

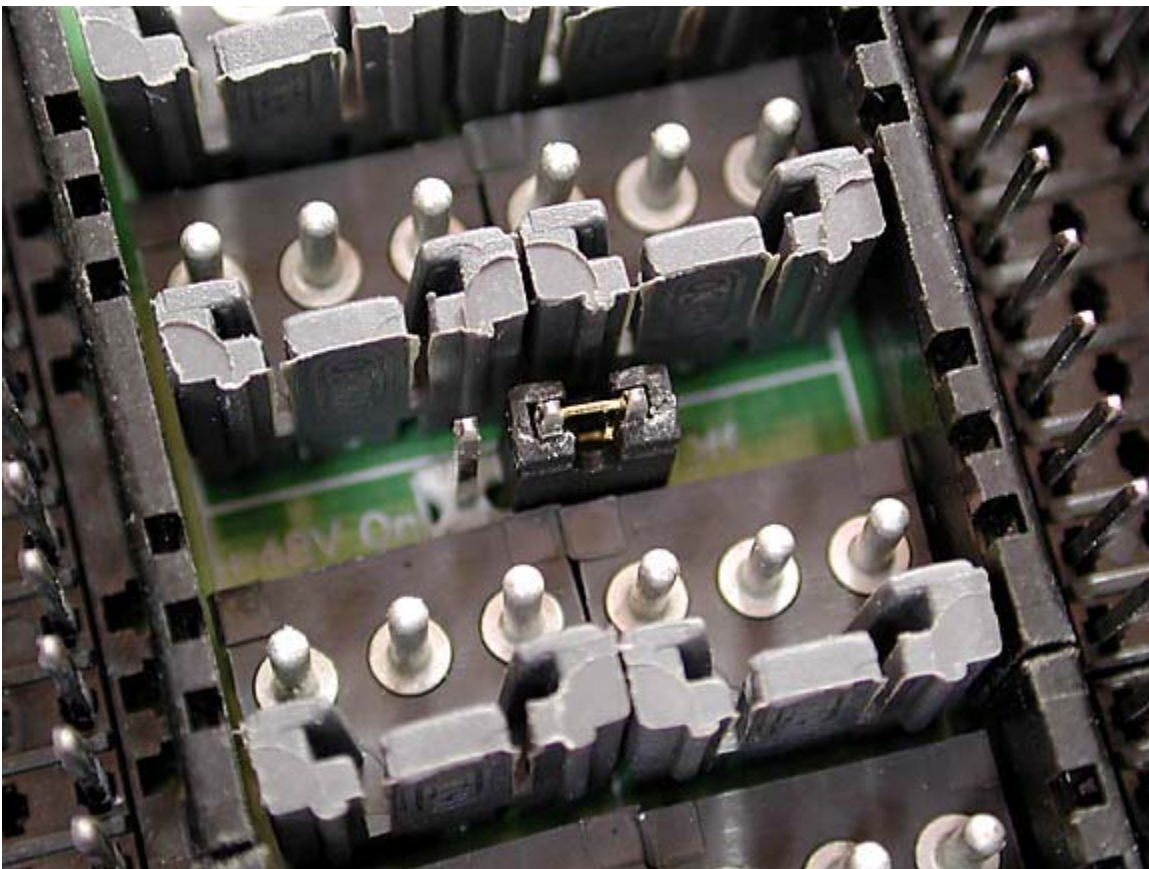
## **System 1000 +48 V Phantom Microphone Power Connections**

### **+48 V Power Source**

There are three power supply systems for the System 1000. They are the PS-302, the PS-202, and the PS-103. Each of the external power supplies must be ordered with the optional +48 V open-frame power supplies installed in its chassis. The PS-302 comes with +48 V power whether or not it is used with a particular frame.

