

P **acitor** **TEST SET**

INSTRUCTION BOOK

**FOR PACITOR ELECTRONIC FUEL
CONTENTS GAUGE Mks. 5 and 5A
(NAVAL AIRCRAFT VERSION)**

Pacitor

TEST SET OPERATING INSTRUCTIONS

MARKS 5 AND 5A PACITOR FUEL CONTENTS GAUGES (NAVAL AIRCRAFT VERSION)

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SIMMONDS AEROCESSORIES LIMITED
TREFOREST PONTYPRIDD GLAMORGAN GT. BRITAIN

A MEMBER OF THE FIRTH CLEVELAND GROUP

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GENERAL DATA

PART No. GP. 30690/2. STORES REF. 6c/964.

Overall Dimensions: $13\frac{3}{8}$ " \times $8\frac{1}{2}$ " \times $11\frac{1}{2}$ " Deep.

Complete Weight: $21\frac{1}{2}$ lb.

This unit covers the testing of Pacitor equipment fitted in the following aircraft:—

Hawker Sea Fury, Fairey Gannet, De Havilland Sea Venom, Westland Wyvern 061, 062, 128 and 060, Fairey Firefly, Boulton-Paul Sea Balliol, De Havilland Sea Vampire.

The Test Set can be adapted, during manufacture, to accommodate the testing of aircraft of a different type.

DESCRIPTION

The Pacitor Test Set is designed to facilitate the testing of the separate units or a complete installation of Mk. 5 or Mk. 5A Pacitor equipment.

When supplied with a 26–28 volts D.C. input the Test Set will check the current consumption, A.C. volts output, and frequency of a Power Unit under test to be within ± 1 per cent of the standard tolerances.

A Rectifier Unit connected to the Test Set can be checked for calibration at 'Full' and 'Empty' and in the case of Mk. 5A equipment the scale length can be set accurately by operation of the adjusters in the Rectifier Unit.

The selector switch fitted allows for the testing of twenty-one different Rectifier Units to the require-

ments of Specification SIM. 1 within an accuracy of ± 2 per cent full scale deflection.

An Indicator can be checked in an aircraft or on the bench. The aircraft check is made by using the 3-pin plug lead and adaptor and the bench check by plugging the Indicator on to the Test Set. A 'slow' check is also incorporated to test for sticky movements caused by faulty pivots, jewel screws, or meshing. The scale length and correct starting positions (i.e. correct meshing, etc.) of Mk. 5A Indicators are also checked to an accuracy of ± 1 per cent.

The capacitance check applicable to Tank Units and Co-axial Cables is made on the Capacity Meter section of the Test Set, and is accurate to within ± 10 pF up to a total value of 4,000 pF.

TEST INSTRUCTIONS

POWER UNIT.

Connect a supply voltage of between 26 volts D.C. and 28 volts D.C. to 'D.C. In' terminals.

Using lead GP. 30900, connect 'D.C. Out' terminal block on Test Set to '24 volts D.C.' terminal of Power Unit under test.

Using lead GP. 30978/2, connect 'A.C. Out' on Power Unit under test to 'A.C. In' on Test Set.

Turn switch 'C' to 'Freq. Ext. P.U.' position.

Check 1.

Volts D.C.

Turn switch 'A' to 'Volts D.C.' position. Reading on meter 'B' should lie within tolerance arc marked 'Volts D.C.'

Check 2.

Amps D.C.

Turn switch 'A' to 'Amps D.C.' position. Reading on meter 'B' should lie within tolerance arc marked 'Amps D.C.'

Check 3.

Volts A.C.

Turn switch 'A' to 'Volts A.C.' position. Reading on meter 'B' should lie within tolerance arc marked 'Volts A.C.'

Check 4.

Frequency.

With switch 'C' at 'Freq. Ext. P.U.' position, operate 'Frequency Capacity' toggle switch. Reading on meter 'A' should lie within orange band.

RECTIFIER UNIT.

Important:—IN ALL THE FOLLOWING TESTS ON RECTIFIER UNITS AND ADJUSTER BOXES THE 2-PIN OR 3-PIN PLUGS ON RECTIFIER UNITS MUST NOT, UNDER ANY CIRCUMSTANCES, BE CONNECTED TO ANY EXTERNAL CIRCUIT EXCEPT WHEN USING THE GP. 30980 CABLE.

For simplicity, this section will be split into three sub-sections as follows:—

- A. 'Mk. 5' Rectifier Units (GP. 612/—/)
- B. 'Mk. 5A' Rectifier Units (GP. 644/—/)
- C. 'Mk. 5A' Rectifier Units (GP. 642/—/)

A. Mk. 5 Rectifier Units (GP. 612/—/).

Sea Fury.

- (i) Using cable GP. 742/074/1, Junction Unit GP. 30694, and cable GP. 732/063/2, connect 'Rectifier' co-axial plug on Test Set to co-axial plug on Rectifier Unit under test.
- (ii) Connect 3-pin plug 'Indicator In' on Test Set to 3-pin plug on Rectifier Unit using cable GP. 30978/3.
- (iii) Connect 2-pin plug 'A.C. Out' on Test Set to 2-pin plug on Rectifier Unit using cable GP. 30978/2.
- (iv) Turn switch 'C' to 'E Cap' position.
- (v) Turn switch 'B' to Type No. of Rectifier Unit under test, in this particular case it will be Sea Fury.
- (vi) Turn switch 'A' to either 'Inner Scale' or 'Outer Scale' position. These positions refer to either inner or outer scale on switch 'B', for example:—Sea Fury, Gannet Fuselage, Sea Venom Totalise, Wyvern 061, 128, 060, Firefly Leading Edge, Starboard and Totalise, Firefly Fuselage Wing and Totalise, Sea Balliol 017 and Sea Vampire, will be considered outer scale, while all others will be considered as inner scale.
- (vii) Supply Test Set with 26–28 volts D.C.
- (viii) Set pointer on meter 'A' to yellow line marked 'S' using knob engraved 'Set Indicator Pointer'.
- (ix) Allow a 10 minute waiting period.
- (x) Turn switch 'C' to 'F. Cap' position, and meter 'A' should read within the yellow arc marked 'S'.

Wyvern.

- (i) Using cable GP. 742/074/1, Junction Unit GP. 30694, and cable GP. 732/063/2, connect 'Rectifier' co-axial plug on Test Set to co-axial plug on Rectifier Unit under test.
- (ii) Connect 3-pin plug 'Indicator In' on Test Set to 3-pin plug on Rectifier Unit using cable GP. 30978/3.
- (iii) Connect 2-pin plug 'A.C. Out' on Test Set to 2-pin plug on Rectifier Unit using cable GP. 30978/2.
- (iv) Turn switch 'C' to 'E. Cap' position.
- (v) Turn switch 'B' to Type No. of Rectifier Unit under test, in this particular case it will be Wyvern /060, /061, /062, /128.

