Tritech International Limited

Seanet System
Sonar Aux iGC

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 the SeaKing Sonar for input of RS232 / RS485 serial data from the Tritech Intelligent Gyro Compass (**iGC**).

The iGC can be powered directly from the Sonar Aux Port. But first check the power ranges are the same. The 24VDC power that is applied to the Sonar 'Main' port is linked directly through to the Aux port.

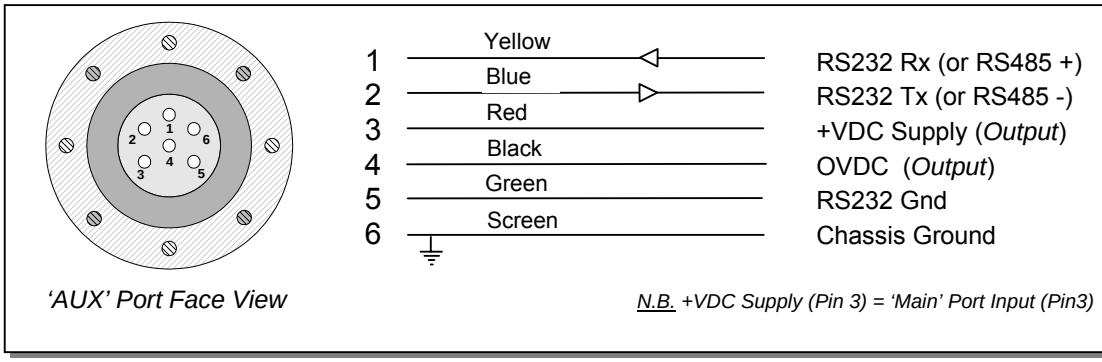
The iGC power requirements are 12-26VDC. The Sonar power requirements are 18-36VDC.

To power the iGC from the Sonar Aux port, ensure that Sonar 'Main' port power is between 18-26VDC.

WIRING DETAILS

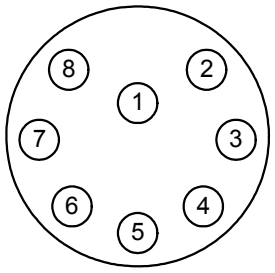
An interconnect cable can be provided for the iGC connection to the Sonar 'Aux' Port. This cable will be wired according to the configured communications type; either RS232 or RS485 are configurable options.

Sonar AUX Port Wiring



The standard mating connector for the Aux Port is a Tritech 6-pin.

iGC Connector Wiring



Subconn Male Face View

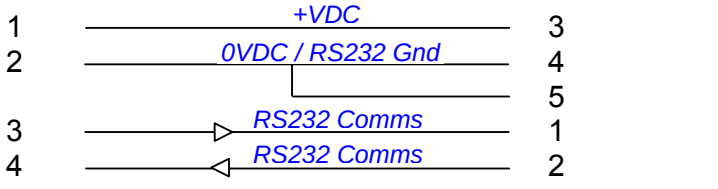
1	----------	**Black**	----------	+Vdc Supply
2	----------	**White**	----------	0Vdc
3	----------	**Red**	----------	RS232 Tx
4	----------	**Green**	----------	RS232 Rx
5	----------	**Orange**	----------	RS485-A
6	----------	**Blue**	----------	RS485-B
7	----------	**White/Black**	----------	N/C
8	----------	**Red/Black**	----------	N/C

-

The standard mating connector for the iGC is a Subconn MCIL8F.

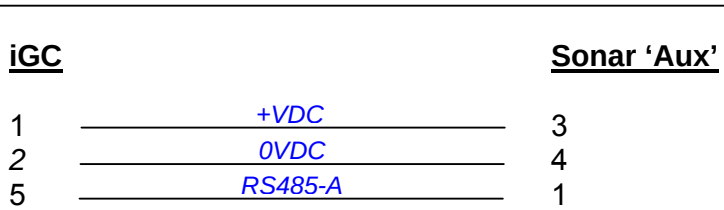
The Sonar 'Aux' Port and iGC have RS232 and RS485 communication options fitted. These are configured by internal switches in both units. The interconnect cabling for both communication options is as follows;

RS232 Interconnect Wiring (Sonar 'Aux' to iGC)



N.B. Aux Port configured RS232

RS485 Interconnect Wiring (Sonar 'Aux' to iGC)



N.B. Aux Port configured RS485

CONFIGURING SONAR 'AUX' PORT

The Sonar 'Aux' port can be configured for RS232 or RS485 communications. This is handled by jumpers on the internal Comms PCB. The Aux port is then enabled in software through the 'Seanet Setup' utility program.

