

For further information see—
A.P. 116D-0125-1

ARI. 18041
(TRANSMITTER-RECEIVER TYPE TR. 2002)



Transmitter-Receiver TR.2002

Function	Single-channel v.h.f. communications equipment for airborne use
Type of transmission	Voice
Frequency	121.5 MHz
Frequency control	Crystal-controlled; separate crystals for transmitter and receiver
Crystal mult. factor	Transmitter, 12; receiver, 8
Power supply	24V d.c., normally derived from two 12V accumulators housed in battery box type 15
Power consumption	Not above 62W
Range	Approx. 80 nautical miles at 5000 ft

TRANSMITTER

Type	Transmitter unit Type 98
Ref. No.	10R/176
R.F. output	Minimum of 1W into 45-ohm line
Modulation and harmonic content	Amplitude modulation up to 100 per cent. With a 1000 Hz tone, 80 per cent modulated, the harmonic content is not greater than 12 per cent
Audio frequency response characteristic	With a constant input giving 80 per cent modulation depth at 1000 Hz, the output for a frequency excursion of 500 to 3000 Hz is within ± 4 dB relative to the output at 1000 Hz. Below 500 Hz the attenuation exceeds 5dB per octave relative to the level at 500 Hz.

RESTRICTED

RECEIVER

Type	Receiver unit Type 127
Ref. No.	10P/13202
Intermediate frequency	9.72 MHz \pm 0.01 per cent
I.F. bandwidth	At 6dB down, not less than \pm 35 kHz. At 40dB down, not greater than \pm 130 kHz
Sensitivity	The r.f. input required to obtain 30 μ A diode current is not greater than 10 μ V
Signal/noise ratio	For an r.f. input of 10 μ V modulated at 1000 Hz to a depth of 30 per cent, the signal-to-noise ratio is not less than 20 dB.
Second channel suppression	Not less than 50 dB
A.G.C.	For an increase in r.f. input from 10 μ V to 100 mV the increase in demodulator diode current is not more than +6dB

Note . . .

All r.f. inputs are quoted as open circuit voltages from a 50-ohm source.

PRINCIPAL ITEMS OF ARL18041

Ref. No.	Item	Height	Dimensions (in.) Width	Depth	Weight (lb.)
10D/17997	Transmitter-receiver Type TR. 2002	7 $\frac{1}{4}$	4 $\frac{3}{4}$	12	9
10AJ/212	Mounting Type 1031 (the mounting increases the o.a. height of the T.R. by 1 in.)				
10AP/189	Boxes, battery, Type 15	5 $\frac{1}{4}$	4 $\frac{3}{4}$	11 $\frac{1}{4}$	12 (with batteries)
10L/292	Attenuator units Type 7157				
10B/16566	Aerials, aircraft, Type 226				