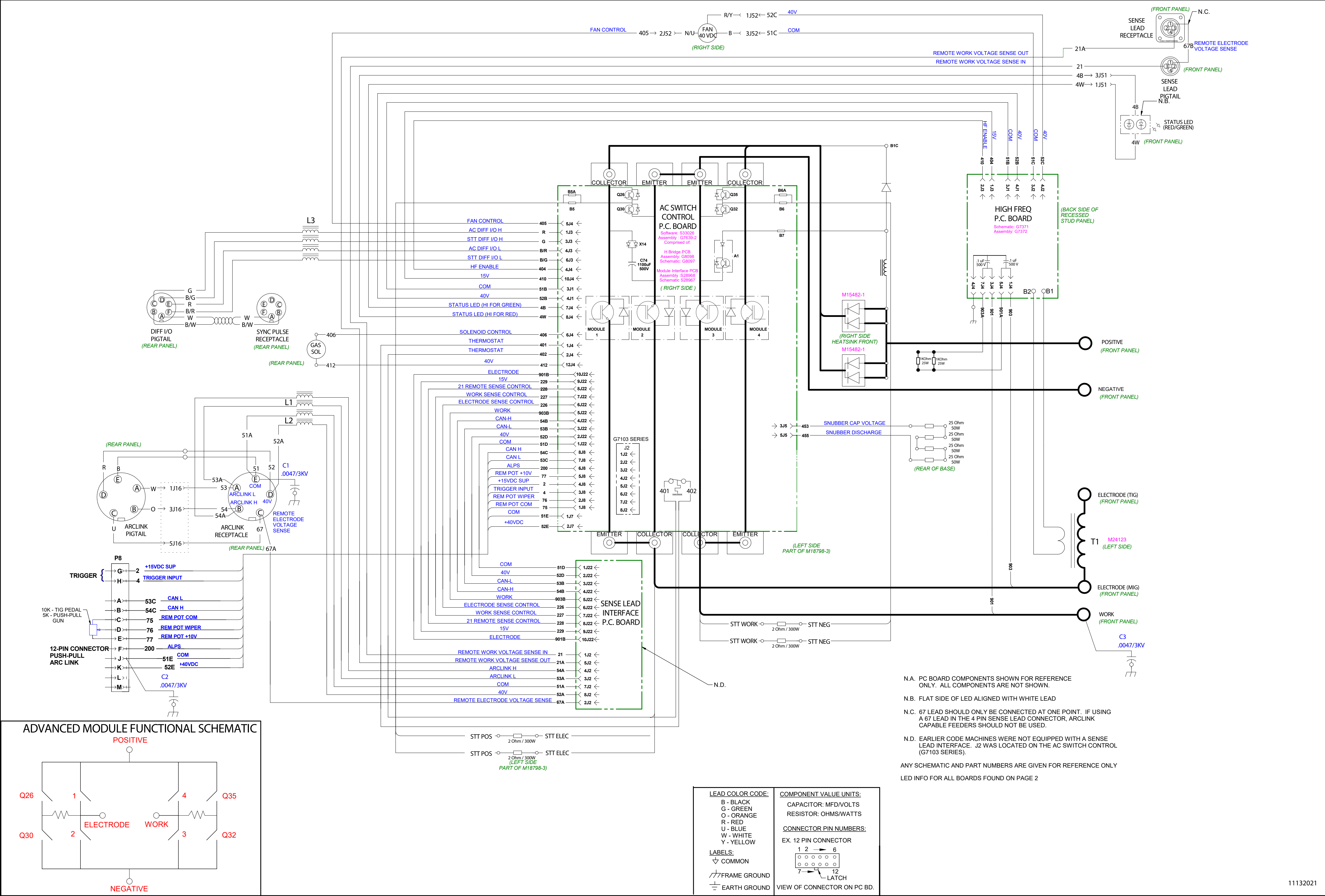
