PURPOSE

G.C. (Gun Camera) Close range, sets for V.I.A.S. blind fire for close range weapons. Type 262(1)M is fitted to the B.T.A.A.O. Mark 2 Mounting, Type 262(2)M is fitted to the C.R.H.P. Director Mark 2M.

9500 - 9900 Mef/s.
3.03 - 3.13 cm.
30 kHz. (peak)

1500 pulses per second.

.5 microsecond.

5,200 (6 db down)

30 Mef/s.

4 Mef/s.

260 volts D.C. 2.5 kJ from ship's mains (for radar equipment only).

FREQUENCY

WAVELENGTH

POWER OUTPUT

PULSE REPEITION

PULSE LENGTH

BEAM-WIDTH

INTERMEDIATE FREQUENCY

RECEIVER BANDWIDTH

POWER REQUIREMENTS

MAJOR UNITS

TYPE 262(1)M

1. Ptt. W64458 Panel 3 M.M Transmitting & Receiving
2. Ptt. W64460 Transmitter-Receiver Unit Design 1
3. Ptt. W64462 Modulator Unit Design 1
4. Ptt. W64458 Autostrobe & Amplifier Unit Design 1
5. Ptt. W64458 C.R. Unit Design 17

TYPE 262(2)M

1. Ptt. W64731 Panel 3 M.M. Rectifying & Auto Control
2. Ptt. W64460 Autostrobe & Amplifier Unit Design 1
3. Ptt. W64458 C.R. Unit Design 17
4. Ptt. W64458 Servo Unit Design 1
5. Ptt. W64458 Modulator Unit Design 1
6. Ptt. W64458 Rectifier Unit Design 34
7. Ptt. W64458 Search Unit Design 1

Cable A

1. Ptt. W64494 Panel 3 M.M Transmitting & Receiving
2. Ptt. W64494 Transmitter-Receiver Unit Design 1
3. Ptt. W64494 Modulator Unit Design 1
4. Ptt. W64494 Autostrobe & Amplifier Unit Design 1
5. Ptt. W64494 C.R. Unit Design 17

Cable C

1. Ptt. W64494 Panel 3 M.M Rectifying & Range Finder
2. Ptt. W64494 Range Transmitting Unit Design 1
3. Ptt. W64494 Rectifier Unit Design 34

Cable D

1. Ptt. W64494 Blower 22A
2. Ptt. W64494 Blower Unit

Cable E (U.K. Provision)

1. Ptt. W64494 C.R. Unit Design 22
Items 2, 3, 4, 5, 6 and 7 are housed in Item 1.
Items 7 and 8 are housed in Item 6.
Items 10 and 11 are housed in Item 9.
Item 12 is housed in Item 10.
Item 14 is housed in Item 15.

POWER SUPPLY OUTFIT

The power supply arrangements are an integral part of the equipment and comprise the following units:

Patt. 53570 Motor alternator 2 kV
Patt. 54680/A Starter Assembly for 1 H.P. Motor
Patt. 5604/A Motor 1,2 H.P.

The Patt. 53570 Motor Alternator provides the following supplies:
- 80 volts 1500 a/c 2 kw and 22 volts D.C. 0,5 kw.

AERIAL OUTFIT

Aerial Outfit 466(1) is fitted to Type 262(1)HM and Aerial Outfit 466(2) to Type 262(2)HM. Aerial APE consists essentially of a 1 ft paraboloid reflector mounted on a shaft of a motor rotating at 1000 rpm per minute.

