CHAPTER

Alarms 13

```
RANGE        +            340    350  000  010  020              TM   HDG 000.0°  COG
                                                                               355°
 6  NM       -        330                              030
RR  1.0 NM        320                                    040       N UP  SOG 17.4 KT NAV
MASTER NAV
TRANSMIT         310                                      050            T VECTORS    16.0 MIN
                                                                        T TRAILS SHORT 1 MIN
MP          300                                            060
                                                                        EBL 1        OFF
        290                                                 070         VRM 1        OFF
                                                                        EBL 2        OFF
    280                                                      080        VRM 2        OFF

    270                                                      090            NO ALARMS

    260                                                      100            TARGET --
                                                                        RANGE   --.- NM
    250                                                     110         T BRG  ---.- °
                                                                        CPA     --.- NM
        240                                                120          TCPA    --.- MIN
HL                                                                      COG    ---.- °
NAV                                                                     SOG    ---.- KT
EVENT        230                                          130           BCD     --.- NM
ENH OFF                                                                 BCT     --.- MIN
GAIN            220                                     140
RAIN                                                                    OWN POSITION (NAV)
SEA    MAN       210                                  150               LAT  52°24.297  N
TUNE  AFC   FREEZE  200   190  180  170  160                           LON 000°14.421  W
                                                                       UTC 14:08:56  W84

                                                                        AZ    PI   TOOLS
                                                                       TARGET SYSTEM NAV
                                                                       CENTRE INTCEPT MAPS BRILL
```
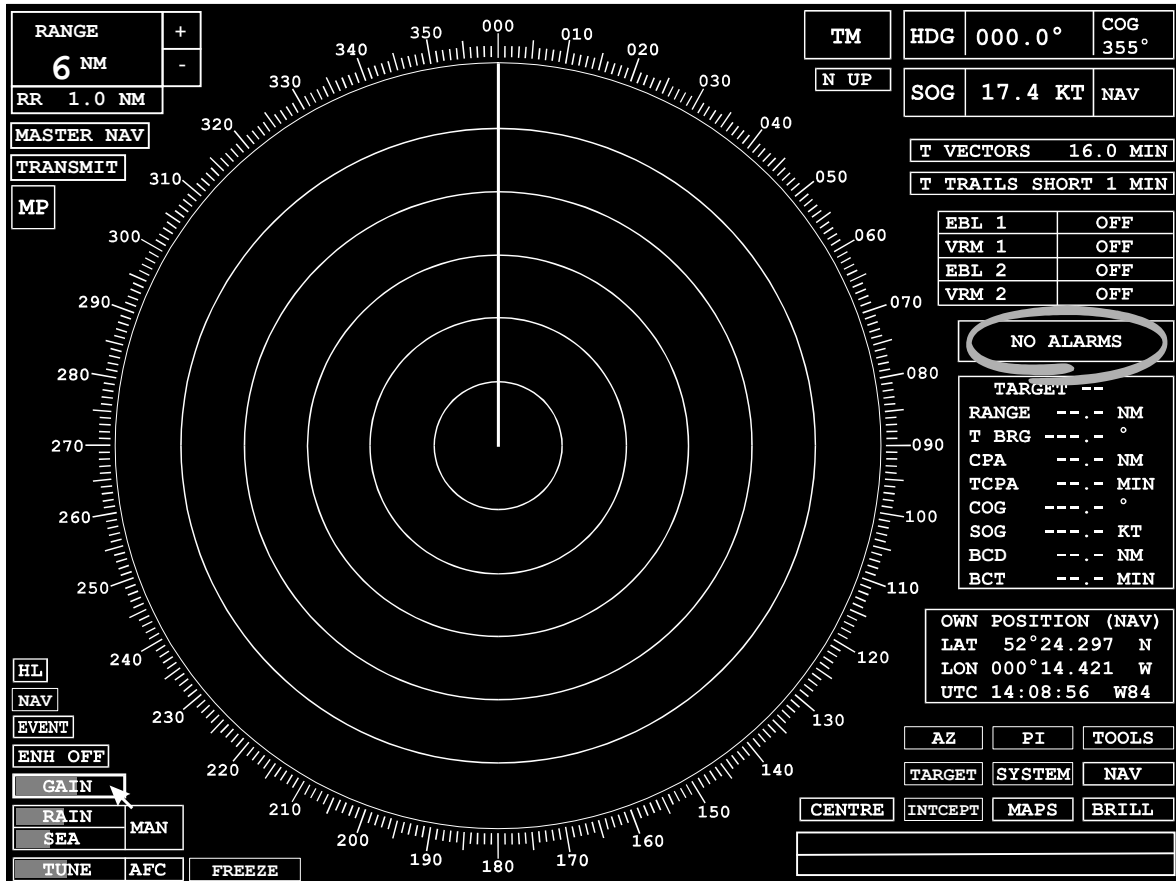
Covered in this chapter:

- The alarm states.
- Acknowledging an alarm.
- Viewing acknowledged alarms in order of priority.
- Determining whether a buzzer is sounded for each new alarm.
- Setting up a watch alarm to detect if there has been no operator activity on the radar for a specified period.
- A list of the alarms which can be raised by the system and any remedial action which should be taken.

Introduction

Alarms are displayed at the right side of the video circle in the Alarms display box which is present in both Standby and Transmit modes. A list of Alarms, together with a brief description and suggested remedial actions for each alarm, is given at the end of the chapter.

Types of Alarm

There are three types of alarm.

- Those which will clear automatically when the condition that caused the alarm is no longer present.
  For example, Bow Crossing CPA/TCPA and Position alarms.

- Those which will clear as soon as they are acknowledged even if the condition that caused the alarm is still present.
  For example, Guard Line and AZ Entry alarms.

- Those which will clear ONLY when the alarm has been acknowledged AND the condition that caused the alarm is no longer present.
  For example, Compass and Position alarms.

Alarm Display

The Alarm display box provides an indication of the current alarm state and a means of acknowledging alarms, should any occur. There are three alarm states:

- No Alarms
- Unacknowledged Alarms
- Acknowledged Alarms

No Alarms

If there are no alarms the caption NO ALARMS is displayed in **GREEN**.

```
LOG ERROR
```

Unacknowledged Alarms

When an alarm condition is detected, that alarm flashes in **RED** in the Alarm display box. If more than one alarm condition exists, the alarm with the highest priority is displayed. The alarm remains displayed until it is either acknowledged, automatically cleared, or is replaced with an alarm of higher priority.

If the internal buzzer is enabled (see **Alarm Facilities** below), this will only sound when there are unacknowledged alarms. If, in addition, a Remote Alarm output is available, this will be active only when the alarms selected for use are unacknowledged. See Ship's Manual Chapter 4 'Remote Alarm' for details.

```
LOG ERROR
```

To Acknowledge an Alarm

1. Position the screen cursor over the Alarm display box.
2. Left click to acknowledge.
   If there is more than one alarm, the acknowledged alarm is replaced by the next HIGHEST priority unacknowledged alarm.
3. Repeat the process until all alarms have been acknowledged. When there are no further unacknowledged alarms, the caption ALARMS is displayed in **RED** and is steady (i.e. is not flashing).

```
ALARMS
```

Acknowledged Alarms

If there are acknowledged alarms but NO unacknowledged (new) alarms the caption ALARMS is displayed in **RED** and is steady.

Alarm Facilities

```
ALARMS
STBY/TX ERR
AZI ERR
LOW VIDEO
COMPASS
MISSING HL
TRIG ERROR
BUZZER        OFF
WATCH ALARM OFF
```

A right click on the Alarm display box reveals a drop down list of up to six acknowledged alarms, arranged in order of priority and a drop down alarm menu.

Note - When required, use a right click to exit and remove the list from display.
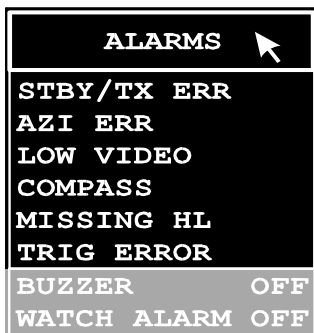
The Alarms menu offers two independent options,

BUZZER   When this is switched-ON, the buzzer
                    sounds for each new alarm.

WATCH ALARM   When this is switched-ON, the buzzer
                    sounds to alert the officer of the watch if
                    no operator activity has been detected
                    for a set period of time.

Note - The two alarms are independent of each other. A WATCH alarm will sound the buzzer even if the BUZZER alarm is switched-OFF.

The Alarm BUZZER

To turn the alarm BUZZER ON or OFF,

1. Within the drop down menu, position the screen cursor over the BUZZER line.
2. Left click to toggle the buzzer ON or OFF.
3. Right click to close the menu.

Note: The alarm BUZZER defaults to ON each time the Display is powered up.

