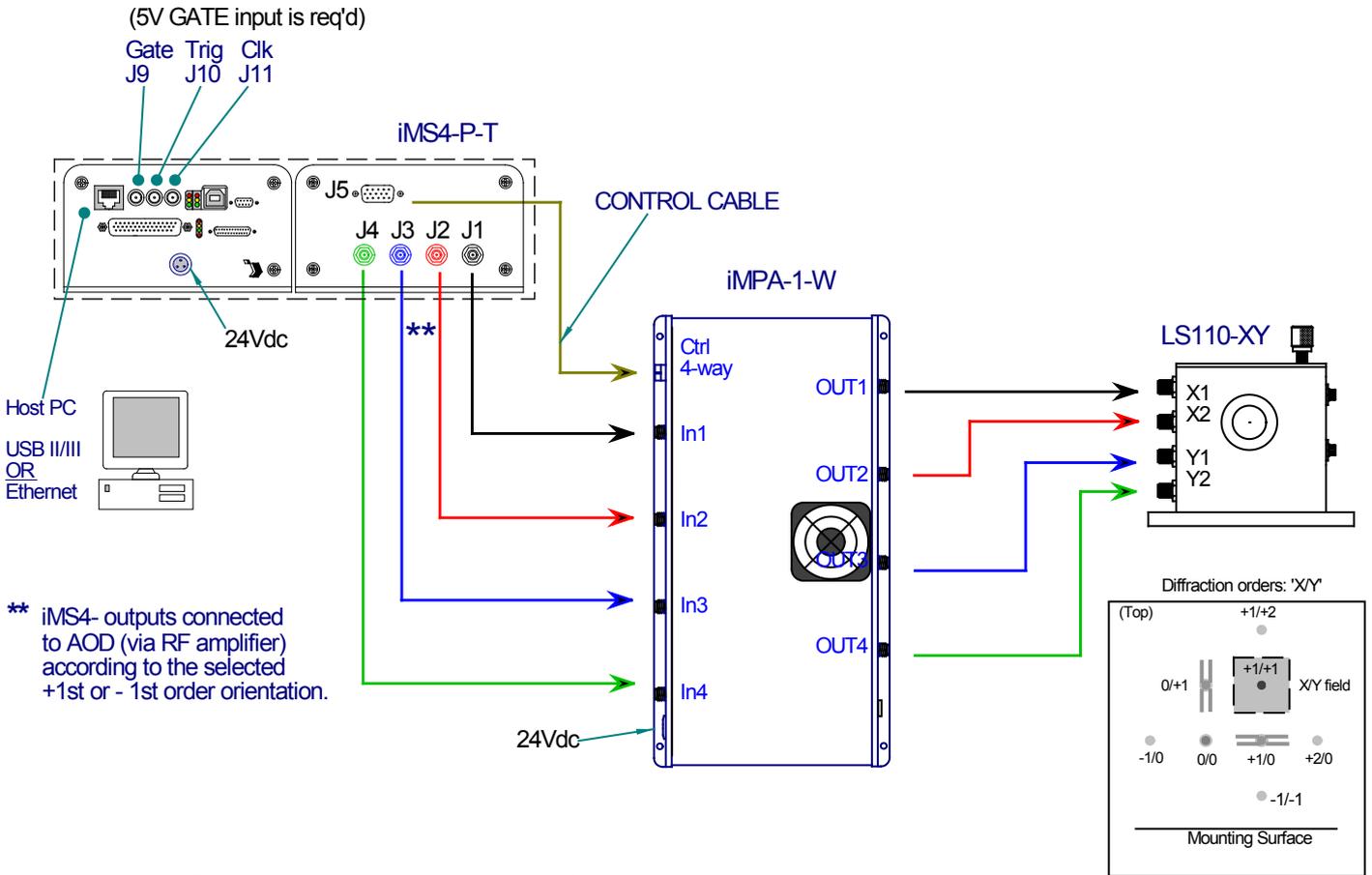## iMS4-P (revB) and iMPA4 Connection Guide

Typical connection with RF amplifier.

