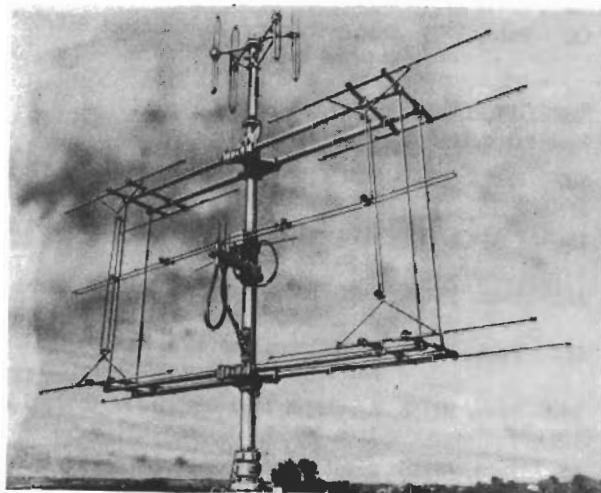


TYPE 281BQ

SUMMARY OF DATA

PURPOSE	Long range Aircraft Warning and Height estimation.
FREQUENCY	86 Mc/s, 88 Mc/s or 90 Mc/s (spot frequencies)
WAVELENGTH	3.5, 3.4 or 3.3 metres (approx.)
PEAK POWER OUTPUT	350 kW
PULSE REPETITION FREQUENCY	50 or 100 pulses per second
PULSE LENGTH	5 microseconds
BEAM-WIDTH	35° horizontal
AERIAL ROTATION SPEED	2 or 4 revs. per minute
INTERMEDIATE FREQUENCY	12 Mc/s
RECEIVER BANDWIDTHS	(1) 150 kc/s (11) 1.5 Mc/s



AERIAL OUTFIT AQB

POWER REQUIREMENTS AND CONSUMPTION	230V 50 c/s single phase (281BQ Power Supply Outfit)
	230V 50 c/s three phase (A.C. Supply Outfit DFB)
	220V D.C.)
) from ships mains
	24V D.C.)
	180V 500 c/s (from nearest W.S. office)
HEAT DISSIPATION IN OFFICE	Receiver 1.45 kW Transmitter 11 kW

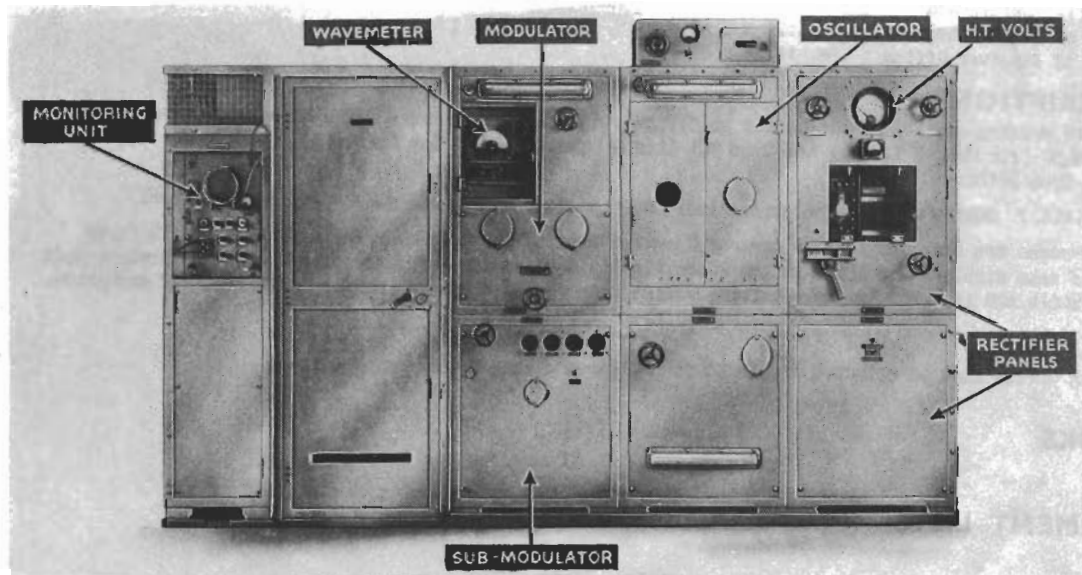
MAJOR UNITS**(a) Transmitter Office**

1. Patt. W1130 Panel 3AB, Transmitting (upper)
2. Patt. W1131 Panel 3AB, Transmitting (lower)
3. Patt. 59320 Panel 3BU, Modulator (upper)
4. Patt. 59321 Panel 3BU, Modulator (lower)
5. Patt. 59322 Panel 3BU, Rectifier (upper)
6. Patt. W1133 Panel 3AB, Rectifier (lower)

Blowers

7. Patt. W9353 Blower, electric (2 in No.)
8. Patt. W2126 Starter for Patt. W1818 Blower
9. Patt. W7391 Blower, electric

Items 7, 8 and 9 are housed in Patt. W1724 Framework.