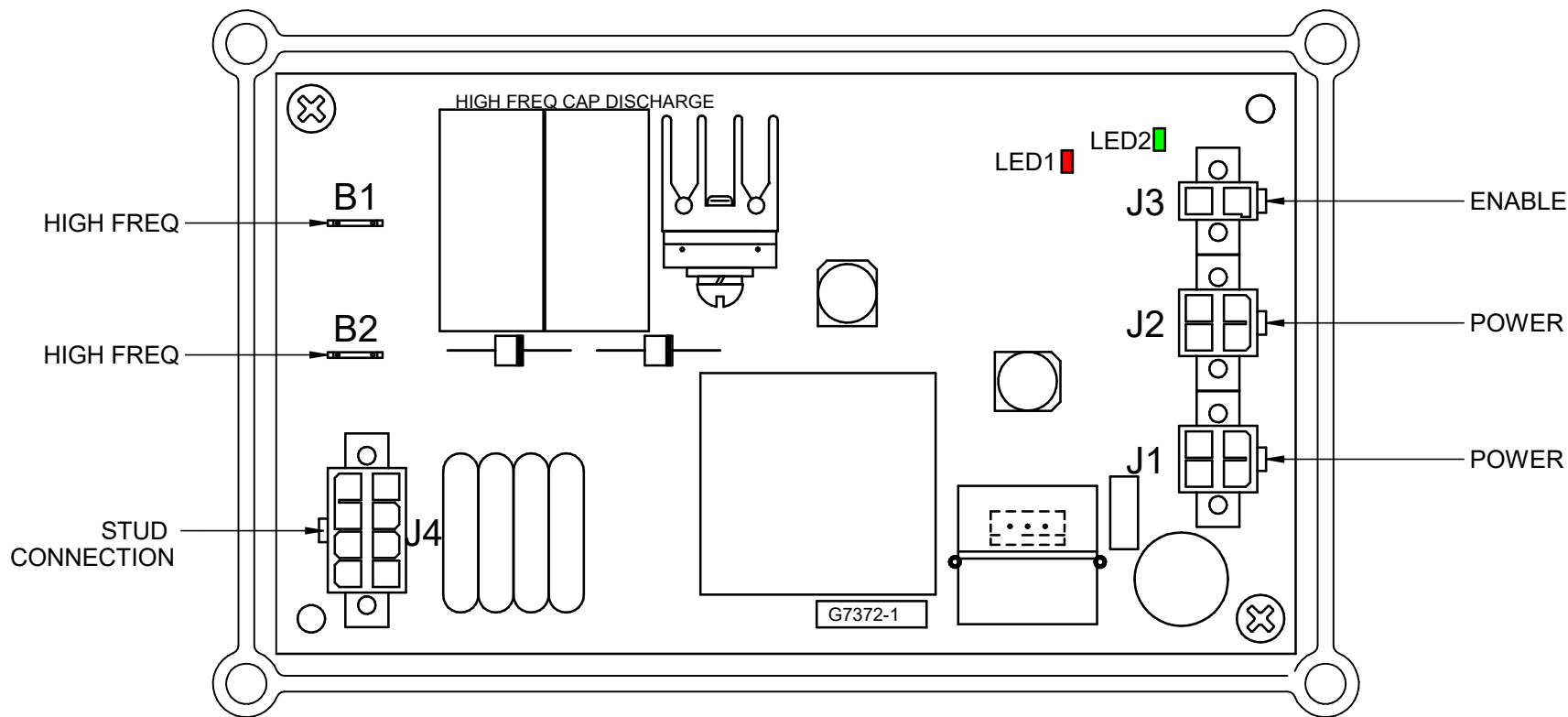


