WIRELESS SET CANADIAN No. 19 Mk. III

GENERAL DATA

PURPOSE
1. Wireless Set (Cdn.) No. 19 Mk. III was designed for use in Armoured Fighting Vehicles, in various Wireless Trucks, and as a ground station.

DESCRIPTION
2. The following sets are contained in one case:
   "A" set—a low power, high frequency transmitter and receiver.
   "B" set—a low power, very high frequency transmitter and receiver.
   L.C. Amplifier—an audio amplifier for inter-crew communication.

TYPES OF OPERATION
   "B" set—R/T.

FREQUENCY COVERAGE
   "B" set—230—240 Mc/s. (intended for single frequency operation on 235 Mc/s.)

INTERMEDIATE FREQUENCY
5. Intermediate frequency ("A" set)—465 KC/s.

POWER SUPPLY
6. 12 or 24 accumulators driving a dynamotor or vibrator.

Fig. 1—Wireless Set (Cdn.) No. 19 Mk. III and Supply Unit
Current drain—
  13.5 amps. maximum on 12 V. (dynamotor operation).
  7.0 amps. maximum on 24 V. (dynamotor operation).

PERFORMANCE
7. Sender Power Output—
   "A" set
   R.F.  1 watt.
   M.C.W. 2 watts.
   C.W.  4 watts.
   "B" set (unmodulated).
Receiver Sensitivity—
   "A" set
   R.F.  3 mV. for 50 mW. output.
   C.W. 18 mV. for 50 mW. output.
   "B" set
   1600 mV. for 50 mW. output.

AERIAL SYSTEMS
8. "A" set—Three-quarter wave horizontal aerial, OR
   8, 16, 28 or 34 ft. vertical quarter wave rod aerial.
   "B" set—20", half wave vertical rod and tuned coaxial
   feeder.

WEIGHTS AND DIMENSIONS
9. The following table shows the approximate weight and
   dimensions of the various units:

<table>
<thead>
<tr>
<th>Item</th>
<th>Dimensions Inches</th>
<th>Weight Lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Height</td>
</tr>
<tr>
<td>Sender/Receiver</td>
<td>17 3/4</td>
<td>8 3/4</td>
</tr>
<tr>
<td>Supply Unit No. 2</td>
<td>6</td>
<td>8 3/4</td>
</tr>
<tr>
<td>Carrier No. 1</td>
<td>27</td>
<td>10</td>
</tr>
<tr>
<td>Sender/Receiver,</td>
<td>27</td>
<td>10</td>
</tr>
<tr>
<td>Supply Unit and Carrier combined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Valves
10. The following table shows the types of valves used in
    the various stages:

<table>
<thead>
<tr>
<th>Circuit/Ref.</th>
<th>Type</th>
<th>Sender Function</th>
<th>Receiver Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1A 6K7G</td>
<td></td>
<td>R.F. amplifier</td>
<td>V2A 6K85</td>
</tr>
<tr>
<td>V1B 6K7G</td>
<td></td>
<td>Ist. I.F. amplifier</td>
<td>V1C 6K7G</td>
</tr>
<tr>
<td>V3A 6B86</td>
<td>R.T Modulator</td>
<td>M.C.W. Audio Oscillator and Modulator</td>
<td>V2B 6K85</td>
</tr>
<tr>
<td>V5A EF50</td>
<td>R.F. Buffer-Driver</td>
<td>Automatic Drive Control and Meter Drive rectifier</td>
<td>V6A 6A6</td>
</tr>
<tr>
<td>V4A 807</td>
<td>Power amplifier</td>
<td>Not used.</td>
<td>V7A 6H7G</td>
</tr>
<tr>
<td>V8A 6N4G</td>
<td>Modulator.</td>
<td>Superregenerative detector</td>
<td>V1D 6K7G</td>
</tr>
<tr>
<td>V8B 6N4G</td>
<td>Output A.F. amplifier</td>
<td>Ist. A.F. amplifier</td>
<td>V1C 6K7G</td>
</tr>
</tbody>
</table>

H.Q. 76-48-16-14
Page 2

END

Issue 2, May 1944