The Baud Rate of the Aux port RS232/RS485 I/O is also set in software using 'Seanet Setup'. This Baud Rate must match that of the iGC which will normally be 4800 Baud for a configured 10Hz update rate.

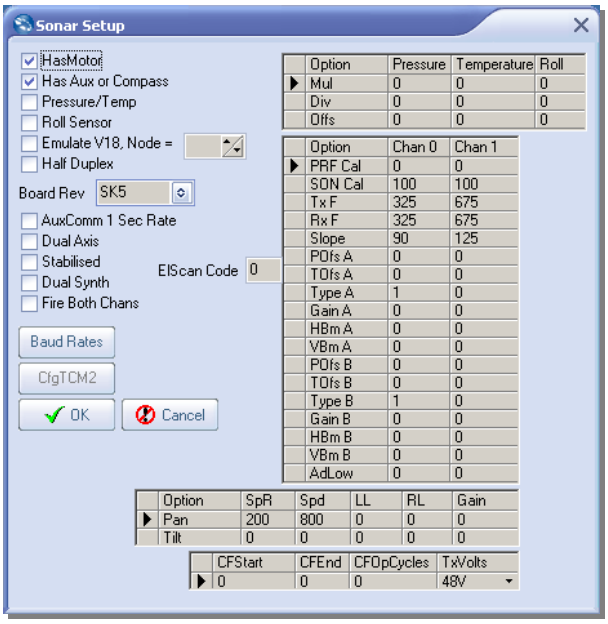
The procedure for the 'Aux' port comms configuration is as follows;

1. Before opening the Sonar head to access the Comms board jumpers, open the 'Seanet Setup' utility program to enable the 'Aux' port:

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

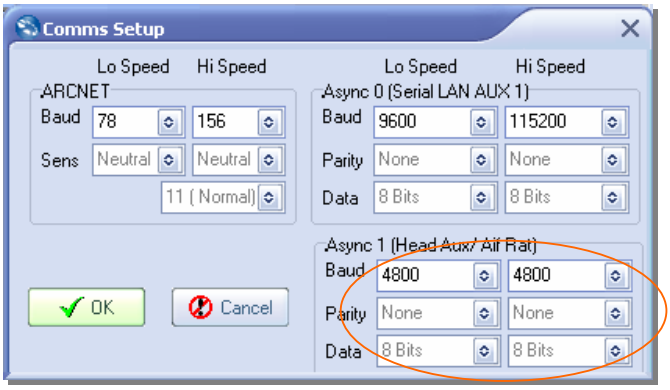
b) Click on the **Action** column for Node 2 and then select **Setup**, as shown…

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



N.B. The '**AuxComm 1 Sec Rate**' check box will limit the throughput of iGC messages to one per second. The iGC can be configured for 5, 10 and 20Hz update rates. Only 5 and 10Hz should be used whenever the 'AuxComm 1 Sec Rate' check-box is disabled.

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



…Check Baud rates on **Async 1 (AUX)** match the iGC output*****.

***** Default is a 4800 baud output for iGC configured with 10Hz update. This is configured by '**SW1**' DIL switches inside the device and is the Switch Mode **202** (Switch 1 –> Switch 8 = 01010011; where 1 = On). Refer to the iGC manual for full details.

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.

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

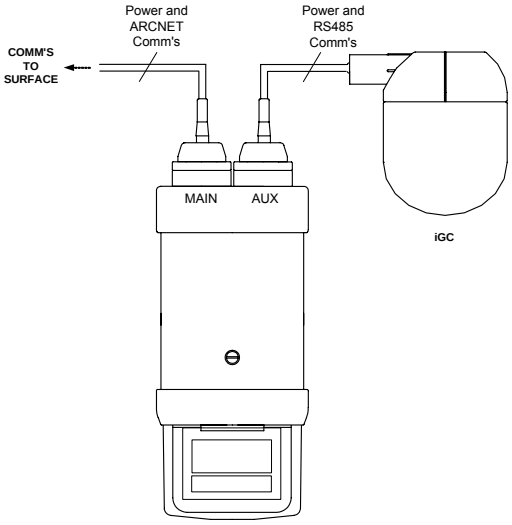
<< See the 4 options that now follow >>

Caution!