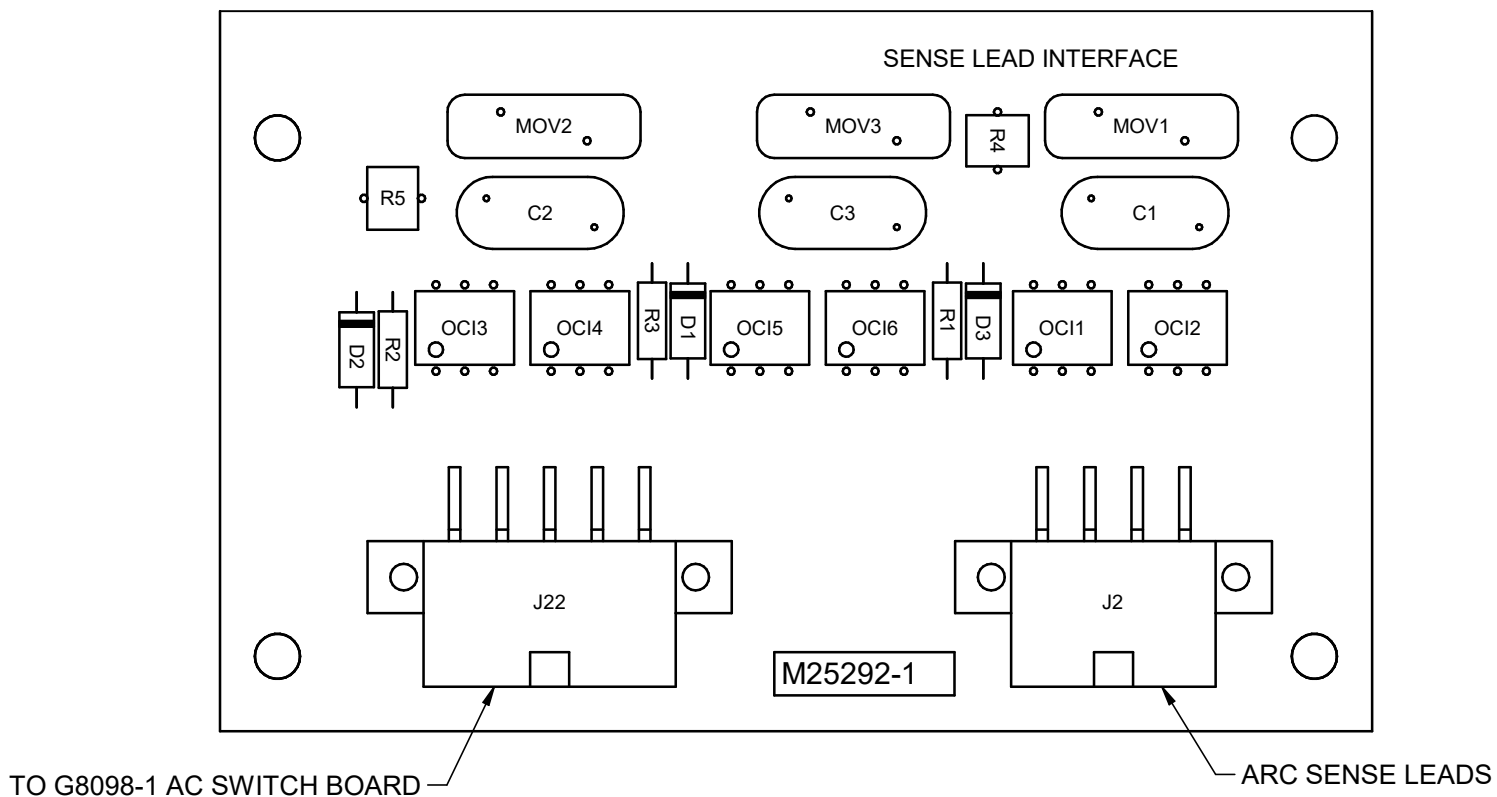
ADVANCED MODULE MACHINE SCHEMATIC G7701-1 REV: A



