

Note:

This document was originally a spiral bound checklist, but was double sided. Starting from one end gave the Emergency Drills and starting the other gave the Normal Drills.

Scanning in a strict page sequence would have been confusing, however, so the document has been rearranged to reflect the two 'parts' above in their correct page sequence.

**RESTRICTED**

ISSUED WITH A.P.(RAN)8 AIRCREW NOTES  
A.L.7

FLIGHT REFERENCE CARDS  
WESSEX Mk 31B

**EMERGENCY  
DRILLS**

OBSERVER  
SONAR OPERATOR

QUEENSLAND  
AIR  
MUSEUM

**RESTRICTED**

Queensland Air Museum



026027

## JETTISONING THE WINDOWS AND DOOR

### Cabin Windows

Push the jettison handles sharply forward and push the lower portion of the window outwards.

### Cabin Door

Pull the jettison handle back.

### Note . . .

*Jettisoning windows and door in autorotation may cause damage to the rotor blades.*

## ABANDONING THE AIRCRAFT

When the Pilot in Command orders "Prepare to abandon aircraft", the observer presses the IDENTIFY pushbutton on the HUDAT control panel. The observer then moves to the cabin door jettisoning or opening it as directed. The Pilot in Command orders "Jump, jump". The observer leaves first, leaning forward, keeping the feet together, head down and with arms close to the body. The observer places his right hand on the D ring. The observer calls "Cabin clear" and/or taps the pilot's leg before abandoning the aircraft.

### CAUTION

*A minimum 3 second delay must be taken prior to pulling the ripcord.*

ABANDONING THE AIRCRAFT (continued)

## Ditching

The pilot orders "Brace Brace".

The observer presses the IDENTIFY pushbutton on the HUDAT indicator.

The crewmen :-

1. Lock and tighten their harness.
2. Jettison the escape windows.
3. Remain strapped in a fixed position until:-
  - (a) The rotor blades have stopped.
  - (b) The initial inflow of water has stopped.
  - (c) All violent movement has stopped.

Do not inflate their life saving waistcoat until they are well clear of the aircraft.

## SONAR

### Alternative transducer raising procedure

If the transducer does not raise normally, and hydraulic pressure is available, manually operate the SYSTEMS PRESSURE, and RAISE solenoids on the feed through panel forward face.

### Note . . .

*The SEAT and PAY-OUT limit switches will be inoperative, exercise caution when housing the transducer.*

### Sonar Reeling Machine Failure

If the alternative procedure is unsuccessful, or if no hydraulic pressure is available, use the 28 Volt D.C. motor. Pull the Tee-handle to the limit of its travel.

SONAR (continued overleaf)

**JETTISONING/ABANDONING/SONAR**

## SONAR (continued)

### Note 1 ...

*The SEAT limit switch will be inoperative, exercise caution when housing the transducer.*

### Note 2 ...

*Overheating of the 28 Volt D.C. motor will cause it to stop raising. Allow the motor to cool before resuming raising.*

## 28 Volt D.C. Motor Failure

If the previous methods of raising the transducer are unsuccessful, one of the following methods should be used.

1. Press the DOME CONTROL-SEAT pushbutton.
2. If unsuccessful, use the hand crank.
3. If still unsuccessful, attempt to haul the cable in by hand. If this is done from forward of the reeling machine, a cable mode hover can still be held, and the cable cutter can still be used if necessary.

## Sonar Reeling Machine Failure - Cable Pay-out

### Indications

1. Cable begins to pay out.
2. In level flight - dry cable height indicator shows an increase.
3. In the hover - transducer depth increases.

### Actions

1. Warn the pilot, who will reduce airspeed.

2. Set the DOME CONTROL – RAISE/LOWER switch to RAISE. If the cable continues to pay out –
3. Set the POWER switch on the control unit to OFF. If the cable continues to pay out –
4. Pull the Tee-handle. If the cable continues to pay out –
5. Press the SEAT pushbutton.

6. During the sequence, the payout is stopped, hoist the transducer using the 28 Volt D.C. motor, and return to base.

### **Transducer Jettison**

The transducer may be jettisoned by :-

1. Either pilot pressing the CABLE CUTTER pushbutton.
2. The sonar operator may jettison the sonar cable and transducer by pressing the SYSTEMS PRESSURE and LOWER solenoids on the forward face of the feed through panel.

