RECEIVER OUTFIT CUH

SUMMARY OF DATA

PURPOSE

A UHF receiver outfit designed for reception of A.M. or F.M. and fitted in conjunction with Types 691/EF.

AP 66926 RECEIVER P116

TYPE OF RECEPTION

Voice and MCW A.M. or F.M.

FREQUENCY RANGE

Ten switched crystal controlled frequencies in the range 277–283 MHz with facilities for replacing six of these by an alternative five by changing crystals.

BRIEF TECHNICAL DESCRIPTION

Receiver P116 is a double superheterodyne receiver with crystal controlled local oscillators. The input from the aerial is fed to a grounded grid r.f. amplifier stage which is followed by the first mixer. There are two stages of i.f. amplification at 25 MHz followed by a second mixer and then three further stages of i.f. amplification at 3.25 MHz. A double diode functions as A.M. detector; for F.M. reception a limiter and discriminator stage is provided. A switchable noise limiter circuit follows the A.M. detector. Muting circuits may also be switched in if required. There is one stage of a.f. amplification followed by the power output stage. The first local oscillator comprises a single valve crystal oscillator operating on 3rd overtone followed by a buffer amplifier, two trebler stages and a further amplifier stage giving a total frequency multiplication of nine. The second local oscillator consists of a single valve crystal oscillator only.

MAJOR UNITS

Receiver P116 Pattern No. 66926, which is the main component of the unit, consists of the two units listed below fitted in a framework. Its total weight is 94 lb.

Patt. No.	Description	Physical Data				Associated with
		Height	Width	Depth	Weight	
67907	Receiver Drawer 62E	7⅜ in.	13⅛ in.	16⅝ in.	27 lb	Types 691/E/EF/ET
67910	Power Supply Drawer Design 3	6⅞ in.	23⅛ in.	17¼ in.	32 lb	Types 691/EF

ELECTRICAL CHARACTERISTICS

Sensitivity:	4 μV for 20 dB signal/noise ratio.
Selectivity:	± 40 kHz for 3 dB
A.F. Response:	Flat within 3 dB between 300 Hz and 3000 Hz
Maximum Power Output:	24 into 600 ohm line for local loudspeaker 10 mW for loudspeaker amplifier 10 mW for local monitor

CONTROL CIRCUITS

The equipment has been designed to work into any of the W/T and Voice Control Outfits KH Series or Fighter Direction Control Outfits KFF/G or the interim Remote Control Outfit KH(Y).

POWER REQUIREMENTS

The outfit requires 115 or 230 V 50 or 60 Hz single phase at 140 W. When the equipment is fitted in conjunction with Type 691EF this may be obtained from A.C. Supply Outfit DWH.

Permissible tolerances are voltage ± 5% frequency ± 7½%.

HEAT DISSIPATION

140 W.

AERIAL SYSTEM

Aerial Outfit AJC or AJE. Aerial Outfit AJE will later completely supersede AJC.

Common Aerial Working can be employed using Common Aerial Outfit EAK. One EAK will combine three receivers. A further EAK will increase the number to five receivers on one aerial.

REMARKS

The frequency band 225–400 MHz allocated to military services overlaps the internationally recognised VHF and UHF bands. By common consent between the Joint Services, this band will be known as the UHF band.

HANDBOOKS

BR 2062(1)(2)

ESTABLISHMENT LISTS

E1033 (Type 691/E/EF/ET and Receiver Outfit CUH)
E1062 (Aerial Outfit AJC)
E775 (Battery Outfit BBY)
E1051 (A.C. Supply Outfits DWH, DWJ and DWK)
E1074 (Aerial Outfit AJE)

INSTALLATION SPECIFICATIONS

B756 (Type 691/EF Receiver Outfit CUH and Common Aerial Outfit EAK with Wireless Control Outfits KHA/Z (not KH(Y)) and KFF/G)

B770 (Control Outfit KH(Y) to Type 691/EF and Receiver Outfit CUH with Aerial Outfit AJC and Common Aerial Outfit EAK)

B757 (Aerial Outfit AJC)

B759 (Aerial Outfit AJE)

B769 (A.C. Supply Outfits DWH, DWJ, DWK)

B704 (Battery)

B758 (Transmitter Receiver 691E)

B694 (Wireless Control Outfits KHA–Z (not KH(Y))

PRODUCTION SPECIFICATION

12339