BRIEF DESCRIPTION

Types 262(1)HM and 262(2)HM are fitted to the R.A.F., Mark 2M mounting and C.R.A.F. Director Mark 2M respectively to enable the guns to be aimed automatically or manually at unseen aircraft targets, and to provide range which is fed automatically and continuously to the calculating mechanism under all conditions of firing. In order to make accurate aiming possible, the radar beam is very narrow and the set is not therefore suitable for all round searching and detecting of targets. The equipment is only fitted in ships having a target indicating set (Type 225) and so ranges and bearing of the target to be engaged by the aiming will be sent from the Target Indicating Unit. Type 262 then searches a small amount of range bearing and elevation (Range 1,750 yds in 30 degrees per 1 sec at 1250 yds in 1 degree per 2 sec and Elevation 0 to 25° at 2° per sec). As soon as the target is detected, the search stops automatically, the radar beam is kept locked on the target and the set provides automatic or radar aiming as desired.

The complete radar equipment is housed in fire watertight outbuildings on the mounting or director.

Preliminary servicing of the equipment can be performed without removing the units. The majority of the operating controls and displays are on the door of Cabiste A (Type 262(1)HM) or Cabiste F (Type 262(2)HM). A series of books under the general title D.A.262/H and D.A.262/HM.

HANDBOOKS

EH85 (Types 262(1)HM and 262(2)HM) E725 (Aerial Outfits 466(1), 466(2)).

ESTABLISHMENT LIST

5607 (Type 262(1)HM) 5642 (Type 262(2)HM)
PURPOSE

G.C. (Summary Close range) sets for H.A./L.A. blind fire for close range weapons. Type 262(1)P is fitted to B.T.A.A./A. Mark 3M Mounting. Type 262(2)P is fitted to the J.A.A./A. Perivale Marks 2A, 3, 7 and 9.

FREQUENCY

WAVELENGTH

9500 - 9900 Hz/s

3.05 - 3.13 cm

POWER OUTPUT

30 kW (peak)

PULSE REPERTITION

1500 pulses per second

PULSE LENGTH

0.5 microseconds

BEAM-WIDTH

5.2° (6 dB down)

INTERMEDIATE FREQUENCY

30 Hz/s

RECEIVER BANDWIDTH

14 Hz/s

POWER REQUIREMENTS

220V 400Hz, 2.5 kW from ship's mains (for radar equipment only).

MAJOR UNITS

**Type 262(1)P**

**Cubicle A**

1. Patt. 6113A Panel 30E
2. Patt. 68028 Transceiver 768
3. Patt. W9680/6397% Modulator Unit
4. Patt. 70165 Auto Strobe Des. 5
5. Patt. 66966 Ch Unit Design 47

**Cubicle B**

6. Patt. W9689H control Unit 80K
7. Patt. 63880 Servo Unit Des. 5
8. Patt. 63981A Search Unit Des. 66A

**Cubicle C**

9. Patt. W9689A Panel 38E
10. Patt. 56400 B.T.U. Des. 57
11. Patt. W9689H Rectifier Unit Des. 34

**Cubicle D**

12. Patt. 59446A Blower 28A
13. Patt. 56400A Blower Unit

**Type 262(2)P**

**Cubicle F**

1. Patt. 6113A Panel 30E
2. Patt. 70165 Auto Strobe Des. 5
3. Patt. 66446 Ch Unit Design 47
4. Patt. 66966 Servo Unit Des. 5
5. Patt. W9689C/6397% Modulator Unit
6. Patt. W9689H Rectifier Unit Des. 34
7. Patt. 63981A Search Unit Des. 66A

**Cubicle G**

8. Patt. 56473 Indicator Ch Design 1
9. Patt. 56472 Control Unit Des. 27
10. Patt. 56489 C.U.U. Des. 22

**Cubicle H**

11. Patt. 44138 T.A. 10U
12. Patt. 66528 Trans-Rectifier 768

**Cubicle J**

13. Patt. 56472 Range Follower 28A
14. Patt. 56400 B.T.U. Des. 57
POWER SUPPLY OUTFIT

The power supply arrangements are an integral part of the equipment and comprise the following units:

