

RESTRICTED

A05-026a

Oct 67



SCHOOL OF SIGNALS

RADIO SET A510

DATA SUMMARY

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General

1. The radio set A510 is a crystal controlled, low power light-weight transmitter-receiver principally intended for operation by long range infantry patrols. It is designed primarily as a one man-pack station. The transmitter and the receiver are separate hermetically sealed units carried in two special web pouches which take the place of the standard basic pouches. The set may be operated as a ground or vehicular station.

Frequency Range

2. The equipment covers a frequency range of 2 to 10 MHz in two bands. Four crystal controlled channels are provided within this range.

Power Supply

3. The set operates from two dry batteries which provide 90 volts HT and 1.5 volts LT. The HT battery incorporates a 7.5 volts PA grid bias battery. The normal life of the battery is approximately 14 hours for continuous operation with a send/receive ratio of 1 to 5.

Working Range

4. Working distances will vary according to conditions and terrain. Typical figures for open country are as follows:

	<u>GROUND WAVE</u>	<u>VOICE</u>	<u>CW</u>
a.	Rod antenna to rod antenna (Manpack or Veh)	2 miles	4 miles
b.	Rod antenna to rod antenna (Ground station)	3 miles	6 miles
c.	Wire antenna to wire antenna	5 miles	10 miles
	<u>SKY WAVE</u>		
d.	Suitable frequency and antenna	40 miles	120 miles

Antennas

5. The following antennas are supplied with each complete station:

- a. Antennas, flexible, 8 ft (Aust) - 2 (one spare) (rod)
- b. Antennas, end-fed, adjustable, 135 ft - 1 (wire)
- c. Antennas, lightweight, 68 ft - 2 (dipole)

Facilities

6. Facilities provide for voice or CW working.

Weight

- | | | | |
|----|----|-----------------------------------|-------------------------------------|
| 7. | a. | Overall weight in transit case | 41 ¹ / ₂ lbs. |
| | b. | Manpack station, with accessories | 24 lbs. |
| | c. | HT battery | 2 ³ / ₄ lbs. |
| | d. | LT battery | 1 ¹ / ₄ lbs. |

Accessories

- | | | | |
|----|----|--|------------------|
| 8. | a. | Antennas, flexible, 8 ft (Aust) | 2 (1 spare) |
| | b. | Antennas, end-fed, adjustable, 135 ft wire | 1 |
| | c. | Antennas, lightweight, 68 ft | 2 (forms dipole) |
| | d. | Pouches, receiver and transmitter each | 1 |
| | e. | Inductors, tuning, 8 ft flexible antenna | 1 |
| | f. | Telephones, hand | 1 |
| | g. | Mic/receiver headgear assembly, L/weight | 1 |
| | h. | Counterpoise assemblies | 1 |
| | i. | Cords, antenna, weighted | 1 |
| | j. | Feeders, antenna, 70 ohm | 1 |
| | k. | Crystal units | 10 |
| | l. | Pouches crystal unit | 1 |
| | m. | Lamps, pilot, 1.5 volts | 2 |
| | n. | Cases, spares, A510 | 1 |
| | o. | Keys, telegraph, L/weight (Aust) No 1 | 1 |
| | p. | User handbook A510 | 1 |
| | q. | Charts, instruction, A510 | 1 |
| | r. | Satchels, Signals | 1 |
| | s. | Cases Transit, A510 | 1 |