Note: J5 connection will depend on the RF amplifier model

- **DC Power**

To ensure correct initialization when the DC supply power is turned on -

1:    Operate both the iMS4-P- and RFA amplifier(s) from the same DC supply (+24Vdc)
      OR
2:    Apply DC power to iMPA amplifier before the iMS4-P-

- **Interlock**

An over-temperature Interlock lead connects between the AO device and RF amplifier. This cable has Binder-719 push connector at each end (normally closed contacts). It is supplied with the RF amplifier.

If the temperature of the Rf amplifier exceeds 32degC, the thermal interlock switch will open, disabling the RF drive .

- **RF amplifier(s) Enable**

Depending on the RF amplifier model, a connection will be required from the iMS4-P- to the RF amplifier.

A 15way HD cable connects between the iMS4-P (J5) and the 4-way Binder (CTRL) input on the amplifier.

This cable is supplied with the RF amplifier

In most cases, software control is also required to enable the amplifier:

1:      A valid Gate signal musts be applied onto J9 of the iMS4-P:
            If J9 = POF input, Enable = High (light on)
            If J9 = TTL input,   Enable = High

2:      Amplifier Enable command must be applied in the iMS4-P- control software

.   C++   GUI

```
// Enable RF output, GATE control (most PA models >10W)
SystemFunc RFGate(myiMS);
RFGate.EnableAmplifier(true);
std::cout << "Done \n\n*** PA's enabled ***";
```
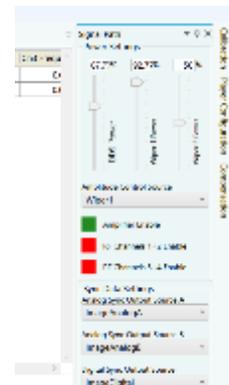

3:      IF fitted to AOD (not the LS110)

        Interlock cable is attached from the AOD to RF Amplifier
        (and AOD thermal interlock is closed contact = temp OK)

- **IMPA-4 amplifier LED Indicator**

The LED indicator illuminates ones thenDC power is applied <u>AND</u> the RF is enabled via the software.

- **iMS4- LED indicators**

All LEDs on the iMS4-P will illuminate during initialization.
The boot sequence includes read flash, initialize peripherals, DHCP request for Ethernet (timeout after ~10sec if not connected and revert to static IP). Power up USB controller

After this period, the upper red LED's will remain illuminated and two green LED's will beat at ~1Hz rate


- **Communication**

It is recommended that USB or Ethernet lead is connected to the iMS4-P-T (-O) prior to power up.

Attempt software communication AFTER initialization is complete.

iMS Library versions 1.4 (and onwards) will allow Ethernet or USB connection using the Isomet GUI or Microsoft Visual Studio software.

If the GUI is not closed correctly, crashes or will not open, then please use Windows Task Manager to delete the *Isomet iMS Studio* and *ims_hw_server* processes.
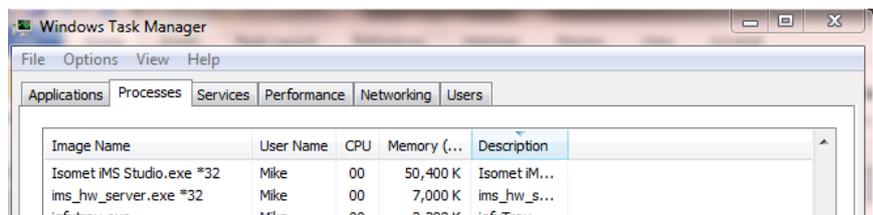
Restart GUI

Ethernet:
The default static IP address for the iMS4 is 192.168.1.10.
You may need to reassign or disable other Ethernet adaptors to avoid contentions.

- **Software**

Download the latest software, SDK and Guide from the Support page:

http://www.isomet.com/software.html