



PROCEDURE FOR OPERATION OF MODEL SFO TELETYPE REGENERATOR
WITH NORTHERN RADIO COMPANY, FREQUENCY SHIFT CONVERTER,
TYPE 107 MODEL 2

(Please attach to your copy of SFO Instruction Book)

- (1) The input Keying Switch on back of SFO Regenerator must be set at "Negative to Ground" position.
- (2) Connect output of converter to "neutral" input of Regenerator, using two wire shielded cable.
- (3) The wire connecting to the "positive" terminal of Regenerator "neutral" input must be connected to the terminal of the converter which is at ground potential. This terminal is the right hand terminal when viewing the converter output terminal strip from the rear. It is advisable to check the output terminals with an ohmmeter to make certain of the grounded terminal. Since the terminal marked "positive" on the Regenerator input is actually grounded to the regenerator chassis, it is imperative that this ground to ground relationship be carried through from the converter to the Regenerator, otherwise the input to the Regenerator will be shorted out when the two units are mounted in a rack or when the cable shield is connected to the two chassis.
- (4) Insert a 1500 ohm 5 watt resistor in series with the wire from the ungrounded terminal of the converter to the ungrounded (negative) terminal of the Regenerator. While the equipment will operate without the series resistor, to fully protect the equipment, the resistor should be installed.

- (5) Adjust the converter for "neutral" operation. (Mark condition with minus 60 ma., space condition, no current).
- (6) The reversing switch on the back of the converter must be in the right hand position when viewed from the back. This can be checked with a voltmeter. With the converter resting in mark condition (minus 60 ma. current indication of meter), a negative voltage should be indicated at the ungrounded terminal of the converter.
- (7) Note that three terminals exist on the rear of the converter. The center terminal is connected directly to the chassis of the converter. The shield should be connected to this terminal.
- (8) The Regenerator operates with the neon light "off" for steady mark condition, i.e., when a negative voltage is applied to the negative neutral terminal and with the neon light "on" for steady space condition, i.e., when no voltage is applied to the neutral input terminal.
- (9) In operation, the output current of the converter should be adjusted to indicate negative 60 ma. current flowing through the load circuit. The Input attenuator should be adjusted to provide approximately 6 to 8 db of limiting beyond the point where the neon light begins to flash off and on with received keying.
- (10) Set the sense control to provide correct mark and space conditions. This setting is dependent upon the reception of plus frequency shift or minus frequency shift. With the Regenerator correctly connected to the Converter, operation of the converter is identical with its operation without the Regenerator connected.

THE TECHNICAL MATERIEL CORPORATION

COMMUNICATIONS ENGINEERS

121 SPENCER PLACE

MAMARONECK, NEW YORK

ADDRESS ALL CORRESPONDENCE TO P. O. BOX 142, MAMARONECK, N. Y.

Cable TEPEI Mamaroneck, N. Y.