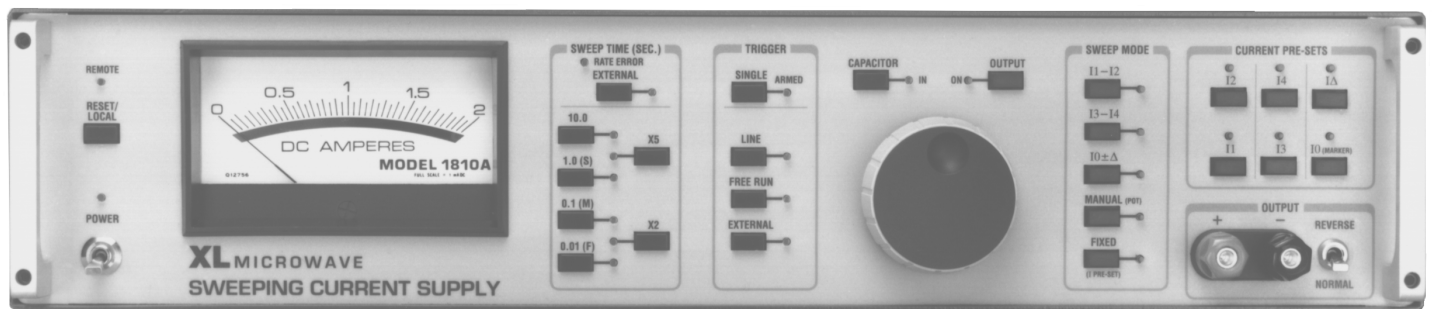


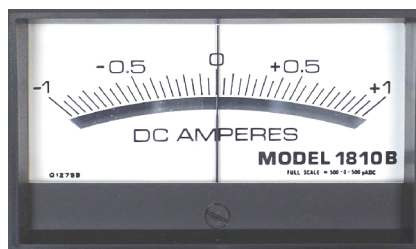
# XL

1810A  
1810B  
1810C

## SWEEPING CURRENT SUPPLIES



Model 1810A Shown



Model 1810B meter

- Low noise Output
- Programmable Sweep Times of 0.01 to 50 seconds (to 500 seconds/optional)
- 0–2 Amp output—Model 1810A  
±1 Amp output—Model 1810B  
0–2.5 Amp output—Model 1810C
- Manual or automatic operation
- IEEE 488.2 programmable (standard feature)

ISO 9001  
CERTIFIED

**XL** MICROWAVE, Inc.

## **Models 1810A, 1810B & 1810C Sweeping Current Supplies**

The models 1810A, 1810B and 1810C are microprocessor-based Sweeping Current Supplies for use by YIG oscillator and filter manufacturers, and customers who use YIGs, that need to control and verify/validate the YIG's operational characteristics. The model 1810 drives the YIG's main tuning coil, supplying the tuning current to the YIG. This current is delivered in a programmable and predetermined set of current sweep times and levels... providing an accurate and stable test environment in which to evaluate the YIG's performance parameters. The 1810 is invaluable during design and development, manufacturing and production test, as well as OEM incoming test/performance verification. These XL Sweeping Current Supplies provide tuning current for YIG filters as well as YIG oscillators.

