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**WIRELESS SET NO. 88, TYPE 'A', A.F.V.
TECHNICAL HANDBOOK—DATA SUMMARY**

PURPOSE

Communication between A.F.Vs. and infantry.

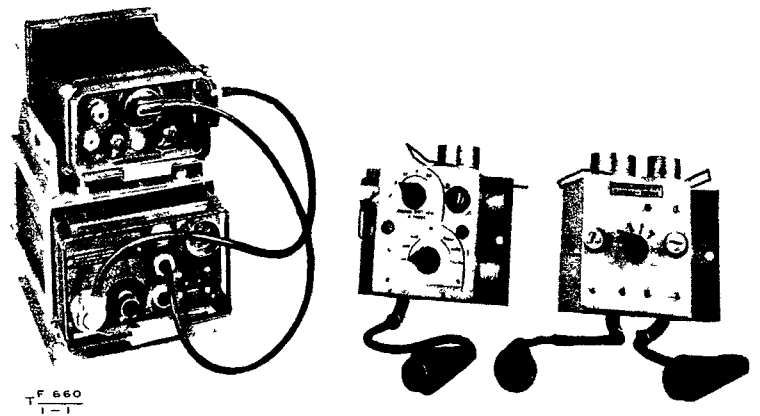
DESCRIPTION

The installation in an A.F.V., when associated with a Wireless set No. 19, consists of four main parts:—

- (a) Wireless set No. 88, type 'A', A.F.V.
- (b) Power supply and L.F. amplifier unit No. 2.
- (c) Control unit No. 16.
- (d) Control unit No. 17.

The Wireless set No. 88, A.F.V. is basically a Wireless set No. 88 (see Tels. F 650) with minor modifications. The Power supply and L.F. amplifier unit No. 2 provides:—

- (a) Operation from a 12V battery supply.
- (b) Control by harness of Wireless set No. 19, using Control units No. 16 and No. 17.
- (c) Additional A.F. amplification, for reception and transmission under noisy conditions.



F 660
1-1

Fig. 1—General view of equipment

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ELECTRICAL AND MECHANICAL
ENGINEERING REGULATIONS

PHYSICAL DATA

| | Weight | Length | Height | Depth |
|---------------------------------------|----------------------|---------------------|---------------------|----------------------|
| W.S. No. 88, A.F.V. | 5 lb. | 5 $\frac{3}{4}$ in. | 9 $\frac{1}{2}$ in. | 3 $\frac{1}{2}$ in. |
| Power supply and amplifier unit No. 2 | 11 $\frac{1}{2}$ lb. | 6 $\frac{1}{2}$ in. | 4 $\frac{1}{2}$ in. | 11 $\frac{1}{2}$ in. |
| Control unit No. 16 | 3 lb. | 6 $\frac{1}{2}$ in. | 6 in. | 3 $\frac{1}{2}$ in. |
| Control unit No. 17 | 2 $\frac{3}{4}$ lb. | 6 $\frac{1}{2}$ in. | 6 in. | 3 $\frac{1}{2}$ in. |

FREQUENCY

Channel frequencies:

| | |
|-----------|-----------|
| Channel A | 42.15Mc/s |
| Channel B | 41.4Mc/s |
| Channel C | 40.9Mc/s |
| Channel D | 40.2Mc/s |

Intermediate frequency: 3Mc/s

PERFORMANCE

Receiver: Output, 2mW
Sensitivity, better than 1.8 μ V for 20db. quieting
Sender: Output, 0.25W

RANGE

1—2 miles depending on the nature of the terrain.

POWER REQUIREMENTS AND CONSUMPTION

Power: 12V battery
Consumption: 3.5A
In order that power supply variations of between 11 and 16V should not affect production, a carbon-pile voltage regulator is incorporated in the L.T. supply to the filaments. (The battery normally supplies the Wireless set No. 19).

AERIAL SYSTEM

Rod aerial—folding type—5 ft. 6 in. long.

VALVES

| Circuit reference W.S. No. 88, A.F.V. | Type | CV No. | Function |
|--|------|---------|--|
| V1 | 3A4 | CV 807 | Sender power amplifier |
| V2 | 1T4 | CV 785 | Sender frequency-doubler |
| V3 | 1L4 | CV 1758 | Sender master oscillator |
| V4 | 1L4 | CV 1758 | Sender reactor |
| V5 | 1L4 | CV 1758 | Receiver R.F. amplifier |
| V6 | 1L4 | CV 1758 | Receiver mixer and frequency-doubler |
| V7 | 1L4 | CV 1758 | Receiver oscillator and frequency-treble |
| V8 | 1T4 | CV 785 | Receiver 1st I.F. amplifier |
| V9 | 1T4 | CV 785 | Receiver 2nd I.F. amplifier |
| V10 | 1T4 | CV 785 | Receiver 3rd I.F. amplifier |
| V11 | 1L4 | CV 1758 | Receiver limiter |
| V12 | 1A3 | CV 753 | Receiver discriminator |
| V13 | 1A3 | CV 753 | Receiver discriminator |
| V14 | 1S5 | CV 784 | Receiver A.F. amplifier |

Power supply and L.F. amplifier unit No. 2

| | | | |
|----|------|--------|----------------------|
| V1 | DDR3 | CV 135 | Rectifier |
| V2 | DDR3 | CV 135 | Rectifier |
| V3 | 3A4 | CV 807 | Output amplifier |
| V4 | 1S5 | CV 784 | Microphone amplifier |

SPECIAL FACILITIES

Rebroadcast facilities are available on both the Wireless sets No. 19 and No. 88, A.F.V., using control unit No. 16.

END

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