

## 10 Specifications

### 10.1 Antenna

LPA-A3-* Low Profile Antenna (LPA)			
Part Number:	LPA-A3		
Colour:	Signal white RAL9003		
Transmission band:	S-band		
Length:	3.9m		
Turning radius:	Ø 3925mm		
Weight:	70kg		
Horizontal beamwidth:	≤1.9° @ -3dB		
Horizontal sidelobes within 10° of main beam:	<u>≤</u> -23dB		
Horizontal sidelobes outside 10° of main beam:	<u>≤</u> -30dB		
Vertical beamwidth:	≈26°		
Polarisation:	Horizontal		
Operational temperature range:	-25 to +60°C		
Storage temperature range:	-40 to +60°C		
Relative Humidity:	95%		

## 10.2 Upmast enclosure

DTX-A1-xxxx				
	Single Phase 85 to 264VAC, 50/60 Hz			
AC supply:	NOTE: AC voltage as measured at the input to the transceiver.			
Single phase AC	Power consumption 440VA			
ONLY, excludes gearbox supply	Heat dissipation	100W		
gearbox supply	External breaker rating	6A Type B MCB		
Motor supply:	Please refer to the GTX	A-A24 specifications (section 10.4)		
Rotation speed:	24 or 40 RPM set in the	GTX-A24 Drive Control Unit.		
Azimuth Data:	4096 quadrature pulses per revolution.			
Heading Data:	1 pulse per revolution.			
Compass safe	Standard (0.25 degrees): 1.2 metres			
distances:	Steering (1.0 degree): 0.52 metres			
Weights:	123kg excluding antenna (all weights are nominal)			
Vibration and Electromagnetic compatibility (EMC):	The system is designed to meet the applicable requirements of IEC 60945			
Storage temperature:	The system is designed to meet the applicable requirements of IEC 60945. Class X: Unprotected equipment storage temperatures of between +70°C and -25°C			
Operational temperature:	The system is designed to meet the applicable requirements of IEC 60945.  Class X: Unprotected equipment operational temperatures of between (upmast/external equipment): +55°C and -25°C  -40°C With Arctic Option Kit fitted; please consult Kelvin Hughes for more information.			
Humidity:	The system is designed to meet the applicable requirements of IEC 60945			

## S-Band SharpEye™ MK7 (ASTERIX) Chapter 10: Specifications

DTX-A1-xxxx				
Salt spray:	The system is designed to meet the applicable requirements of IEC 60945			
	The SharpEye <sup>™</sup> radar system is designed to meet the applicable requirements of the following:			
Emissions:	ITU-R SM.329-9 Meets the requirements of 'Spurious Emissions'			
	ITU-R SM. 1541 Unwanted emissions in the out of band domain			
Rain and spray:	The SharpEye <sup>™</sup> radar system is designed to meet the applicable requirements of IEC 60945			
Wind:	Class X equipment is designed not to deteriorate in performance in relative wind speeds up to 100 knots			
Solar radiation:	The SharpEye <sup>™</sup> radar system meets the applicable requirements of IEC 60945			

#### 10.3 SharpEye

DTX-A603-xxxx Sharp	DTX-A603- <i>xxxx</i> SharpEye™		
<b>Note:</b> The specification shown can vary depending on the system variant. Please contact HENSOLDT UK quoting the full SharpEye™ part number for a full specification.			
Frequency:	Frequency: 1 of 8 frequencies, each 20MHz wide and selectable in the band 2.93 to 3.07GHz (Note: Frequency selection is not user accessible).		
Type:	Solid State Power Amplifier.		
Peak Power Output:	170W nominal.		
RF average power output: 17W nominal.			

#### **ELECTROMAGNETIC COMPATIBILITY**

All Hensoldt UK designed equipment incorporates high specification power supply filters, 360° earthing connectors, 360° earthing cable glands and screened inter-unit cables to ensure good EMC with other equipment.

All Hensoldt UK designed equipment is designed to meet the requirements of IEC 60945 Third Edition clause 4.5.1 for Class B protected equipment for both emissions and immunity.

#### **ELECTROMAGNETIC EMISSIONS**

The system meets the requirements of 'Unwanted Emissions in the Out of-Band Domain' (ITU-R SM.1541).

