Tritech International Limited

Seanet System

Sonar Aux Altimeter

Supplement

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Handling of Electrostatic-Sensitive Devices

Certain semiconductor devices used in the equipment are liable to damage due to static voltages.

Observe the following precautions when handling these devices in their unterminated state, or sub-units containing these devices:

- Persons removing sub-units from any equipment using electrostatic sensitive devices must be earthed by a wrist strap via a 1MΩ resistor to a suitable discharge reference point within the equipment.
- Soldering irons used during any repairs must be low voltage types with earthed tips and isolated from the Mains voltage by a double insulated transformer. Care should be taken soldering any point that may have a charge stored.
- Outer clothing worn must be unable to generate static charges.
- Printed Circuit Boards (PCBs) fitted with electrostatic sensitive devices must be stored and transported in appropriate anti-static bags/containers.

F110.0

Warranty Statement

Tritech International Limited herein after referred to as **TIL**

TIL warrants that at the time of shipment all products shall be free from defects in material and workmanship and suitable for the purpose specified in the product literature.

The unit/system warranty commences immediately from the date of customer acceptance and runs for a period of 365 days. Customer acceptance will always be deemed to have occurred within 72 hours of delivery.

Note: Any customer acceptance testing (if applicable) must be performed at either TIL premises or at one of their approved distributors unless mutually agreed in writing prior to despatch.

Conditions:

These include, but are not limited to, the following:

1 The warranty is only deemed to be valid if the equipment was sold through TIL or one of its approved distributors.

2 The equipment must have been installed and commissioned in strict accordance with approved technical standards and specifications and for the purpose that the system was designed.

3 The warranty is not transferable, except or as applies to Purchaser first then to client.

4 TIL must be notified immediately (in writing) of any suspected defect and if advised by TIL, the equipment subject to the defect shall be returned by the customer to TIL, via a suitable mode of transportation and shall be freight paid.

5 The warranty does not apply to defects that have been caused by failure to follow the recommended installation or maintenance procedures. Or defects resulting from normal wear & tear, incorrect operation, fire, water ingress, lightning damage or fluctuations in vehicles supply voltages, or from any other circumstances that may arise after delivery that is out with the control of TIL.
(**Note:** The warranty does not apply in the event where a defect has been caused by isolation incompatibilities.)

6 The warranty does not cover the transportation of personnel and per diem allowances relating to any repair or replacement.

7 The warranty does not cover any direct, indirect, punitive, special consequential damages or any damages whatsoever arising out of or connected with misuse of this product.

8 Any equipment or parts returned under warranty provisions will be returned to the customer freight prepaid by TIL

9 The warranty shall become invalid if the customer attempts to repair or modify the equipment without appropriate written authority being first received from TIL.

10 TIL retains the sole right to accept or reject any warranty claim.

11 Each product is carefully examined and checked before it is shipped. It should therefore be visually and operationally checked as soon as it is received. If it is damaged in anyway, a claim should be filed with the courier and TIL notified of the damage.

Note: TIL reserve the right to change specifications at any time without notice and without any obligation to incorporate new features in instruments previously sold.

Note: If the instrument is not covered by warranty, or if it is determined that the fault is caused by misuse, repair will be billed to the customer, and an estimate submitted for customer approval before the commencement of repairs.

F167.1

Safety Statements

Caution!

Throughout the manual certain safety or operational related comments and requirements will be highlighted to the operator by indications identified by the adjacent symbol and text.

Technical Support

Contact your local agent or Tritech International Ltd

	Mail	***Tritech International Ltd.*** Peregrine Road, Westhill Business Park, Westhill, Aberdeen, AB32 6JL, UK
	Telephone	++44 (0)1224 744111
	Fax	++44 (0)1224 741771
	Email	support@tritech.co.uk
	Web	www.tritech.co.uk

An out-of-hours emergency number is available by calling the above telephone number

If you have cause to use our Technical Support service, please ensure that you have the following details at hand **prior** to calling:

- System Serial Number (if applicable)
- Fault Description
- Any remedial action implemented

Due to the expansion of equipment capabilities and the fact that new sub-modules are continually being introduced, this manual cannot detail every aspect of the operation.

