



Analyzer Check Out Routine



- **Tools Needed**
 - Standard screwdrivers
 - 9/64 inch hex, long (at least 8" shaft length) Allen Hex driver
 - 10 mm socket and ratchet or speed wrench
 - Digital Voltmeter
 - Operation and Installation Manual for Analyzer
- **Please print off this presentation and make notes on any page which are appropriate to your situation.**
- **Fax findings back to Phase Dynamics, Inc., 1-972-680-3262, USA**
- **Technical help can be obtained through email at:**
 - sales@phasedynamics.com
 - Phone number is USA 1-972-680-1550 - press "0" for operator and ask for technical help



Main Electronics



- **Check Display for any Errors on the Bottom line of the LCD Display**
- **Open Main Explosion Proof Electronics and switch both Dip Switches to the left (Technician Mode)**
 - **Record Frequency, Vref, Water Cut, Temperature, "Oil" or "Wat" phase**
- **Verify that an extra 14 gauge Green Ground wire is run in the same conduit with the cable going to the sensor**
 - **This was included in the package with the system cable along with a large note that it MUST BE INSTALLED.**
 - **Is the green ground connected to the Chassis (lower Left corner**
 - **Is this same green wire grounded inside of the "football" on the sensor?**
 - **If no "Green Wire" is there a SOLID & Continuous metal conduit to serve as a ground with no plastic parts to prevent grounding?**



Main Electronics (Continued)



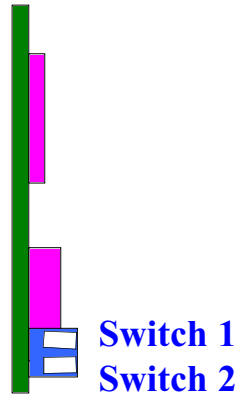
- Are two red LED's lit on the Mother Board and two more one each on the Analog Output board and the Analog Input board?
- Measure the voltages per attached trouble sheet and record them.
- Are all boards fully in their sockets and the metal hold down bracket in place?
- When Through Servicing Switch the two Dip switches back to
 - **User Defined Mode** Switch 1 to the Left Switch 2 to the Right
This prevents any changes from the front panel by an operator.
 - If any specific Menu items such as Salinity or Stream Number set this up in the **Supervisor Mode** (1 right 2 left) before switching to the **User Defined Mode**



Dip Switch for Mode Setting



**Microprocessor
Board**



Mode of Operation	Switch 1 Location	Switch 2 Location
Normal	right	right
Supervisor	right	left
User-defined	left	right
Technician	left	left



Main Electronics Layout



EEProm Near Edge
& Eprom (White Label)

