

## INSTRUCTION SHEET

MINIATURE LOW-LEVEL PREAMPLIFIER  
TYPE 123

## GENERAL DESCRIPTION

The Tektronix Type 123 Preamplifier is a compact light-weight battery-operated amplifier for use in applications where a gain of 100 without additional hum signal is desired. Passband is 3 cycles to 25 kc. Coaxial uhf connectors permit the Type 123 to be connected directly to an oscilloscope or other instrument, and at reduced high-frequency response, in a connecting cable, or even for use as a probe.

A small mercury cell supplies the filament voltage and a miniature 30-v battery is the source of plate voltage. Life of the mercury cell is approximately 100 hours. Low plate current, 75  $\mu$ a, assures plate-supply battery life of more than 100 hours.

## SPECIFICATIONS

Voltage Gain — 100 with screwdriver calibration control.

Frequency Response — 3 db points, 3 cycles and 25 kc. 2% points, 15 cycles and 6 kc.

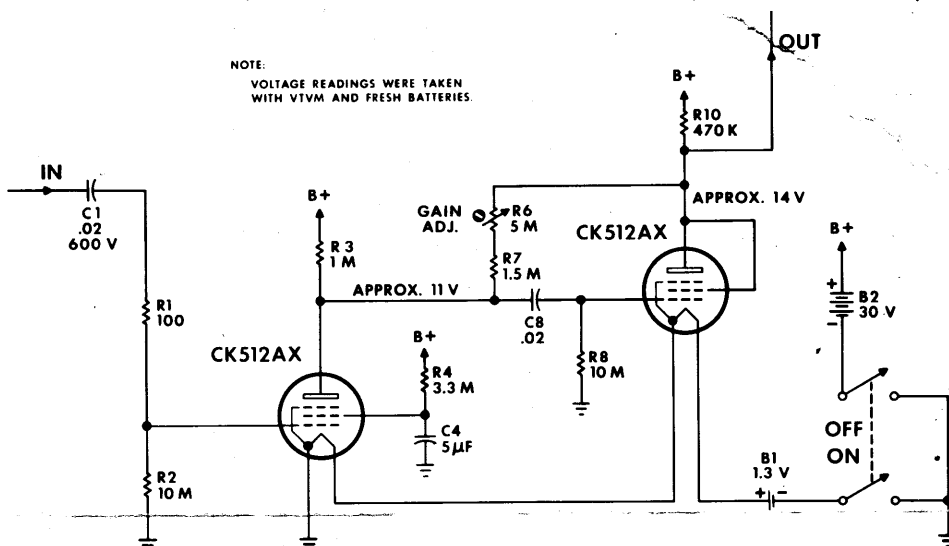
Maximum Input Signal — 0.1 volt, peak to peak.

Input Impedance — 10 megohms shunted by approximately 15  $\mu$ mfd.

Effective Output Impedance — Approximately 30,000 ohms.

Output Signal Level — Approximately +15 v dc.

**Note:** DC-coupled oscilloscopes should be switched to ac coupling to prevent deflecting the trace off screen at high sensitivities.



## PARTS LIST

B1	1.3 v	MALLORY RM3R OR EQUAL			
B2	30 v	EVEREADY 413 OR EQUAL			
C1	.02 $\mu$ f	CERAMIC	600 v		
C4	5 $\mu$ f	ELECTROLYTIC	25 v		
C8	.02 $\mu$ f	CERAMIC	250 v		
R1	100 $\Omega$			1/2 w	10%
R2	10 MEG $\Omega$			1/2 w	5%
R3	1 MEG $\Omega$			1/2 w	5%
R4	3.3 MEG $\Omega$			1/2 w	5%
R6	5 MEG $\Omega$			0.1 w	20%
R7	1.5 MEG $\Omega$			1/2 w	5%
R8	10 MEG $\Omega$			1/2 w	5%
R10	470 k $\Omega$			1/2 w	5%

The Type 123 is a relatively simple instrument and the circuit diagram and parts list are photo-etched on the case. No instructional material other than this INSTRUCTION SHEET will be provided.