- P/N 33770 Motor Alternator 28 kW
- P/N 56728 Starter Assembly for 1 S.P. Motor
- P/N 56717 Motor 12 S.P.
- P/N 59728 Regulator, Auto Voltage Control, Carbon Plate Type, Design 0
- P/N 56736 Governor Air Design 1 (Type 2601P only)
- P/N 67006 Governor Air Design 2 (Type 2602P only)

P/N 33770 Motor Alternator provides the following supplies:

- 50 volts: 1500 amp. 2 kw and 28 volts d.c. 0.5 kw

AERIAL OUTFIT

Aerial Outfit A1601 is fitted to Type 2601P and Aerial Outfit A1602 to Type 2602P. Aerial APE consists essentially of a 1 ft paraboloid reflector mounted on the shaft of a motor rotating at 1000 rpm.

BRIEF DESCRIPTION

Types 2601P and 2602P are fitted to the S.T.D.A.D.G. Part 3B mounting and G.A.S.G. Director items 2, 3, 7 and 9 respectively to enable the guns to be aimed automatically or manually at unseen aircraft targets, and to provide range which is fed automatically and continuously to the calculating mechanisms under all conditions of firing. In order to make accurate aiming possible, the radar beam is very narrow and the set is therefore suitable for all round searching and detecting of targets. The equipment is only fitted in ships having a target interesting set (Type 203) and the range and bearing of the target to be engaged by the mounting will be sent from the target indicating unit. Type 2602P then generates a small amount of range, bearing and elevation (range ± 750 yards in 20 steps per sec., bearing ± 1 degree 1 minute per sec., and Elevation 0 to 90 degrees at 5 degrees per sec.). As soon as the target is detected, the search stops automatically, the radar beam is kept locked on to the target and the set provides automatic or manual aiming as desired.

The complete radar equipment is housed in fire water-tight cabinets on the mounting or director. Preliminary servicing of the equipment can be performed without removing the units. The majority of the operating controls and displays are on the door of Cabinet A (Type 2601P) or Cabinet B (Type 2602P).

HANDBOOKS


ESTABLISHMENT LIST

- 2607 (Type 2601P and 2602P)
- 2655 (Aerial Outfit A1601, A1602)

INSTALLATION SPECIFICATION

- 2607 (Type 2601P)
- 2655 (Type 2602P)
PURPOSE:
Associated radar set of the C.A.R.F.D. Mark 5 fitted as part of the Medium Range System Mark 8 (M.R.S.8).

Type 262(q) is fitted in a.c. ships.
Type 262(q) is fitted in a.c. ships.

FREQUENCY
9580 - 9900 Hz/s

WAVELENGTH
3.03 - 3.13 cm

POWER OUTPUT
2kW (peak)

PULSE REPEATER FREQUENCY
1500 pulses per second

PULSE LENGTH
0.5 microsecond

BEAM WIDTH
5.2° (6 db down)

INTERMEDIATE FREQUENCY
50 Hz/s

POWER REQUIREMENTS
UACN 60 a/s 3 phase for radar generator in a.c. ships
220V 400 c/s for radar generator in a.c. ships

RECEIVER BANDWIDTH
4 Hz/s

MAJOR UNITS

CUBICLE F1
1. Fait. GR98 Panel 30(A) Mod. Rect. and Auto Control
2. Fait. DJ99 Modulator Unit 7FN
3. Fait. WQA5 Rectifier Unit Des. 54
4. Fait. G3680 Search Unit Des. 6
5. Fait. G3881A Search Unit 6HA

CUBICLE F2
6. Fait. G1990 Control Unit Des. 120
7. Fait. DJ996 Auto Stroke and Amplifier Unit Des. 4
8. Fait. G286 Cathode Ray Unit Des. 17

CUBICLE H
10. Fait. G156B Transmitter-Receiver 70B

TYPE 262 (2) Q
FITTED IN C.R.B.F.D.
MK. 5

The units are housed in watertight cubicles as follows:
CUBICLE J
11 Patt. 62035 Range Follower 60A
12 Patt. 54036 Range Transmitting Unit Des. 57