The name of the organisation which purchased this system is held on record at *Tritech International Ltd*. Details of new software and hardware packages will be announced at regular intervals. Depending on the module, free upgrades will be offered in keeping with our policy of maintaining the highest levels of customer support.

Tritech International Ltd can only undertake to provide software support for systems loaded with Operating System and Tritech Seanet software in accordance with the instructions given in the System Re-installation section of this manual. It is the customers responsibility to ensure the compatibility of any other package that they may choose to load unless with the prior consent of *Tritech*.

INTRODUCTION

It is possible to configure the 'Aux' port on a SeaKing Sonar for input of RS232 / RS485 serial data from a free-running Tritech 'PA' Altimeter. The Altimeter is connected via a dual 6-pin Tritech interconnect cable which has "one-to-one" wiring between the pins. The DC power input of the Sonar is linked through to the AUX port for the 24VDC supply to the Altimeter.

Note: It is recommended, whenever possible, that the Altimeter has the RS485 board fitted since this avoids breaking the power isolation in the SeaKing head and also allows the Altimeter analogue output to be jumpered through the Sonar head on pin 5 (COMDV3/COMFV3 = JP3 link, COMGV3/COMV5 = JP2 link) if necessary.

COMPATIBLE ALTIMETER CONFIGURATIONS

The Altimeter must be of type 'PA' that is manufactured by Tritech. Earlier 'ST' models may be supported; contact Tritech for confirmation, stating the Serial Number of the unit and the Power requirements (these should be on the casing label).

The PA Altimeter is available with either RS485 or RS232 telemetry options. This is not selectable in the unit but requires a PCB replacement to convert the unit from one option to the other. The Sonar AUX Port can be configured to receive either RS485 or RS232 data although RS485 is preferred for power isolation reasons.

There is a set of switches inside the Altimeter that will configure the Altimeter to output different formats of serial message. The Sonar AUX port will receive most of these free-running Altimeter message formats and so changing the switch settings may not be necessary in most cases.
If the PA Altimeter is a 'Bathy Altimeter' type then this is an Interrogated unit (not free-running) and so the set of switches would need to be re-configured to change the unit to a free-running type (ensure to re-label the unit if changes are made!).

HINT: To confirm whether the PA Altimeter is a Free-running type, apply power to it and listen for the audible pings from the yellow/red cased transducer. If the unit is an Interrogated type then it will not ping.

Only if necessary, open the Altimeter to check/change the 'SW1' switch settings…

!! DO NOT ADJUST 'SW2' SWITCHES !!

'SW1' Switches – Supported Modes

MODE		6	5	4	3	2	1			SUPPORTED ?
0		0	0	0	0	0	0		DEBUG IN ZNE	N
1		0	0	0	0	0	1		DEBUG FR ZNE	N
2		0	0	0	0	1	0		DEBUG IN MNE	N
3		0	0	0	0	1	1		DEBUG FR MNE	N
4		0	0	0	1	0	0		3P3 IN ZNE	N
5		0	0	0	1	0	1		3P3 FR ZNE	**Y**
6		0	0	0	1	1	0		3P3 IN MNE	N
7		0	0	0	1	1	1		3P3 FR MNE	**Y**
8		0	0	1	0	0	0		2P3 IN ZNE	N
9		0	0	1	0	0	1		2P3 FR ZNE	**Y**
10		0	0	1	0	1	0		2P3 IN MNE	N
11		0	0	1	0	1	1		2P3 FR MNE	**Y**
12		0	0	1	1	0	0		3P2 IN ZNE	N
13		0	0	1	1	0	1		3P2 FR ZNE	**Y**
14		0	0	1	1	1	0		3P2 IN MNE	N
15		0	0	1	1	1	1		3P2 FR MNE	**Y**
16		0	1	0	0	0	0		V3BATHY IN ZNE	N
17		0	1	0	0	0	1		NMEA FR ZNE	**Y**
18		0	1	0	0	1	0		NMEA FR MNE	**Y**
19		0	1	0	0	1	1		TSS FR ZNE	N
20		0	1	0	1	0	0		TSS FR MNE	N

