TELEDYNE
ODOM HYDROGRAPHIC
A Teledyne Technologies Company

MB2 MULTIBEAM ECHO SOUNDER
QUICK START MANUAL

The following is intended as an aide-memoir to quickly set up and operate the MB2 system. It is intended to supplement, not replace, the Hardware and software manuals. Refer to these manuals as the authority on any or all of the steps outlined below.

1.   HARDWARE SET UP with External Sensors
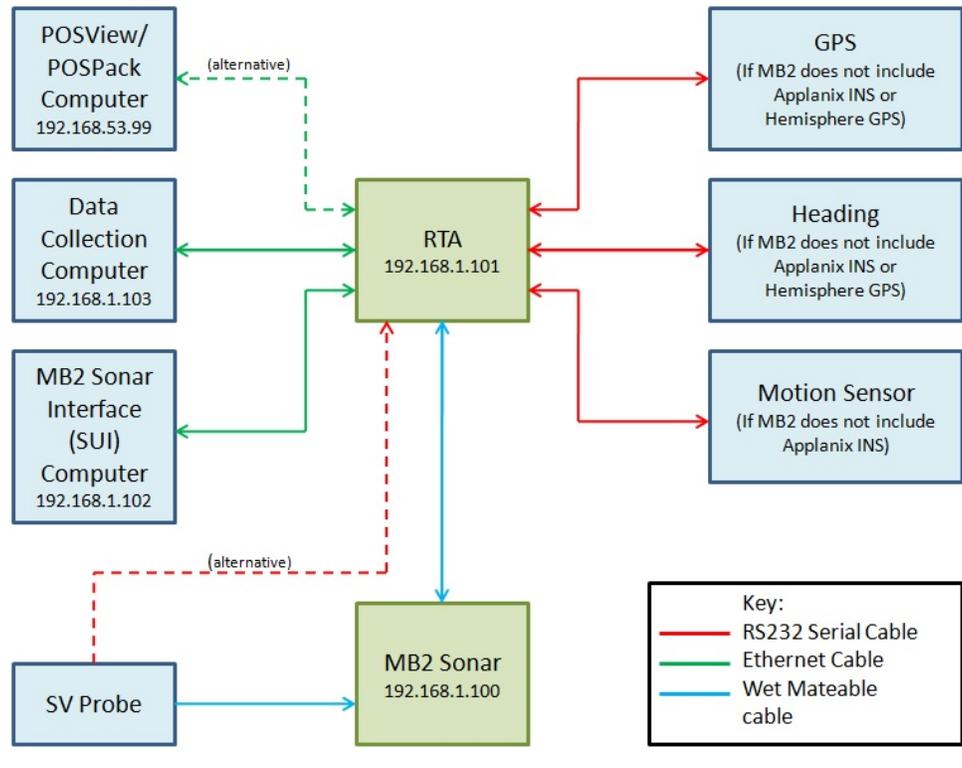
1.1   Connect to a Power Source
Using the supplied DC power cable connect the Amphenol connector to the power socket on the rear of the RTA. Connect the other end to a power supply of 12-30V DC.

1.2   Connect Real Time Sound Velocity to the Sonar Head or RTA
If a Digibar V is being used for real time sound velocity, attach this unit to the side of the sonar head and connect to the SV port on the rear of the sonar, using the short wet-mate cable.

If a different type of sound velocity probe is being used for real time corrections, connect this through the port marked "SVP I/O". Note the baud rate of the probe.

1.3   Connect GPS, Heading and Motion Sensors to the RTA
If the MB2 is being used with external sensors use the serial ports on the rear of the RTA, connect the GPS to the port marked "GPS I/O". If the PPS is carried on a BNC (rather than pin 9 of the GPS serial) connect the PPS to the BNC connector marked "1PPS in". Connect the Heading sensor to the port marked "Heading I/O". Connect the motion sensor to the port marked "HPR I/O". Make a note of all the baud rates that each sensor is outputting.

For motion sensors that accept heading and/or GPS aiding, use the "Heading-HPR" and "GPS-HPR" ports to output this data to the motion sensor.

If the MB2 has and integrated Applanix INS, connect the Primary and Secondary antennas.

1.4   Connect MB2 Control PC to the RTA

Note: The minimum computer requirements are an Intel i7 quad core processor w/8GB Ram, and 64 bit OS (Windows® 7) with 1TB of data storage space. The computer is also required to use a Gigabit Ethernet adaptor which allows the receive buffer to be resized to 2MB and a high performance video adaptor which has performance that is better than the standard Intel chipset performance.

Using the supplied Ethernet cable, connect the computer that is to be used to control the sonar to the "LAN 1" port on the RTA.

1.5   Connect Data Collection Computer to the RTA

Using the supplied Ethernet cable, connect the computer that is to be used to acquire the sounding data to the "LAN 2" port on the RTA.

Note: The SUI software used to control MB2 is not designed to run on the same computer as the data collection software and can result in a lower data rate depending on the load the data collection software places on the computer if used this way.

2.   SOFTWARE SETUP

The software used to control MB2 is called SUI (Sonar User Interface) and should be located in the Odom product USB Flash device. Follow the instructions when installing the software. Please review the MB2 Technical Note – Increasing Network Adapter Receive Buffer after installing the software.

2.1   Configure Network

In the MB2 SUI computer, change the computer's IP address through network settings within the Control panel to 192.168.1.102.

2.2   Start SUI Software

Double click on the "SonarUI" logo to start the software.

2.3   Configure Serial & Network Ports

Click on the hardware tab on the right of the SUI screen. If the MB2 is equipped with an integrated Applanix IMU select the Enable Built in HPR checkbox. If the MB2 has a Digibar V connected select the Enable Attached SVP checkbox. It is important that these are checked before powering up the MB2.

Default settings of the serial data are as follows:

Serial Input	Data Format	Default Baud Rate (all are 8 Data bits, No parity and 1 stop bit)	Notes
GPS Position	NMEA GGA	19200	
GPS Time	NMEA ZDA	19200	PPS may be through *either* Pin 9 or BNC connector
Heading	NMEA HDT	19200	
Motion (Heave, Pitch, Roll)	TSS1	19200	
Real Time Sound Velocity	AML	19200	Use either head port or RTA port

2.4 Power Up RTA

Press the "Power" button on the front of the RTA. Wait up to 35 seconds or until the "Link" light on the "Sonar1" section of the front of the RTA is constantly flashing. Once the GPS or Applanix have acquired satellites the PPS LED should start blinking. Soon thereafter the ZDA and GPS LED's should start blinking. After the HPR or Applanix INS has settled (~2 min after start up) the HPR & Heading LED should start blinking.

2.5 Start Sounding

Go to the Advanced tab on the bottom of the screen. Select the desired Transmit Max Rate.

Click the Main tab on the bottom of the screen. Adjust the range scale, power and pulse length desired.

The best general bottom detection rate is achieved by turning on Adaptive Gates in the advanced menu. It is also recommended to set the gate window to 30% under the Detection tab on the right side of the SUI display under Window Size.

Sonar data should be seen on the screen at this point, along with all of the serial data information on the right of the screen.

2.5 Enter Sounder Settings

Under the Advanced tab sounder settings such as number of beams, frequency of operation may be changed either during sounding or before sounding commences.

To start and stop logging when the sonar is sounding, go to the Advanced tab and set the Transmit Max Rate to OFF.