## Rockwell-Collins SERVICE BULLETIN

## Collins Telecommunications Products Division/Rockwell International

KWM-380 TRANSCEIVER (622-5093-001,-101) HF-380 TRANSCEIVER (622-3580-001,-101)

SERVICE BULLETIN NO 4

#### REPLACE OPTICAL ENCODER

KWM-380 (622-5093-001,-101) and HF-380 (622-3580-001,-101) units shipped prior to 4 August 1980 could exhibit the problem described below.

In some cases and on a random basis, the tuning dial drive will drag when turned in a clockwise direction resulting in an intermittant ratcheting noise or the dial drive may stick momentarily when initially turned.

This modification consists of replacing the defective encoder with a new part.

Estimated time required is 0.5 man-hour.

The modification parts listed in the material information paragraph are available upon request at no charge. The defective encoder must be returned to the factory service center to cancel billing invoice. Direct all correspondence to Rockwell/Collins Service Center, 6001 Threadgill Avenue, El Paso, Texas 79924.

No special tools or equipment are required.

#### MODIFICATION PROCEDURE

- A. Turn off all power to the transceiver.
- B. Remove the dust cover by removing the four screws located adjacent to the four feet on the bottom of the transceiver using a #2 Phillipshead screwdriver.
- C. Tip the front panel forward and down by removing the front one of two screws securing each of the front panel side brackets to the chassis. Be extremely careful not to pull or pinch any wires.
- D. Remove the tuning knob by loosening two set screws using a 5/64 inch Allen wrench.
- E. Remove the encoder from the front panel by using a 1/2 inch wrench or nutdriver to remove one retaining nut and the cable clamp attached to the case.
- F. Unsolder the four wires connected to the encoder printed circuit board.

NOTE: The encoder printed circuit board terminals are numbered 1 through 6 with number 4 being replaced by a keyway.

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- G. Install the four wires removed in step F into the printed circuit board of the new encoder (229-9702-010) as follows:
  - (1) Orange wire to terminal 1.
  - (2) Red wire to terminal 3.
  - (3) Brown wire to terminal 5.
  - (4) Green wire to terminal 6.
  - (5) Solder all connections on BOTH SIDES of the printed circuit board.
- H. Install encoder onto front panel using the retaining nut.
- Install tuning knob onto encoder shaft and tighten the two set screws.
- J. Install new cable clamp (150-0836-010) onto back of encoder case and insert ribbon cable into clamp.
- K. Tip front panel up into place and secure with screws removed in step C.
- L. Reinstall dust cover using hardware removed in step B.

#### MATERIAL INFORMATION

The parts listed below are required to modify one KWM-380 or one HF-380.

COLLINS PART NUMBER	QTY	DESCRIPTION
229-9702-010	1	Encoder, optical
150-0836-010	1	Clamp, cable