Power Supply Board
Microprocessor Board

Frequency Board

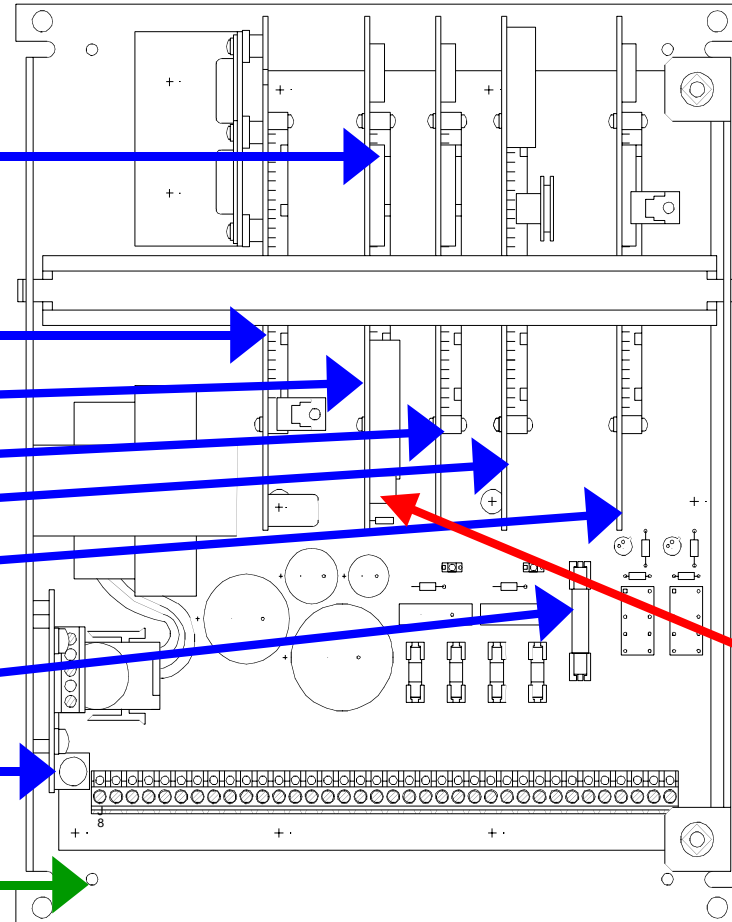
Analog Output

Analog Input

Heater Fuse

AC Fuse

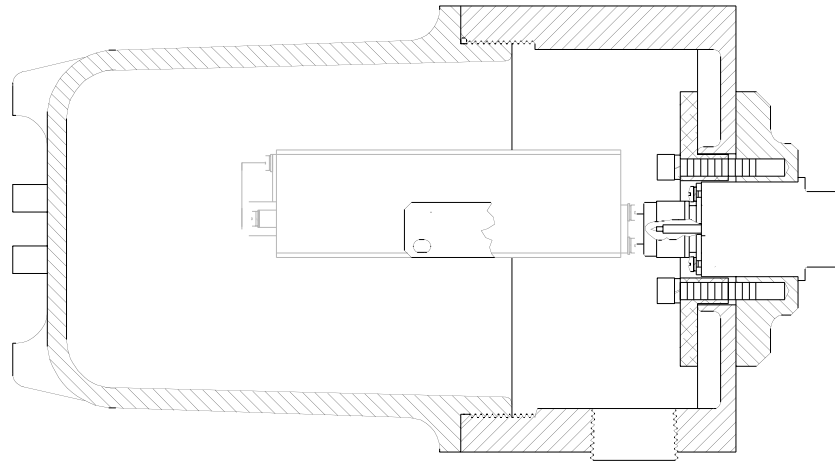
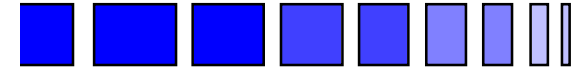
Green Ground Wire
Screw Location



Dip Switch
On
Microprocessor
Board



Measurement Section or Sensor



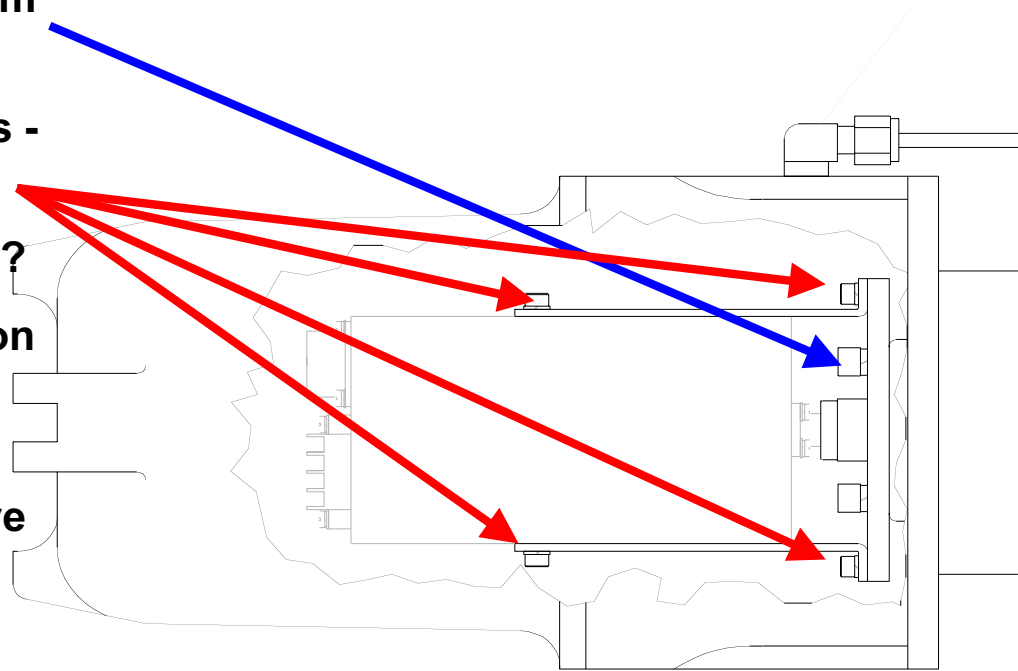
- Leave power on until everything is ready - then power down
- Remove Lid on "Football"
- Touch the gold anodized oscillator housing - it should be warm to the touch - this signifies the internal heater is operational
- Visually Inspect the areas shown by arrows in next slide for any leakage