## SONAR

Emergency Operating Procedures

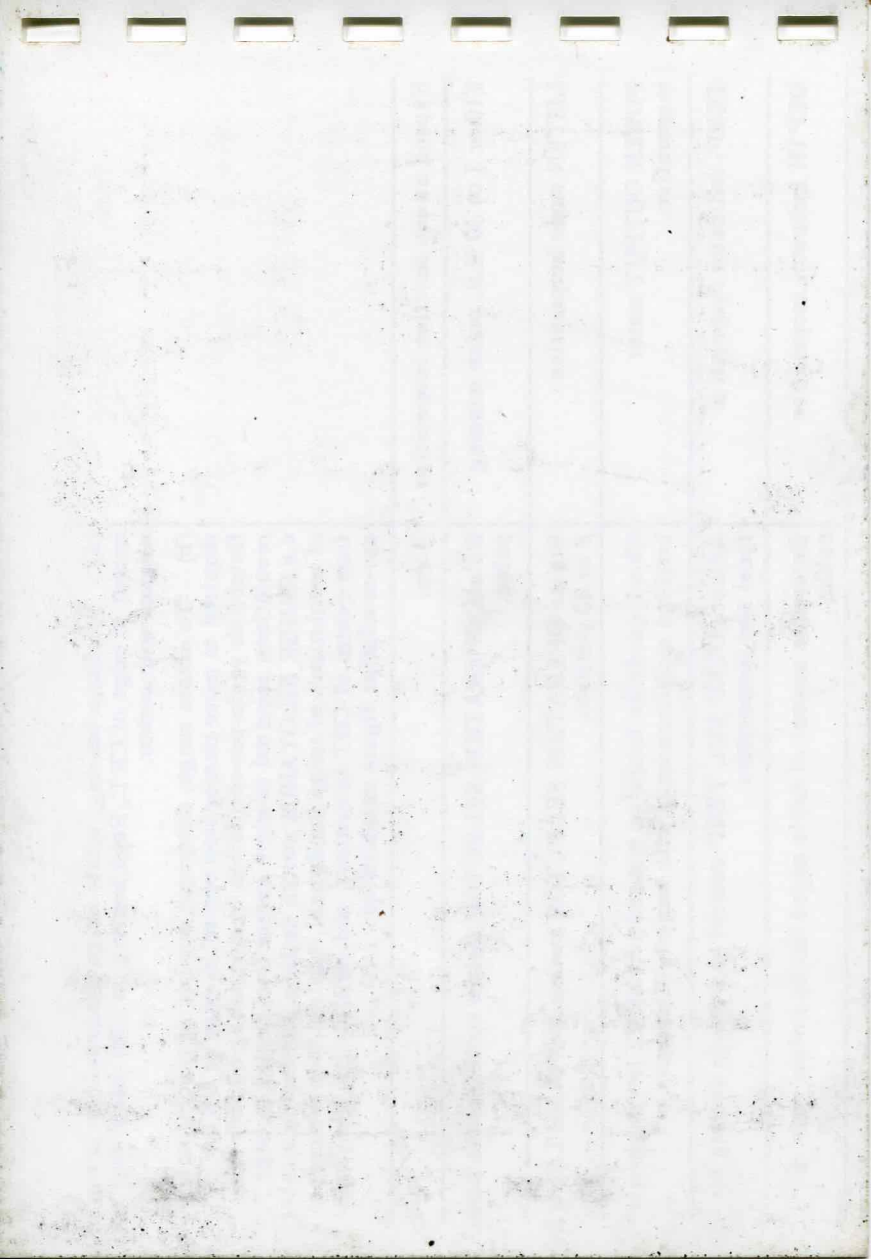
## DEFECT

## PROCEDURE

Audio tone or tones missing	Change LISTEN SECTOR switch from ALL to ONE. (a) If audio tone is available, rotate RECEPTION DIRECTION switch until contact is in sector two. (b) If audio tone is missing, return LISTEN SECTOR switch to ALL, and rotate RECEPTION DIRECTION switch until contact echo can be heard.
Video sector or sectors missing No sweep trace or echo appearance	Rotate FREQ. switch to an alternative position. Rotate RECEPTION DIRECTION switch until sweep appears in desired sector(s).
Fore-aft switching disabled on echo-ranging operation (RECEPTION DIRECTION switch in NORTH, and LISTEN SECTOR switch to ALL).	Rotate RECEPTION DIRECTION switch to sweep desired bearing.
No video or audio on operating frequency.	Rotate FREQ. switch to an alternative position.
No transmission on operating frequency.	Rotate FREQ. switch to an alternative position.
Bearing and range indicator failure.	Adjust RANGE and BEARING handwheels to align cursor with contact.