The system meets the requirements of 'Spurious Emissions' (ITU-R SM.329-9).

Hensoldt UK designed equipment is designed and constructed to Hensoldt UK's own standards of practice and is constructed so that access to high voltages may only be gained after having used a tool, such as a spanner or screwdriver. Warning labels are prominently displayed both within the equipment and on protective covers.

#### 10.4 GTX-A24 Drive Control Unit

GTX-A24					
	Input Power Requirement:	Single Phase 220 V AC, 50/60 Hz			
	Power consumption:	1.5kW / 2200VA			
POWER	Heat dissipation:	150W			
	Output voltage:	200V AC 3-phase supply			
	External breaker rating:	6A Type B MCB			
	Location:	The GTX-A24 is designed to be internally mounted in a position that offers quick well illuminated and unrestricted access to the unit.			
		To meet with electrical safety recommendations, the unit should be situated in a restricted area where access is only available to authorised personnel.			
ENVIROMENTAL	Storage temperature:				
	Operational temperature:	The system is designed to meet the applicable requirements of IEC 60945. Class B: Protected equipment operational temperatures of between (upmast/ external equipment): +55°C and -15°C			
	Ambient Temperature Range:	-15 deg. C to +55 deg. C			
	Relative Humidity:	95% at +40Deg.C			
COMPASS SAFE	Standard (0.25 degrees):	2.46 metres			
DISTANCES	Steering (1.0 degree):	1.54 metres			
WEIGHT	GTX-A24:	11kg			

## 10.5 110/ 220VAC transformer (optional)

OPTIONAL GTX-A234				
	Input:	Single Phase 110 V AC, 50/60 Hz		
	Output:	Single phase 220V AC, 50/ 60 Hz		
	Power consumption:	3KVA Maximum.		
DOWED	Heat dissipation:	<200W		
POWER	External breaker rating:	16A type C or type D is to be used for the transformer 100V feed to handle the magnetising inrush.		
	Recommended AC input cable:	The cable should be suitably rated for the specified breaker. A cable with a grounded high coverage tinned copper braid screen is recommended to reduce the risk of EMC problems.  The gland is sized to take a cable with up to 16mm maximum outer diameter.		

OPTIONAL GTX-A234				
		The GTX-A234 is designed to be internally mounted in a position that offers unrestricted access to the unit.		
ENVIROMENTAL	Location:	To meet with electrical safety recommendations, the unit should be situated in a restricted area where access is only available to authorised personnel.		
	Operational temperature:	The step-up transformer is tested to IEC 61558. It is qualified to 93% relative humidity at 20-30°C, and de-rated by 16A MCB protection for dry heat at 55°C.		
	the marine radar equi	ner is supplied as an ancillary component in the electrical supply to pment, rather than part of the Type Approved navigation radar en tested in accordance with the requirements of IEC 60945, or any d.		
COMPASS SAFE DISTANCES	Europe – to the stand To that end, as it has	to industrial safety legislation in force in the United Kingdom and lard BS EN (IEC) 61558-1:2005 +A1:2009. not been tested for Compass Safe Distance: It should be installed at letic compasses that is appropriate for the class of vessel on which it		
	As it is likely to be installed in a machinery space or electrical cabinet, the suitability of the product for the associated environment will need to be assessed by qualified personnel.			
	Weight:	37kg		
GENRAL	Finish:	RAL7032		
	Material:	Mild steel enclosure rated at IP22		

#### 11 Annex A: Inverter Defaults

The inverter fitted within the GTX-A24 is factory configured and should not require any commissioning. FOR REFERENCE USE ONLY, the following details the factory default settings for the various inverters that can be fitted within the GTX-A24 (document source TS1000-0935 issue 11).

#### 11.1 TOSHIBA VFNC1 (Grey) Inverter Settings

#### **HENSOLDT UK PART NUMBER: 45-690-0033-001**

#### FIRST TIME POWER ON

Switch mains ON. Inverter initialises and readout goes to n50, which indicates 50Hz input conditions will be set (if not, press û button until n50 is displayed).

Press ENTER. The inverter will set the relevant internal settings, the display will show HELLO then settle at 0.0.

