

RADAR TYPE 992Q

992Q

SUMMARY OF DATA

PURPOSE

Target indication Set for use with ADAWS Mk. 1 for GWS 2 and as replacement for earlier Types 992.

BRIEF DESCRIPTION

Radar Type 992Q is a high-power, S-band medium range surveillance radar using modern, solid state techniques and a parametric amplifier. The frequency band is covered by three interchangeable, water-cooled magnetrons. The equipment is fully interlocked and can be remotely controlled.

FREQUENCY

2944 - 3052 MHz
in 3 bands:
CV 2168 3034 - 3052 MHz
CV 2169 2989 - 3007 MHz
CV 2170 2944 - 2962 MHz

P.R.F. 750, 500, 250 p/s
Normally from Pulse
Synchronising Outfit

RECEIVER Separate, high accuracy receiver

RECEIVER BANDWIDTH 600 kHz logarithmic

HEAD AMPLIFIER I.F. OUT 13.5 MHz

AERIAL Outfit ADN(1)

Beam width - horizontal $1\frac{1}{2}^{\circ}$
- vertical 30°
Tilt - 15° above horizontal

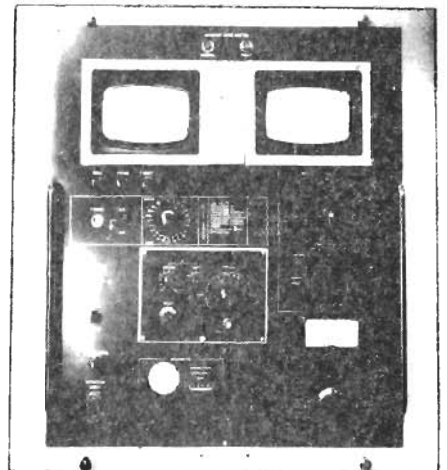
PULSE DURATION 2 μ s Fixed

R.F. PEAK POWER OUTPUT 1.75 MW

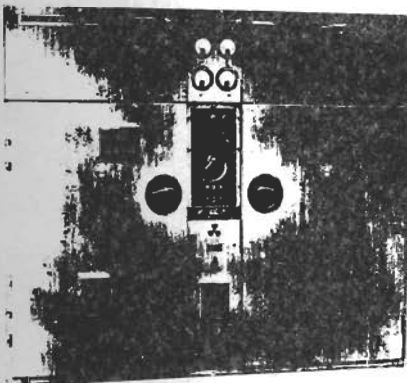
MONITORING

The Cabinet Monitor, Transmitter provides comprehensive facilities including:

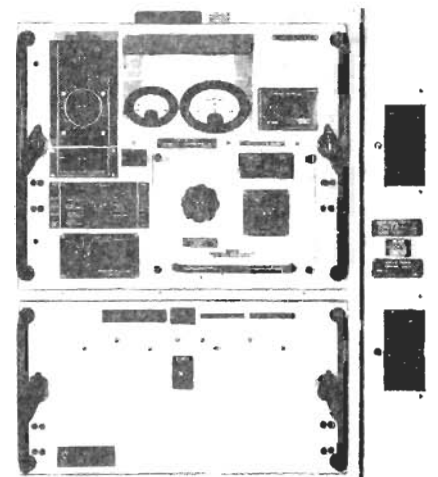
1. A waveform Monitor for the eleven principal waveforms.
2. A general purpose oscilloscope and attenuating probe.
3. A direct reading wavemeter for the Transmitter Frequency.



CABINET
MONITOR-TRANSMITTER



TRANSMITTER, MODULATOR AND CONTROL CABINETS



CABINET
RECEIVER & MONITOR

MAJOR UNITS

The transmitter is assembled in three cabinets mounted horizontally on their sides, one above the other. These are, from bottom to top:-

A.P.173450 CABINET, MODULATOR (Cabinet 1) (Bottom)

containing:- Magnetron and its assembly.
A.P.173476 Modulator Sub-Assembly, Thyatron
A.P.173477 Modulator Sub-Assembly, Charging and Protection
A.P.173478 Modulator Sub-Assembly, Charging and Filter

A.P.173451 CABINET, TRANSMITTER (Cabinet 2) (Middle)

containing:- A.P.173461 Power Supply Low Voltage
A.P.173463 Waveguide Assembly (including T-R switches)
A.P.173479 Transmitter Sub-Assembly, Contactor and Fusing
A.P.173480 Transmitter Sub-Assembly, Regulator H.T.
A.P.173481 Transmitter Sub-Assembly, Generator H.T.
A.P.173488 Power Supply 115 V.

A.P.173452 CABINET, CONTROL (Cabinet 3) (Top)

containing:- A.P.173458 Mixer and A.F.C.
A.P.173460 Control Modulator
A.P.173462 Generator Trigger
5840-99-520-7015 Parametric Amplifier (with 5840-99-521-2595 Control, Amplifier)

The Transmitter, Monitor and the High Accuracy Receiver are assembled in two cabinets, one above the other. The Transmitter, Monitor is at the top.

5840-99-520-1774 CABINET MONITOR, TRANSMITTER

containing:
5840-99-522-4031 MONITOR, PERFORMANCE
A.P.172855 CABINET RECEIVER AND MONITOR
containing:- 5840-A.P.172857 Drawer Receiver and Monitor
5840-A.P.172858 Drawer Power Supply

PHYSICAL DATA

	Height	Width	Depth	Weight
Modulator - Transmitter Assembly	67½ in	78½ in	28½ in	2400 lb
Cabinet Monitor Transmitter } Cabinet Receiver and Monitor }	55½ in	26½ in	25½ in	500 lb
				Rx. Mon. only

POWER REQUIREMENTS AND CONSUMPTION

Main Supply 440 V, 60 Hz, 3 ph., 9 kVA to Modulator - Transmitter Assembly

COOLING

	AIR	CHILLED WATER
992Q Transmitter - Modulator	600 ft ³ /min	40 gal/hour

HANDBOOKS

B.R.2499(1-5) series (3 volumes)
B.R.2524(1)(2)(3) series, (3 volumes) Aerial Outfit ADN }
B.R.2429 High Accuracy Receiver Outfit CEQ }

INSTALLATION SPECIFICATION

B1026

ESTABLISHMENT LISTS

S1481, E1439 (Outfit ADN), E1174 (W.G. Outfit Size 10 No. 1), S1519 (Outfit CEQ)