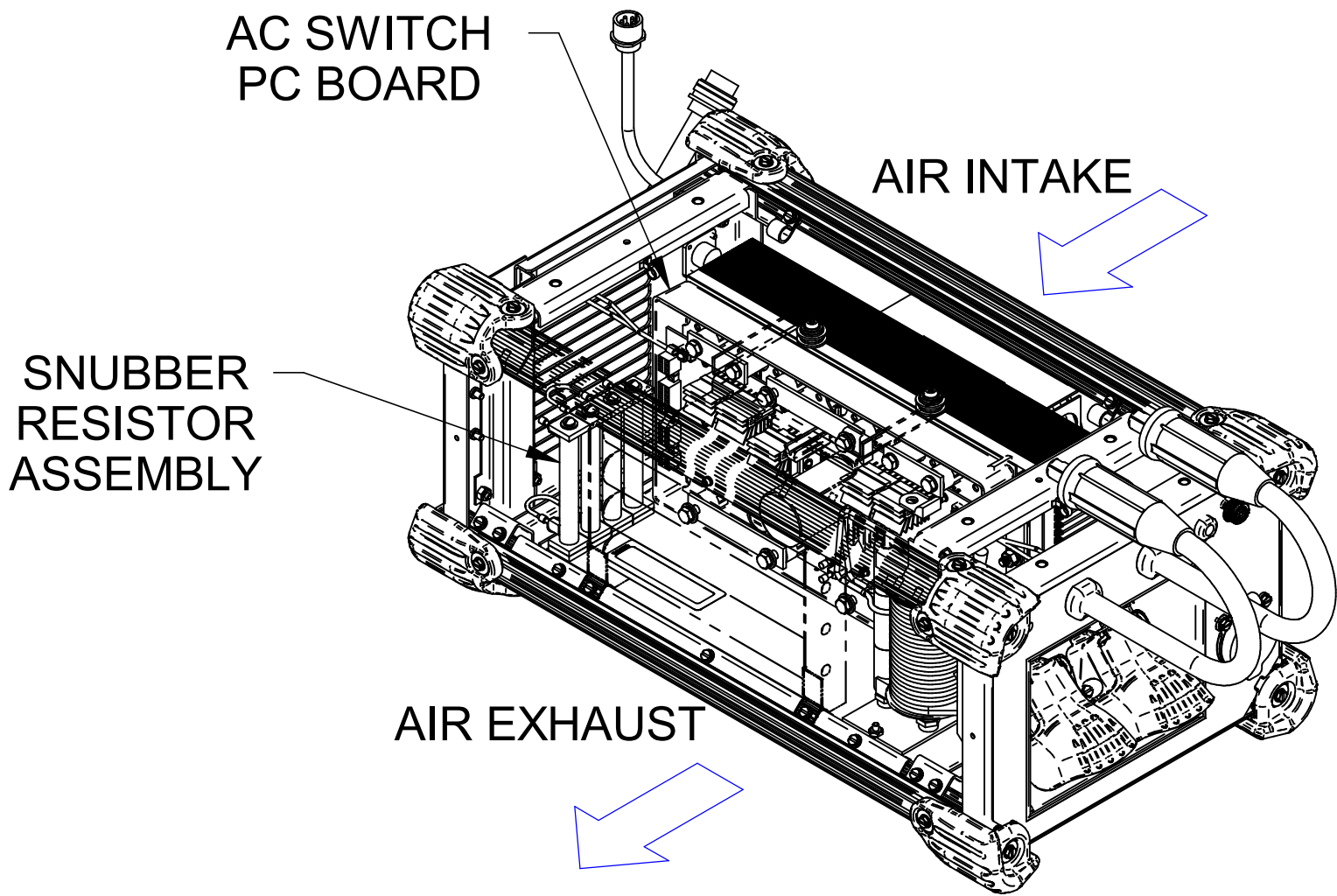
HIGH FREQUENCY
P.C. BOARD



SENSE LEAD
INTERFACE
P.C. BOARD
(USED WITH G8098 SERIES ONLY)