(vi) Turn switch 'A' to either 'Inner Scale' or 'Outer Scale' position. These positions refer to either inner or outer scale on switch 'B', for example:—Sea Fury, Gannet Fuselage, Sea Venom Totalise, Wyvern 061, 128, 060, Firefly Leading Edge, Starboard and Totalise, Firefly Fuselage Wing and Totalise, and Sea Balliol 017, will be considered outer scale, while all others will be considered as inner scale.

- (vii) Supply Test Set with 26–28 volts D.C.
- (viii) Set pointer on meter 'A' to yellow line marked 'W' using knob engraved 'Set Indicator Pointer'.
- (ix) Allow a 10 minute waiting period.
- (x) Turn switch 'C' to 'F. Cap' position, and meter 'A' should read within the yellow arc engraved 'W'.

B. Mk. 5A Rectifier Units (GP. 644).

Sea Balliol.

Before commencing to check scale length of this type of Rectifier Unit, it is necessary that the 'Empty' and 'Full' adjusters should be set to centre of their electrical traverse. This should be done on ohmmeter incorporated in Test Set as follows:—

Setting Empty Adjuster.

1. Remove lid of Rectifier Unit under test.
2. Set switch 'A' to 'Ohms 20–60' position.
3. Connect cable GP. 30967 to 'Ohms' position on Test Set, i.e. spade clip to black 'D.C. Input' terminal and Wander plug to socket.
4. Supply Test Set with 26–28 volts D.C.
5. Zero ohmmeter by shorting leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads full scale deflection.
6. Connect GP. 30980 cable to 3-pin plug of Rectifier Unit and connect crocodile clip lead to blue lead of this cable.
7. Connect probe lead to red lead on Rectifier element.
8. Turn potentiometer directly under 'E' on Rectifier Unit lid until meter 'B' reads 50 ohms.

Setting Full Adjuster.

1. Set switch 'A' to 'Ohms 300–950' position.
2. Connect GP. 30980 cable to 3-pin plug of Rectifier Unit.
3. Zero ohmmeter after connecting GP. 30967 cable as 3 and 4 above. Connect crocodile clip to red lead on GP. 30980, and probe to blue lead.
4. Turn potentiometer directly under 'F' on Rectifier Unit lid until meter 'B' reads on the 800 ohm line, i.e. yellow line.
5. Replace lid of Rectifier Unit.

HAVING SET 'E' AND 'F' ADJUSTERS, CARRY ON AS FOLLOWS:—

1. Using cable GP. 742/074/1, Junction Unit GP. 30694, and cable GP. 732/063/2, connect 'Rectifier' co-axial plug on Test Set to co-axial plug on Rectifier Unit under test.
2. Connect 3-pin plug 'Indicator In' on Test Set to 3-pin plug on Rectifier Unit, using cable GP. 30978/3.
3. Connect 2-pin plug 'A.C. Out' on Test Set to 2-pin plug on Rectifier Unit, using cable GP. 30978/2.
4. Supply Test Set with 26–28 volts D.C.
5. Turn 'Set Indicator Pointer' knob fully clockwise.
6. Turn switch 'C' to 'F. Cap' position and wait 5 minutes. (This is to heat up Rectifier Unit more quickly.)
7. Turn switch 'C' to 'E. Cap' position and allow 2–3 minutes to elapse before varying potentiometer directly under 'E' on Rectifier Unit lid to bring pointer of meter 'A' on to zero.
8. Turn switch 'C' to 'F. Cap' position and vary potentiometer directly under 'F' on Rectifier Unit lid to bring pointer of meter 'A' on to yellow line, i.e. 500 position.

C. Mk. 5A Rectifier Units (GP. 642/001).

Sea Vampire.

Before commencing to check scale length of this type of Rectifier Unit, it is necessary that the 'Empty' and 'Full' adjusters on the Rectifier Unit should be at the centre of their traverse, i.e. set approximately to half their value of electrical resistance. In most instances, this can be accomplished by viewing the centre of their traverse, but for complete accuracy an ohmmeter has been incorporated in the Test Set. This should be used as follows:—

1. *Setting Full Adjuster.*

- (a) Remove lid of Rectifier Unit under test.
- (b) Set switch 'A' to 'Ohms 20–60' position.
- (c) Connect Cable GP. 30967 to 'Ohms' terminals on Test Set, that is, spade clip to black terminal and Wander plug to socket.
- (d) Zero ohmmeter by shorting GP. 30967 leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads full scale deflection.
- (e) Connect GP. 30980 cable to 3-pin plug of Rectifier Unit and connect crocodile clip lead to red lead of this cable.
- (f) Connect probe lead to blue lead on Rectifier element.
- (g) Turn potentiometer directly under 'F' on Rectifier Unit lid until meter 'B' reads 25 ohms.

2. *Setting Empty Adjuster.*

- (a) Set switch 'A' to 'Ohms 300–950' position.
- (b) Connect Cable GP. 30967 to ohms terminals on Test Set, that is, spade clip to black Belling Lee terminal and Wander plug to socket.
- (c) Zero ohmmeter by shorting GP. 30967 leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads full scale deflection.
- (d) Connect GP. 30980 cable to 3-pin plug of Rectifier Unit.
- (e) Connect leads from 'Ohms' terminals to leads of GP. 30980 cable.
- (f) Turn potentiometer directly under 'E' on Rectifier Unit lid until meter 'B' reads on the orange 700 line.

HAVING SET THE 'E' AND 'F' ADJUSTERS OF THE RECTIFIER UNIT, PROCEED AS FOLLOWS:—

- (i) Using cable GP. 742/074/1, junction unit GP. 30694, and cable GP. 732/063/2, connect 'Rectifier' co-axial plug on Test Set to co-axial plug on Rectifier Unit under test.
- (ii) Connect 3-pin plug 'Indicator In' on Test Set to 3-pin plug on Rectifier Unit, using cable GP. 30978/3.
- (iii) Connect 2-pin plug 'A.C. Out' on Test Set to 2-pin plug on Rectifier Unit, using cable GP. 30978/2.
- (iv) Turn switch 'C' to 'F. Cap' position.
- (v) Turn switch 'B' to position marked SEA VAMPIRE.
- (vi) Turn switch 'A' to 'Outer Scale' position.
- (vii) Set pointer on meter 'A' to yellow line at end of scale by means of 'Set Indicator Pointer' knob, i.e. yellow line terminating the white arc line.
- (viii) Allow a 10 minute waiting period.
- (ix) Turn switch 'C' to 'E. Cap' position. Meter 'A' should then read approximately 'O.' If not, it can be set to the 'O' mark by means of the 'E' adjuster on the Rectifier Unit provided that there is no fault within the Unit under test.

