

## TC-051524 SYSTEM POWER SUPPLY FUNCTIONAL DESCRIPTION

REV 2 4/16/90

For ease of maintenance, system flexibility, and to reduce heat and hum, many system components operate from a separate, isolated power supply, and are interconnected with AMP CPC style 16 pin terminated cables. Voltage outputs and ground points also appear on a barrier strip on the rear panel for testing, spare, or emergency use.

Normally, only the voltages needed for a particular configuration are provided although pins are reserved for other ranges and future expansion.

All power supplies feature a three pin removable power cord, AC line switch, line fusing, a Corcom EMI/RFI filter on the primary side and independent secondary fusing, front panel power status (LEDs), and test points for verifying the output voltages.

**DISCONNECT THE AC POWER BEFORE REMOVING ANY POWER CONNECTORS OR OPENING THE UNIT FOR SERVICE!**

PIN	DESIGNATION	FUSE	NOTES	COLOR
1	Digital Ground		Isolated from other grounds	BK
2	+5 V @ 3 A	3 A	Regulated	RD
3	+10 V @ 3 A	3 A	Unregulated logic supply	OR
4	Analog Ground			GN
5	+12 V @ 1.5 A	1.5 A	Regulated	BL
6	-12 V @ 1.5 A	1.5 A	Regulated	WH
7	Analog Ground		Same as pin 4	RD/BK
8	+15 V @ 1.2 A	1.5 A	Regulated	OR/BK
9	-15 V @ 1.2 A	1.5 A	Regulated	GN/BK
10	Analog Ground		Same as 4 and 7	BL/BK
11	+18 V @ 1.5 A	2 A	Unregulated analog +	WH/BK
12	-18 V @ 1.5 A	2 A	Unregulated analog -	BK/WH
13	Control Ground		Isolated	RD/WH
14	+24/+27 V 1 A	1.0 A	Servo/relay power	GN/WH
15	-24/-27 V 1 A	1.0 A	Servo negative output	BL/WH
16	Frame Ground		Chassis ground	

The analog and digital grounds are strapped at the power supply end but are left separate for noise isolation until installed.

On the newer style revision two TC-051525 power supplies, the CPC connectors have been replaced with 4 Phoenix pluggable 12 position terminal strips. The CPC connector is still used on the card frames. The power pin assignments for the terminal strip is as follows:

PIN	DESIGNATION	FUSE	NOTES	COLOR
1	Digital Ground		Isolated from other grounds	BK
2	+5 V @ 3 A	3 A	Regulated	WH
3	+10 V @ 3 A	3 A	Unregulated logic supply	RD
4	Analog Ground			GN
5	+12 V @ 1.5 A	1.5 A	Regulated	OR
6	-12 V @ 1.5 A	1.5 A	Regulated	BL
7	Analog Ground		Same as pin 4	WH/BK
8	+15 V @ 1.2 A	1.5 A	Regulated	RD/BK
9	-15 V @ 1.2 A	1.5 A	Regulated	GN/BK
10	Control Ground		Isolated	BL/BK
11	+24 1 A	1.0 A	Servo/relay power	BK/WH
12	Frame Ground		Chassis ground	

The TC-051524 uses off-the-shelf Sola power supply modules to generate the +5, +/-15, and +24 voltages. The +/-12 volt outputs are derived from the 15 volt supplies using LM-7812 and LM-7912 regulators.

The Sola part numbers for the supplies are:

+5 Volts @ 3 Amp	83-05-230-2
+15 Volts @ 1.6 Amps	83-15-216-2
-15 Volts @ 1.6 Amps	83-15-216-2
+24 Volts @ 1.2 Amps	83-24-212-2

Each output voltage is protected by the current foldback limiting inherent in the power supply module, and by pico-fuses located on the rear panel.

The bipolar analog supply (+/- 15 and 12 volts) is switched by an internal relay after a short delay to prevent lockup of either of the analog supplies.