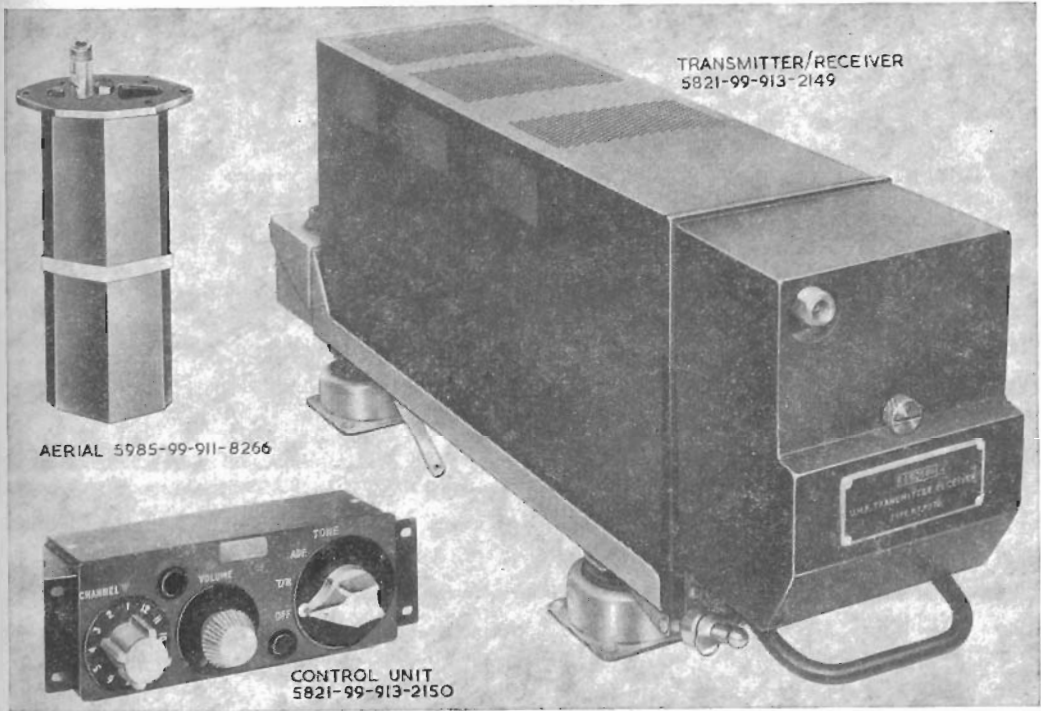


For further information see:
A.P.2531S

ARI.18197/1, 18197/2
U.H.F. LIGHTWEIGHT
COMMUNICATIONS AND
HOMING INSTALLATIONS



ARI.18197/1—Main units

Brief description

The ARI.18197/1 is a non-pressurized, lightweight, 12-channel u.h.f. transmitter-receiver installation for use in small aircraft and helicopters. The ARI.18197/2 is the same basic installation but includes additional equipment to provide homing facilities (azimuth) only.

Power supply

28V d.c. 3.5A on receive, 4.5A on transmit and during channel change.

Frequency range

225 Mc/s to 399.9 Mc/s

Channels

12 preset out of a possible 1750 using miniature plug-in type crystals.