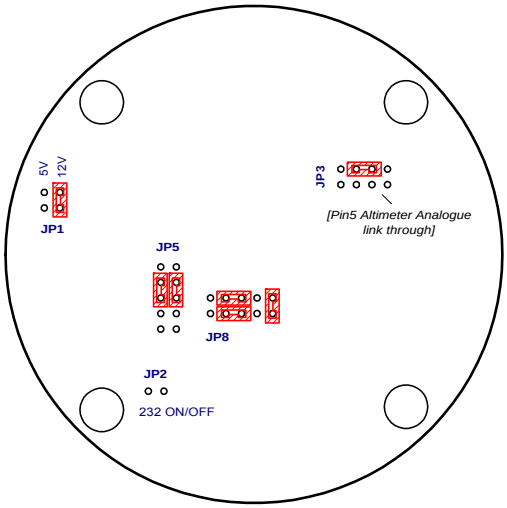
Ensure that the sonar Aux port is fitted with a Water Block connector.

OPTON1: ARCNET SONAR WITH RS485 AUX PORT

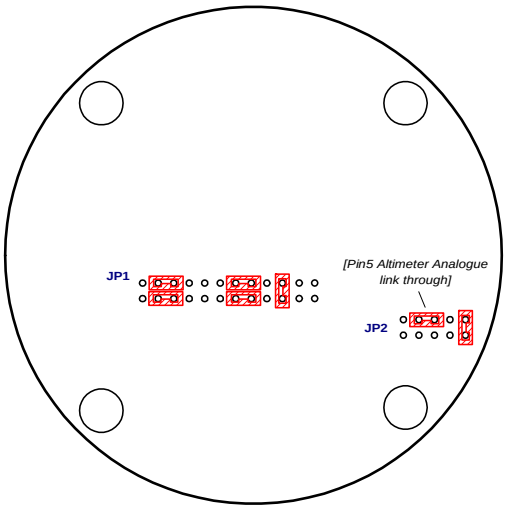
CONNECTION DIAGRAM



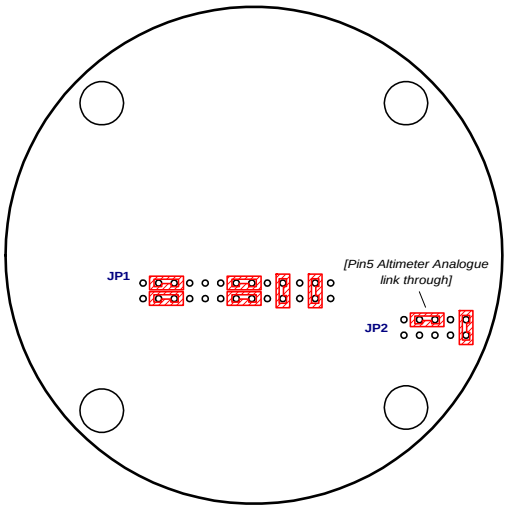
I) COMD(F)V3 SONAR PCB



II) COMGV3 / COMV5 SONAR PCB



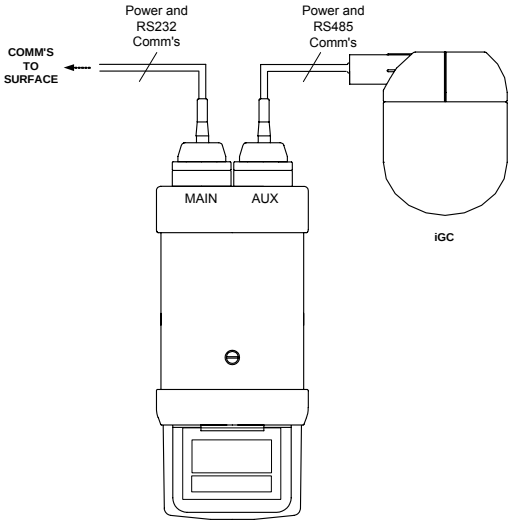
III) COMV5 Mod A SONAR PCB



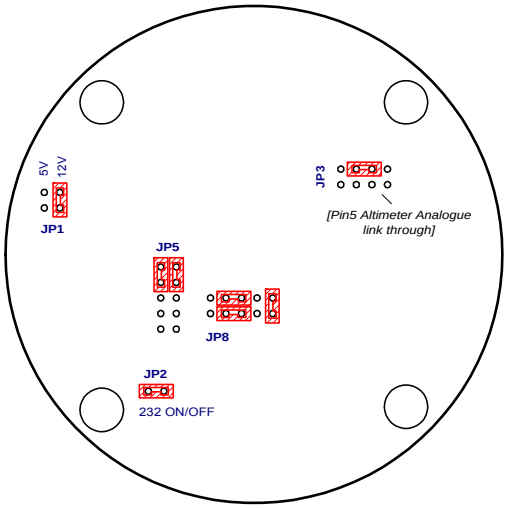
N.B. The 'Pin 5 Altimeter Analogue link through' is shown for purposes of connecting a PA Altimeter to the Aux Port. This link is not required for an iGC connection.