FR = Free-Running, IN = Interrogated, MNE = Max Range on No Echo, ZNE = Zero on No Echo, P = Decimal Point position

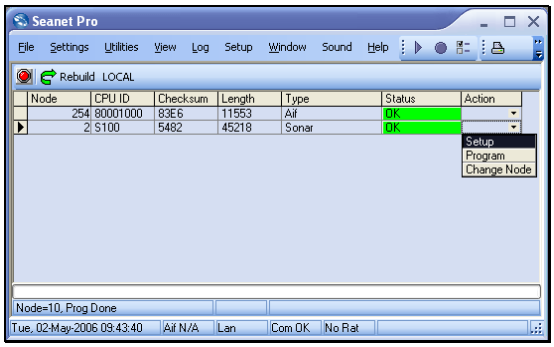
N.B. the Altimeter must be installed with 'V7' / 'V8' / 'NMEA' software – this is noted on the label of the large, square IC next to the switch banks.

CONFIGURING SEAKING COMMS BOARD FOR AUX SERIAL I/O

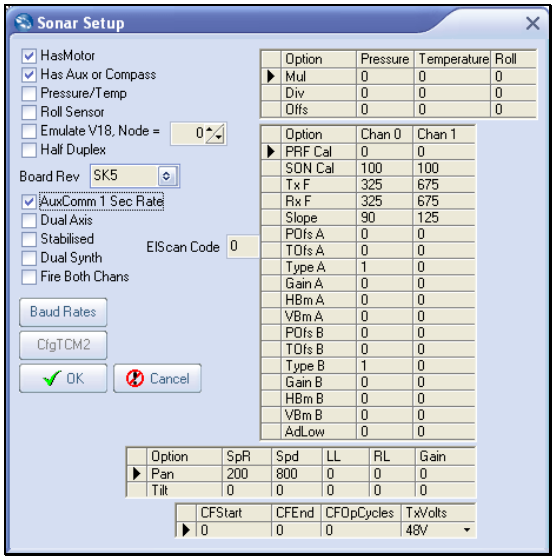
1. Before opening the Sonar head to access the Comms board jumpers, using the 'Seanet Setup' utility program configure the following check box settings. These are needed to enable the 'Aux' port;

a) Open the 'Seanet Setup' program and ensure that **Node 2** is detected in the table.

b) Click on the **Action** column for Node 2 and then select **Setup**, as shown…

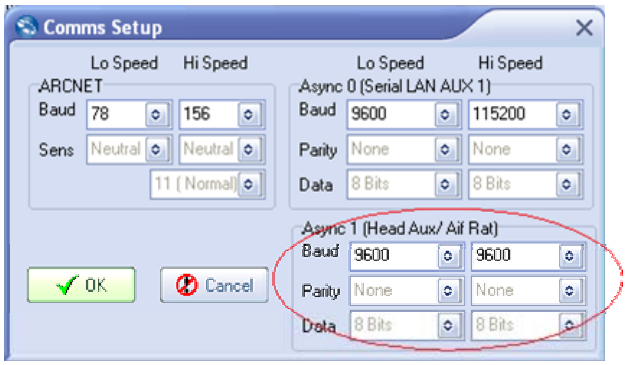


c) In the Sonar Setup panel, ensure that the '**Has Aux or Compass**' check box is enabled.



N.B. If the '**AuxComm 1 Sec Rate**' check box is disabled, the Sonar will try to send up all data collected through it's auxiliary port. Please be aware that if the quantity and rate of this data is too great then the interface may hang up.

d) From here press the Baud Rates Button...



…Check Baud rates on **Async 1 (AUX)** match the device output (PA Altimeter is 9600 baud output).

2. Now change the jumper settings on the Comms board inside the Head. In the SeaKing head, this must be a COMDV3/FV3, COMGV3/V5 or a COMV5 Mod-A board. In some configurations it is possible to link through the Pin5 Analogue output line of the Altimeter.

The jumpers should be set as follows - refer to the option that suits your configuration.