Fairey Firefly.

Adjuster Box—Leading Edge GP. 814/002.

Full Adjuster.

Totalise Full.

1. Supply Test Set with 26–28 volts D.C.
2. Turn switch 'B' to 'totalise leading edge'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.

4. Connect 'Rectifier' on Test Set to either Port or Starboard co-axial plug on Adjuster Box, using cable GP. 742/074/1, junction unit GP. 30694 and cable GP. 732/063/2.
5. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
6. Turn switch 'A' to 300-950 ohms.
7. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads a max. deflection.
8. Contact probe lead to red lead of GP. 30980 on red 3-pin plug of Adjuster Box. Connect clip to blue lead on other 3-pin plug. Vary 'F.T.' adjuster on Adjuster Box until meter 'B' reads '700' ohms.

Port Full.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Port'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect cable GP. 30978/2 to 2-pin socket 'Relay supply' on Test Set and 2-pin plug on Adjuster Box.
5. Connect 'Rectifier' on Test Set to either Port or Starboard plug on Adjuster Box using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
6. Turn switch 'A' to 600-950 ohms.
7. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads max.
9. Contact probe lead to red lead on red 3-pin plug.
10. Connect clip lead to blue lead on other 3-pin plug.
11. Vary F.P. adjuster on Adjuster Box until meter 'B' reads on '950' ohms.

Starboard Full.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Starboard'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect cable GP. 31659 with red spade end to 'D.C. In' terminal on Test Set and to 2-pin plug on Adjuster Box.

5. Connect 'Rectifier' on Test Set to either 'Port or Starboard' co-axial plug on Adjuster Box using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
6. Turn switch 'A' to 300-950 ohms.
7. Connect cable GP. 30967 to Test Set with plug to ohms socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads max.
9. Contact probe lead to red lead on red 3-pin plug.
10. Connect clip lead to blue lead on other 3-pin plug.
11. Vary F.S. adjuster on Adjuster Box until meter 'B' reads on '800' ohms.

Empty Adjusters Starboard.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Starboard'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect cable GP. 31659 with red spade end to 'D.C. In' terminal on Test Set and to 2-pin plug on Adjuster Box.
5. Connect 'Rectifier' on Test Set to either Port or Starboard co-axial plug on Adjuster Box using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
6. Turn switch 'A' to 20-60 ohms.
7. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads max.
9. Contact probe lead to blue lead on red 3-pin plug.
10. Connect clip lead to blue lead on other 3-pin plug.
11. Vary 'E.S.' adjuster on Adjuster Box until meter 'B' reads 50 ohms.

Empty Adjuster Port.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Port'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect cable GP. 30978/2 to 2-pin socket 'Relay Supply' on Test Set and 2-pin plug on Adjuster Box.

5. Connect 'Rectifier' on Test Set to either Port or Starboard co-axial plug on Adjuster Box using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
6. Turn switch 'A' to 20-60 ohms.
7. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads max.
9. Contact probe lead to blue lead on red 3-pin plug.
10. Connect clip lead to blue lead on other 3-pin plug.
11. Vary 'E.P.' adjuster until meter 'B' reads 50 ohms.

Empty Adjusters. Totalise.

1. Supply Test Set with 26-28 volts D.C.
2. Ensure cable GP. 31659 is disconnected from 2-pin plug on Adjuster Box. Turn switch 'B' to 'Totalise Firefly Leading Edge'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect 'Rectifier' on Test Set to either Port or Starboard co-axial plug on Adjuster using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
5. Turn switch 'A' to 20-60 ohms.
6. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and C spade to 'D.C. In' black terminal.
7. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
8. Contact probe lead to blue lead on red 3-pin plug.
9. Connect clip lead to blue lead on other 3-pin plug.
10. Vary 'E.T.' adjuster until meter 'B' reads 50 ohms.

Firefly Fuselage GP. 814/001.

Full Adjusters.

Totalise. Full.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Totalise Firefly Fuselage'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.

4. Connect 'Rectifier' on Test Set to either Main or Wing co-axial plug on Adjuster using junction unit GP. 30964, cable GP. 742/074/1 and GP. 732/063/2 cable.
5. Turn switch 'A' to 300-950 ohms.
6. Connect cable GP. 30967 to Test Set with plug to 'Ohms' and spade to 'D.C. In' black terminal.
7. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
8. Contact probe lead to red lead on red 3-pin plug.
9. Connect clip lead to blue lead on other 3-pin plug.
10. Vary F.T. adjuster on Adjuster Box until meter 'B' reads '700 Ohms'.

Main. Full.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Main' and turn switch 'A' to 300-950 ohms.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect GP. 30978/2 cable from 'Relay Supply' on Test Set to 2-pin plug on Adjuster Box.
5. Connect 'Rectifier' on Test Set to either Wing or Main co-axial plug on Adjuster using junction unit GP. 30964, cable GP. 742/074/1 and GP. 732/063/2 cable.
6. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
7. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
8. Contact probe lead to red lead on red 3-pin plug.
9. Connect clip lead to blue lead on other 3-pin plug.
10. Vary F.M. adjuster on Adjuster Box until meter 'B' reads on '950' ohms.

Wing. Full.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Wing'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect cable GP. 31659 with red spade from 'D.C. In' on Test Set to 2-pin plug on Adjuster Box.

5. Connect 'Rectifier' on Test Set to either Wing or Main co-axial plug on Adjuster using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
6. Turn switch 'A' to 300-950 ohms.
7. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
9. Contact probe lead to red lead on red 3-pin plug.
10. Connect clip lead to blue lead on other 3-pin plug.
11. Vary F.W. adjuster on Adjuster Box until meter 'B' reads on '600' ohms.

Empty Adjusters. Wing.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Wing'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect cable GP. 31659 with red spade end to 'D.C. In' on Test Set and 2-pin plug on Adjuster Box.
5. Connect 'Rectifier' on Test Set to either Main or Wing co-axial plug on Adjuster using junction unit GP. 30694, cables GP. 742/074/1 and GP. 732/063/2.
6. Turn switch 'A' to 20-60 ohms.
7. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
9. Contact probe lead to blue lead on red 3-pin plug.
10. Connect clip lead to blue lead on other 3-pin plug.
11. Vary 'E.W.' adjuster until meter 'B' reads on 50 ohms.

Empty Adjusters. Main.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Main'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect cable GP. 30978/2 from 'Relay Supply' on Test Set to 2-pin plug on Adjuster Box.

5. Connect 'Rectifier' on Test Set to either Wing or Main co-axial plug on Adjuster using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
6. Turn switch 'A' to 20-60 ohms.
7. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
9. Contact probe lead to blue lead on red 3-pin plug.
10. Connect clip lead to blue lead on other 3-pin plug.
11. Vary 'E.M.' adjuster until meter 'B' reads 50 ohms.