Expand sweep function inoperative	<p>(a) To obtain bearing, rotate range handwheel to bring cursor to edge of CRT. Read bearing on CRT bezel that is aligned with cursor.</p> <p>(b) To obtain range, determine number of revolutions required to move cursor from centre, to edge of CRT. Establish yards-per-revolution by comparing number of revolutions required to move cursor from centre to edge v.s. RANGE KILOYARDS switch setting. Determine number of revolutions of range handwheel required to move cursor from centre of CRT to contact, and multiply, by the yards-per-revolution figure established.</p>
Either 3 or 30 M.S. pulse missing	None.
LISTEN mode inoperative	Rotate OPERATION SELECTOR switch to select the other pulse.
POWER OUTPUT meter inoperative.	Rotate OPERATION SELECTOR switch to PULSE LENGTH 3 or 30 position.
TEMP. indicator inoperative	Check quadrille lamps on transmitter; all 22 lamps should brighten simultaneously with same brilliance.
DEPTH indicator inoperative	Adjust SOUND VEL TEMP control to average setting for local sea temperature.
DEPTH indicator inoperative	Determine amount of cable payed out by colour code on cable.





### On completion of U.Q.C. operation

ERSP.34D

Transmitter Selector - U.H.F.

U.Q.C. VOICE/CW

switch - CW or sonar will not transmit properly.

Sonar controls

- Adjust for next operation.

### Listen Mode Operation

INTENSITY control - Normal operation.

FOCUS control - Normal operation.

AUDIO control - Normal operation.

OPERATION

SELECTOR switch - LISTEN

RANGE

KILOYARDS switch - 8.

RECEPTION

DIRECTION switch - NORTH.

EXPAND SWEEP

switch - OFF.

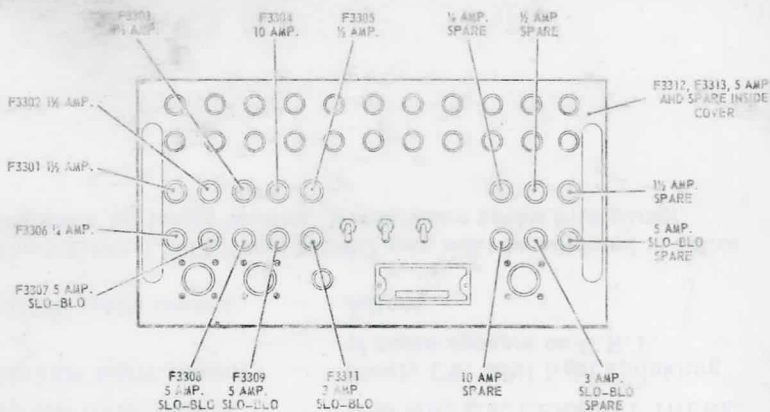
VIDEO GAIN control -  $\frac{3}{4}$  to fully CW. LEAVE IT THERE.

LISTEN GAIN control - Slowly CW. until light sprinkling of noise appears on C.R.T.

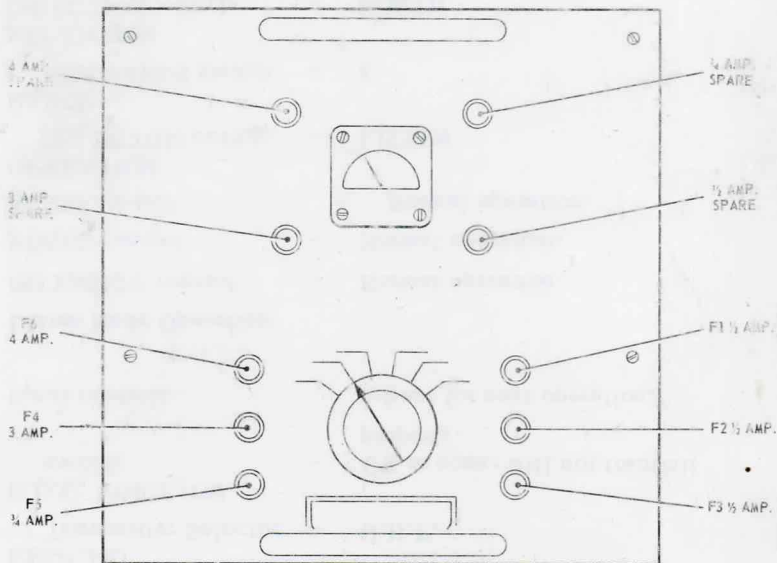
AUDIO GAIN control - Adjust.

The VIDEO, LISTEN and AUDIO gain must be adjusted in above sequence for target bearing, bisect voice spoke with cursor.

# FUSE DIAGRAM



FRONT VIEW



FRONT VIEW

WINCH FAST/  
SLOW switch - SLOW.  
Report "Ball housed"

**Active Sonar Operation**

OPERATION  
SELECTION switch - As briefed.  
FREQ. switch - As briefed.  
LISTEN SECTOR  
switch - ALL.  
CABIN SEL. BOX - SONAR ONLY.