#### **CUSTOM SETTINGS**

The Inverter parameters must then be changed as follows:

- a) Press MON button.
- b) Whilst programming, the Prog indicator is ON for main function path and Flashing for F.---setting path.
- c) Pressû buttons to scroll down through the function menu as listed below. Pressing 4 button scrolls up the menu.
- d) At any function press ENT to read the function setting. Press ⊕ ⊎ buttons to change setting.
- e) Press ENT to enter new setting and return to function menu.
- f) When the menu reaches F---, Press ENT to access F100 then û to scroll F101 F102 to F990.
- **g)** Pressing \$\Pi\$ scrolls F100, F990, F880 .. to F100.
- h) At any F--- function press Ent to read function setting and û ⊕ buttons to change Setting.
- i) Press Ent to enter the new setting and return to the Function menu.
- j) To exit menus, press MON button until 0.0 is displayed.
- **k)** Set the following parameters:

Table 1 - Custom Settings for TOSHIBA VFNC1 Inverter				
FUNCTION	DESCRIPTION	SET	OPERATION	
CN0d	Command Mode	0	0 - GTX-A104 SKA control	
CNOC	Command Mode		1 - Inverter operation panel	
		0	0 - GTX-A104 SKA control	
FN0d	Frequency Setting Mode	0	1 - Inverter operation panel	
			2 - Inverter panel potentiometer	
			UNLESS SPECIFIED, SET TO 50Hz, FOR	
			ANY MAINS INPUT FREQUENCY.	
tvo	Standard Setting Mode	10	10, sets FH, UL, uL & F170 to 50Hz	
typ	(Input frequency)	10	20, sets FH, UL, uL & F170 to 60Hz	
			30 , manufacturers default settings	
	Forward / Deverse		0 - Forward	
FR	Forward / Reverse		1 - Reverse	
ACC	Acceleration Time	5	5 seconds	
dEC	Deceleration Time	10	10 seconds	
FH	Maximum Frequency	50	Set by 'typ'	
UL	Upper Limit Frequency	50	Ignore; set by 'typ'	
LL	Lower Limit Frequency	0	0Hz	
uL	Base Frequency, (Motor)	50	Ignore; set by 'typ'	
Pt	V/F Control Mode Selection	0	Voltage / Frequency constant	
г	V/I Control Mode Selection	U	3 - Sensorless Vector control	

Table 1 - Custom Settings for TOSHIBA VFNC1 Inverter				
FUNCTION	DESCRIPTION SET		OPERATION	
ub	Torque Boost	5	5% boost	
tHr	Motor Thermal Protection Level	80	80% (equivalent 1.5kW Motor)	
0LN	Electronic Thermal Protection Level	0	Overload Protection OFF	
ULIN	Electronic Thermal Protection Level	U	Overload Stall ON	
Sr-1	Preset Speed Frequency 1	0	0Hz	
Sr-2	Preset Speed Frequency 2	25	25Hz	
Sr-3	Preset Speed Frequency 3	50	50Hz	
Sr-4	Preset Speed Frequency 4	0	0Hz	
Sr-5	Preset Speed Frequency 5	0	0Hz	
Sr-6	Preset Speed Frequency 6	0	0Hz	
Sr-7	Preset Speed Frequency 7	0	0Hz	
F	Extended Parameter	ENT		
F109	Analog / Logic input function select	2	Contact Input	
F127	Sink / Source input selection	100	Source	
F170	Base Frequency	50	Ignore; set by 'typ'	
F300	PWM Carrier Frequency	2	4kHz	
F301	Auto Restart	0	Disabled	
F302	Repetitive Power Ride-Through	0	Disabled	
F303	Retry Selection	5	5 times at 1 second intervals	
			Unless specified, Set to 50Hz, for any	
417	Motor Rated Speed	2820	mains input frequency.	
417			2820 - for 50Hz 'typ' setting	
			3384 - for 60Hz 'typ' setting	

#### **INVERTER DEFAULT SETTINGS**

IIII EIX DEI	WERTER DEL AGET GETTINGS				
	Table 2 – Inverter Default Settings VFNC1				
FUNCTION	DESCRIPTION	SET	OPERATION		
AUH	History function.				
AUF	Wizard function.				
FNSL	FM/OUT Terminal Function Selection	0	Default Not used		
FN	Meter Adjustment.	0			
	Search for Changed Settings.				
GrU	This menu only shows parameters that are				
GiU	not set to default value. Gives fast tracks				
	through menus.				

