accessible to the user, so that the antenna(s) provided cannot be easily change by the user.

Typical locations of the system(s) the BLT transceiver is installed in require a “pole-mounting” location. This is usually accomplished by mounting on a street light pole or a utility pole (telephone/electric pole) at 20 to 30 feet above the ground. This type of installation is required for proper RF performance in the network.

The BLT LAN Transceiver is built to be mounted in any location, and any orientation providing it is within the ambient temperature range of –40 to +85 degrees C and less than 95% humidity.

Connect the RJ45 serial I/O to the host controller using any length cable between 0.5 and 3 meters.

The LAN can be powered by any dc power source from 10.5 to 15.5 volts capable of supplying 1 amp with less than 150 millivolts p-p of ripple into the 4-pin Molex input power connector.

**WARNING:** The unit is protected against reverse connection for up to 2 amps for 5 seconds or forward direction up to 3kV for not more than 50 uSec. Exceeding the proceeding may result in damage to the unit. The **12-volt return** (ground) **connects to pin 4** (top pin closest to RJ45 connector) and the **Plus 12 volts connect to pin 3** (top pin closest to the two-pin Molex connector).

According to the conditions of the FCC certification, the power cable must have a clamp-on ferrite filter with two turns through it – mounted within 0.1 meter of the LAN power connector. The filter must provide a minimum loss equivalent to Steward ferrite part number 28A2025-0A0. This is a type 28 material clamp-on core having 200 – 300 ohms-per-turn at 100 MHz.

The LAN is designed to receive or transmit by switching between two external whip antennae having omnidirectional gains of not more than 3 dBi. Care must be exercised when connecting or disconnecting the OSX right-angle antenna connectors: do not pull on cable; move connectors directly in or out by holding the connector body.



It is recommended that the coaxial connection between the BLT LAN and its antennae be kept as short as practical for the mounting configuration: 0.2 to 0.5 meters.

Before application of DC power, check to assure that the cover is secured by the ten screws, that the antennae, SIO, and power connectors are completely engaged, and that the DC source is in the range between 10.5 and 15.5 volts dc.

A test program called CELLGRAB.EXE, nicknamed GRABBER, for the host controller is available; versions 3.0-46 or later are applicable.

Upon application of DC power, the POWER light should illuminate, followed in 2 to 5 seconds by the CPU OK light. Normal power supply current is 0.2 amps in the receive mode and 0.7 amps in transmit.

If, at any time, the CPU OK light goes out, or fails to stay on, the LAN requires either the host controller to issue a BREAK command over the SIO line, or the DC power to be re-initialed.

If either of the two indicators remains off, check to assure that DC power is adequate. If the power is o.k., but either of the indicators remains off, then replace, or, return the unit to a repair facility.

**Warning:** Any modifications to the unit, unless expressly approved by Schlumberger, may void the users authority to operate the equipment.