Immediately on acquiring a contact

RECEPTION  
DIRECTION switch - Place contact in sector 2.  
LISTEN SECTOR switch - ONE.  
AUDIO GAIN control - Adjust.  
VIDEO GAIN control - Adjust.  
RANGE handwheel - Cursor over contact.  
BEARING handwheel - Cursor over contact.

**U.Q.C. Transmission**

Transducer depth - 50 feet or as ordered.  
FREQ. - As briefed.

OPERATION  
SELECTOR switch - COMM.

TEST/MAX.  
POWER switch - MAX. POWER.

UQC VOICE/CW switch - VOICE.

I/C NORM.  
SONAR ONLY - I/C NORM.

AUDIO GAIN control -  $\frac{1}{2}$  -  $\frac{3}{4}$  full volume.

- ERSP.34D  
 receiver selector - SONAR
- LISTEN  
 SECTOR switch - ALL.
- Press to transmit switch - Operate.  
 Talk slowly and clearly.  
 Adjust side tone level.

**Note . . .**

*Allow time for message and reply to be transmitted through the water at 5,000 feet per second.*

**U.Q.C. Reception**

- OPERATION SELECTOR  
 switch - LISTEN.
- LISTEN SECTOR  
 switch - ALL.
- ERSP.34D  
 receiver selector - SONAR.
- LISTEN GAIN control - Fully a.c.w.
- UQC VOICE/CW switch - VOICE
- I/C NORM/SONAR  
 ONLY switch - I/C NORM.
- AUDIO GAIN control - Mid-position.
- LISTEN GAIN control - Rotate until voice is clear, but no  
 further or distortion will result.
- AUDIO GAIN control - Adjust side tone level.
- RECEPTION  
 DIRECTION switch - Place voice spoke in sector TWO.
- LISTEN SECTOR switch - ONE.
- OPERATION  
 SELECTOR switch - COMM.

**U.Q.C. RECEPTION (continued)**

**RESTRICTED**

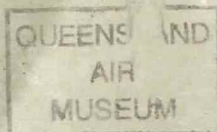
ISSUED WITH A.P.(RAN)8 AIRCREW NOTES  
A.L.7

FLIGHT REFERENCE CARDS  
WESSEX Mk 31B

**NORMAL**

**OPERATING**

**DRILLS**



**OBSERVER/SO AR OPERATOR**

**RESTRICTED**

## EXTERNAL AND INTERNAL

- Rescue hoist - HYDRAULIC LEADS connected  
Cable Cutter connected
- Cabin light - As required.
- Reeling Machine - No hydraulic leaks  
Hand crank stowed  
Hand crank clutch knob disengaged  
(OUT)  
Funnel secure  
Transducer fully housed  
General security.

### Fwd. Bulkhead

- Fire extinguisher - In position.
- Aldis lamp - In position.

### Stbd. Side

- Cabin Door - Wire-locked.
- Windows - Secure.
- Stbd. after  
escape window - Locking pins in  
Wire-locked  
Polarized cover fitted  
Emergency lights intact.

### Rear bulkhead

- Armament - As briefed.  
Security.

EXTERNAL AND INTERNAL (continued)

Signal Pistol	-	Secure.
Galley Hatch Cover	-	Secure.
Cartridge Stowage	-	Contents.
First Aid kit	-	In position, seals intact.
Port Side	-	
Port after escape windows	-	Locking pins in. Wire-locked Polarized cover fitted. Emergency lights intact.
Circuit Breaker Tee Handle	-	Fully housed. Wire-locked.
Seat	-	
Harness	-	Strap in. Check 'g' lock.
Radio	-	
ERSP34D Station box	-	Set to NORM. Receivers as required - UP. Transmitter selector - U.H.F. I/C set to ALL. Adjust volume.
Cabin Sel. Box	-	I/C NORM. Check intercomm and Private I/C

EXTERNAL AND INTERNAL (continued overleaf)



## EXTERNAL AND INTERNAL (continued)

### OBSERVER

#### PRE-START

##### Upper Instrument Panel

- Fighting Light — OFF.
- Dimmer — Set to BRIGHT.
- Wander Light — Check operation.
- Sonar well lights — As required.
- Cable Reel Lights — As required.
- AUW Presetter — OFF.
- Armament Panel — All switches OFF (down).

##### Lower Instrument Panel

- HUDAT RANGE  
SELECT switch — Set to TACAN.
- TACAN controller — OFF.  
Select briefed channel.
- FAST/SLOW  
raise switch — Set to SLOW.

PRE-START (continued)

### After Start-up

- B.D.H.I. compass card -- Agrees with G6 compass.
- HUDAT compass rose -- Set to B.D.H.I. reading.

### Post Engagement Checks

#### CAUTION

*Obtain pilot's clearance, when rotors are engaged, before unstrapping to move about the cabin.*

### Rescue Hoist

#### Note ...

*Keep a down load on the hoist cable at all times.*

Check operation.