#### 11.2 TOSHIBA VFNC3 (Red) Inverter Settings

**HENSOLDT UK PART NUMBER: 45-690-0066-001** 

#### FIRST TIME POWER ON

Switch mains ON. Inverter initialises, the display will show HELLO then settle at 0.0.

If display reads a flashing SEt, then rotate the wheel to EU and press wheel to set, (init will appear) display should now be 0.0.

#### **CUSTOM SETTINGS**

The Inverter parameters must then be changed as follows:

- a) Press MODE, AUH should appear, then rotate wheel to CnOd and press wheel to set parameter as in table 2. (Pressing the wheel after each setting should advance to next function).
- b) Rotate the wheel clockwise to scroll down through the function menu as listed below. Rotating the wheel counter clockwise will scroll up the menu.
- c) At any function press the wheel to read the function setting. Rotate wheel to change setting.
- d) Press the wheel to enter a new setting and return to function menu.
- e) To exit menus, press STOP button (4 times) until 0.0 is displayed.
- f) Set the following parameters:





Table 2 - Custom Settings for TOSHIBA VFNC3 Inverter				
FUNCTION	DESCRIPTION	SET	OPERATION	
CN0d	Command Mode	0	0 - GTX-A104 SKA control	
CNUU	Command Wode	U	1 - Inverter operation panel	
			0 - GTX-A104 SKA control	
FN0d	Frequency Setting Mode	0	1 - Inverter operation panel	
			2 - Inverter panel potentiometer	
FnSL	Meter Selection Mode	0	N/A	
Fn	Meter gain adjustment	0	N/A	
Fr	Forward / Reverse	0	0 - Forward	
11	Totward / ixeverse	U	1 - Reverse	
ACC	Acceleration Time	5	5 seconds	
dEC	Deceleration Time	10	10 seconds	
FH	Maximum Frequency	50	Ignore; set by 'typ'	
UL	Upper Limit Frequency	50	Ignore; set by 'typ'	
LL	Lower Limit Frequency	0	0Hz	
uL	Base Frequency, (Motor)	50	Ignore; set by 'typ'	
uLu	Supply Voltage	230	Ignore; set by 'typ'	
Pt	V/F Control Mode Selection	0	Voltage / Frequency constant	
			3 - Sensorless Vector control	
ub	Torque Boost	5	5% boost	
tHr	Motor Thermal Protection Level	80	80% (equivalent 1.5kW Motor)	
0LN	Electronic Thermal Protection Level	0	Overload Protection OFF	
0211	Electronic fricting in retection Ecvel		Overload Stall ON	
Sr-1	Preset Speed Frequency 1	0	0Hz	
Sr-2	Preset Speed Frequency 2	25	25Hz	
Sr-3	Preset Speed Frequency 3	50	50Hz	
Sr-4	Preset Speed Frequency 4	0	0Hz	
Sr-5	Preset Speed Frequency 5	0	0Hz	
Sr-6	Preset Speed Frequency 6	0	0Hz	
Sr-7	Preset Speed Frequency 7	0	0Hz	
typ	Default parameters	3 0	Ignore; set by 'SEt' at initial power on	

## S-Band SharpEye™ MK7 (ASTERIX) Chapter 11: Annex A: Inverter Defaults

Table 2 - Custom Settings for TOSHIBA VFNC3 Inverter				
FUNCTION	DESCRIPTION	SET	OPERATION	
SEt	Region	4	Ignore; set at initial power on	
PSEL	Registered Parameter display	0	Ignore; set by 'typ'	
F1	Extended Parameter	Press wheel		
F109	Analog / Logic input function select	2	Contact Input	
F127	Sink / Source input selection	100	Source	
F170	Base Frequency	50	Ignore; set by 'typ' Note	
F300	PWM Carrier Frequency	4	4kHz	
F301	Auto Restart	0	Disabled	
F302	Repetitive Power Ride-Through	0	Disabled	
F303	Retry Selection	5	5 times at 1 second intervals	
F417	Motor Rated Speed	2820	UNLESS SPECIFIED, SET TO 50Hz, FOR  ANY MAINS INPUT FREQUENCY.  2820 - for 50Hz 'typ' setting  3384 - for 60Hz 'typ' setting	