To Set the Watch Alarm Interval

1. Position the screen cursor over the **watch alarm** line.
2. Left click to cycle through the available time intervals. The interval can be set to 3, 6, 9 or 12 minutes, or OFF.
3. When the time interval required is displayed, right click to accept the interval and close the menu.

List of Alarms

The alarms which are raised by the system, and appear in the ALARM box at the right hand side of the display. are given in alphabetical order in the table below. If more than one alarm exists, the alarm with the highest priority (the most important) is displayed.

Alarm Message	Brief Description/Remedial Actions
ALARM INPUT	Input failure from Central Alarm Management System.
APPROACH	Waypoint Approach Limit reached.
AZ ENTRY	Target detected entering acquisition zone.
AZ OVERLOAD	Acquisition zone overloaded. Reduce size of zone or re-position.
AZI ERROR	Wrong number of azimuths detected. SYSTEM menu, TEST DATA.
BOW CROSS	Limit reached. Check limits – left click BCR or BCT line in TOTE.
CARD BATTERY	Replace battery on memory card. Refer to Ship's Manual.
CARD FULL	A memory card has only 2K bytes free left. Delete some unused files.
CHECKSUM	Error detected in file on memory card.
COMPASS	Compass Alarm. Check wiring and SYSTEM menu – TEST DATA.
CONTROL PANEL	Check joystick or trackerball connections.
CPA/TCPA	Limit reached. Check limits – left click on CPA or TCPA line in TOTE.
DEPTH INPUT	Input has failed. Check sensor and wiring.
DISPLAY RESET	System has restarted – processor fault.
EXTERNAL MAP	Communication failure on NAV line interface.
GPS QUALITY	Quality of GPS signals degraded. Check external GPS input.
GRAPHICS RESET	System has restarted – processor fault.
GUARD LINE	Own ship has crossed a guard line. MAPS soft key.
INTERSWITCH	NOT communicating correctly. Check for correct wiring.
LEG CHANGE	New leg has defaulted to RHL. NAV menu – ROUTE to select GC.
LOG ERROR	NO pulses or NO serial input. Check TYPE selected and wiring.
LOST REF	ECHO REF target lost. Select new target or different speed source.
LOST TARGET	Tracked target no longer detected.
LOW VIDEO	Reset video input level. SYSTEM menu – TX SETTINGS.
MEMORY	Memory device has failed.
MISSING HL	Missing Heading Marker
MISSING SL	Missing Stern Marker
MOTION MODE	Forced motion mode change due to new range or compass alarm.
MVR TIME	Manoeuvre time has expired.
NAV INPUT	Serial input has failed. Check sensor and wiring.
NAV SPEED	Alarm condition or NO messages. Check sensor.
NO SCAN HL	Scanner NOT rotating – System forced to STANDBY.
OFF TRACK	Cross Track Error limit reached.
PC CARD	PC CARD removed or write-protected. SYSTEM menu – MEMORY CARD – CARD STATUS.
PL ERROR	Pulse length sent to transceiver does not match pulse length returned.
POSITION	Lat/Lon Position or Compass alarm for 1 minute.
PROCESSOR	Radar Processor communications failure.
RADAR RESET	System has restarted – Processor fault.
ROUTE ERROR	Error in internal route data on PC card.

Alarm Message	Brief Description/Remedial Actions
STBY/TX ERR	Transceiver failed to go to transmit or standby.
TEMPERATURE	TOO high – clean filter, check fan is running.
TM RESET	Picture about to reset. Left click on TM to change to RM(T)
TRACKS FULL	Tracking maximum number of targets – cancel some.
TRIG ERROR	NO triggers – check connections.
TX BIST	Check SYSTEM menu – TEST DATA – TX BIST.
TX COMMS	No serial communication from transceiver.
VMS GRAPHIC	Communication failure with the VMS system.
WATCH ALARM	NO control panel activity for pre-set limit. ALARMS menu.
WIND INPUT	Input has failed. Check sensor and wiring.
SCOUT	SCOUT system has failed

When the following alarm message is displayed, all video information within the video circle is blanked.

Alarm Message	Brief Description/Remedial Actions
SYSTEM FAILURE PLEASE RESTART	Graphics processor communication failure. System must be restarted in order to clear the alarm

When the following alarm message is displayed inside the video circle the commissioning settings for the display and transceiver must be re-entered.

Alarm Message	Brief Description/Remedial Actions
WARNING – RADAR REQUIRES RE-COMMISSIONING	System non-volatile memory has been reset. Re-enter all commissioning values as stored in the Ships Manual.