### To set Mk.44 Torpedoes

- Pilots Armament Safety -- FIRE.
- ARMAMENT MASTER -- ON.
- TORPEDO SELECT -- 1 (i.e. PORT torpedo)  
Light illuminates in indicator window.
- F.D. -- Set Floor Depth.
- I.S.D. -- Set Initial Search Depth.
- SET -- Hold to SET until F.D. and I.S.D. lights illuminate.
- TORPEDO SELECT -- 2 (i.e. STBD. TORPEDO).

Repeat F.D., I.S.D., SET procedure as above.

## HUDAT & TACAN

Check with pilot:-

### ESSENTIAL

- |                               |   |                                  |
|-------------------------------|---|----------------------------------|
| AC POWER                      | - | Reset to NORMAL.                 |
| TACAN functional              | - | Completed.                       |
| COCKPIT/<br>CABIN selector    | - | Set to CABIN                     |
| Inform pilot:- TACAN to HUDAT |   |                                  |
| TACAN/controller              | - | REC.                             |
| CHANNEL                       | - | As briefed                       |
| VOL.                          | - | Adjust - Check with Pilots op.   |
| HUDAT RANGE<br>SELECT         | - | RADAR 5                          |
| NIGHT/DAY switch              | - | As required.                     |
| BEACON - RADAR/<br>BEACON     | - | RADAR/BEACON.                    |
| CHANNEL SELECT                | - | As briefed.                      |
| VIDEO GAIN                    | - | Mid-position.                    |
| Compass Rose                  | - | As briefed.                      |
| TACAN controller              | - | T/R                              |
| VIDEO GAIN                    | - | Check operation<br>Adjust.       |
| RANGE SELECT                  | - | RADAR 10,20, check presentation. |
| STC                           | - | Check operation.<br>Adjust.      |
| MEMORY                        | - | Check operation.<br>Adjust.      |

HUDAT AND TACAN (continued)

- NIGHT/DAY switch - Check operation.
- BEACON - RADAR/  
BEACON - BEACON check presentation.
- RED filter - Check operation.
- DIM filter - Check operation.

### Final Landing

- HUDAT RANGE  
SELECT knob - TACAN.
- TACAN controller - OFF.
- ARMAMENT  
MASTER switch - OFF.
- List all stores expended
- Harness - Locked and tight.  
Report ready for landing.

### ROTORS RUNNING TURN ROUNDS

#### Prelanding

- Cabin TACAN  
controller - REC.
- Stores - List stores dropped for relief crew.
- Security - All gear stowed.
- Harness - Locked and tight.  
Report "Ready for landing".

#### Pre-take-off

- AUW PRESETTER - F.D. and I.S.D. settings.
- RANGE SELECT - Inform pilot before using HUDAT  
RADAR 5.

**ROTOR RUNNING TURN ROUNDS (continued overleaf)**

## ROTOR RUNNING TURN ROUNDS (continued)

- NIGHT/DAY switch - As appropriate.
- BEACON - RADAR/  
BEACON switch - RADAR/BEACON
- CHANNEL SELECT  
switch - As briefed.
- TACAN controller - T/R.
- VIDEO GAIN control - As required.
- RANGE SELECT - Check presentations.
- STC control - As required.
- MEMORY control - As required.
- RED filter - As required.
- DIM filter - As required.
- Harness - Locked and tight  
"Ready for take-off".

## PRE TAKE-OFF CHECKS

Strap in and check as follows:-

- Mk.44 torpedoes - Check FD and ISD settings in  
AUV Presetter.
- HUDAT - Check whether HUDAT RANGE  
SELECT knob at TACAN:  
inform the pilot before using  
HUDAT
- RANGE  
SELECT knob - Set to RADAR 5
- NIGHT/DAY switch - As appropriate
- BEACON - RADAR/  
BEACON switch - Set to RADAR/BEACON
- CHANNEL  
SELECT Knob - Set to briefed channel

PRE-TAKE-OFF (Continued)

If HUDAT has been used on the previous sortie, allow only a brief warm-up period for precision clock stabilisation.

- TACAN controller - Set to T/R
- VIDEO GAIN Knob - As required
- RANGE SELECT Knob - Set to RADAR 10 and RADAR 20 to check for correct presentation.
- STC Knob - As required
- MEMORY Knob - As required
- RED filter - As required
- DIM filter - As required

Check harness locked and tight: inform pilot ready for take-off.

## SONAR OPERATOR CHECKS

### Pre-start

#### CAUTION

*The POWER switch on the control unit must be set to OFF during engine start up.*

#### Control Unit

- POWER switch - OFF.
- FREQ. switch - 2.
- SOUND VEL.  
TEMP. control - 54°.
- OPERATION  
SELECTOR switch - LISTEN.
- LISTEN GAIN control - Fully acw.