Checks for Items in "Football"

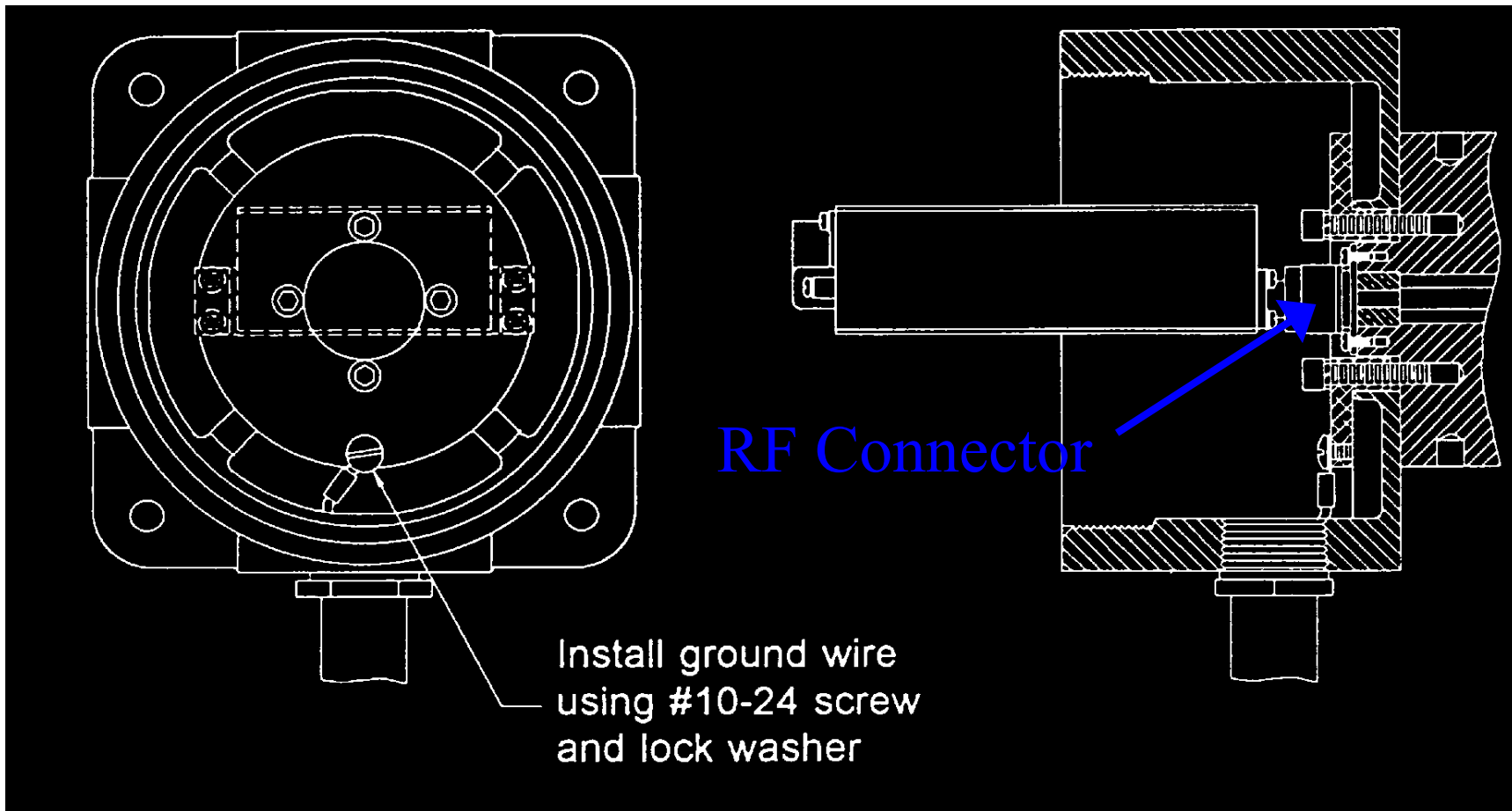


- Check for Leakage in bottom of "football"
- Check for any loose screws - 6 total on brackets
- Is oscillator assembly tight?
- Loosen two Outer screws on brackets and see if it will move easily
- If oscillator is loose, remove brackets and tighten RF connector in the front by rotating oscillator while holding RF Connector "barrel" **ONLY PERFORM THIS WITH NO PRESSURE ON SYSTEM**





