

ORDER

FEDERAL AVIATION AGENCY
WESTERN REGION
LOS ANGELES, CALIFORNIA

WE 6770.1

3/28/66

SUBJ: INSTALLATION AND MAINTENANCE STANDARDS AND TOLERANCES FOR WILCOX
TYPE 492B INDEPENDENT FAN MARKER (IFM).

1. PURPOSE. This Order establishes Regional maintenance and installation standards applicable to Wilcox, Type 492B, 75 MC Fan Markers, since deviations are necessary from the standards and tolerances applicable to 75 MC markers. It applies to Area Airway Facilities field personnel responsible for fan marker installation and maintenance.
2. REFERENCES.
 - a. Handbook SM P 6770.2, dated 11/5/64, Maintenance of 75 MC Marker Facilities.
 - b. Handbook OA P 8200.1, dated May 1963, Flight Inspection Manual, paragraph 219, Marker Beacons (75 MC).
 - c. Instruction Manual, Wilcox, Type 492B, 75 MC Marker.
3. EQUIPMENT SUPPLIED. (Refer to Section 1, Part 1, paragraph 9 on page 1 of Wilcox 492B Instruction Book).
 - a. 1 each transmitter, Wilcox type 97525-100 (less electronic keyer, K-3).
 - b. 1 each transmitter cabinet, Wilcox type 8357-1 or 2.
 - c. 1 each antenna system, Wilcox type 97542-100.
 - d. 1 each set, R.F. cables, Wilcox.
 - e. 1 each CA 1515 keyer (or equal), with mounting panel.
 - f. 1 each thruline R.F. body, with 1W and 10W elements.
4. INSTALLATION STANDARDS.
 - a. Building. A wood frame structure, or other economical and weather-tight shelter with dimensions approximating 4' X 5' X 7', shall be substituted for a standard Fan Marker building. This will provide added protection of equipment from the weather, and will permit maintenance and repair of the installed transmitter.

Distribution: RAF-3, M-1, MAF-2, WFSM-2, WIM-2, CAC-3, FSM-1, FSM-48

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- b. Counterpoise. Refer to Figure 2 of instruction manual for Model 492B Marker Beacon Transmitter. The counterpoise height shall not exceed 8 feet above ground. A plank or suitable walkway shall be mounted on top of the counterpoise to permit inspection of the antenna dipoles without damaging the counterpoise mesh.
- c. Transmission Lines. Cable W-3 (antenna feedline), if not furnished with equipment, shall be fabricated from RG-9B/U cable instead of RG-8 B/U. Cables W-4 and W-5 (antenna tie lines) if not furnished with equipment shall be fabricated from RG-11 B/U cable. See Part 4, page 45 of Wilcox 492B instruction book for dimensions. The thru-line R.F. body shall be installed at the transmitter output jack and connected to cable W-3.
- d. Identification Keyer. The identification keyer panel shall be mounted below the transmitter panel and connected by means of a 4 wire cable, an octal plug, and an octal socket mounted in the vacant socket hole in the transmitter chassis.

5. MAINTENANCE STANDARDS AND TOLERANCES.

- a. All standards listed in paragraph 104, Handbook SM P 6770.2, shall apply to Wilcox Independent Fan Markers except those which conflict with the following:

	Standard	Initial Tolerance	Operating Tolerance
Antenna Element Currents (Modulated)	Established by commissioning flight check	Not Applicable	+ 10% of standard
Antenna Current Balance Ratio (Modulated) any element combination	1.0 to 1.0	1.3 to 1.0	1.5 to 1.0
Transmission Line Standing Wave Ratio	1.0 to 1.0	1.5 to 1.0	2.0 to 1.0

- b. The requirements for monitoring the following parameters have been waived:
 - (1) Keying.
 - (2) Modulation.
 - (3) Power reduction.

APPROVED WESTERN REGION MARCH 30, 1966