#### **INVERTER DEFAULT SETTINGS**

Table 3 – Inverter Default Settings VFNC3				
FUNCTION	DESCRIPTION	SET OPERATION		
AUH	History function.			
AUF	Wizard function.			
FNSL	FM/OUT Terminal Function Selection	0	Default Not used	
FN	Meter Adjustment.	0		
GrU	Search for Changed Settings. This menu only shows parameters that are not set to default value. Gives fast tracks through menus.			

**Note:** Unless specified, Set to 50Hz, for any mains input frequency. Where specified, the input frequency can be set to 50Hz or 60Hz by changing the 'typ' function setting and the control access (to adjust start/stop and frequency etc.) can be changed from REMOTE to LOCAL INVERTER PANEL by changing the settings of 'CNOd' & 'FNOd'.

#### 11.3 REHFUSS inverter settings

#### **HENSOLDT UK PART NUMBER:** 45-690-0035-001

#### **FIRST TIME POWER ON**

Switch mains ON. Inverter initialises and readout goes to 50.0, Flashing ON and OFF.

When set to RUN, the display shows 50.0, not flashing.

#### **CUSTOM SETTINGS**

The Inverter parameters are changed as follows:

- a) Press DSP/FUN button.
- b) Pressû Ubuttons to scroll Function menu, F00.
- c) Press Data/Ent to read Function Setting.
- d) Pressû ∜buttons to change Setting.
- e) Press Data/Ent to enter the setting and return to the Function menu.
- f) Switch mains ON. MAINS ON indicator will light. Inverter initialises and readout goes to 50.00 (flashing)
- g) Set the following parameters on the REHFUSS Inverter.

FUNCTION	CET	DESCRIPTION	OPERATION
FUNCTION	SET	DESCRIPTION	OPERATION
F00	000	Factory adjustment	
F01	02.0	Accelerate time	3 secs
F02	10.0	Decelerate time	10 secs
F03	001	Operating Mode	Fwd / Rev & Run / Stop
F04	000	Fwd / Rev	Fwd
	001	V/F pattern	1 (linear) 2 50Hz Input
F05	or		4 (linear) 2 60 Hz Input
	004		4 (IIIIear) 2 00 Fiz Iliput
F06	50.0	Frequency upper level	50 Hz
F07	00.0	Frequency lower level	0 Hz
F08	10.0	SP1 frequency	Factory Default
F09	06.0	JOG Frequency	Factory Default
F10	001	Operation Control	Terms (EXT)
	000		Keypad - 0
F11	or	Frequency control	or
	001		Terms - 1
F12	005	Carrier frequency control	5 kHz
F13	10.0	Torque compensation	10%
F14	000	Stop method	Decelerate stop
F15	00.5	DC braking time	Factory Default
F16	01.5	DC braking injection frequency	Factory Default
F17	08.0	DC braking torque	Factory Default
F18	100	Electronic thermal	100%
F19	002	Multifunction input terminal 6	SP1
F20	005	Multifunction input terminal 7	Reset
F21	003	Multifunction output terminal	Fault
F22	000	Reverse instruction	Rev run enabled
F23	000	Momentary power loss	Enabled
F24	001	Auto restart	1 try.
F25	000	Factory setting	Factory Default
F26	20.0	CPU version	Factory Default
F27	30.0	Fault trace	Factory Default
F28	001		Factory Default
F29	02.2		Factory Default
F30		Fault records cleared	



### 12 Abbreviations

Some of the following abbreviations may not appear in this handbook and are shown for reference only.