CUBICLE K
13 Patt. 56174/A Blower 22B
14 Patt. 54038/A Blower Unit 220V d.c.
15 Patt. 57172 Control Unit Des. 27 fitted as integral part of C.O.'s Dial Panel. TYPE 202 (C) Q

CUBICLE FI
1 Patt. 66099 Panel 300(W) Mod. sect. and Auto Control
2 Patt. 64970 Modulator Unit 57R
3 Patt. 54036 Rectifier Unit Des. 56
4 Patt. 63100 Servo Unit Des. 6
5 Patt. 63101 Search Unit 66A

CUBICLE F2
6 Patt. 60170 Control Unit Des. 121
7 Patt. 64196 Auto Strobe and Amplifier Unit Des. 4
8 Patt. 64198 Cathode Ray Unit Des. 67

CUBICLE H
9 Patt. 61165 Transmitter-Receiver 10U
10 Patt. 66639 Transmitter-Receiver 7M0

CUBICLE J
11 Patt. 62035 Range Follower 60A
12 Patt. 54036 Range Transmitting Unit Des. 57

CUBICLE K
13 Patt. 67107 Blower 22B
14 Patt. 66703 Blower Unit 220V 3 phase
15 Patt. 57172 Control Unit Des. 27 fitted as integral part of C.O.'s Dial Panel.

POWER SUPPLY OUTFIT
As for Type 256(2) and 266(1).

AERIAL OUTFIT
Aerial Outfit APR(2) which consists of a parabolic reflector fed by a flare from the waveguide system. The aerial reflector rotates at 1500 revs per minute.

BRIEF DESCRIPTION
Types 256(2) and 266(1) fitted in C.O.'s. F.D. Mark 5 as part of the H.A.S.B. The radar beam is very narrow and the set is therefore suitable for all round searching and detecting of targets. Range and bearing of the target to be engaged is provided by the C.O.'s. Type 262 then searches a small amount in range, bearing and elevation (range 2700 yards about the mean range, bearing 5°, elevation at 5° per sec.) When the target is detected, the search stops automatically, the radar beam is locked on to the target and the set provides auto-ranging under all conditions of operation, and auto-following as applicable.

The majority of the radar operating controls and displays are on the door of Cubicle F2. Certain controls are duplicated on the C.O.'s Dial Panel. It should be noted that the Auto-radar switch on the door of Cubicle F2 is, at all times, to be left in AUTO.

HANDBOOK C.O.(A) ............

ESTABLISHMENT LIST E.4155
PURPOSE

G.C. (Summary Close range) sets for R.A./A.A. blind fire for close range weapons in A.G. Ships. Type 262(5)P is fitted to R.A./A.A. Mark 3 Housing, Type 262(6)P is fitted to C.A.B./F. Director Mark 4.

FREQUENCY

9500 - 9500 Hz/s

WAVELENGTH

3.03 to 3.15 cm

POWER OUTPUT

30 kw (peak)

PULSE REPETITION FREQUENCY

1500 pulses per second

PULSE LENGTH

0.5 microseconds

BEAM WIDTH

5x2° (6 db down)

INTERMEDEIATE FREQUENCY

30 Hz/s

POWER REQUIREMENTS

440 volts, 60 Hz, 3 A for radar generator

RECEIVER BANDWIDTH

4 Hz/s

MAJOR UNITS

The sets are housed in watertight cubicles as follows:

Type 262(5)P

Cubicle F1

1. Patt. 61156A Panel XCR
2. Patt. 61566/6371A Modulator Unit
3. Patt. 61688B Rectifier Unit Des. 56
4. Patt. 636680 Servo Unit Des. 6
5. Patt. 636814 Search Unit Des. 66A