Empty Adjusters. Totalise.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Totalise Fuselage'.
3. Connect both cables GP. 30980 to 3-pin plugs on Adjuster Box leaving ends of cables free.
4. Connect 'Rectifier' on Test Set to either Main or Wing co-axial plug on Adjuster using junction unit GP. 30694, cable GP. 742/074/1 and GP. 732/063/2 cable.
5. Turn switch 'A' to 20-60 ohms.
6. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
7. Zero ohmmeter by shorting probe and clip leads together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
8. Contact probe lead to blue lead on red 3-pin plug.
9. Connect clip lead to blue lead on other 3-pin plug.
10. Vary 'E.T.' adjuster until meter 'B' reads 50 ohms.

AFTER ADJUSTER BOX HAS BEEN SET, CONTINUE AS FOLLOWS:—

Rectifier Unit Checks

Firefly—Leading Edge.

Totalise.

1. Connect 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft.
2. Connect red 3-pin plug on Adjuster Box to 'Indicator In' on Test Set using GP. 30978/3 cable.

3. Connect other 3-pin plug on Adjuster Box to Rectifier Unit 3-pin plug using cable from aircraft.
4. Connect cable GP. 30978/2 from 2-pin plug on Rectifier Unit to 'A.C. Out' on Test Set.
5. Connect GP. 742/074/1 cable to 'Rectifier' on Test Set and connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
6. Connect GP. 732/063/1 cable to GP. 30694 junction unit and connect GP. 732/063/2 cable to either co-axial plug on Adjuster Box.
7. Turn switch 'B' to 'Totalise Leading Edge' position.
8. Connect 26-28 volts D.C. to 'D.C. In' on Test Set.
9. Turn 'Set Indicator Pointer' knob fully clockwise.
10. Turn switch 'A' to 'Outer Scale' position.
11. Turn switch 'C' to 'F. Cap' position and leave for 5 minutes. This is to allow rectifier to heat up.
12. Turn switch 'C' to 'E. Cap' and allow 2-3 minutes to elapse before varying potentiometer directly under 'E.T.' on Adjuster Box to bring indicator pointer on to zero.
13. Turn switch 'C' to 'F. Cap' position and vary potentiometer directly under F.T. on Adjuster Box to bring indicator pointer on to yellow line at end of capacity scale, i.e. '500' position.

Starboard.

1. Connect 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft.
2. Connect cable GP. 31659 with red spade end to red 'D.C. In' terminal on Test Set and 2-pin plug on Adjuster Box.
3. Connect red 3-pin plug on Adjuster Box to 'Indicator In' on Test Set using GP. 30978/3 cable.
4. Connect other 3-pin plug on Adjuster Box to Rectifier Unit 3-pin plug using cable from aircraft.
5. Connect 2-pin plug on Rectifier Unit to 'A.C. Out' on Test Set using cable GP. 30978/2.
6. Connect GP. 742/074/1 cable to 'Rectifier' on Test Set.
7. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
8. Connect GP. 732/063/2 cable to GP. 30694 junction unit.
9. Connect GP. 732/063/2 cable to co-axial plug marked 'S' on Adjuster Box.
10. Turn switch 'B' to 'Starboard' position.
11. Turn switch 'A' to 'Outer Scale' position.

12. Connect 26-28 volts D.C. to 'D.C. In' on Test Set.
13. Turn 'Set Indicator Pointer' knob fully clockwise.
14. Turn switch 'C' to 'F. Cap' position and leave for 5 minutes. This is to allow rectifier to heat up.
15. Turn switch 'C' to 'E. Cap' and allow 2-3 minutes to elapse before varying potentiometer directly under 'E.S.' on Adjuster Box to bring indicator pointer on to 'Zero'.
16. Turn switch 'C' to 'F. Cap' position and vary potentiometer directly under 'F.S.' on Adjuster Box to bring indicator pointer on to red line on centre of meter 'A' scale.

Port.

1. Connect 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft.
2. Connect 'Relay Supply' on Test Set to 2-pin plug on Adjuster Box using GP. 30978/2 cable.
3. Connect red 3-pin plug on Adjuster Box to 'Indicator In' on Test Set using GP. 30978/3 cable.
4. Connect other 3-pin plug on Adjuster Box to Rectifier Unit 3-pin plug using cable from aircraft.
5. Connect cable GP. 30978/2 from 2-pin plug on Rectifier Unit to 'A.C. Out' on Test Set.
6. Connect GP. 742/074/1 cable to 'Rectifier' on Test Set.
7. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
8. Connect GP. 732/063/2 cable to GP. 30694 junction unit.
9. Connect GP. 732/063/2 cable to co-axial plug marked 'P' on Adjuster Box.
10. Turn switch 'B' to 'Port' position.
11. Turn switch 'A' to 'Inner Scale' position.
12. Connect 26-28 volts D.C. to 'D.C. In' on Test Set.
13. Turn 'Set Indicator Pointer' knob fully clockwise.
14. Turn switch 'C' to 'F. Cap' position and leave for five minutes. This is to allow rectifier to heat up.
15. Turn switch 'C' to 'E. Cap' position and allow 2-3 minutes to elapse before varying potentiometer directly under 'E.P.' on Adjuster Box to bring indicator pointer to 'Zero'.
16. Turn switch 'C' to 'F. Cap' position and vary potentiometer directly under 'F.P.' on Adjuster Box to bring indicator pointer on to red line on centre of meter 'A' scale.

Firefly—Fuselage.

Totalise.

1. Connect 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft.
2. Connect red 3-pin plug on Adjuster Box to 'Indicator In' on Test Set using GP. 30978/3 cable.
3. Connect other 3-pin plug on Adjuster Box to Rectifier Unit 3-pin plug using cable from aircraft.
4. Connect cable GP. 30978/2 from 2-pin plug on Rectifier Unit to 'A.C. Out' on Test Set.
5. Connect GP. 742/074/1 cable to 'Rectifier' on Test Set.
6. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
7. Connect GP. 732/063/2 cable to GP. 30694 junction unit.
8. Connect GP. 732/063/2 cable to either co-axial plug on Adjuster Box.
9. Turn switch 'A' to 'Outer Scale' position.
10. Turn switch 'B' to 'Totalise Fuselage' position.
11. Connect 26–28 volts D.C. to 'D.C. In' on Test Set.
12. Turn 'Set Indicator Pointer' knob fully clockwise.
13. Turn switch 'C' to 'F. Cap' position and leave for 5 minutes. This is to allow rectifier to heat up.
14. Turn switch 'C' to 'E. Cap' and allow 2–3 minutes to elapse before varying potentiometer directly under 'E.T.' on Adjuster Box to bring indicator pointer on to 'Zero'.
15. Turn switch 'C' to 'F. Cap' position and vary potentiometer directly under F.T. on Adjuster Box to bring indicator pointer on to yellow line at end of capacity scale, i.e. '500' position.

