CONFIDENTIAL

ENG-6-261

Chief, Operations & Training Division, CC

Chief, Engineering Division, CC

Eldico FS-100 Frequency Standard

1 March 1956

DOC O1	REV DATE 1 MAY 1980	BY 018313				
ORIG COMP 33	OPI 5L	TYPE O2				
ORIG CLASS C	PAGES 6	REV CLASS C				
JUST 2	NEXT REV 2010	AUTH: HR 70-2				

1. An Eldico FS-100 frequency standard has been procured and given a cursory evaluation by the R&D Laboratory. It is believed that the general characteristics of this item will be of interest to your Division.

2. The FS-100, as shown on the attached brochure, is a transistorized, 100 kc frequency standard, powered by a 15V battery contained within the case. A 100 kc crystal is employed for the frequency standard. According to the manufacturer, check points should occur each 100 kc, from 100 kc to 30 megacycles. The FS-100 is slightly smaller than a "King Size" cigarette package and weighs 103 grams, complete with crystal and battery.

3. When received the FS-100 failed to operate. Inspection revealed a broken lead at the RF choke. After repairs, the device still failed to produce detectable harmonics at frequencies higher than 300 kc.

4. Inspection of the FS-100 indicates poor construction, especially in component mounting. Basically the principle of operation is good. However, this unit is believed to be unsatisfactory and unreliable.
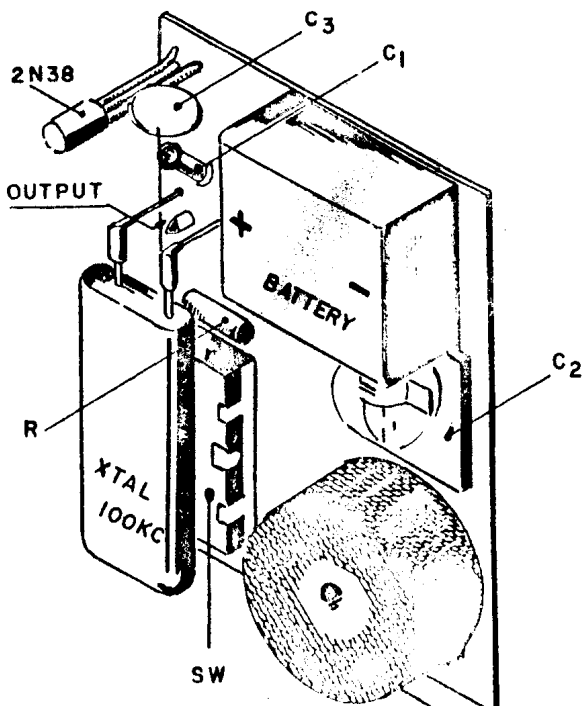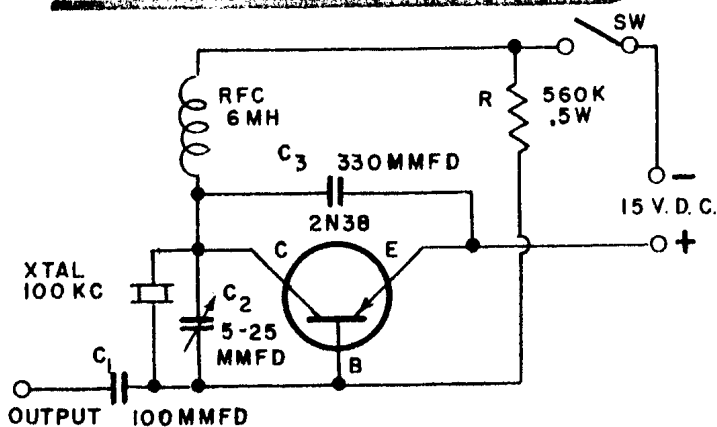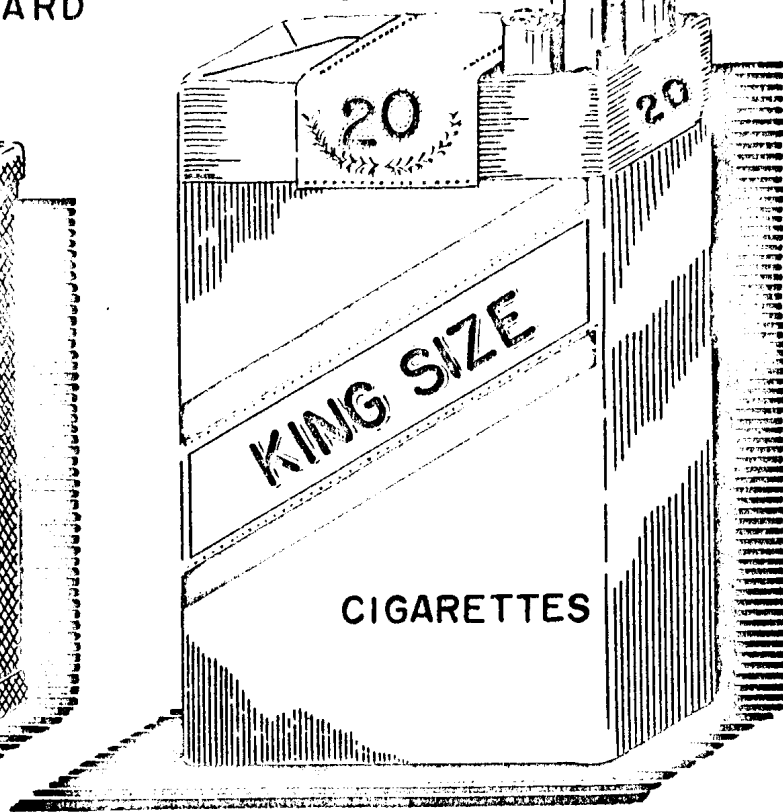
25X1

Attachment
FS-100 Brochure (1)

R&D/Lab/JGB/rkb (1 March 1956)

Distribution:
Original and 1 - Addressee
1 - R&D Chrono
1 - R&D Lab
1 - OC-E Chrono
1 - Dev/s

CONFIDENTIAL

ELDICO FS-100
100KC FREQUENCY STANDARD

Eldico's FS-100 is a precision, transistorized, 100KC frequency standard, smaller than a King Size package of cigarettes. The FS-100 contains its own power supply and requires no external connections.

To operate: Place switch (SW) in "on" position and couple output to antenna of receiver. Accurate frequency markers at every 100KC point (100KC to 30MC) will appear on your receiver dial. A variable trimmer condenser (C2) is provided for zeroing in the crystal frequency against WWV. This is done by tuning in WWV (2.5, 5, 10, 15, 20, 25 or 30MC) and beating the output of the FS-100 against it. Adjust condenser C2 for zero beat.

Frequency modulation of the FS-100 for identification purposes can be accomplished by slight pressure of the hand on the case. For clean cw signal, the FS-100 should not be held. The battery life is approximately shelf life of the battery. Exact replacement can be obtained from your local supplier or any miniature 15 volt battery of the same physical size can be used.

MANUFACTURED BY

ELDICO INC.

Test Procedure

ELDICO FS-100

1. Attempt to measure frequency stability with HP Electronic Counter if sufficient output is available. (at 100 Kc)

2. Check calibration by zeroing with WWV

3. Using RR-6 receiver, determine degree of coupling to antenna required to produce useful calibration signal at check points thru out RR-6 frequency range.

4. Check frequency stability versus pressure on case.