OPTON2: RS232 SONAR WITH RS485 AUX PORT

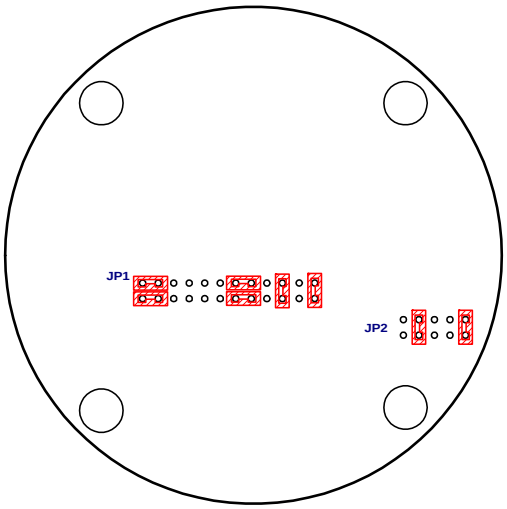
CONNECTION DIAGRAM



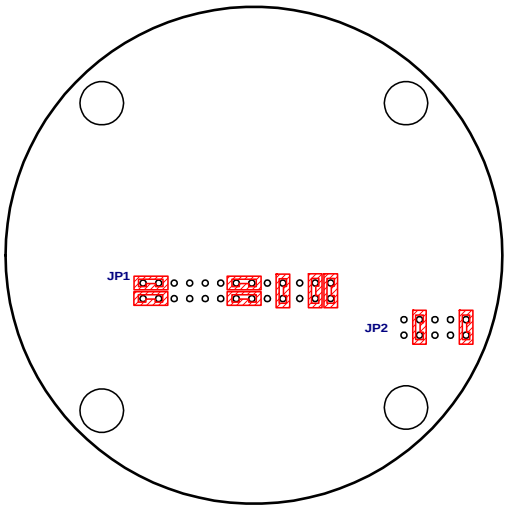
I) COMD(F)V3
SONAR PCB



II) COMGV3 / COMV5
SONAR PCB



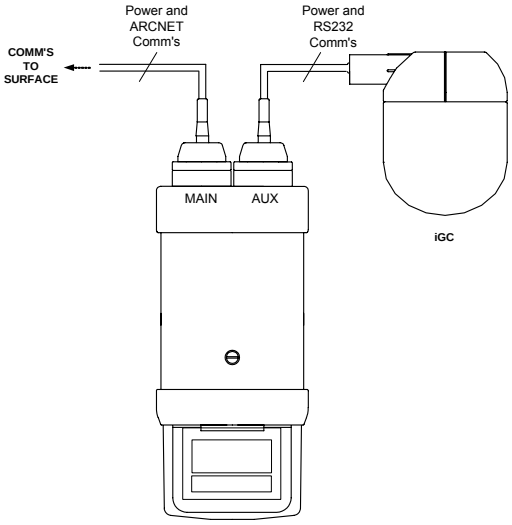
III) COMV5 Mod A
SONAR PCB



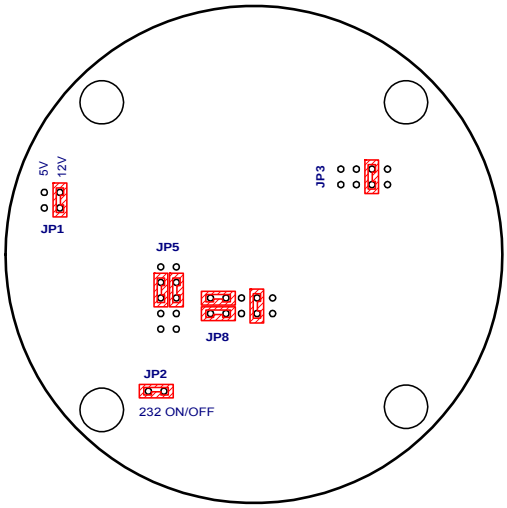
N.B. The 'Pin 5 Altimeter Analogue link through' is shown for purposes of connecting a PA Altimeter to the Aux Port. This link is not required for an iGC connection.