Wing.

1. Connect 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft.
2. Connect cable GP. 31659 with red spade end to 'D.C. In' on Test Set and 2-pin plug on Adjuster Box.
3. Connect red 3-pin plug on Adjuster Box to 'Indicator In' on Test Set using GP. 30978/3 cable.
4. Connect other 3-pin plug on Adjuster Box to Rectifier Unit 3-pin plug using cable from aircraft.
5. Connect 2-pin plug on Rectifier Unit to 'A.C. Out' on Test Set using cable GP. 30978/2.
6. Connect GP. 742/074/1 cable to 'Rectifier' on Test Set.

7. Connect GP. 30694 junction unit to other end of G.P. 742/074/1 cable.
8. Connect GP. 732/063/2 cable to GP. 30694 junction unit.
9. Connect GP. 732/063/2 cable to co-axial plug marked 'W' on Adjuster Box.
10. Turn switch 'A' to 'Outer Scale' position.
11. Turn switch 'B' to 'Wing' position.
12. Connect 26–28 volts D.C. to 'D.C. In' on Test Set.
13. Turn 'Set Indicator Pointer' knob fully clockwise.
14. Turn switch 'C' to 'F. Cap' position and leave for 5 minutes. This is to allow rectifier to heat up.
15. Turn switch 'C' to 'E. Cap' and allow 2–3 minutes to elapse before varying potentiometer directly under 'E.W.' on Adjuster Box to bring indicator pointer to 'Zero'.
16. Turn switch 'C' to 'F. Cap' position and vary potentiometer directly under 'F.W.' on Adjuster Box to bring indicator pointer on to yellow line in centre of meter 'A'.

Main.

1. Connect 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft.
2. Connect 'Relay Supply' on Test Set to 2-pin plug on Adjuster Box using GP. 30978/2 cable.
3. Connect red 3-pin plug on Adjuster Box to 'Indicator In' on Test Set using GP. 30978/3 cable.
4. Connect other 3-pin plug on Adjuster Box to Rectifier 3-pin plug using cable from aircraft.
5. Connect GP. 30978/2 from 2-pin plug on Rectifier Unit to 'A.C. Out' on Test Set.
6. Connect GP. 742/074/1 cable to 'Rectifier' on Test Set.
7. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
8. Connect GP. 732/063/2 cable to GP. 30694 junction unit.
9. Connect GP. 732/063/2 cable to co-axial plug marked 'M' on Adjuster Box.
10. Turn switch 'A' to 'Inner Scale' position.
11. Turn switch 'B' to 'Main' position.
12. Connect 26–28 volts D.C. to 'D.C. In' on Test Set.
13. Turn 'Set Indicator Pointer' knob fully clockwise.
14. Turn switch 'C' to 'F. Cap' position and leave for 5 minutes. This is to allow rectifier to heat up.

15. Turn switch 'C' to 'E. Cap' position and allow 2-3 minutes to elapse before varying potentiometer directly under 'E.M.' on Adjuster Box to bring indicator pointer on to 'Zero'.
16. Turn switch 'C' to 'F. Cap' position and vary potentiometer directly under 'F.M.' on Adjuster Box to bring indicator pointer on to red spot on centre of meter 'A' scale.

Adjuster Box Capacitance Check.

Firefly Leading Edge. GP. 814/002.

Totalise.

1. Connect GP. 30694 junction unit to 'Capacity' socket on Test Set.
2. Connect GP. 742/074/1 co-axial cable from GP. 30694 junction unit to co-axial plug marked 'R' on Adjuster Box.
3. Turn switch 'A' to 'Outer Scale' position.
4. Turn switch 'B' to 'Totalise'.
5. Supply Test Set with 26-28 volts D.C.
6. Turn switch 'C' to 'O Cap.' position.
7. Press 'Freq. and Cap.' switch. Capacity reading should be 110 pFs. approx. after capacitance of co-axial leads used have been deducted.

Starboard.

1. Connect GP. 742/074/1 cable to 'Capacity' socket on Test Set.
2. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
3. Connect GP. 732/063/2 cable to GP. 30694 junction unit.
4. Connect GP. 732/063/2 cable to co-axial plug marked 'S' on Adjuster Box.
5. Connect cable GP. 31659 with red spade end to red 'D.C. In' terminal on Test Set and 2-pin plug on Adjuster Box.
6. Turn switch 'A' to 'Outer Scale'.
7. Turn switch 'B' to 'Starboard'.
8. Supply Test Set with 26-28 volts D.C.
9. Turn switch 'C' to '500 pFs.' position.
10. Press 'Freq. and Cap.' switch. Capacity reading should be 660 pFs. approx. after capacitance of co-axial leads used have been deducted.

Port.

1. Connect GP. 742/074/1 cable to 'Capacity' socket on Test Set.
2. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
3. Connect GP. 732/063/2 cable to GP. 30694 junction unit.

4. Connect GP. 732/063/2 cable to co-axial plug marked 'P' on Adjuster Box.
5. Connect GP. 30978/2 cable from 'Relay Supply' on Test Set to 2-pin plug on Adjuster Box.
6. Turn switch 'A' to 'Inner Scale' position.
7. Turn switch 'B' to 'Port'.
8. Turn switch 'C' to '500 pFs.' position.
9. Press 'Freq. and Cap.' switch. Capacity reading should be 550 pFs. approx. after capacitance of co-axial leads used have been deducted.

Firefly Fuselage. GP. 814/001.

Totalise.

1. Connect GP. 30694 junction unit to 'Capacity' socket on Test Set.
2. Connect GP. 742/074/1 co-axial cable from GP. 30694 junction unit to co-axial plug marked 'R' on Adjuster Box.
3. Turn switch 'A' to 'Outer Scale' position.
4. Turn switch 'B' to 'Totalise'.
5. Turn switch 'C' to 'O. Cap.' position.
6. Press 'Freq. and Cap.' switch. Capacity reading should be 110 pFs. approx. after capacitance of co-axial leads used have been deducted.

Wing.

1. Connect GP. 742/074/1 cable to 'Capacity' socket on Test Set.
2. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
3. Connect GP. 732/063/2 cable to GP. 30694 junction unit.
4. Connect GP. 732/063/2 cable to co-axial plug marked 'W' on Adjuster Box.
5. Connect cable GP. 31659 with red spade end to 'D.C. In' on Test Set and 2-pin plug on Adjuster Box.
6. Turn switch 'A' to 'Outer Scale' position.
7. Turn switch 'B' to 'Wing'.
8. Turn switch 'C' to '500 pFs.' position.
9. Press 'Freq. and Cap.' switch. Capacity reading should be 720 pFs. approx. after capacitance of co-axial leads used have been deducted.