SONAR OPERATOR CHECKS (continued overleaf)

**SONAR OPERATOR CHECK**

- LISTEN SECTOR switch -
- VIDEO GAIN control - Fully acw.
- RECEPTION  
DIRECTION switch - NORTH
- AUDIO GAIN control - Fully acw.
- RANGE KILOYARDS  
switch - 1.
- EXPAND SWEEP switch - OFF.
- DOME CONTROL  
RAISE/LOWER - OFF (centre)

**Indicator Unit**

- TEST OSC  
LEVEL control - 25.
- CURSOR INTSTY  
control - Fully acw.
- VAR ADJ. - Set 0°
- INTENSITY control - Fully acw.
- FOCUS control - Fully acw.

**Sonar Transmitter**

- OVERLOAD TEST/  
RESET switch - Centre position.
- ON/OFF switch - OFF.
- TEST/MAX.  
POWER switch - TEST.
- Fuses - In position.

**Power Supply**

- Fuses - In position.

## WINCH FAST/SLOW

switch

- Set to SLOW.

## Cabin Checks Completed

Tighten and lock harness; inform pilot "Cabin Checks complete, crew ready for Start Up and Engagement".

## Post Engagement Checks

Alternator

- On line.

SONAR PRESSURE M.I.

- Black/ON.

POWER switch

- STDBY

CABLE ANGLE  
INDICATOR

- OFF flags disappeared.

VOLTAGE TEST

- Rotate.

115 AC

- Needle in green

+ 28 RELAY

- Needle deflects more than half scale.

+ 85 RELAY

- As above.

+ 47

- Needle in green.

Dome Submerged light

- Press to test.

Dome seated light

- Press to test.

PANEL DIM

- Adjust.

Allow 70 seconds warm up, then :-

POWER switch

- ON.

VOLTAGE TEST switch

- Rotate needle in green.

## Video

INTENSITY control

- Adjust until sweeps clearly visible.

CURSOR INTSTY control

- Cursor visible.



- SONAR POST ENGAGEMENT CHECKS (continued)
- FOCUS control - Adjust cursor and sweeps.
  - RANGE handwheel - Range odometer - zero  
Cursor - centre of CRT  
Sweeps - equal brightness
    - start within 1/2" cursor centre.
    - terminate at azimuth ring
  - FOCUS control - Adjust.
  - INTENSITY control - Adjust until sweeps just barely visible. Note all sweeps are of equal intensity.
  - LISTEN GAIN control - C.W. check display spreads to semi-circle.  
Reset fully a.c.w.
  - VIDEO GAIN control - C.W. - CRT brightens.  
Reset fully a.c.w.
  - INTENSITY control - ACW until sweeps just disappear.  
Rotate further 90° a.c.w.

Note ...

*CRT is dark except for cursor circle. Fasten door over INTENSITY and FOCUS controls. Make all further video adjustment with VIDEO GAIN.*

- VIDEO GAIN control - C.W. - sweeps just visible.  
Set to ALL.
- LISTEN SECTOR switch - Check sweeps alternate North and South.
- RECEPTION DIRECTION switch - Rotate C.W. in 45° steps through 360°.  
Check sweep switching ceases.  
Check CRT display rotates 45° for each detent. On North.

SONAR POST ENGAGEMENT CHECKS (continued)

Check sweep switches alternate north and south.  
Rotate a.c.w. and repeat above.

### Audio

- INTERCOMM - Comfortable level.
- OPERATION  
SELECTOR switch - TEST - check synchronization of audio tone and dots appearing in centre of each sweep.
- ERSP.34D  
Station box - SONAR selected.
- CABIN SEL. BOX - I/C NORM.
- SONAR CONTROL  
UNIT - Adjust AUDIO GAIN.
- CABIN SEL. BOX - SONAR ONLY.  
Adjust SON. VOL as required.
- TEST OSC  
LEVEL control - Rotate a.c.w. from 25- through 45.  
Check audio and video decrease and disappear beyond 35 level.
- CABIN SEL. BOX - I/C NORM.

### Range and Bearing Indicator

#### RANGE

- KILOYARDS switch - Rotate through 3, 8, 12 & 20.  
Check operation.  
Re-set to 1.
- LISTEN SECTOR switch - ONE.
- BEARING handwheel - Rotate until bearing pointer at 325°.
- RANGE handwheel - Rotate until cursor at edge of sweeps.

**SONAR POST ENGAGEMENT CHECKS (continued)**

- RANGE YARDS odometer - 1000 ( $\pm$  50 yards).
- Observers range and bearing indicator -  $\pm$  10 yards of RANGE YARDS odometer.  
 $\pm$  1 degree of BEARING DEGREES pointer on all headings.

