



## **MODEL AL-450-CR-GPIB-3 MULTI-PHASE PROGRAMMABLE POWER SOURCES**

The model AL-450-CR-GPIB-3 power sources are constant current mode 3-phase GPIB programmable AC power supplies. They are equipped with amplitude control, frequency control, phase control, open/closed loop, external synchronization, and output enabled/disabled functions. Typical application of these phase angle adjustable multi-channel power sources are in the military researches and industrial testing fields.

### **Specifications of Model AL-450-CR-GPIB-3 Programmable Power Sources**

#### **Output:**

Output Power:	150 watts per channel (450 watts total)
Output Current:	0 - 6 A rms. adjustable @ 25 V rms. compliance voltage per channel (Other output current ranges can be achieved if requested - at additional charge) – Please see “Note 1” below.
No. of Output Channels:	3
Output Frequencies:	30 Hz to 20K Hz adjustable at 0.1Hz increment
Output Load Regulation:	1% or better
Output Line Regulation:	0.1% or better (line voltage +/-10%)
Output Waveform:	Sine wave (Square wave is available with reduced bandwidth)
Output Phases:	0 - 360.0° adjustable at 0.1° increment
Output Synchronization:	External Sync. (0.2 - 1 V rms. sync. input signal required)
Closed-Loop Feedback:	Closed-loop feedback function equipped on all 3 channels (0 - 1 V rms.)
Output Distortion:	1% T.H.D. max.
Hum and Noise:	-65 dB below full output
Fault Protection:	Input line circuit breaker
Thermal Protection:	Auto-reset thermostat prevents heat damage
Local Mode Control:	10-turn lockable pot to control output amplitude Output frequency is jumper selectable between 50 and 60 Hz Mini-switch to enable/disable output signal
Remote Mode Control:	Output Parameters Controlled by GPIB Commands 1. Output Amplitude – 0 to full current at 1000 ppm 2. Output Frequency – 300.0Hz to 10000.0Hz selectable 3. Output Phase – 0 to 360 to reference signal 4. Closed Loop Feedback Enabled/Disabled 5. Output Signal Enabled/Disabled

#### **Control Commands:** PC control via GPIB Interface

1. Amplitude Control: 0 to 100% output current at 1000 ppm resolution  
Sample Code: AMPL 1.000
2. Frequency Control: 30 Hz to 20K Hz at 0.01 Hz resolution  
Sample Code: FREQ 1000.00

3. Output Phase Control: 0 - 360.0° at 0.1° increment steps  
Sample Code: PHAS 120.0
4. Closed-loop Feedback Control: Closed-loop feedback signal (0 - 1V rms.)  
Sample Code: LOOP CLOS
5. Output Enabled/Disabled: All 3 channels can be set ON/Off individually  
Sample Code: OUTP ON

**Demo Program:**

A Demo program will be provided along with shipment of order.

**Input Power:**

Power Efficiency: 45% max.  
 Input Power Req.: 120 V AC 60 Hz (Default);  
 230 V AC, 50 Hz (at request)  
 Input Line Ampere Req.: 12 A @ 120 V AC;  
 6 A @ 230 V AC

**Other Specifications:**

Dimensions: 7.0"H X 19"W X 23"D  
 Weight: 65 lbs approx.  
 Cooling Method: Internal fan (Intake-front;  
 Output–rear, sides)  
 Operating Temp Range: 20 to 140 deg F  
 Storage Temp Range: -40 to 170 deg F

**Note 1:**

Output transformers can be added to the standard unit to achieve other output ranges. The output frequencies of the units will be limited to the frequency response of the output transformers. Please consult our sales or technical support team to discuss feasible output frequencies for custom output ranges.

**Dimension Drawings**