ACH	Anti-condensation heater
	Azimuth Clock Pulse (azimuth
ACP	pulses)
101/	
ACK	Acknowledge
ACQ	Acquire
AFC	Automatic Frequency Control
AGC	
	Automatic Gain Control
AIS	Automatic Identification System
ALT	Altitude or Alternative
ANCH	Anchor
ANT	Antenna
AP	Auto-Pilot
ARCS	Admiralty Raster Chart Service
ARCO	
ARP	Azimuth Reset Pulse (heading
AIXE	line)
AUD	Audio
AZ	Azimuth
BCR	Bow Crossing Range
BCT	Bow Crossing Time
	Built In Test/ Built in Test
BIT/BITE	
	Equipment
BRG	Bearing
	Brilliance
BRILL	
BWW	Bearing Waypoint to Waypoint
CAL	Calibrate or Calibration
CANBus	Controller Area Network Bus
CANDUS	
CCRP	Consistent Common Reference
CORP	Point
	Consistent Common Reference
CCRS	
	System
CENT	Centre
CFAR	Constant false Alarm Rate
GHG	Change
CLR	Clear
CNCL	Cancel
CONT	Contrast
CORR	Correction or Correlator
CPA	Closest Point of Approach
CRS	Course
CTW	Course Through Water
C-UP	Course UP
CSR	
	Cursor
DAY/NT	Day/ Night
DA I/INI	
	Data Distribution Unit
DDU	Data Distribution Unit
DDU DECR	Decrease
DDU DECR DEL	Decrease Delete
DDU DECR	Decrease
DDU DECR DEL DEP	Decrease Delete Departure
DDU DECR DEL DEP DEST	Decrease Delete Departure Destination
DDU DECR DEL DEP DEST DEV	Decrease Delete Departure Destination Deviation
DDU DECR DEL DEP DEST	Decrease Delete Departure Destination
DDU DECR DEL DEP DEST DEV DISP	Decrease Delete Departure Destination Deviation Display
DDU DECR DEL DEP DEST DEV	Decrease Delete Departure Destination Deviation Display Distance
DDU DECR DEL DEP DEST DEV DISP	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning
DDU DECR DEL DEP DEST DEV DISP DIST DGPS	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System
DDU DECR DEL DEP DEST DEV DISP DIST	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing & Range
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DFFH DR DTG EBL	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display &
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL EBRL ECDIS ECS ENC	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL EBRL ECDIS ECS ENC ENH	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR EBL ECDIS ECS ENC ENH ENT	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL EBRL ECDIS ECS ENC ENH	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR EBL ECDIS ECS ENC ENT EMC	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMCON EP	Decrease Delete Departure Departure Destination Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMCON EP	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System Electronic Plotting Fixing System Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing Line
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing Line Error
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing Line Error Estimated Time of Arrival
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Arrival Estimated Time of Departure/
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing Line Error Estimated Time of Arrival
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA ETD	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Departure/ Target Detection
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA ETD EXT	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Departure/ Target Detection External
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPPS ERBL ERR ETA ETD EXT	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Departure/ Target Detection External Exclusion Zone
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPPS ERBL ERR ETA ETD EXT	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Departure/ Target Detection External Exclusion Zone
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA ETD EXT EZ FAT	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electronic Chort System Electronic Plotting Aid External Position Fixing System Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Departure/ Target Detection External Exclusion Zone Factory Acceptance Test
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA ETD EXT EZ FAT FCS	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Departure/ Target Detection External Exclusion Zone Factory Acceptance Test Fire Control System
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA ETD EXT EZ FAT	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Arrival Estimated Time of Departure/ Target Detection External Exclusion Zone Factory Acceptance Test Fire Control System Frequency Diversity
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA ETD EXT EZ FAT FCS FD FWD	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Departure/ Target Detection External Exclusion Zone Factory Acceptance Test Fire Control System
DDU DECR DEL DEP DEST DEV DISP DIST DGPS DPTH DR DTG EBL ECDIS ECS ENC ENH ENT EMC EMCON EP EPA EPFS ERBL ERR ETA ETD EXT EZ FAT FCS FD	Decrease Delete Departure Destination Deviation Display Distance Differential Global Positioning System Depth Dead Reckoning Distance To Go Electronic Bearing Line Electronic Bearing & Range Line Electronic Chart Display & Information System Electronic Chart System Electronic Navigation Chart Enhance Enter Electromagnetic Compatibility Electromagnetic Control Estimated Position Electronic Range & Bearing Line Error Estimated Time of Arrival Estimated Time of Arrival Estimated Time of Departure/ Target Detection External Exclusion Zone Factory Acceptance Test Fire Control System Frequency Diversity