- BEARING HANDWHEEL - Rotate. BEARING DEGREES pointer and cursor within  $\pm$  4° of CRT azimuth bezel, at cardinal points.

- RANGE KILOYARDS switch - 8.  
Repeat checks above.

**Active Mode Checks**

- OPERATION SELECTOR switch - 30 m.s.

- LISTEN SECTOR switch - ALL.

- RANGE handwheel - RANGE YARDS odometer to zero.

- RANGE KILOYARDS - 1  
Check sweep operation.  
Rotate through 3, 8, 12 & 20.  
Check operation.

- OPERATION SELECTOR - 3 m.s.  
Repeat checks above.

**Expand sweep checks**

- RANGE KILOYARDS switch - 8.

- RANGE handwheel - Make RANGE YARDS odometer read 1,000

- EXPAND SWEEP switch - ON.

- LISTEN  
SECTOR SWITCH - ONE.  
Trace sweeps diagonally right to left through sector 2.
- RECEPTION  
DIRECTION switch - C.W. and a.c.w. to each detent.  
Check trace follows.  
Reset north.
- EXPAND SWEEP  
switch - OFF.
- LISTEN  
SECTOR switch - ALL.

#### Temperature and Depth Checks

- TEMP indicator - Ambient Fahrenheit Temp.  $\pm 15^\circ$ .
- DEPTH indicator - Less than 5 feet.
- Pilots height indicator - Less than 5 feet.

#### CRT Display Switching Checks

- VAR ADJ - Rotate C.W. and a.c.w.  
Check display switching.  
Reset as briefed.

#### Transmitter Checks

- OPERATION  
SELECTOR switch - TEST.
- RANGE  
KILOYARDS switch - 1.
- ON/OFF switch - ON.
- OVERLOAD TEST/  
RESET switch - After one minute set to TEST  
OVERLOAD lamp illuminates.  
Set to RESET.  
OVERLOAD lamp extinguishes.  
Reset to centre position.

- POWER OUTPUT meter - Indicates 1 to 3.
- TEST - MAX. POWER switch - MAX.
- POWER OUTPUT meter - Indicates 2 to 5.

**Communication Mode Checks**

- OPERATION SELECTOR switch - Set to COMM.  
Display disappears.  
Operate telegraphic key.  
Check intermittent audio transmission.  
Set to LISTEN.

**Reeling Machine Checks**

- WINCH PRESSURE M.I. - Black.
- SEAT button - Press.  
DOME SEATED lamp illuminates.
- Emergency Tee handle - Fully housed.  
Wire-locked.
- WINCH FAST/SLOW switch - SLOW.

**PRE-TAKE-OFF**

**Control Unit**

- POWER switch - ON.
- FREQ switch - As briefed.
- SOUND VEL TEMP control - As briefed.
- OPERATION SELECTOR switch - LISTEN.

LISTEN GAIN control	-	As adjusted.
LISTEN SECTOR switch	-	ALL.
VIDEO GAIN control	-	Adjust till sweeps disappear.
RECEPTION DIRECTION switch	-	NORTH.
AUDIO GAIN control	-	As adjusted.
RANGE KILOYARDS switch	-	As briefed.
EXPAND SWEEP switch	-	OFF.
DOMESTIC CONTROL RAISE/LOWER switch	-	OFF (centre).
<b>Indicator Unit</b>		
CURSOR INTSTY	-	As adjusted.
TEST OSC LEVEL control	-	25.
VAR ADJ control	-	As briefed.
INTENSITY control	-	As adjusted.
FOCUS control	-	As adjusted.
<b>Sonar transmitter</b>		
TEST/MAX POWER switch	-	MAX. POWER
ON/OFF switch	-	ON
OVERLOAD - TEST/RESET switch	-	Centre position.

- Power supply** - List any spare fuses which may have been used in flight.
- Sonar transmitter**
- OVERLOAD-TEST/  
RESET switch - Centre position
- ON/OFF switch - Set to OFF
- TEST/MAX  
POWER switch - Set to TEST
- Spare fuses - List any spare fuses which may have been used in flight.