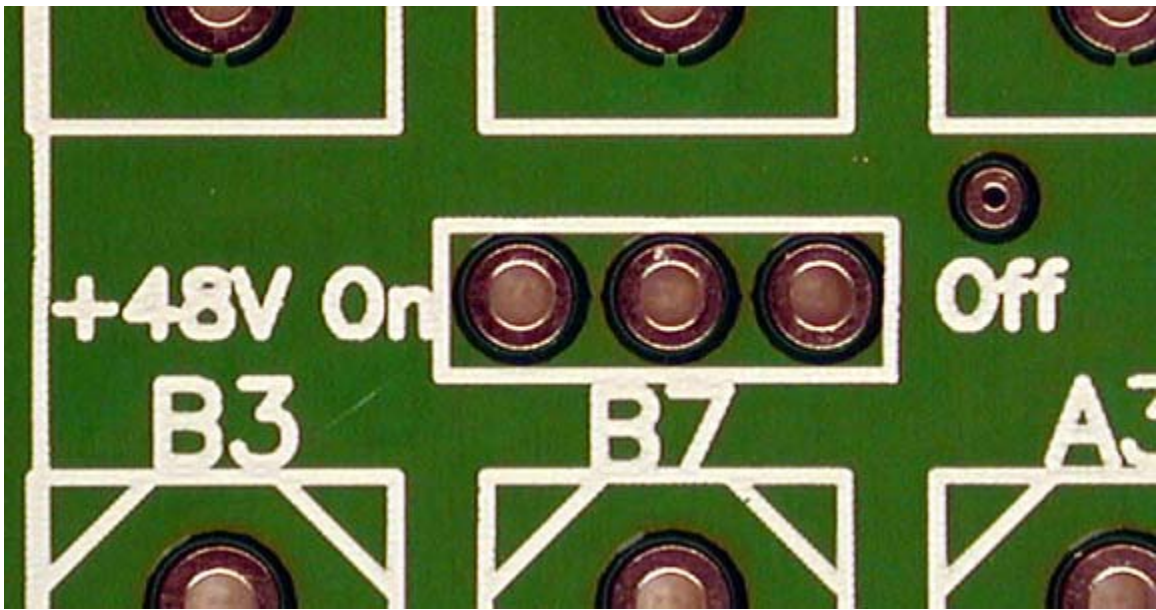
### **All Power Supplies**

There are three backplanes for the MF-300 card frame. They are the MF-300MLX, the MF-300WECO, and the MF-300EDAC. +48 V must enter each mic-pre module on Pin 26, no matter which back-plane is used.