Cubicle F2

6. Patt. 61156B Control Unit Des. 76
7. Patt. 79045 Auto Strobe Des. 5
8. Patt. 63686 C.R.O. Des. 47
9. Patt. 79270 Control Unit Des. 27

Type 262(6)P

Cubicle F1

1. Patt. 61156A Panel XCR
2. Patt. 61566/6371A Modulator Unit
3. Patt. 61688B Rectifier Unit Des. 56
4. Patt. 636680 Servo Unit Des. 6
5. Patt. 636814 Search Unit Des. 66A

Cubicle F2

6. Patt. 61156B Control Unit Des. 76
7. Patt. 79045 Auto Strobe Des. 5
8. Patt. 63686 C.R.O. Des. 47
9. Patt. 79270 Control Unit Des. 27

Cubicle B

10. Patt. 61152 Transmitter-Receiver 10W
11. Patt. 63688 Transmitter-Receiver 7A

10. Patt. 61152 Transmitter-Receiver 10W
11. Patt. 63688 Transmitter-Receiver 7A
POWER SUPPLY OUTFIT

The power supply arrangements are an integral part of the equipment and are as follows:-

(a) 60 volts 60 c/s, 3 kW supply from the ship’s mains is fed to the Housing Control Panel (D.E.E., provision) and hence to

- (a) 110 volts 120 c/s, 11 kW Generator which supplies
  - 80 volts 1500 c/s, 1.6 kW
  - 22 volts d.c., 0.3 kW

(b) A 5 kVA transformer (D.E.E., provision) which supplies

- 220 volts 50 c/s, 1 kW (for cabine heaters)
- 150 volts 50 c/s, 5 kW (for radio control circuits)
- 60 volts 60 c/s, 5 kW (for searchlight)
- 26 volts 60 c/s, 1 kW (for firing and illuminating circuits)

(c) Blower Motor, Gun Barrel Water Heaters, Oil Pump, Drawing Motor, Water Pump Motor.

NOTE: The Mounting Control Panel and 5 kVA transformer are fitted in Type 262(53) only. In Type 262(63) the supplies in (b) are obtained from fitted structural junction boxes.

AERIAL OUTFIT

Aerial Outfit APES(2) which consists of a parabolic reflector fed by a flare from the waveguide system. The aerial rotates at 1000 r.p.m.

BRIEF DESCRIPTION

Types 262(53) and 262(63) are fitted to the S.T.A.A.C. Mark 3 mounting and C.R.H.T, Director Mark 4, respectively. In 262, ships’ antennas are fixed and the set is therefore suitable for all round searching and detecting of targets. The equipment is only fitted in ships having a target indicating set (Type 213) and range and bearing of the target to be engaged by the mounting will be sent from the target indicating unit. Type 262 then searches a small amount of range, bearing and elevation, (range 125 yards in 30 seconds per second, bearing 5° in one sweep per two seconds and elevation 5 to 60° at 5° per second). As soon as the target is detected, the search stops automatically, the radar beam is locked on to the target and the set provides automatic or manual aiming as desired.

The majority of the operating controls and displays are on the door of Cabine 22. Certain controls and one display are duplicated in Cabine Ray Unit Des. 22 situated at the Control Office position.

HANDBOOK

B.R.A.20674/13 Type 262(53)
B.R.A.20674/4 Type 262(63)

ESTABLISHMENT LIST

E1079 (Types 262(53) and 262(63))
E725 (Aerial Outfit APES(2))

INSTALLATION SPECIFICATION
PURPOSE

O.C. (Dummy Close Range) sets for W/USN blind fire for close range weapons on A.C. Ships. Type 262(5)M is fitted to S.T.A.A.G. Mark 3 mounting. Type 262(6)M is fitted to C.R.A.P. Director Mark 4.

FREQUENCY

9500 to 9900 Hz/s.

WAVELENGTH (FREQUENCY)

5.03 to 5.13 cm.

POWER OUTPUT (PEAK)

30 kW.