OPTON3: ARCNET SONAR WITH RS232 AUX PORT

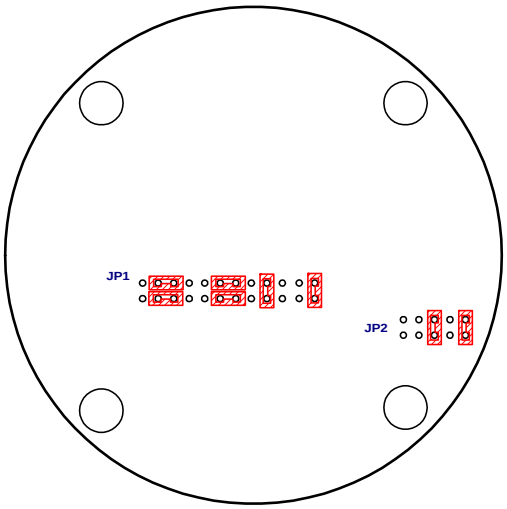
CONNECTION DIAGRAM



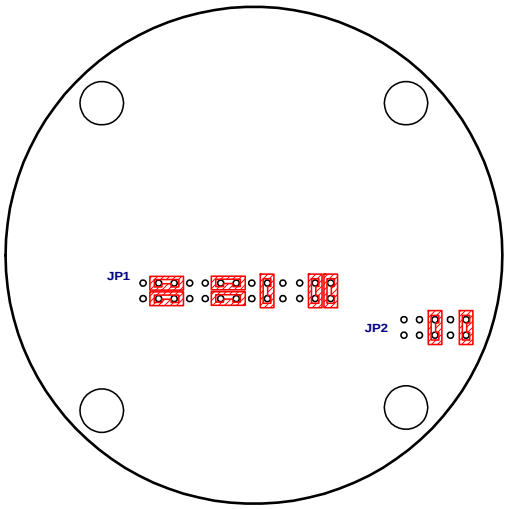
I) COMD(F)V3
SONAR PCB



II) COMGV3 / COMV5
SONAR PCB

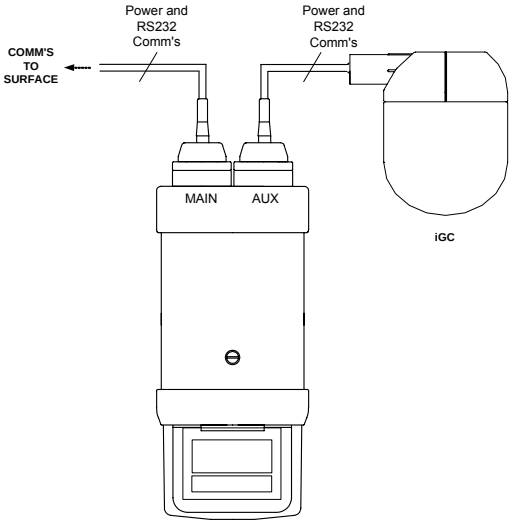


III) COMV5 Mod A
SONAR PCB

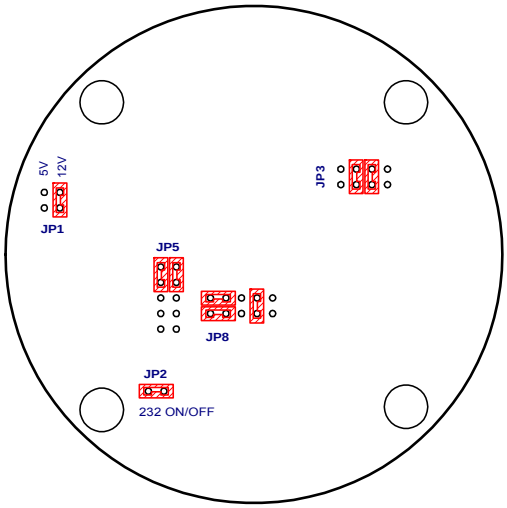


OPTON4: RS232 SONAR WITH RS232 AUX PORT

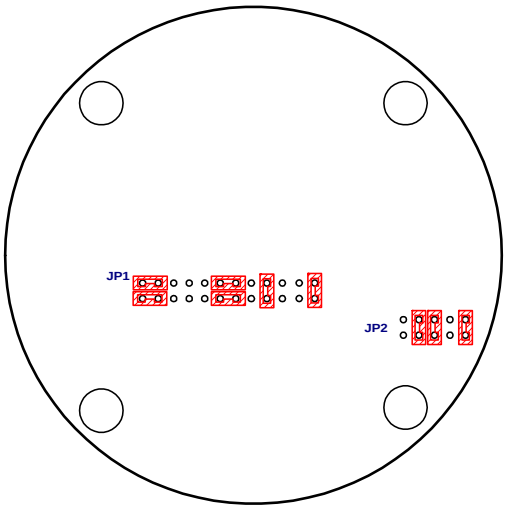
CONNECTION DIAGRAM



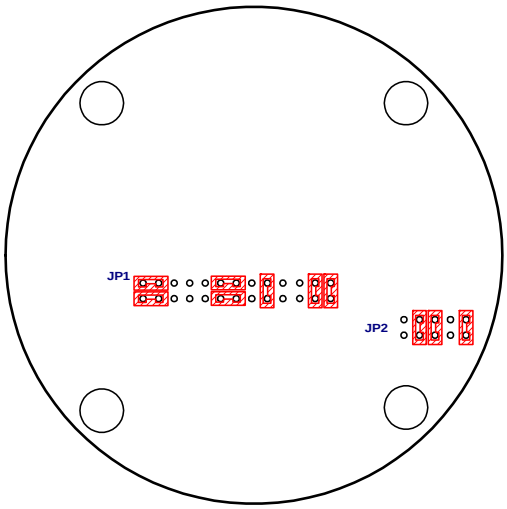
I) COMD(F)V3
SONAR PCB



II) COMGV3 / COMV5