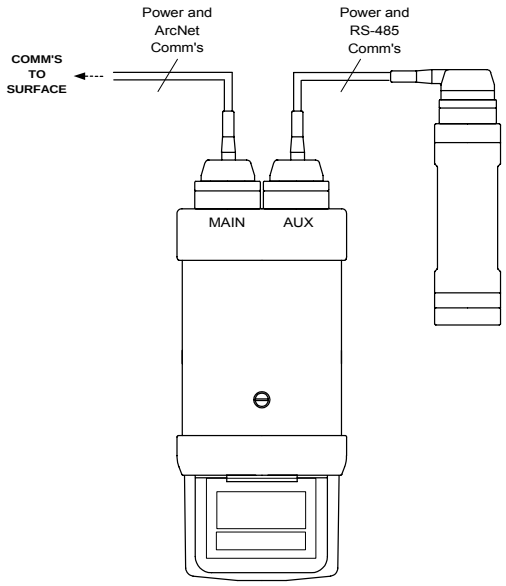
<< See the 4 options that now follow >>

Caution!

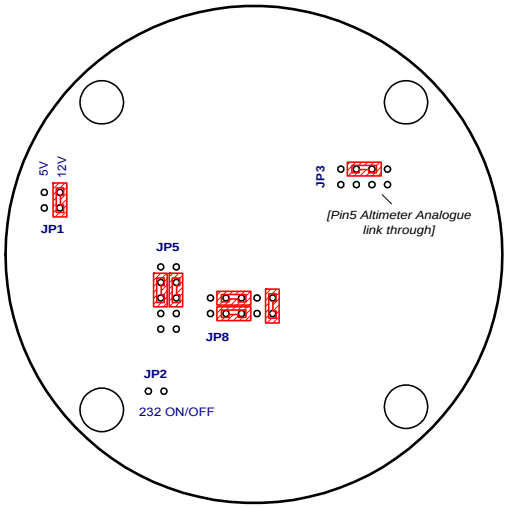
Ensure that the sonar Aux port is fitted with a Water Block connector.

