



PRODUCT ADVISORY LETTER (PAL)

PRODUCT ADVISORY LETTER NO.: CC46-00002

DATE: 3/06/00

AFFECTED PRODUCT(S): TC-10B's only used in phase comparison applications that shipped between 5/1/96 and 3/6/00.

AFFECTED MODULE(S): Receiver Output module (Part # CC20-RXSMN-001, rev. 1)

SYMPTOM(s): The Trip Positive / Trip Negative (Mark/Space) ratio is not equal when driving the outputs with station battery voltage. **This situation along with relay setting tolerances and low fault current levels can result in a mis-operation by the relay system.**

RECOMMENDATION: Pulsar recommends the corrective action listed below be taken for all Receiver Output modules described above that are used in phase comparison systems.

CORRECTIVE ACTION: Call Pulsar at phone # 800-785-7274 (ext. 211 or customer service) to obtain a RMA number and reference this PAL. Pulsar will provide a modification kit (CC56-00002) that contains a 20 Vdc power supply that operates at 125 Vdc input (if other input voltage is needed, please specify), quantity 2 of 0.01 microfarad capacitors, and instructions on how to modify the outputs to provide the correct ratio. This will not affect any applicable warranty. The modification kit is available at no charge.

TECHNICAL DETAILS: Due to the high input impedance of the ABB microprocessor-based phase comparison relays (REL-350 & REL-352) that the Receiver Output module has to drive and the output's protective surge capacitors, there is a long RC time constant which distorts the output waveform. C1 and C2 have to be decreased in value by replacing with the new 0.01 microfarad capacitors per the modification kit instructions. Also the receiver outputs have to be powered up with a lower voltage (i.e. the 20 Vdc power supply) to decrease the time for the capacitors to discharge.

Pulsar Technologies appreciates your past support and we want to continue to provide you the best service possible. Please help us by letting us know if future notices should be sent to another individual. PAL: CC46-00002