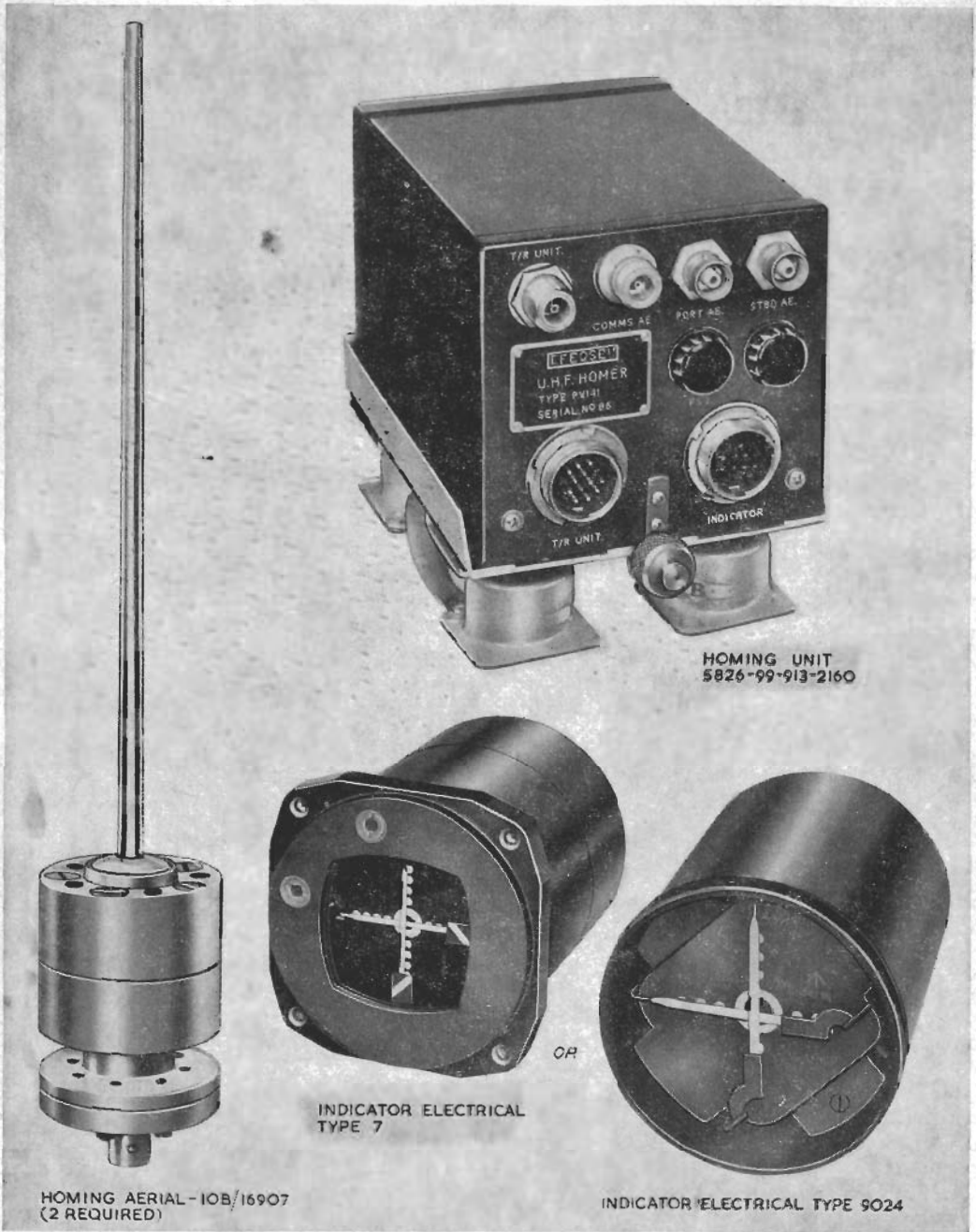
Duty cycle

Maximum transmit/receive ratio 1 : 2 with maximum continuous transmission time of 5 minutes. Receiver rate for continuous use.

Maximum ambient temperature

+55°C at sea level
±25°C at 35 000 ft.

RESTRICTED



T/R UNIT.
COMMS AE
UHF HOMER
TYPE 9141
SERIAL NO 85

PORT AE

STBD AE

INDICATOR

HOMING UNIT
5826-99-913-2160

HOMING AERIAL - IOB/16907
(2 REQUIRED)

INDICATOR ELECTRICAL
TYPE 7

OR

INDICATOR ELECTRICAL TYPE 9024

Homing units of ARI.18197/2

TRANSMITTER

Power output	2 watts nominal
Modulation	Average of 80% to 90% amplitude modulation. R/T or MCW.
Sidetone	225 mW into 50-ohm load.
Microphone	Dynamic balance armature. Input impedance 200 ohms.

RECEIVER

Sensitivity	Output of at least 25mW (at a signal-plus-noise/noise ratio of 10dB) for an open circuit input signal of 5 μ V modulated with a 1000 c/s signal to a depth of 30%.
Selectivity	Bandwidth at 6dB down not less than 90 kc/s. Bandwidth at 60dB down not greater than 200 kc/s.
A.G.C.	Audio output does not rise more than 6dB for r.f. inputs ranging from 10 μ V to 100mV.
Minimum/maximum output	225mW into 50.0 ohm load.
Output characteristic	Relative to response at 1000 c/s 300 c/s + 1dB to -3dB 3000 c/s + 1dB to -4dB
Distortion	Less than 10% at 1000 c/s for 150mW into 150-ohm load.
Aux. output (for homing unit)	Preset to 1.5V r.m.s. into 20000 ohm load for 1mV input signal at 300 Mc/s with 30% modulation at 1000 c/s
Output characteristics	Relative to response at 100 c/s Not more than -3dB at 7Kc/s and -10dB at 20 kc/s.

Weight and Dimensions	Height (in)	Width (in)	Depth (in)	Weight (lb)
Aerial (Communications)	9	3 $\frac{1}{2}$	1	—
Transmitter-receiver	7 $\frac{3}{4}$	5	20	23
Control unit	3	7	3 $\frac{3}{4}$	1 $\frac{1}{4}$
TR Mounting tray	4 $\frac{1}{2}$	5 $\frac{3}{4}$	20 $\frac{3}{4}$	2
H/oming unit	4 $\frac{1}{2}$	4 $\frac{7}{8}$	8 $\frac{3}{8}$	4
Homing unit mounting tray	1 $\frac{1}{2}$	5 $\frac{1}{4}$	8 $\frac{3}{4}$	11 oz.

Homing aerials (each) 12 in. long approx. 1 $\frac{1}{2}$ in diam.
(2 required)

***Indicator Type 7** Front flange 3 $\frac{1}{4}$ in. \times 3 $\frac{1}{4}$ in., body 3 $\frac{1}{8}$ in. diam.
4 $\frac{1}{2}$ in. long overall, weight 1 $\frac{1}{2}$ lb.

***Indicator Type 9024** 3 $\frac{3}{8}$ in. diam. 4 $\frac{1}{4}$ in. long approx.

* **Note.**—One indicator only is required for an installation, either Type 7 or Type 9024

RESTRICTED

Reference numbers:

Aerial aircraft (communications) 5985-99-911-8266

Transmitter-receiver, radio 5821-99-913-2149

Control unit, radio set 5821-99-913-2150

Rack electrical equipment (T/R mounting tray)
5975-99-913-2152

Homing group radio (homing unit) 5826-99-913-2160

Rack electrical equipment (homing unit mounting tray)
5975-99-913-2151

Aerials aircraft Type 11421 (homing aerial) 10B/16907

Indicator electrical Type 7 10Q/61

Indicator electrical Type 9024 10Q/98