OPTON1: ARCNET SONAR WITH RS-485 AUX ALTIMETER

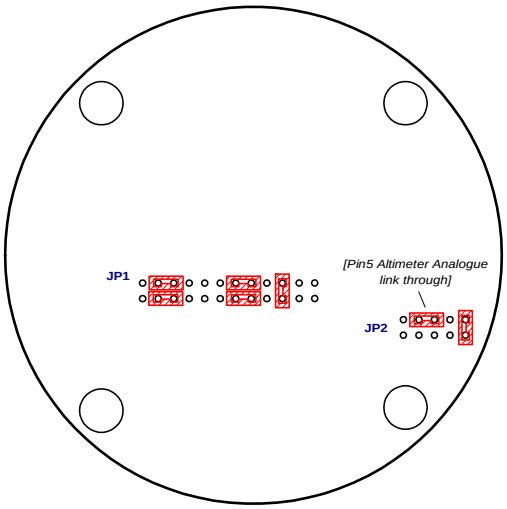
CONNECTION DIAGRAM



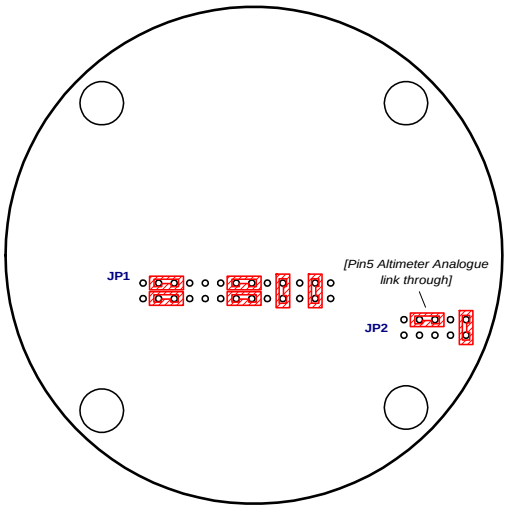
I) COMD(F)V3 SONAR PCB



II) COMGV3 / COMV5 SONAR PCB

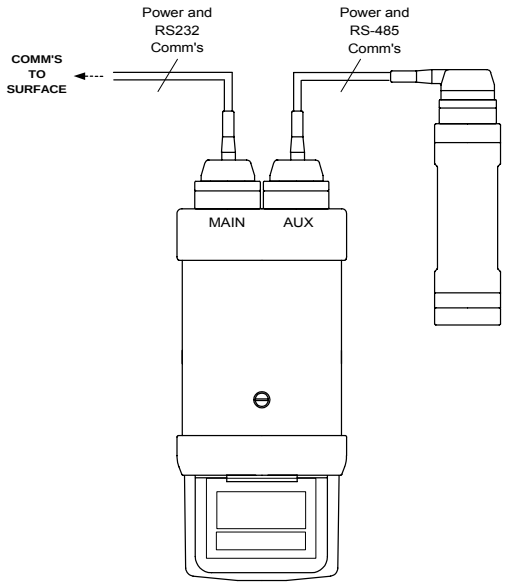


III) COMV5 Mod A SONAR PCB

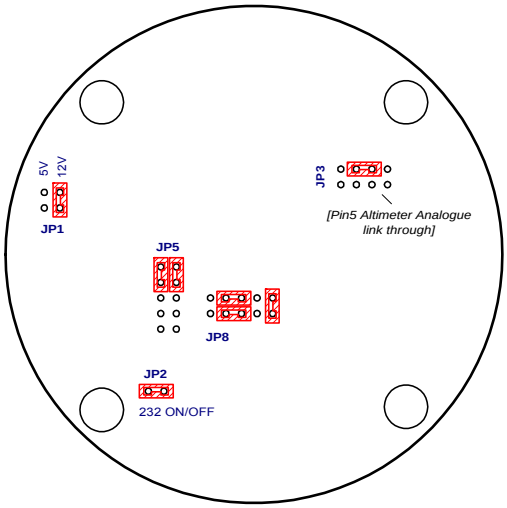


OPTON2: RS-232 SONAR WITH RS-485 AUX ALTIMETER

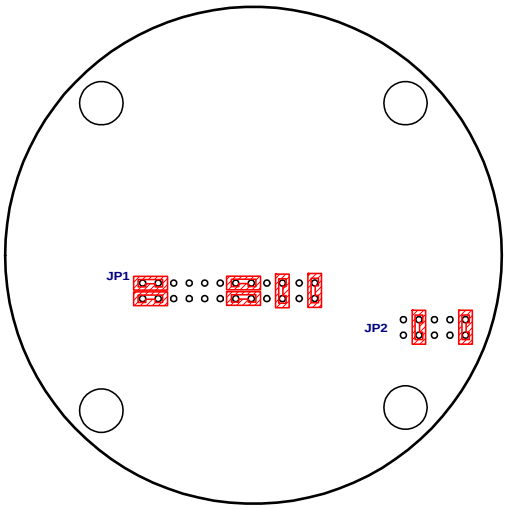
CONNECTION DIAGRAM