### **GENERAL SPECIFICATIONS:**

DC Current (I <sub>0</sub> ):	0–2 Amps (Model 1810A), ±1 Amp (Model 1810B), 0–2.5 Amps (Model 1810C).
Sweep Current ( I <sub>D</sub> ):	0–2 Amps (Model 1810A), ±1 Amp (Model 1810B), 0–2.5 Amps (Model 1810C).
I <sub>0</sub> + I <sub>D</sub> :	0–2 Amps (Model 1810A), ±1 Amp (Model 1810B), 0–2.5 Amps (Model 1810C).
Drive Voltage (L <sub>di</sub> /dt +IR):	24 VDC (Model 1810A), ±15 VDC (Model 1810B), 22 VDC (Model 1810C).
Current Stability:	≤6 x 10 <sup>-5</sup> /hr.
Line Regulation:	≤3 x 10 <sup>-6</sup> /volt
Load Regulation:	≤3 x 10 <sup>-5</sup>
Current Noise + Ripple:	≤3 x 10 <sup>-5</sup> typical
Sweep Modes:	START–STOP (I1–I2 & I3–I4), I0 ±IΔ, I0 fixed and manual.
Sweep Time:	500, 200, 100, 50, 20, 10, 5, 2, 1, 0.5, 0.2, 0.1, 0.05, 0.02, and 0.01 seconds and External (rear panel BNC). Note: Option 035 extends sweep time to 100/200/500 seconds.
Sweep Linearity:	≤±1 x 10 <sup>-4</sup>
Sweep Output:	Direct-coupled sawtooth, 0 to +10 VDC, rear panel BNC, coincident with front panel sweep current output.
Sweep Delays:	Approx. 5% of sweep time at start and stop of sweep.
External Sweep Input:	0 to 10 VDC, 20 kΩ Z, BNC.
Flyback:	Approx. 10% for 0.1 to 50 second sweeps; same as sweep time for 0.01 to 0.05 second sweeps (approx. 10% on option 035).
Trigger Source:	Single, Line, Free Run, and External.
Sweep Drive Modes:	Automatic (internal), External, and Manual.
External Trigger Input:	≥+2 V peak, ≥0.5 μs pulse width, <0.1 MHz repetition rate, 1 kΩ Z, BNC, 10 V MAX.
Start/Stop Range:	0 to 2 Amps (Model 1810A), ±1 Amp (Model 1810B), 0 to 2.5 Amps (Model 1810C).
DC Current Adjust (I <sub>0</sub> ):	Front panel continuously variable, velocity sensitive controller knob.
Sweep Current Adjust:	Front panel continuously variable, velocity sensitive controller knob.
Current Sweep Pre-sets:	I1–I2, I3–I4, and I0 ±IΔ.
Filter Capacitor Selection:	IN/OUT (4400 mFd/50V filter capacitor across output, Model 1810A & Model 1810C) (2200 mFd/50V filter capacitor across output, Model 1810B).
Output Select:	ON/OFF and REVERSE/NORMAL Polarity.
Resolution:	65,536 points over selected MODE range.
Self-Test:	All LED's and 5 meter settings.
Display:	3-1/2 inch, mirrored scale, ±1% tracking, ±1% accuracy, analog meter 0–2 Amps (Model 1810A), ±1 Amp (Model 1810B), 0–2.5 Amps (Model 1810C).
LED Status Indicators:	REMOTE; RATE ERROR; EXTERNAL sweep; Sweep times of: 100, 10, 1, 0.1, 0.01 seconds, plus X5, X2; Triggers: SINGLE, LINE TRIG., FREE RUN, EXTERNAL; CAPACITOR IN; OUTPUT ON; Sweep mode of: I1–I2, I3–I4, I0 ±IΔ, MANUAL (POT), FIXED (I PRE-SET); Current pre-sets of: I1, I2, I3, I4, I0, IΔ.

## ADDITIONAL FEATURES:

Rear Panel DVM Output terminals for monitoring voltage as a function of output current (1V/amp). Scope sweep out and blanking/marker intensity output. Marker is variable over entire sweep range of instrument.

## GPIB [Complies with IEEE Std 488.2-1992]:

Programmable Functions/Controls:

RESET - LOCAL/REMOTE, SWEEP TIME, TRIGGER,  
CAPACITOR IN/OUT, OUTPUT ON/OFF, SWEEP MODE, CURRENT PRE-SETS.

## ENVIRONMENTAL: *Designed to meet EN 61010-1 (IEC 1010-1), Specifically:*

Operating Temperature: 0°C to 50°C.  
Storage Temperature: -40°C to 71°C.  
Burn In: Failure-free burn in of no less than 100 hours at 40°C.  
Pollution Degree: 1 (no pollution)(IEC 1010-1/3.7).  
Montreal Protocol: Nil Return.  
Transient Overvoltage: Installation Category II (IEC 1010-1/J)

## MECHANICAL:

AC MAINS Power: 90/265 VAC; 45 Hz to 440 Hz; 200 VA.  
AC MAINS Fuse: (115 V) 3 A/250 V SLO-BLO (3AG)(1/4" x 1-1/4").  
(230 V) 1.5 A 'T'/250 V (IEC 127-III-T Time-lag)(5 x 20 mm).T  
Weight: Net: 12 lbs. (5.4 kg).  
Shipping: 18 lbs. (8.2 kg).  
Dimensions (HxWxD): 3.5 in. x 16.75 in. x 16.0 in. (89 mm x 426 mm x 406 mm).

## SUPPLEMENTAL SPECIFICATIONS:

**ISO 9001:** XL Microwave's Quality System for design and manufacture of millimeter wave, microwave, and RF control, test and measurement equipment is registered and certified to ISO 9001:2000 by RWTUV USA.

**Montreal Protocol:** Nil Return.

**Warranty:** 1 year.

## ACCESSORIES FURNISHED:

One (1) Operating/Maintenance Manual,  
One (1) AC power cord (EN 60 320 and CEE color coding), 6 ft. (2 meters)  
UL listed type SVT, 3 conductor Vinyl with NEMA, type 5-15p plug and  
IEC 320-3:1987/EN 60 320 end termination.

## OPTIONS AVAILABLE

171 Rack Ears: RETMA 3.5 in. x 19 in. (88.9 mm x 482.6 mm) (H x W).

*NOTE: ALL OPTIONS ARE INSTALLED BY FACTORY ON ORIGINAL INSTRUMENT ORDER*

# XL MICROWAVE, Inc.