SONAR PCB



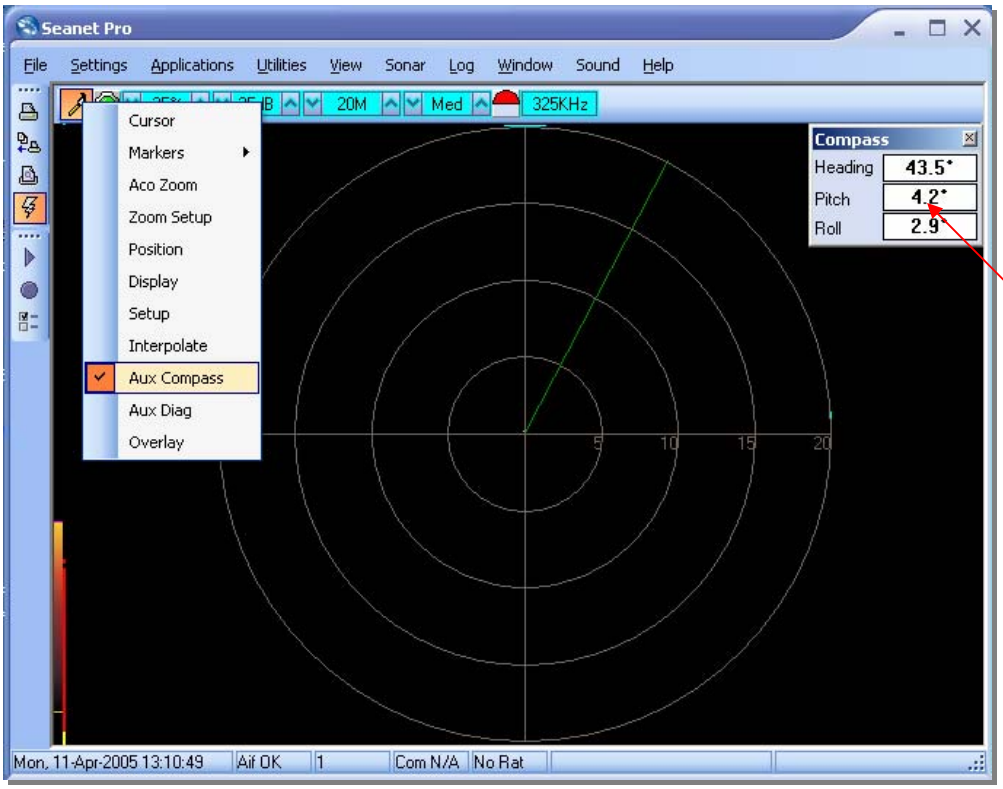
III) COMV5 Mod A
SONAR PCB



SOFTWARE SETTINGS

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

Then, when running a Sonar application, right-click on the sonar display and select 'Aux Compass' from the popup menu. If recognised Gyro data is received via the Sonar Aux Port it will be displayed in the Compass popup.



Display of iGC data in Compass popup.

N.B. The iGC 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 "**.**"