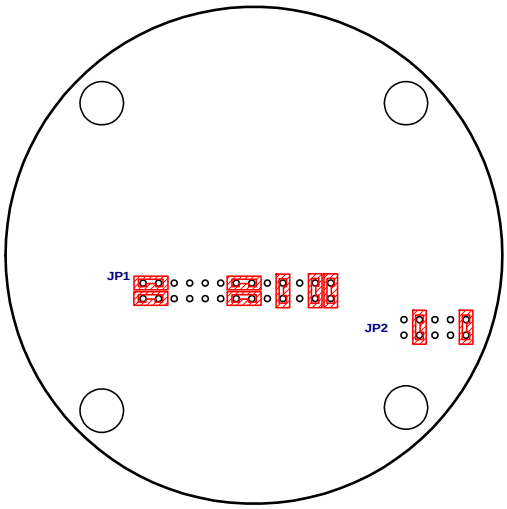
I) COMD(F)V3
SONAR PCB



II) COMGV3 / COMV5
SONAR PCB

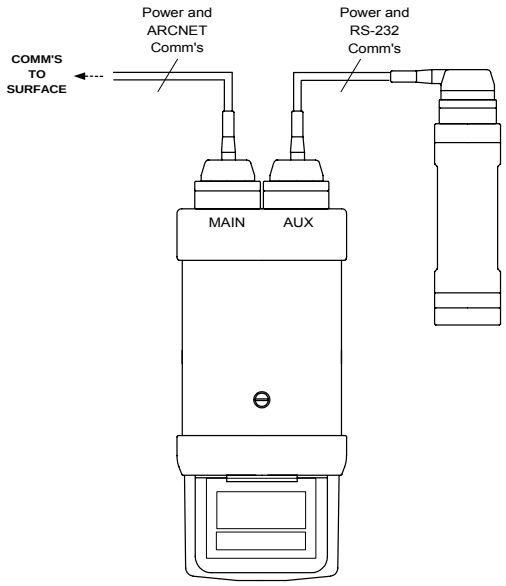


III) COMV5 Mod A
SONAR PCB

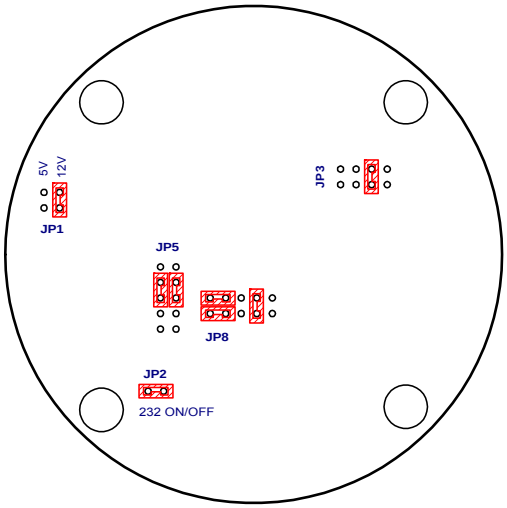


OPTON3: ARCNET SONAR WITH RS-232 AUX ALTIMETER

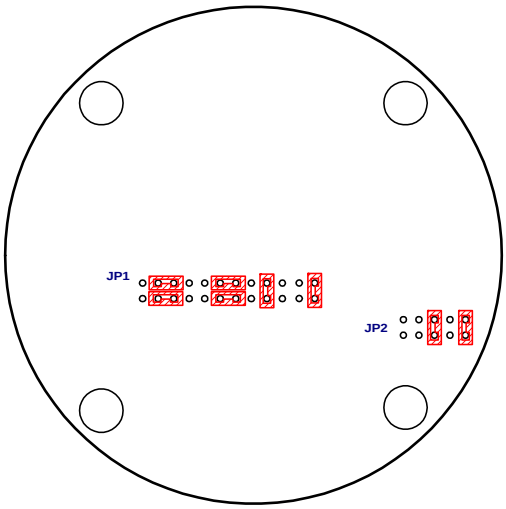
CONNECTION DIAGRAM



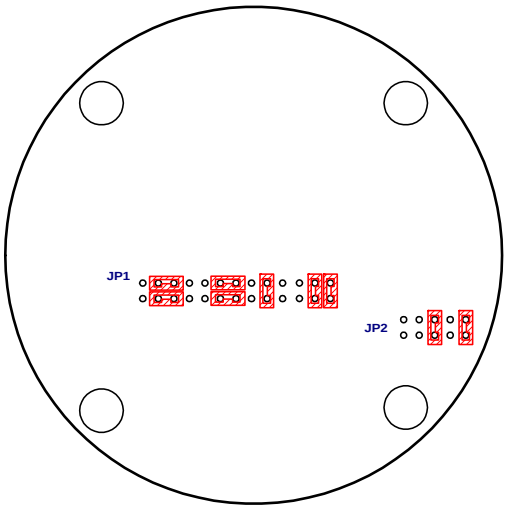
I) COMD(F)V3 SONAR PCB



II) COMGV3 / COMV5 SONAR PCB