COMPONENT LOCATION DETAIL



Troubleshooting the Power Wave Advanced Module

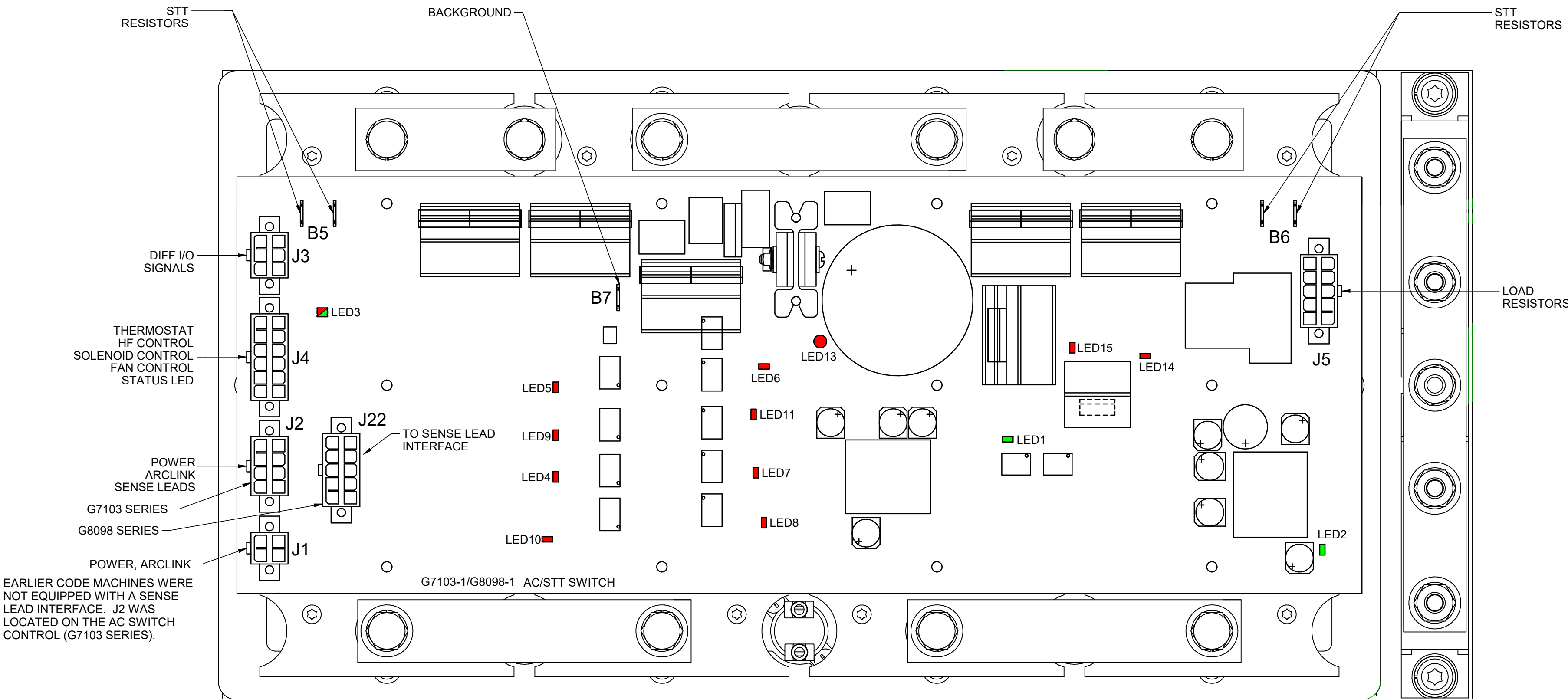
Using the External Status LED

LIGHT CONDITION	MEANING
Steady Green	System OK. Power source is operational, and is communicating normally with all healthy peripheral equipment connected to its ArcLink network.
Blinking Green	Occurs during power up or a system reset, and indicates the power source is mapping (identifying) each component in the system. Normal flash 1-30 seconds after power is turned on, or if the system configuration is changing operation.
Fast Blinking Green	Under normal conditions indicates Auto-mapped LEDs. Also used by the diagnostic utility (included in Power Wave Manager Utilities) available at www.powerwavesoftware.com to identify the selected machine when connecting specific IP address.
Alternating Green and Red	Non-recoverable system fault. If the Status light is flashing any combination of red and green, errors are present. Read the error code(s) before the machine is turned off. Error Code interpretation through the Status light is detailed in the Service Manual. Individual code digits are flashed in red with a pause between digits. If more than one code is present, the codes will be separated by a bright. Only active error conditions will be accessible through the Status Light. Error codes can also be retrieved with the diagnostic utility (included in Power Wave Manager Utilities) available at www.powerwavesoftware.com . This is the preferred method, since it can access historical information retained in the error log. To clear the active error(s), turn power source off and back on to reset.
Steady Red	Not applicable (check polarity of LED).
Blinking Red	Not applicable (check polarity of LED).

Error codes for the Power Wave Advanced Module

Advanced Module	
Error Code #	Indicator
36 Thermal error	Indicates over temperature. Usually accompanied by a thermal LEI on the hose power source. Check fan operation. Be sure protection does not exceed duty cycle limit of the machine.
39 Misc. hardware fault	Unknown glitch has occurred on the fault interlock circuitry. Sometimes caused by intermittent connections in the thermostat circuit.
54 Secondary (Output) Over Current	The long term average secondary (weld) current has been exceeded. The error will immediately turn off the machine output. NOTE: The long term average secondary current limit is 200A.