GNSS	Global Navigation Satellite
GPS	System Global Positioning System
GZ	Guard Zone
HAP	Harbour Approach & Pilotage
HDG HL	Heading Heading Line
H-UP	Head-UP
IALA	International Association of
IBS	Lighthouse Authorities Integrated Bridge System
IF	Intermediate Frequency
ILS	Integrated Logistic Support
IMO	International Maritime Organisation
IND	Indicator
INS INT	Integrated Navigation System
I/O	Interval Input/ Output
IP	Internet Protocol
IR	Interference Rejection
KH KN	Kelvin Hughes Knots
LAN	Local Area Network
LAT	Latitude
LCD LED	Liquid Crystal Display Light Emitting Diode
LIM	Limit(s)
LNFE	Low Noise Front End
LON	Longitude Line(s) of Position
LP	Long Pulse
LPA	Low Profile Antenna
LR LRU	Long Range Line Replaceable Unit
MAN	Manual
MAS	Man Aloft Switch
MDS	Minimum Detectable Signal  Modular Interface System
MISM	Module
MMI	Man Machine Interface
	Maritime Mobile Service Identity
MMSI	
MOB MON	Man Over Board Monitor
MOB MON MP	Man Over Board Monitor Medium Pulse
MOB MON MP MTD	Man Over Board Monitor Medium Pulse Moving target Detection
MOB MON MP	Man Over Board Monitor Medium Pulse
MOB MON MP MTD MTTR MVR NAV	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation
MOB MON MP MTD MTTR MVR NAV NM	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile
MOB MON MP MTD MTTR MVR NAV	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation
MOB MON MP MTD MTTR MVR NAV NAV NM NM NORM N-UP	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP
MOB MON MP MTD MTTR MVR NAV NM NM NM NORM N-UP OOW	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch
MOB MON MP MTD MTTR MVR NAV NAV NM NM NORM N-UP	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP
MOB MON MP MTD MTTR MVR NAV NM NORM NORM N-UP OOW OS PI PL	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length
MOB MON MP MTD MTTR MVR NAV NM NORM NORM N-UP OOW OS PI PL PM	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position
MOB MON MP MTD MTTR MVR NAV NM NORM NORM N-UP OOW OS PI PL	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulse Repetition Frequency Pulse Width Modulation Power Radius
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PPR PRF PWM PWR	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging
MOB MON MP MTD MTTR MVR NAV NM NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM PWR RAD	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PF PW RAD RADAR RACON RCDS	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM PWR RAD RADAR RACON RCDS R CRS	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PF PW RAD RADAR RACON RCDS	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System
MOB MON MP MTD MTTR MVR NAV NM NM NORM N-UP OOW OS PI PL PM POS PPR PF PWM POS PR RAD RAD RAD RAD RAD RAD RAD RAD RAD RA	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radiuve
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM PWR RAD RADAR RACON RCDS R CRS RDU REF REL RF	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radio Frequency Radire Reference Relative Radio Frequency
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM RAD RADAR RACON RCDS R CRS RDU REF REL	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radar Distribution Unit Reference Relative Radio Frequency Rhumb Line
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM PWR RAD RADAR RACON RCDS R CRS RDU REF REL RF RL RM	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radio Frequency Radire Reference Relative Radio Frequency
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM RAD RADAR RACON RCDS R CRS RDU REF REL RF RL RM RM(R)	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radio Frequency Radio Frequency Radio Frequency Radire Chart Display System Relative Course Radar Distribution Unit Reference Relative Radio Frequency Rhumb Line Relative Motion Relative Motion Relative Motion Relative Trails
MOB MON MP MTD MTTR MVR NAV NM NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM PWR RAD RADAR RACON RCDS R CRS RDU REF REL RF RL RM RM(R) RM(R)	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radive Course Radio Frequency Rumb Line Relative Motion with Relative Trails Relative Motion with Relative Trails Relative Motion with True Trails
MOB MON MP MTD MTTR MVR NAV NM NORM N-UP OOW OS PI PL PM POS PPR PFF PWM PWR RAD RADAR RACON RCDS R CRS RDU REF REL RF RL RF RL RM RM(R) RM(R) RM(T) RNC RNG	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulses Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radio Frequency Radio Frequency Radio Frequency Radar Distribution Unit Reference Relative Radio Frequency Rhumb Line Relative Motion Relative Motion with Relative Trails Rester Navigation Chart Range
MOB MON MP MTD MTTR MVR NAV NM NM NORM N-UP OOW OS PI PL PM POS PPR PRF PWM PWR RAD RADAR RACON RCDS R C CRS R C CRS R C CRS R C RS R C	Man Over Board Monitor Medium Pulse Moving target Detection Mean Time To Repair Manoeuvre Navigation Nautical Mile Newton Metre Normal North-UP Officer On Watch Own Ship Parallel Index Line(s) Pulse Length Performance Monitor Position Pulses Per Revolution Pulse Repetition Frequency Pulse Width Modulation Power Radius Radio Detection & Ranging Receiver Radar Beacon Raster Chart Display System Relative Course Radar Distribution Unit Reference Relative Radio Frequency Rhumb Line Relative Motion with Relative Trails Relative Motion with True Trails Raster Navigation Chart