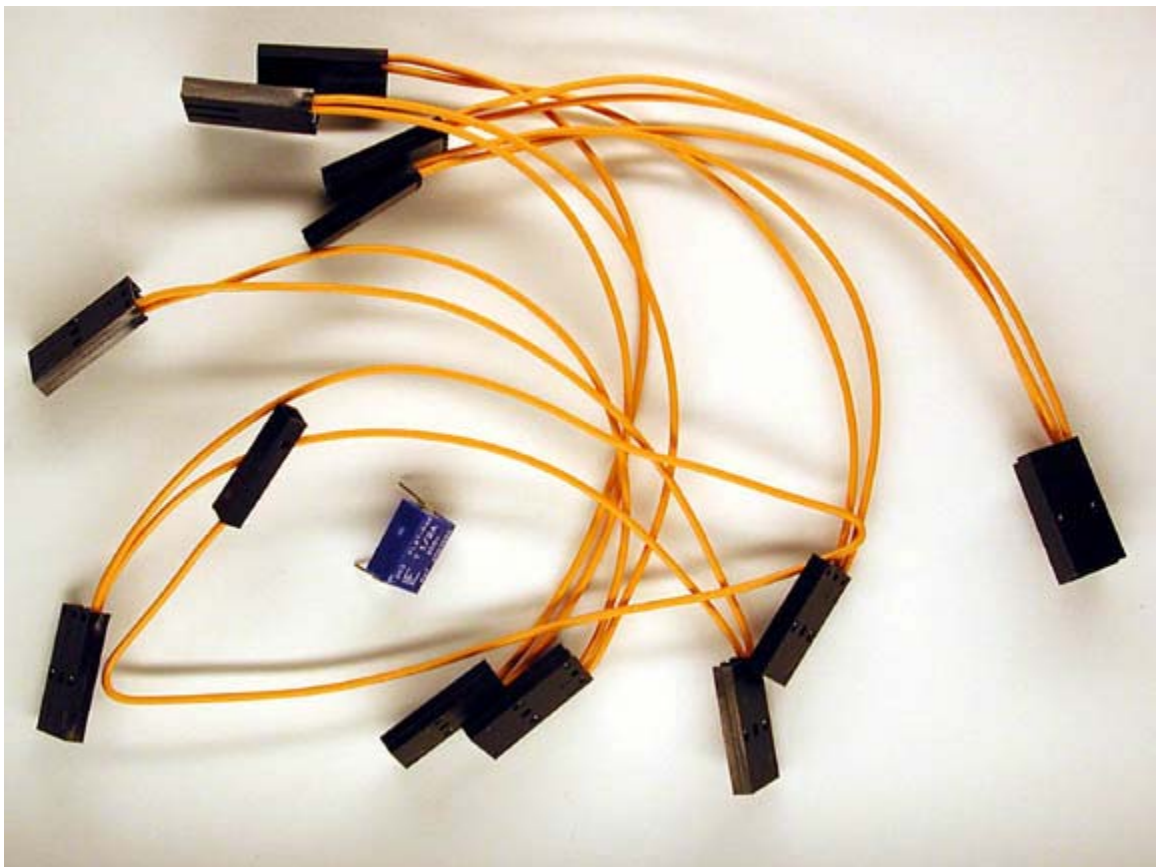


**Fig 1. The WECO Back plane +48 V Power Jumper shown in the NON-Powered Position**

Both the WECO and the EDAC backplanes have a built-in phantom power bus that receives +48 V power from **External** power supplies by way of the six-wire umbilical cable. The power bus must be enabled at each module position that will receive a mic-pre module. To do this a small jumper must be moved from the Center & Right pins to the Center & Left pins. The phantom power bus jumper is shipped from the factory in the **non**-powered position.



**Fig 2. An Un-populated EDAC Backplane Close-up View**



**Fig 3. The PH-300 Phantom Power Wire Harness and Fuse for the MF-300MLX**

The MLX backplane does not have a built in +48 V bus. +48 V power must be fed to each module position by way of a PH-300 wire harness. This wire harness routes power from the frame's +48 V source pin. For external power supplies this source pin is located near the bottom

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power connector on the MLX backplane. The installer will need to route the voltage to Pin 26 at each mic-pre module position. For the internal PS-302 the power source pins are on the power supply interface (PSI-70A) module.

DO NOT install power at Pin 26 where anything other than mic-pres are to be installed; simply let the connector hang free at those positions. If the wire harness is installed and a non mic-pre type module is inserted at that card position, phantom power will be shorted to ground – taking the entire bus down. This same scenario is also true for the WECO or EDAC backplanes. The +48 V jumper must not be enabled where modules other than mic-pres (except PS-302's) are installed.