99 STT Status error	Error reported by the Advanced Module Switch Board. Generally caused by misconnection of welding leads (reverse polarity). May also be caused by loss of input voltage or blown fuses. Observe diagnostic LEDs on the Advanced Module Switch PC Board to determine the exact cause.
Other	A complete list of error codes is available: Power Wave Manager Utility (available at www.powerwavesoftware.com). Error codes that contain three or four digits are listed as fatal errors. These codes generally indicate internal errors on the Power Source Control Board. If cycling the input power on the machine does not clear the error, contact the Service Department.

AC SWITCH
P.C. BOARD ASSEMBLY



AC Switch PC Board			
LED	COLOR	FUNCTION	INDICATION
1	GREEN	H-BRIDGE STATUS	Normal Status: ON Fault Condition: If the snubber capacitor voltage exceeds its threshold, the acceptable voltage across the Switch is exceeded, or the power supplies voltages are insufficient, the LED will be OFF
2	GREEN	POWER SUPPLY	Normal Status: ON Fault Condition: If there is a short on any of the power supplies, this LED will blink. If no power is present, this LED will be OFF
3	RED/GREEN	STATUS	Normal Status: SOLID GREEN Fault Condition: If the switch encounters an error, this LED will flash an ERROR CODE
4 & 7	RED	NEG. SWITCH	Indicates switch is configured for NEGATIVE polarity or AC output.
5 & 6	RED	POS. SWITCH	Indicates switch is configured for POSITIVE polarity or AC output
8 & 10	RED	NEG. STT	Indicates switch is closed in NEGATIVE polarity. Will detect slight dimming if performing NEGATIVE STT
9 & 11	RED	POS. STT	Indicates switch is closed in POSITIVE polarity. Will detect slight dimming if performing POSITIVE STT
13	RED	SNUBBER VOLTAGE	Indicates that high voltage is present on the snubber capacitor
14	RED	MAIN BUS OVERVOLTAGE	Fault Condition: Indicates that a voltage > 120 VDC was present across the bridge. Latched Error.
15	RED	SNUBBER CAP OVERVOLTAGE	Fault Condition: Indicates that a voltage > 500 VDC was present on the snubber capacitor

On Board LEDs for the Advanced Module High Freq Board

High Freq PC Board			
LED	COLOR	FUNCTION	INDICATION
1	RED	POWER SUPPLY	Indicates that the power supply is functioning
2	GREEN	ENABLE	Indicates that the board is being commanded to turn on