Main.

1. Connect GP. 742/074/1 cable to 'Capacity' socket on Test Set.
2. Connect GP. 30694 junction unit to other end of GP. 742/074/1 cable.
3. Connect GP. 732/063/2 cable to GP. 30694 junction unit.

4. Connect GP. 732/063/2 cable to co-axial plug marked 'M' on Adjuster Box.
5. Connect GP. 30978/2 cable from 'Relay Supply' on Test Set to 2-pin plug on Adjuster Box.
6. Turn switch 'A' to 'Inner Scale' position.
7. Turn switch 'B' to 'Main'.
8. Turn switch 'C' to '1000 pFs.' position.
9. Press 'Freq. and Cap.' switch. Capacity reading should be 770 pFs. after capacitance of co-axial leads used have been deducted.

De Havilland—Sea Venom.

Totalise.

Adjuster Full.

1. Turn switch 'B' to 'Totalise Sea Venom' position.
2. Connect adaptors GP. 31655 (2-pin) and GP. 31655/2 (3-pin) to plugs in end of Adjuster Box and adaptor GP. 31655/1 (3-pin) to plug in side of box.
3. Connect both cables GP. 30980 to 3-pin adaptors.
4. Connect GP. 742/074/1 cable to 'Rectifier' co-axial plug on Test Set and to either co-axial plug marked 'W' or 'F' on Adjuster Box.
5. Connect cable GP. 30967 to Test Set, plug to 'Ohms' socket and spade to black 'D.C. In' terminal.
6. Turn switch 'A' to '300-950 Ohms' position.
7. Supply Test Set with 26-28 volts D.C.
8. Zero ohmmeter by shorting probe and clip together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
9. Contact probe to red lead coming from plug on side of Adjuster Box. Connect clip to blue lead coming from plug on end of Adjuster Box. Vary 'F.T.' adjuster on Adjuster Box until meter 'B' reads 600 ohms.

Adjuster Empty.

1. Turn switch 'A' to '20-60 Ohms' position. Zero ohmmeter by shorting probe and clip together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
2. Connect probe to blue lead coming from plug on side of Adjuster Box. Connect clip to blue lead coming from plug on end of Adjuster Box. Vary 'E.T.' adjuster on Adjuster Box until meter 'B' reads 50 ohms.

Fuselage.

Adjuster Full.

1. Turn switch 'B' to 'Fuselage Sea Venom' position.
2. Connect adaptors GP. 31655 (2-pin) and GP. 31655/2 (3-pin) to plugs in end of Adjuster Box and adaptor GP. 31655/1 (3-pin) to plug in side of box.
3. Connect both cables GP. 30980 to 3-pin adaptors.
4. Connect GP. 742/074/1 cable to 'Rectifier' co-axial plug on Test Set and either co-axial plug marked 'W' or 'F' on Adjuster Box.
5. Connect GP. 30967 to Test Set, plug to 'Ohms' socket and spade to black 'D.C. In' terminal.
6. Turn switch 'A' to '300-950 Ohms' position.
7. Connect GP. 30978/2 cable to 'Relay Supply' on Test Set and to adaptor GP. 31655 on Adjuster Box.
8. Supply Test Set with 26-28 volts D.C.
9. Zero ohmmeter by shorting probe and clip together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
10. Contact probe to red lead coming from plug on side of Adjuster Box.
11. Connect clip to blue lead coming from plug on end of Adjuster Box.
12. Vary 'F.F.' adjuster until meter 'B' reads 600 ohms.

Fuselage Empty.

1. Turn switch 'A' to '20-60 Ohms' position.
2. Zero ohmmeter by shorting probe and clip together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
3. Contact probe to blue lead coming from plug on side of Adjuster Box.
4. Connect clip to blue lead coming from plug on end of Adjuster Box.
5. Vary 'E.F.' adjuster on Adjuster Box until meter 'B' reads 50 ohms.

Fuselage Rectifier.

1. Turn switch 'C' to 'E. Cap' position.
2. Turn switch 'B' to 'Sea Venom Fuselage' position.
3. Turn switch 'A' to 'Inner Scale' position.
4. Couple co-axial plug marked 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft (GP. 742/155/1).

5. Couple cable GP. 742/074/1 from co-axial plug marked 'F' on Adjuster Box to co-axial plug marked 'Rectifier' on Test Set.
6. Connect GP. 30978/3 cable to 'Indicator In' on Test Set, couple to adaptor GP. 31655/2 and connect to 3-pin plug on end of Adjuster Box.
7. Connect GP. 31822/1 cable to Rectifier Unit, connect Adaptor GP. 31655/1 to side of Adjuster Box and couple together.
8. Connect GP. 30978/2 cable to 'A.C. Out' on Test Set, connect GP. 30979/2 cable to Rectifier Unit and couple together using adaptor GP. 30927.
9. Connect GP. 31655 adaptor to Adjuster Box, connect GP. 30978/2 cable to 'Relay Supply' on Test Set and couple together.
10. Supply Test Set with 26-28 volts D.C.
11. Wait 5 minutes for rectifier to warm up.
12. Turn 'Set Indicator Pointer' knob to bring pointer on to zero.
13. Turn switch 'C' to 'F. Cap.' position.
14. Wait 2 to 3 minutes.
15. Turn switch 'C' to 'E. Cap' position and allow 2-3 minutes to elapse before varying adjuster marked 'E.F.' on Adjuster Box to bring indicator pointer to zero.
16. Turn switch 'C' to 'F. Cap' position and vary adjuster marked 'F.F.' on Adjuster Box to bring indicator pointer on to yellow line at end of capacity scale, i.e. '500' position.

Totalise Rectifier.

1. Turn switch 'C' to 'E. Cap' position.
2. Turn switch 'B' to 'Sea Venom Totalise' position.
3. Turn switch 'A' to 'Outer Scale' position.
4. Couple co-axial plug marked 'R' on Adjuster Box to co-axial plug on Rectifier Unit using cable from aircraft. (GP. 742/155/1.)
5. Couple cable GP. 742/074/1 from co-axial plug marked 'W' on Adjuster Box to co-axial plug marked 'Rectifier' on Test Set.
6. Connect GP. 30978/3 cable to 'Indicator In' on Test Set, couple to adaptor GP. 31655/2 and connect to 3-pin plug on end of Adjuster Box.
7. Connect cable GP. 31822/1 to Rectifier Unit, connect adaptor GP. 31655/1 to side of Adjuster Box and couple together.
8. Connect cable GP. 30978/2 to 'A.C. Out' Test Set, connect GP. 30979/2 cable to Rectifier Unit and couple together using Adaptor GP. 30927.
9. Supply Test Set with 26-28 volts D.C. Wait 5 minutes for rectifier to warm up.

