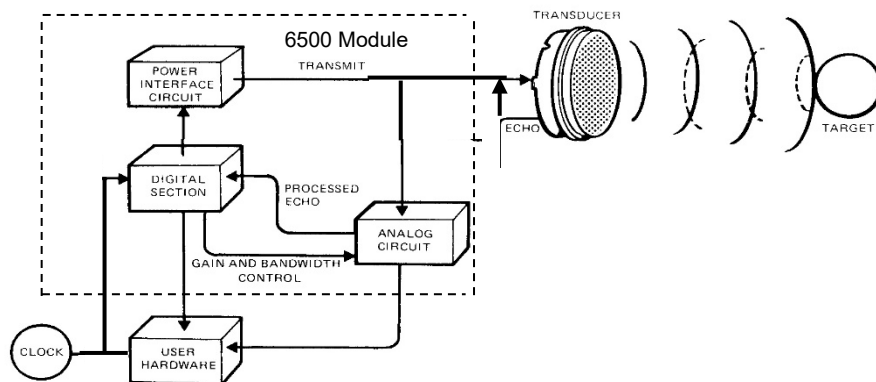


Interfacing to SensComp Electrostatic Transducers and the 6500 Sonar Ranging Module

A Time of Flight (TOF) Ranging System using the SensComp 6500 Ranging Module



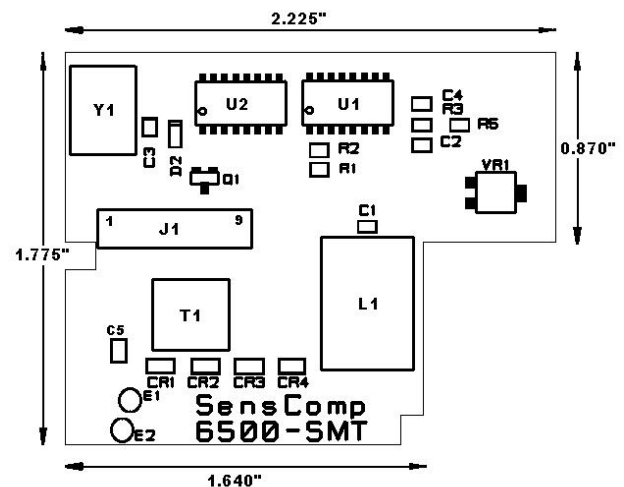
In the above figure, SensComp’s 6500 ranging module is the driving electronic interface between our Series 600, or Series 7000, Electrostatic Ultrasonic Transducers and your external electronics. The “Clock” and “User Hardware” circuits, requesting and receiving ultrasonic time of flight (TOF) data must be supplied by the user.

Connecting “User Hardware” to the 6500 Sonar Ranging Module

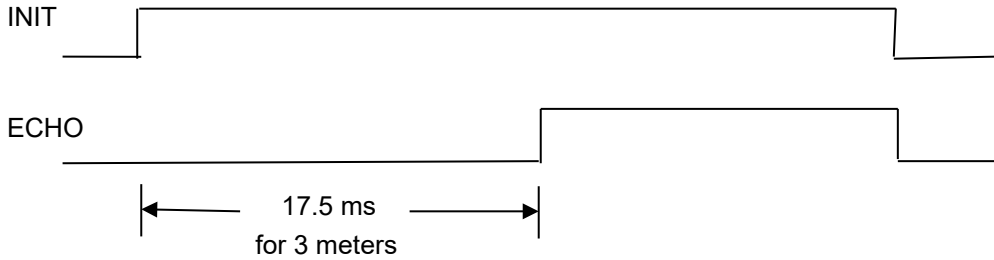
The J1 connector on the Ranging Module provides access for connecting external electronic control signals and power, as follows:

- J1-1 GND Power Supply Ground
- J1-2 BLNK Blanking (multiple echo’s)
- J1-4 INIT Initialize a Write/Read Cycle
- J1-6 OSC Internal 49.4 KHz Oscillator**
- J1-7 ECHO Received Echo Detected**
- J1-8 BINH Inhibit Internal Blanking
- J1-9 VCC Power Supply (+5 VDC)

** OSC and ECHO outputs are TTL-compatible Open Collector NPN outputs. A 4.7 Kohm resistor to +5 VDC is required to observe signals at these outputs.



For normal distance measurements between 1.5 feet and 35 feet, only pins 1, 4, 7, and 9 need to be used. Pins 1 and 9 provide the power to the module, Pin 4 is the INIT signal from external hardware to start a write/read cycle, and Pin 7 is the returning ECHO signal that is an input to external hardware. Pins 2, 6, and 8 can be left disconnected for normal operation.



Connecting 6500 Sonar Ranging Module to the Series 7000 Transducer

We supply the 6500 Sonar Ranging Module with a 2-conductor ribbon cable for interconnecting the module to either our Series 600 or our Series 7000 Electrostatic Transducers. This cable assembly, PID# 604789, contains two clips that provide easy connection to the protruding tabs on the transducer. One of the cable conductors will have a white stripe. This is the negative (-) lead and should be connected to the (-) terminal on the transducer.