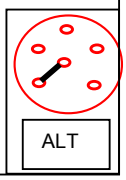


III) COMV5 Mod A SONAR PCB



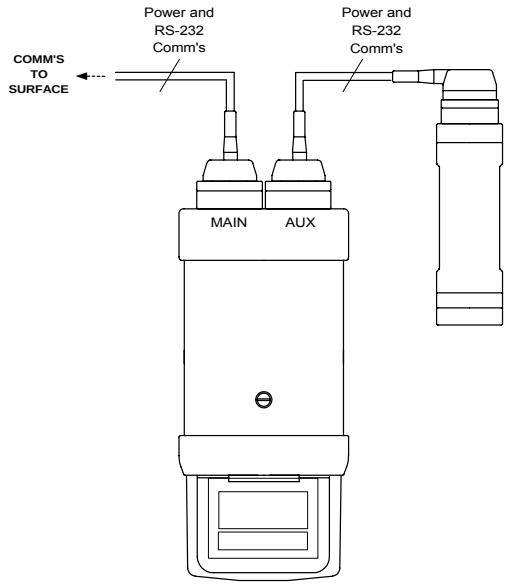
Caution!

The SeaKing head will normally use Pin 5 for RS232 ground and the PA altimeter uses Pin 4. Therefore for an Altimeter to be used with a standard double ended Tritech cable then Analog output on the altimeter should be disabled and Pins 4 and 5 must be shorted together on the SeaKing comms board ALT connector (J2).