10. Turn 'Set Indicator Pointer' knob to bring pointer on to zero.
11. Turn switch 'C' to 'F. Cap' position.
12. Wait 2 to 3 minutes.
13. Turn switch 'C' to 'E. Cap' position and allow 2-3 minutes to elapse before varying adjuster marked 'E.T.' on Adjuster Box, to bring pointer on to zero.
14. Turn switch 'C' to 'F. Cap' position and vary adjuster marked 'F.T.' on Adjuster Box to bring indicator pointer on to yellow line at end of capacity scale, i.e. '500' position.

Fairey "Gannet" Aircraft. (GP. 653/006/1.)

Fuselage Adjusters Full.

1. Turn switch 'B' to 'Gannet Fuselage' position.
2. Turn switch 'A' to '300-950 Ohms' position.
3. Connect cable GP. 31822/1 to Rectifier Unit and couple to cable GP. 30980 using adaptor GP. 30729.
4. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
5. Supply Test Set with 26-28 volts D.C.
6. Zero ohmmeter by shorting probe and clip together and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.
7. Contact probe lead to red lead on cable GP. 30980 and connect clip to blue lead.
8. Vary 'F.F.' adjuster on rectifier unit until meter 'B' reads 700 ohms.
9. To adjust 'Fuselage Empty', vary 'E.F.' adjuster to its approximate midpoint. (Meter 'B' will be unaffected by this adjustment.)

Totalise Adjusters.

1. Supply Test Set with 26-28 volts D.C.
2. Turn switch 'B' to 'Gannet Fuselage Totalise' position.
3. Turn switch 'A' to '300-950 Ohms' position
4. Connect cable GP. 31822/1 and adaptor GP. 30729 to rectifier unit.
5. Connect cable GP. 30980 to adaptor GP. 30729 and leave ends of cable free.
6. Connect cable GP. 31822/2 from relay supply on Test Set to 4-pin plug on Rectifier Unit.
7. Connect cable GP. 30967 to Test Set with plug to 'Ohms' socket and spade to 'D.C. In' black terminal.
8. Zero ohmmeter by shorting clip and probe together, and turning 'Slow Check and Ohmmeter Zero' knob until meter 'B' reads on max.

9. Contact probe to red lead on cable GP. 30980 and connect clip to blue lead.
10. Vary 'T.F.' adjuster until meter 'B' reads 600 ohms.
11. To adjust totalise empty, vary 'E.T.' adjuster to its approx. midpoint. (Meter 'B' will be unaffected by this adjustment.)

Fuselage Rectifier.

1. Turn switch 'B' to 'Gannet Fuselage' position.
2. Turn switch 'A' to 'Outer Scale' position.
3. Connect GP. 31822/1 cable to 'Indicator In' on Test Set and to 3-pin plug on Rectifier Unit.
4. Couple GP. 30978/2 cable to GP. 30979/2 cable using adaptor GP. 30927 and connect to 'A.C. Out' on Test Set and 2-pin plug on Rectifier Unit.
5. Connect GP. 742/074/1 cable from co-axial plug marked 'F' on Rectifier Unit to co-axial plug marked 'Capacity' on Test Set.
6. Supply Test Set with 26–28 volts D.C.
7. Turn 'Set Indicator Pointer' knob fully clockwise.
8. Turn switch 'C' to 'E. Cap.' position and leave for 5 minutes. This is to allow rectifier to heat up.
9. To bring meter 'A' pointer on to zero vary adjuster marked 'E.F.' on Rectifier Unit.
10. Turn switch 'C' to 'F. Cap.' position and allow five minutes to elapse before varying adjuster marked 'F.F.' on Rectifier Unit, to bring meter 'A' pointer on to full position end of white scale, i.e. '500' position.

Totalise.

1. Turn switch 'B' to 'Gannet Totalise' position.
2. Turn switch 'A' to 'Inner Scale' position.
3. Connect GP. 31822/1 cable to 'Indicator In' on Test Set and to 3-pin plug on Rectifier Unit.
4. Couple GP. 30978/2 cable to GP. 30979/2 cable using adaptor GP. 30927 and connect to 'A.C. Out' on Test Set and 2-pin plug on Rectifier Unit.
5. Connect cable GP. 31822/2 from relay supply on Test Set to 4-pin plug on Rectifier Unit.
6. Connect GP. 742/074/1 cable from co-axial plug on Rectifier Unit marked 'F' to co-axial plug marked 'Capacity' on Test Set.
7. Connect second GP. 742/074/1 cable from co-axial plug marked 'Rectifier' on Test Set to either of the co-axial plugs marked 'W' on Rectifier Unit.
8. Supply Test Set with 26–28 volts D.C.
9. Turn 'Set Indicator Pointer' knob fully clockwise.

10. Turn switch 'C' to 'E. Cap.' and leave for 5 minutes to allow rectifier to heat up.
11. To bring meter 'A' pointer to zero vary adjuster marked 'E.T.' on Rectifier Unit.
12. Turn switch 'C' to 'F. Cap.' position and allow five minutes to elapse before varying adjuster marked 'F.T.' on Rectifier Unit to bring meter 'A' pointer on to full position end of white scale, i.e. '500' position.

CABLE AND TANK UNITS.

Connect junction unit GP. 30694 to co-axial plug on Test Set marked 'Capacity'.

Testing the tank unit and cables together, the procedure is as follows:—

- (i) Note the number of cable involved.
- (ii) Find capacity of each cable involved from appropriate drawing.
- (iii) Add the pF. value of all these cables together.
- (iv) The same procedure applies to all tank units.
- (v) Add total value of all cables to total value of all tank units.
- (vi) Plug cable end on to junction unit GP. 30694 using appropriate plug on unit.
- (vii) Set switch 'C' to position nearest and below total value of all tank units and cables being tested.
- (viii) Press 'Freq. Cap.' switch and note reading on meter 'A'.
- (ix) Add reading on meter 'A' to reading on switch 'C' scale. This is correct value of cables and tank units which should lie within a tolerance of ± 4 per cent of total added pF. value.

NOTE—If any individual tank unit or cable is less in pF value than the 4 per cent tolerance of the total pF. value of a number of tank units and cables, test should be carried out as in section (x) for that particular tank unit or cable.

- (x) To check any one tank unit or cable, disconnect all others not required, and carry out procedure as above.

NOTE—When using cable GP. 742/074/1 and/or cable GP. 732/063/2 and GP. 752/001, add values of these cables to total value. The values of these cables are marked on them or can be checked on Capacity meter using procedure above. The capacitance of the junction box has been allowed for in the calibration.

INDICATOR.