VIEW OF TRANSMITTER

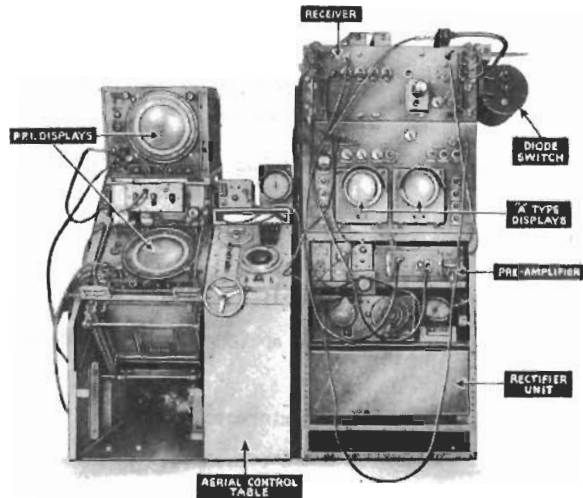
TEST EQUIPMENT

10. Patt. W882 Wavemeter G70 (housed in Patt. W1724 Framework)
11. Patt. W1913 Comparator Unit Design A (housed in Item 1)
12. Patt. W881 Wavemeter G69 (housed in Item 3)
13. Patt. W879 Supply Unit for Wavemonitors G68/69 (housed in Item 1)

b) Receiving Office

Receiver Outfit CPL consisting of:-

14. Patt. 55342 Amplifier M81 (housed in Patt. 57831 Framework)
15. Patt. 57279 Attenuator Unit Design 13 (housed in Item 22)
16. Patt. 53186 Performance Meter Design 1 (housed in Patt. 57832 Framework)
17. Patt. 54978 Calculator, Design 1 (housed in Patt. 57831 Framework)
18. Patt. W1158 Rectifier Unit Design 'F' (housed in Item 22)
19. Patt. 57766 Swept Gain Unit, Design 2 (housed in Patt. 57531 Framework)
20. Patt. 57931 Receiver P107 (housed in Item 22)
21. Patt. 56952 Filter Unit Design 15 (housed in Patt. 57831 Framework)
22. Patt. 57884 Panel L50
23. Patt. 58284 Power Unit for Panel L50 (housed in Patt. 57831 Framework)
24. Patt. 59366 Filter Unit Design 31 (Part of Aerial)



RECEIVING PANELS & DISPLAYS

(c) Aerial Outfit AQB with Control Unit 20L, Patt. 54357

(See separate data sheet)

Associated Power Supply Outfit (1) A.C. Supply Outfit DPB

- | | |
|---|--|
| (2) Patt. W999/B Alternator Motor 14 kVA (2 in No.) | Patt. W1708/A Board 2AB |
| Patt. 6942A Starter for 14 kW M.A. (2 in No.) | Patt. W440A Board 2AA, Supply |
| x Patt. 53903 Booster, Reversing Des. 2 | Patt. W441A/B Board 2AA, Supply |
| Patt. W474B Board 2AA Distributing (lower) | x Patt. 53901A Board, Synchronising, (upper) |
| Patt. W1150 Board 2AB Distributing (upper) | Patt. W2192 Board, Voltage Control, Des. A |
| Patt. W443A/B Board 2AA Regulating | x Patt. 53907 Board, Voltage Control, Des. C |
| Patt. W444A/B Board 2AA Regulating | |

x These items are only fitted where Type 281BQ is fitted in conjunction with Type 79B.

PHYSICAL DATA

Weight of Apparatus in Transmitter Office (including power supply control and distribution panels)	- 39 cwt
Weight of Apparatus in Receiving Office (including distribution panels etc.)	- 32 cwt
Weight of Motor Alternators, Starters	- 38 cwt
Weight of Spare Stores	- 14 cwt
Weight of Aerial Outfit AQB	- 12 cwt
Minimum size of Transmitter Office	- 12' x 9'6"
Minimum size of Receiver Office	- 11'3" x 8'

BRIEF DESCRIPTION

Long range air warning and height estimation set fitted in cruisers and above. The associated interrogators fitted are Type 243Q (for Mark 3 I.F.F.) and Type 941 (for G Band I.F.F.) The following displays are used in conjunction with Type 281BQ:-

Outfit JE (P.P.I.) Outfit JJ1 (height estimation) Outfit JH2 (interrogation) Outfit JK (Skiatron)

Two office A-scans are also provided as part of Receiver Outfit CPL. Normally in ships fitted with Types 281BQ/277/293 the main displays are sited in the Radar Display Room and the Air Direction Room. The Control Unit 20L for Aerial Outfit AQB is sited in the receiving office with the JE displays (coupled pair) mounted alongside.

REMARKS

The Receiving Office must be situated within 50 ft cable run of the Transmitting Office.

HANDBOOKS

B.R.1519(1)(2)

ESTABLISHMENT LISTS

E421 (Type 281BQ and Receiver Outfit CPL)
E772 (Aerial Outfit AQB)

INSTALLATION SPECIFICATIONS

B526/R1 (Type 281BQ)
B527 (Aerial Outfit AQB)