PULSE REPEITION FREQUENCY

1500 pulses per second.

PULSE LENGTH

0.5 micro seconds.

BEAM WIDTH

5.2° (5 db down).

INTERMEDIATE FREQUENCY

50 Hz/s.

POWER REQUIREMENTS

440 volts 60 cycles 3 phase for radar generator.

The units are housed in watertight cubicles as follows:

TYPE 262(5)M

1. Patt. 66762 Control Unit Design 62.
2. Patt. 66769 Modulator Unit Design 1.
3. Patt. 66768 Rectifier Unit Design 36.
4. Patt. 540978 Servo Unit Design 7.
5. Patt. 66759 Search Unit Design 1.
6. Patt. 66760 Range Follower 23E.
7. Patt. 540918 Range Transmitting Unit Design 57.
8. Patt. 66758 Blowover 28E.
9. Patt. 66752 Blower Unit 440 volts 3 phase.

NOTE: Items 1 to 7 are in 1, Items 8 and 9 are on side of Cubicle F2, Items 11 and 12 are in 12, Item 13 is in 14.

TYPE 262(6)M

1. Patt. 66760 Control Unit Design 62.
2. Patt. 66758 Auto Stroke and Amplifier Unit Design 17.
3. Patt. 66759 Cathode Ray Unit Design 17.
4. Patt. 66760 Control Unit Design 27.
5. Patt. 66759 Search Unit Design 1.
6. Patt. 540918 Range Transmitting Unit Design 57.
7. Patt. 540918 Range Follower 23E.
8. Patt. 66752 Blower Unit 440 volts 3 phase.

NOTE: Items 1 to 7 are in 1, Item 9 is on side of Cubicle F2, Items 11 to 14, Item 13 is in 12, Item 15 is in 14.
The power supply arrangements are an integral part of the equipment and are as follows:

(a) Pkt. 66/753 A.C./D.C. A.C. Generator which supplies
80 volts 1500 cycles 1.5 kw
22 volts D.C. 0.3 kw

(b) A 2.00 kVA Transformer (O.E.E. provision) which supplies
220 volts 60 cycles single phase (For control circuits)
150 volts 60 cycles 3 phase (For A.G.B.)
50 volts 60 cycles 3 phase (For illuminating circuits)
24 volts 60 cycles single phase (For lighting and illumination circuits)

(c) Blower Motor, Gun Barrel Water Heaters, Oil Pump Drawing Motor, Water Pump Motor.

NOTE: The Mounting Control Panel and 2.00 kVA transformer are fitted in Type 262/15M only. In Type 262/16M the supplies in (b) are obtained from fitted structural junction boxes.

AERIAL OUTFIT

Aerial Outfit AP(2) which consists of a parabolic reflector fed by a flare from the waveguide system. The aerial rotates at 1800 revolutions per minute.

BRIEF DESCRIPTION

Types 262/15M and 262/16M are fitted to the S.T.A. A.G. Mark 3 mounting and C.R.S.F. Director Mark 2 respectively in A.C. Ships to enable the two ships to be fired automatically or manually at unseen aircraft targets and to provide automatic ranging under all conditions of firing. The radar beam is very narrow and the set is not therefore suitable for all round searching and detecting of targets. The equipment is only fitted in ships having a target indicating set (Type 295 series) and range and bearing of the target to be engaged by the mounting will be sent from the target indicating unit. Type 402 gives a small amount of range bearing and elevation (range of 750 yards in 30 sweeps per second, bearing of 4K sec in 1 sweep per 2 seconds and elevation 5 = 200 at 2 deg per sec). As soon as the target is detected, the search stops automatically, the radar beam is locked on to the target and the set provides automatic or radar aiming as desired.

The majority of the operating controls and displays are on the door of Cabin #2. Certain controls and one display are subhosted in Cathode Ray Unit Design 32 situated at the Control Office position.

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INSTALLATION SPECIFICATION

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