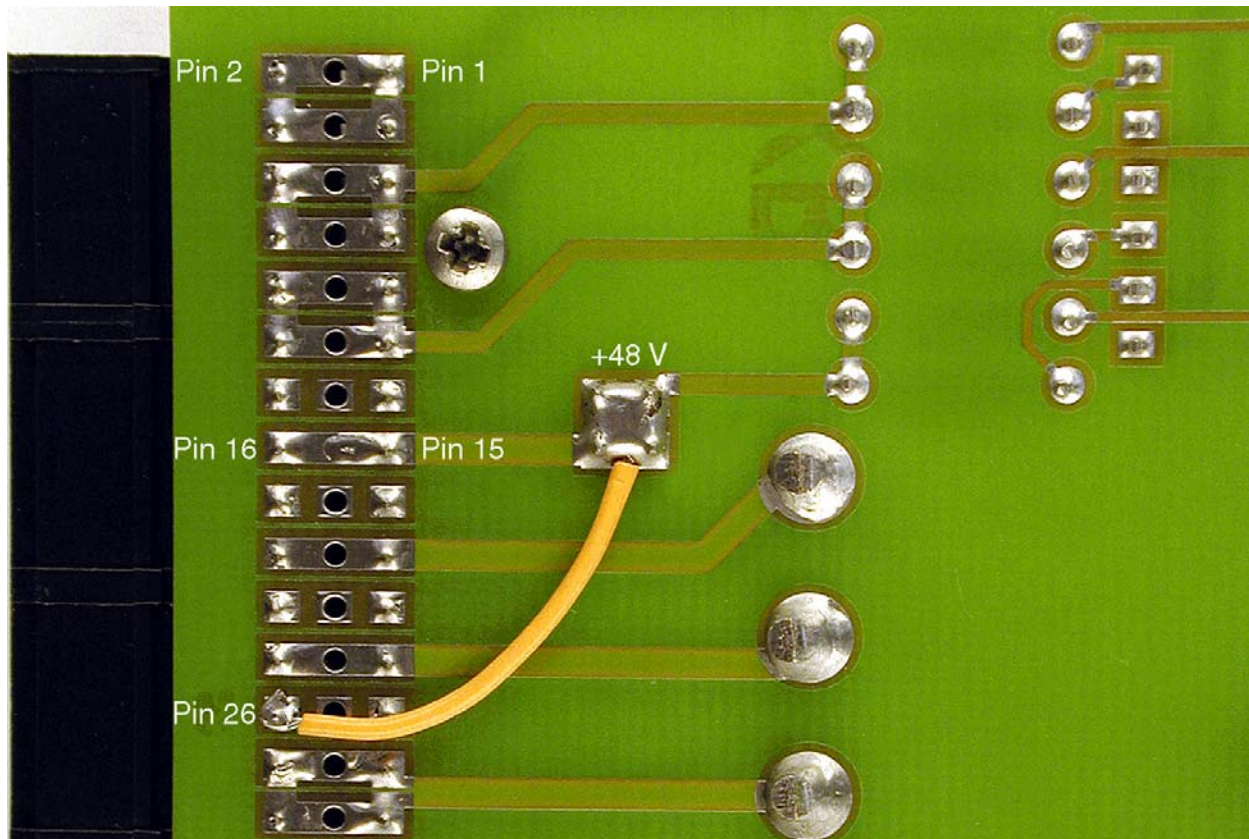
Once the PH-300 wire harness or the jumpers have been configured, power from the external supply should be present at Pin 26. At this point the Phantom power switch on the module itself should be turned on for power to reach the microphone.



Fig 4. The PSI-70A Interface Module

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### *PS-302 Internal Power Supply WECO and EDAC Connections*



**Fig 5. PSI-70A Rear-View Jumper Wire for +48 V for the WECO and EDAC Backplanes**

The PS-302 requires a jumper to take +48 V that comes from the regulator, by way of the PSI-70A module, to the backplane of the MF-300 frame. There was no direct connection designed into the original PSI-70A. The jumper shown above has been added to the PSI-70A on some, but not all modules shipped from Benchmark. If this wire is not on the module you have, it will need to be added. The wire takes +48 V from Pins 15-16 where +48 V comes from the regulator module to Pin 26 of the card-edge connector. This will place power on the Phantom Power buss of the WECO or the EDAC backplanes when the shunt jumper shown in Fig 1. is placed in the “+48 V On” position at the PS-302 module location.

If multiple PS-302 modules are used to provide redundant power, both PSI-70A’s +48 V power pins must be connected to the phantom power bus on the backplane, as shown.

This completes the Phantom Power installation addendum.

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