**Indicator unit**

- TEST OSC  
LEVEL control - Set to 25
- CURSOR INTSTY  
control - Fully anti-clockwise
- VAR ADJ. - Set 0°
- INTENSITY control - Fully anti-clockwise
- FOCUS control - Set to mid-position

**Control unit**

- POWER switch - Set to STBY
- FREQ. switch - Set to 2
- SOUND VEL  
TEMP control - Near 54° on calibration dot
- OPERATION  
SELECTOR switch - Set to LISTEN
- LISTEN GAIN control - Fully anti-clockwise
- LISTEN  
SECTOR switch - Set to ALL
- VIDEO GAIN control - Fully anti-clockwise

**FINAL LANDING (continued)**

## RECEPTION

- DIRECTION switch - NORTH (arrows pointing down)
- AUDIO GAIN control - Fully anti-clockwise
- RANGE KILOYARDS switch - Set to 1
- EXPAND SWEEP switch - Set to OFF
- DOMESTRONTROL- RAISE/LOWER switch - Set to OFF (centre)
- DOMESTRONTROL- SEAT pushbutton - Press, check transducer fully housed, and DOME SEATED lamp illuminates
- PANEL DIM control - Fully anti-clockwise
- POWER switch - Set to OFF

Stow any loose gear, check harness locked and tight, and inform the pilot, "Ready for landing, ball housed".

### Note ...

*After final landing, enter details of any spare fuses used in flight in the aircraft servicing form.*

## ROTOR RUNNING TURN ROUNDS

### Pre-landing checks

#### CONTROL UNIT

- POWER switch - STDBY.
- FREQ. switch - 2.
- SOUND VEL TEMP control - As adjusted.

#### OPERATION

- SELECTOR switch - As adjusted.
- LISTEN GAIN control - As adjusted.



- LISTEN SECTOR switch — ALL.
- VIDEO GAIN control — As adjusted
- RECEPTION
  - DIRECTION switch — NORTH.
- AUDIO GAIN control — As adjusted.
- RANGE
  - KILOYARDS switch — As ordered.
- EXPAND SWEEP switch — OFF.
- DOME - CONTROL
  - RAISE/LOWER switch — OFF (centre)
  
- DOME CONTROL - SEAT push button — Press check transducer fully housed. DOME SEATED lamp illuminates.

### Indicator Unit

Leave all controls as adjusted.

### Transmitter Unit

- TEST/MAX. POWER switch — MAX. POWER.
- ON/OFF switch — ON.
- OVERLOAD - TEST/RESET switch — Central.
- Spare fuses — List all fuses used and inform relief crew.
- Security — All gear stowed.
- Harness — Locked and tight.  
Report "Ready for landing, ball housed".

**ROTORS RUNNING TURN ROUNDS (continued)**

## ROTORS RUNNING TURN ROUND

### Pre-take-off checks

- |                                  |   |   |
|----------------------------------|---|---|
| Harness                          | - | Adjust.   |
| Intercomm. level                 | - | Adjust.   |
| POWER switch                     | - | ON.   |
| FREQ. switch                     | - | As briefed.   |
| OPERATION<br>SELECTOR switch     | - | TEST.   |
| Power supply<br>VOLTAGE TEST     | - | Rotate. Check needle in the green.                                    |
| INTENSITY control                | - | As required.  |
| FOCUS control                    | - | As required.  |
| VIDEO GAIN control               | - | As required.  |
| RECEPTION<br>DIRECTION<br>switch | - | Rotate c.w. and a.c.w.<br>Check display switching.<br>Reset to NORTH. |
| Sonar station box                | - | SONAR.  |
| CABIN SEL. BOX                   | - | I/C NORM.   |
| AUDIO GAIN control               | - | Adjust.   |
| CABIN SEL. BOX                   | - | SONAR ONLY.<br>Adjust SON VOL. as required.<br>Reselect I/C NORM.     |
| OPERATION<br>SELECTOR switch     | - | LISTEN.   |
| VAR. ADJ. control                | - | As briefed.   |
| Harness                          | - | Loosened and tight.<br>"Ready for take-off".                          |

## Transducer Lowering Checks

- DOME CONTROL RAISE/  
LOWER switch - Repeat "lower the ball". LOWER to  
ordered depth. Call transducer  
depths at 50 feet intervals.
- DOME SUB light - Illuminates.
- SOUND VEL  
TEMP control - Set TEMP indicated.

## Normal transducer raising checks

Repeat the order "Raise the ball".

### OPERATION

- SELECTOR switch - LISTEN.
- WINCH FAST/  
SLOW switch - FAST.
- DOME CONTROL  
RAISE/LOWER  
switch - RAISE.  
Call transducer depths at 50 feet  
intervals.

Transducer depth 50 feet -

- If cable angle  
within  $2\frac{1}{2}^\circ$  - Continue FAST raise.
- If cable angle  $2\frac{1}{2}^\circ - 6^\circ$  - Reduce to SLOW raise.
- If cable angle  
greater than  $6^\circ$  - Stop raising.

Report all actions to pilot.

- Transducer at 20 feet - Call "Ball at 20 feet".
- Transducer at  
trail position - Release RAISE press SEAT until  
transducer fully housed. DOME  
SEATED lamp illuminates.

**SONAR OPERATION (continued)**