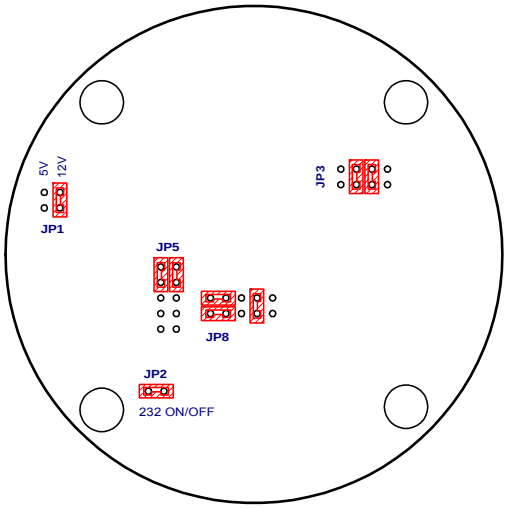


OPTON4: RS-232 SONAR WITH RS-232 AUX ALTIMETER

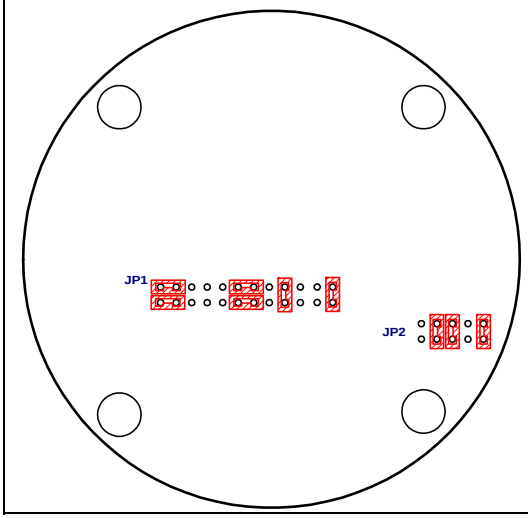
CONNECTION DIAGRAM



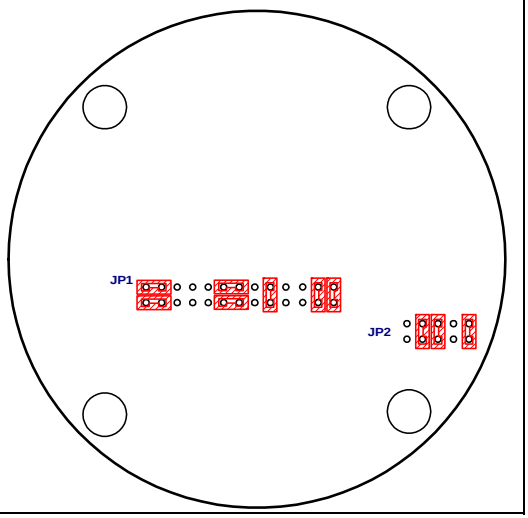
I) COMD(F)V3
SONAR PCB



II) COMGV3 / COMV5
SONAR PCB



III) COMV5 Mod A
SONAR PCB



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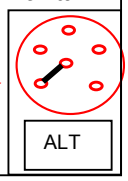
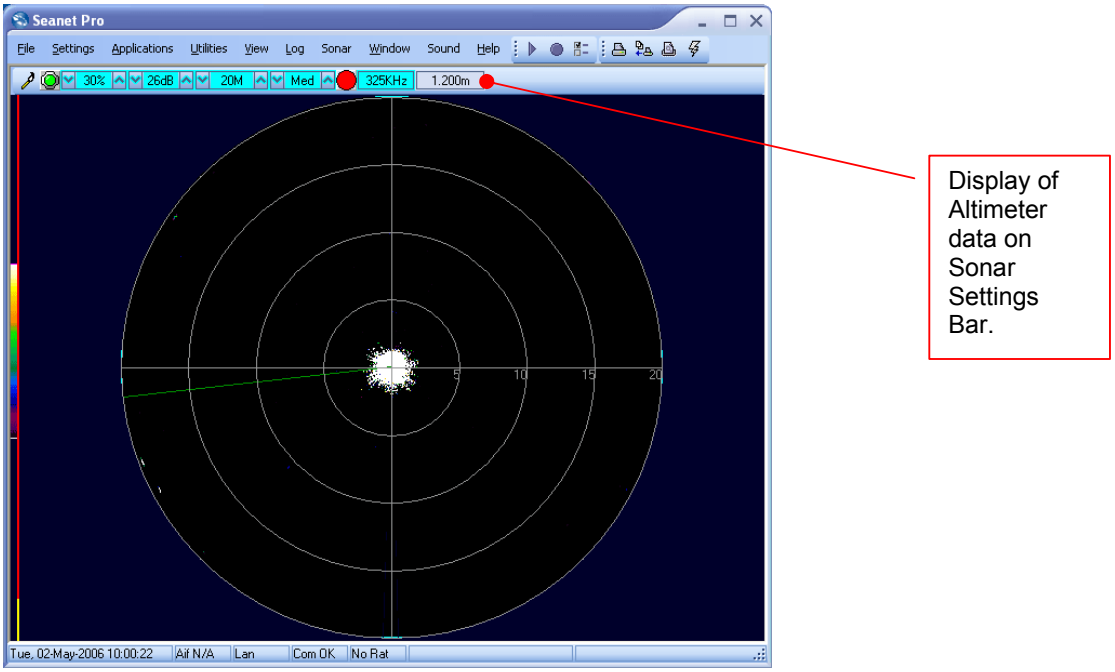


SOFTWARE SETTINGS

Once the Sonar head has been correctly configured with the Altimeter connected, power up the system and run the main Seanet application software. N.B. Ensure that the 'Seanet Setup' program is closed down first.

Then, when running a Sonar application and Altimeter data is received via the Sonar Aux Port a display box will appear on the Sonar Settings Bar. This is where the Altimeter data will be displayed…



N.B. The Altimeter data will be logged along with Sonar data and will be displayed during later playback of the log file.

REGIONAL SETTINGS and AUX data

It has been noted that Windows regional settings can prevent the flow of AUX data through the system.
If the Aux device is connected correctly and operating but no data is displayed on the screen then the Regional settings may be preventing Seanet Pro from processing the data.

In the Windows Control Panel open REGIONAL & LANGUAGE OPTIONS.
Set the drop down list to "English(United Kingdom)"
Press OK for the changes to take effect.
Restart the Seanet Pro MiniKing software and check whether the AUX data is now displayed.

If you wish to continue using your local settings then open REGIONAL & LANGUAGE OPTIONS.
Set the region to the desired setting.
Now press the "Customize" button and ensure that the DECIMAL SYMBOL is set to a "**.**"