RR	Range Ring(s)
R SPD	Relative Speed
RTD	Real Time Display
Rx	Receive
	Search And Rescue
SART	Transponder
SAT	Satellite
SC/SC	Scan to Scan
SEL	Select
	Systems Engineering Technical
SETD	Document
SOG	Speed Over Ground
SOLAS	Safety Of Life At Sea
SP	Short Pulse
SPD	Speed
STAB	Stability
STBY	Standby
STC	Sensitivity Time Control
STG	Speed to Go
STW	Speed Through Water
SVDR	Simplified Voyage Data
SVDR	Recorder
SYM	Symbol
SYNC	Synchronisation
Т	True
TBA	To Be Advised
TBC	To Be Confirmed
TCP	Transmission Control Protocol
TCPA	Time to Closest Point of
	Approach
T CTW	True Course Through Water
TGT	Target
TM	True Motion or ™ Trade Mark
TM(T)	True Motion with True Trails
TOA	Time Of Arrival
TOD	Time of Departure
TRK	Track
T STW	True Speed Through Water
TT	Target Tracking
Tx	Transmit
TWOL	Time to Wheel Over Line
UNSTAB	Un-Stabilised
UPS	Uninterruptable power supply
USB VAR	Universal Serial Bus Variable
VAR	
VECT	Voyage Data Recorder Vector
VECT	Video
VOY	
VRM	Voyage Variable Range Marker
VSWR	Voltage Standing Wave Ratio
WAN	Wide Area Network
WGS	World Geodetic System
WI	Work Instruction
WOL	Wheel Over Line
WOP	Wheel Over Point
WOT	Wheel Over Time
WPT	Waypoint
XTD	Cross Track Distance
XTE	Cross Track Distance Cross Track Error
<u> </u>	C.CCC TIGOR ETTO



## 13 Contact details

HENSOLDT UK
Unit 4, Voltage
6 Mollison Avenue
Enfield
EN3 7XQ
UNITED KINGDOM

UNITED KINGDOM			
Phone:	+44 (0)1	+44 (0)1992 805 200	
Fax	+44 (0) 1992 805 310		
Samileo	email	service@hensoldt.net	
Service	Phone	+44 (0)1992 805 301	
Technical Advice	email	technical.advice@hensoldt.net	
	Phone	+44 (0)1992 805 302	
Spares	email	spares@hensoldt.net	
	Phone	+44 (0)1992 805 301	
Internet	Website	www.uk.hensoldt.net	

# S-Band SharpEye™ MK7 (ASTERIX) Chapter 13: Contact details

NOTES (Page 1 of 2)	

# S-Band SharpEye™ MK7 (ASTERIX) Chapter 13: Contact details

NOTES (Page 2 of 2)	_

## **HENSOLDT UK**

Unit 4, Voltage 6 Mollison Avenue Enfield EN3 7XQ UNITED KINGDOM T +44 (0) 1992 805200 F +44 (0) 1992 805310 www.uk.hensoldt.net

> HENSOLDT UK is a trading name of: Kelvin Hughes Limited

Registered Office: Voltage, 6 Mollison Avenue, Enfield EN3 7XQ, UK. Incorporated in England No. 01030135