Green Ground Wire & RF Connector Locations



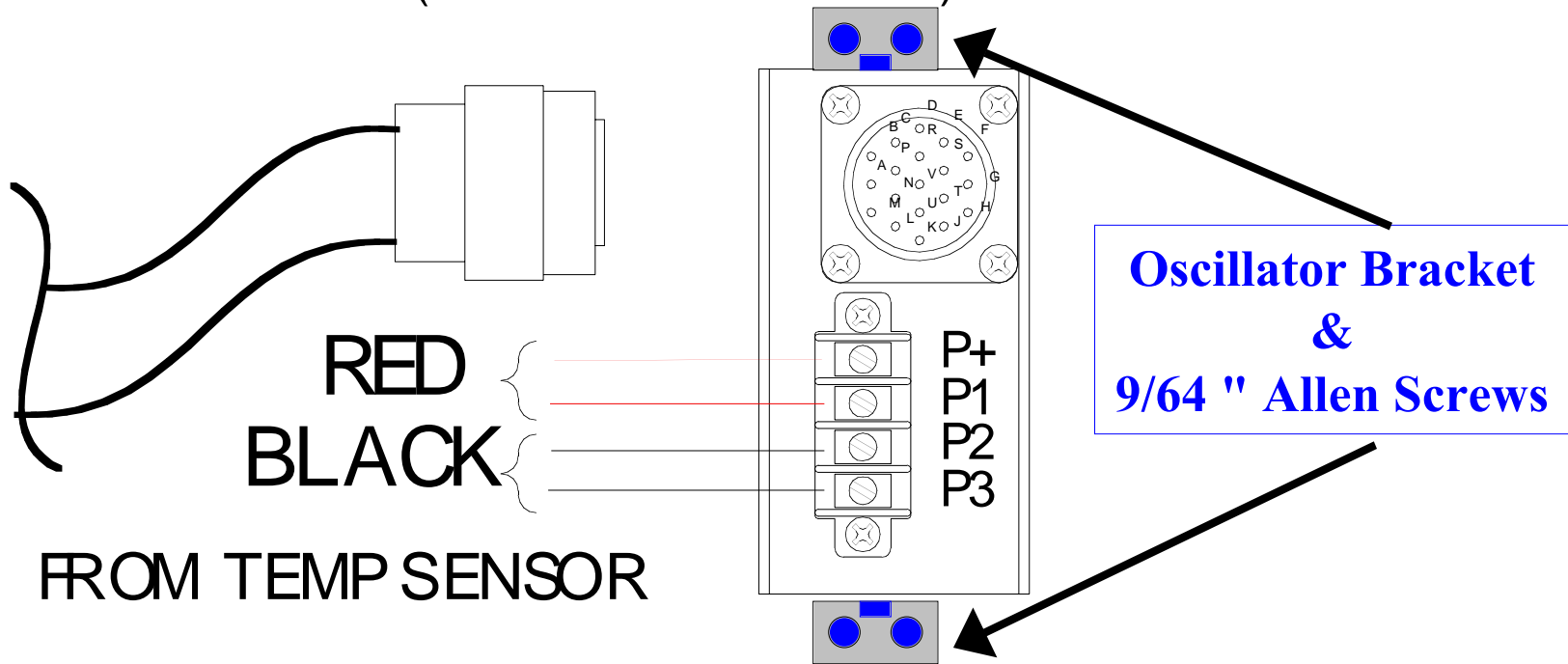


Oscillator Brackets and Wiring



OSCILLATOR MODULE

Inside Sensor (Measurement Section)





Conclusion & Action Items



- If you found leakage of oil into the "Football" around the area of the RF Connector - only the sensor needs to be returned to the factory. Main Electronics can stay at site.
- If you found voltages out of specification - contact factory
- If oscillator was loose - tighten and see if numbers return to proper range. A new offset may be required to bring unit back to correct value.
- If green ground wire is missing and insufficient metal grounding is between main electronics and sensor - provide a good metal path with a ground wire or other methods. Ground loops will create many problems!
- If oscillator housing was not warm, check heater fuse. DC current should be between 0.150 mA and 1.0 amps for heater alone.