

INSTALLATION MANUAL
Tubester Sets 32S-3

PACKAGE 3:

When any of these three Tubesters are exchanged for the tubes it is necessary to touch up the RF alignment. The following procedure is in accord with Section 4.5.4, "RF Circuits Alignment" in the Collins 32S-3 manual. Stated simply, the RF Trimmer capacitors, located in two rows beneath the Exciter Tuning assembly, are adjusted to give maximum drive to the PA tubes with the Exciter Tuning and main dials set as prescribed for each band.

If the 32S-3 is cabled to a 75S- receiver for TRANSCEIVE, the transmitter's XTAL OSC trimmers have no effect. Their adjustment may be deferred until "XMTR XTAL OSC" cabling is desired; the V12 socket even may be left empty. Just assure that the receiver has the matching band, Preselector and tuning dial settings during the RF trimmer alignments.

1. Replace the tubes with the Tubesters from Package 3:

<u>Dot Color</u>	<u>Tubester Type</u>	<u>Replaces</u>	<u>At</u>	<u>Notes</u>
Pink	ST305B	(12AT7)	V5	Replace tube shield over the ST305B.
Dark Blue	ST306	(6AH6)	V6	REMOVE SPRING, then replace tube shield
Silver	ST312B	(6DC6 or 6CB6)	V12	over the ST306

2. Connect the transmitter to a dummy load. Select band 28A if 10 meter operation is anticipated; otherwise select any band. Set the Exciter Tuning per the following table. Set the Dial at 100; PA Tuning at the band number on its dial; RF Gain to minimum; and Meter switch to PA Plate.

<u>Band Switch</u>	<u>Exciter Tuning Logging Scale</u>	<u>Band Switch</u>	<u>Exciter Tuning Logging Scale</u>
28A	9.0	14.0	6.4
3.6	2.1	21.2	7.8
7.0	3.8		

3. Turn power on and allow warm-up. Turn EMISSION switch to TUNE.
- 4.a. Advance RF Gain (near maximum may be required) and rock Exciter Tuning slightly if needed to get PA Plate current indication. Dip PA Plate current with PA Tuning. Now and through the remainder of the alignment, as the drive is increased by peaking the trimmers, reduce RF Gain to keep PA Plate current between 2 db and 4 db.
- b. Adjust the XTAL OSC, MIXER PLATE, RF AMP and DRIVER PLATE trimmers for this band for maximum PA drive. (If cabled for TRANSCEIVE, peak the receiver Preselector and/or the receiver OSC trimmer instead of the transmitter XTAL OSC trimmer). If the Exciter Tuning was moved off its alignment point to get initial drive indication, work it back to the proper setting while making compensating trimmer adjustments. The alignment is then complete for this band.
5. Perform steps 4.a and 4.b above for the other bands.

The Tubester Set installation is complete.