

140A Amplifier.

Use — The 140A, an amplifier of the AC-DC type of unique design, is used for wired program service and general purpose monitoring. Offering the same stability for d-c operation as it does for a-c operation, it incorporates many features which greatly simplify installation problems for the AC-DC type amplifier.

Description — Basically the 140A is a three stage push-pull AC-DC amplifier using stabilized feedback to obtain high quality performance. Long trouble-free life is assured through the use of high safety factor components.

No special grounding arrangement is required. Usually, considerable trouble is experienced when connecting "ground" to most AC-DC amplifiers and the internal noise is dependent on the grounding connection. However, with the 140A this problem has been completely eliminated. The internal noise of the amplifier is entirely independent of the line or grounding connections.

This amplifier can be operated directly from telephone lines and meets the requirements imposed by telephone companies for such equipment, hence, a separate isolating coil need not be used where local telephone company practices permit. Also, these amplifiers conform to the protection requirements specified by the Underwriters Laboratories for equipment installed on a subscriber's premises, and their stamp of approval will be found on this equipment.

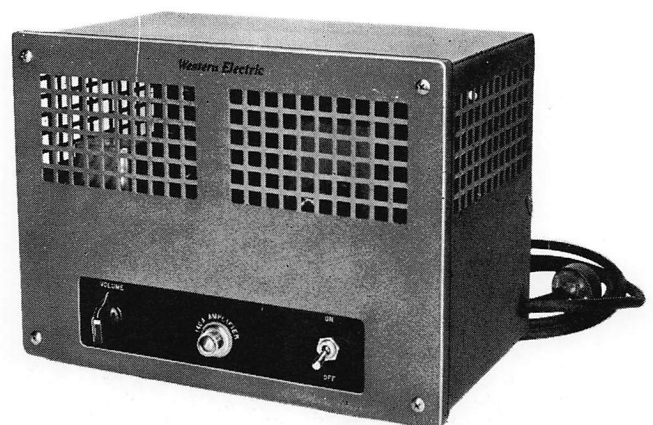
Power output of 10 watts with a-c operation, 6 watts with d-c operation makes these amplifiers applicable for nearly all wired program installations. The 140A Amplifier is designed for mounting in a KS-13678 Cabinet which can be ordered separately. Versatility of design in this amplifier permits it to be used either as fixed or portable equipment. The 1140A, which consists of the 140 Amplifier

in the KS-13678 Cabinet, is recommended for subscriber installations as no additional mounting equipment is required.

Features

Can be operated directly from telephone lines without the use of additional equipment, where local telephone company practices permit.

Conforms to protection requirements of the Underwriters Laboratories for equipment installed on subscriber's premises.



1140A Amplifier.
(140A Amplifier in a KS 13678 Cabinet.)

Negligible external field thus permitting its use in close proximity to low level circuits and equipment.

Stabilized feedback gives high quality and reduces noise and distortion.

No special grounding arrangement required.

A-c or d-c operation, protected by thermal cutout fuse.

Maximum accessibility to all components for servicing and maintenance.

Small size — lightweight.

Typical Specifications

Frequency Response: ±1 db, 50 to 10,000 cycles; ±2 db, 50 to 15,000 cycles.

Output Noise: —15 dbm.

Source Impedance: See Figure 46.

Load Impedance: See Figure 47.

Gain: 60 db high gain. 40 db bridging.

Gain Control: Continuously variable.

Power Output:

	DC Operation	AC Operation
Less than 1% harmonic distortion	3½ watts	6 watts
Less than 2% harmonic distortion	5 watts	8 watts
Less than 5% harmonic distortion	6 watts	10 watts

(The above distortion percentages are for 400 cycles with 60 cycle power supply on a-c operation.)

Power Supply: 105 to 125 volts a-c, 25 to 60 cycles or 115 volts d-c, 1.5 amperes, 175 watts. Thermal cutout fuse mounted in chassis.

VACUUM TUBES

Quantity Required	Commercial Receiver Type
2	6SL7
4	25L6
2	25Z6
—	
8	

INPUT CONNECTIONS

Nominal Source (Ohms)	Range (Ohms)	Input Connections
150	75 to 300	2,3
600	300 to 1,200	2,4
600 Bridging	0 to 10,000	1,5

140A Amplifier Input Connections.

OUTPUT CONNECTIONS

Nominal Load (Ohms)	Load Range	Strap	Output Terminals
AC SUPPLY			
4	2 to 6		1,2
8	4 to 12		2,3
24	12 to 36		1,3
250	125 to 375	4-6, 5-7	4,7
1000	500 to 1500	5-6	4,7
	70 VOLTS	3-4-6, 5-7	1,7

DC SUPPLY

Nominal Load (Ohms)	Load Range	Strap	Output Terminals
1.5	1.0 to 2.5		1,2
3	2.0 to 4.5		2,3
8	6 to 14		1,3
100	60 to 150	4-6, 5-7	4,7
400	250 to 600	5-6	4,7
	70 VOLTS	3-4, 5-6	1,7

Output Connections for 140A Amplifier

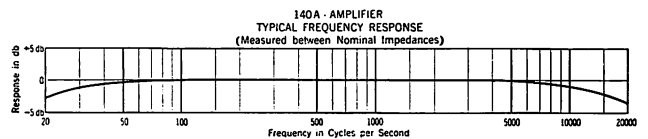
Mounting Arrangement: KS-13678 Cabinet. Ventilated metal box for shelf or wall mounting. It is equipped with a detachable front cover. Input and output terminal terminated at screw type lugs mounted on top of chassis. External terminals also provided to permit changing of output transformer strapping. AC-DC power cord attached with ground connection terminating in a 3 prong plug.

Dimensions: KS-13678 Cabinet overall: 12¾" long, 8⅛" deep, 9" high.

Weight: 1140A Amplifier, 19½ pounds.

140A Amplifier, 9¾ pounds.

Finish: Chassis — light gray enamel. Cabinet — light aluminum gray.



Frequency Response Curve 140A Amplifier.