If the indicator to be checked has been taken from panel in aircraft, plug it on to the plugs marked 'Ext. Indicator' on Test Set. Before doing this, turn ZAR on back of indicator fully anti-clockwise (zero) looking at back of indicator.

Procedure.

- (i) Turn switch 'A' to 'Empty R' position, and indicator under test should read zero.
- (ii) Turn switch 'A' to 'Full R' position and indicator under test should read full.

If it is suspected that indicator is sticking:—

- (iii) Turn switch 'A' to 'Slow' position, and turn 'Slow Check and Ohmmeter Zero' knob slowly so that meter traverses from 'O' to 'Full'. Sticks will show up clearly as distinct 'jumps' in reading.

If indicator to be checked is on aircraft panel, i.e. connected into installation, turn ZAR to zero as above, and carry out the following procedure:—

- (iv) Disconnect 3-pin socket from Rectifier Unit.
- (v) Connect adaptor GP. 30729 to end of this 3-pin socket.
- (vi) Using cable GP. 30978/3 connect one end to adaptor GP. 30729 and other end to 'Ext. Indicator' 3-pin plug on Test Set.
- (vii) Carry out procedure as in instructions for indicator which has been removed from aircraft.

WARNING—On completion of above tests, re-set ZAR in indicator according to aircraft setting-up instructions.

Readings on indicators should be within 2 per cent of Full Scale Deflection of indicator under test.

Indicators marked: GP. 211/013/9 are of different D.C. resistance, so will read approximately 12 gallons at empty.

Indicators marked: GP. 211/036/8 will read on 170 gallons mark instead of full mark, when switch 'A' is set to 'Full R' position. This is because a fixed resistance of 356 ohms to suit the Mk. 5A indicators is fitted in Test Set on this test, and the current flowing is only sufficient to bring it on to the 170 gallons mark.

To overcome this would require much complicated switching which is not justified.

Indicators marked: GP. 211/037/8 will read on 160 gallons mark instead of full mark when switch 'A' is set to 'Full R' position. The reason for this is the same as above.

Additional Check on Test Set.

By connecting the ohmmeter leads across the pin marked 'C' and 'A' and also 'C' and 'B' on the 3-pin plug on the Rectifier Unit, the forward resistance of the rectifier element, and therefore its 'goodness' can be checked.

The reading for a good rectifier element will lie within the 'Volts A.C.' tolerance on meter 'B' providing ohmmeter has been zeroed correctly. If the meter reads outside this mark the rectifier element can be considered as faulty, but the unit should always be checked as a whole before final rejection.

CAPACITY VALUES - R. N. AIRCRAFT

The list below indicates the capacity values of the Pacitor Gauge cable assemblies and tank units fitted to various R.N. aircraft. All these figures can be checked by the use of the Pacitor Test Set.

SEA BALLIOL

(Drawing No. GP. 30092)

<i>Tank Units.</i>	<i>Capacitance (pF).</i>
GP. 352 — 072	280 — 258
GP. 312 — 107	56 — 52
<i>Cable Assemblies.</i>	<i>Capacitance (pF).</i>
GP. 732 — 031	240 — 214
GP. 732 — 030	197 — 175
GP. 712 — 088	64 — 56
GP. 712 — 087	43 — 35
GP. 712 — 068	27 — 22

FIREFLY.

(Drawing No. GP. 30643.)

<i>Tank Units.</i>	<i>Capacitance (pF).</i>
GP. 382 — 074	158 — 146
GP. 382 — 073	81 — 73
GP. 352 — 083	109 — 101
GP. 352 — 082	139 — 129
GP. 352 — 073	175 — 161
<i>Cable Assemblies.</i>	<i>Capacitance (pF).</i>
GP. 742 — 044	165 — 151
GP. 742 — 043	73 — 67
GP. 733 — 011	182 — 162
GP. 733 — 010	133 — 115
GP. 732 — 060	164 — 148
GP. 732 — 054	324 — 304
GP. 713 — 001	63 — 53
GP. 712 — 115	53 — 48
GP. 712 — 114	58 — 51
GP. 712 — 113	75 — 67
GP. 712 — 112	33 — 29

SEA FURY.

(Drawing No. GP. 17522.)

<i>Tank Units.</i>	<i>Capacitance (pF).</i>
GP. 352 — 010	601 — 579
<i>Cable Assemblies.</i>	<i>Capacitance (pF).</i>
GP. 712 — 003	102 — 97

GANNET.

(Drawing No. GP. 31501.)

<i>Tank Units.</i>	<i>Capacitance (pF).</i>
GP. 384 — 010	534 — 494
GP. 384 — 009	51 — 47
GP. 384 — 008	54 — 50
GP. 384 — 007	49 — 45
GP. 384 — 006	29 — 25
GP. 384 — 005	42 — 38
GP. 384 — 004	45 — 41

GANNET—cont.

<i>Cable Assemblies.</i>	<i>Capacitance (pF).</i>
GP. 743 — 006	55 — 53
GP. 743 — 005	97 — 92
GP. 743 — 004	49 — 47
GP. 743 — 003	64 — 62
GP. 743 — 002	59 — 56
GP. 743 — 001	123 — 118
GP. 742 — 058	80 — 75
GP. 742 — 057	223 — 213
GP. 742 — 056	660 — 640
GP. 742 — 055	365 — 355
GP. 742 — 054	155 — 150

SEA VENOM.

(Drawing No. GP. 31559.)

<i>Tank Units.</i>	<i>Capacitance (pF).</i>
GP. 384 — 040	185 — 171
GP. 352 — 119	525 — 505
<i>Cable Assemblies.</i>	<i>Capacitance (pF).</i>
GP. 743 — 007	45 — 40
GP. 742 — 155	24 — 21
GP. 742 — 042	202 — 192
GP. 742 — 041	116 — 110
GP. 742 — 039	215 — 203
GP. 742 — 038	75 — 71

WYVERN.

(Drawing No. GP. 20885.)

<i>Tank Units.</i>	<i>Capacitance (pF).</i>
GP. 383 — 006	609 — 563
GP. 382 — 036	121 — 111
GP. 382 — 005	136 — 126
GP. 372 — 005	162 — 154
GP. 383 — 009	616 — 568
GP. 352 — 041	405 — 375
GP. 312 — 032	96 — 89
GP. 312 — 031	71 — 65
GP. 312 — 030	125 — 115
GP. 312 — 029	81 — 75
GP. 312 — 028	133 — 123
GP. 312 — 027	97 — 89
<i>Cable Assemblies.</i>	<i>Capacitance (pF).</i>
GP. 732 — 033	318 — 308
GP. 732 — 032	253 — 243
GP. 732 — 020	50 — 40
GP. 712 — 073	60 — 50
GP. 712 — 072	121 — 111
GP. 712 — 071	186 — 176
GP. 712 — 070	145 — 135
GP. 712 — 069	308 — 298

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