

# ELCOM Typical Transistor Amplifiers & Other Useful Circuits

Six amplifier circuits and a power supply circuit are shown. Each amplifier is designed to use 4 ohm speakers. The circuits are designed to use the speakers for dual purpose, as the speaker and as the microphone. A circuit for a two station intercom is also shown.

Delco 7277152 heat sinks are to be used for the output transistors. The ES9 transistors may be mounted on a 2 x 2 inch piece of 1/8 inch aluminum. Output transformers may be obtained from Elcom Distributors.

## AMPLIFIER CHARACTERISTICS

Amplifier Number	Maximum Power	Harmonic Distortion	Drive Requirements	Frequency Response 3 db Points
1	.5W	5% at .4W	5MV RMS at .4W	140 cps - 2KC
2	2.5W	5% at .5W	5MV RMS at .5W	60 cps - 5 KC
3	2.5W	4% at 1.0W	3MV RMS at 1.0W	120 cps - 4 KC
4	2.5W	6% at 1.0W	6MV RMS at 1.0W	100 cps - 3.5 KC
5	2.5W	3% at 1.0W	8MV RMS at 1.0W	40 cps - 14 KC
6	2.0W	1% at 1.0W	6MV RMS at 2.0W	90 cps - 6 KC at 1.0W Mid-frequency at 500 cps

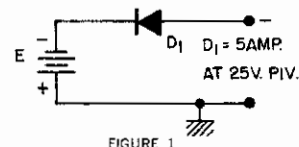


FIGURE 1

Protection circuit to prevent burn out because of cross wiring to the battery or supply voltage.

2. A 12 volt power supply operating from 60 cycle 110 volt line.

T<sub>1</sub> = Elcom F25

D<sub>1</sub>-D<sub>2</sub>-D<sub>3</sub>-D<sub>4</sub> = 5 amp at 25V PIV

L<sub>1</sub> = neon pilot light

R<sub>1</sub> = 220 K 1/2 watt

R<sub>2</sub> = 5 - 25 watt

C<sub>1</sub> = 2000 mf 25V

C<sub>2</sub> = 2000 mf 15V

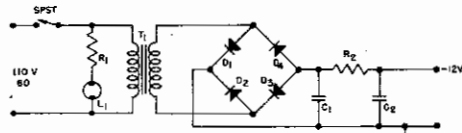


FIGURE 2

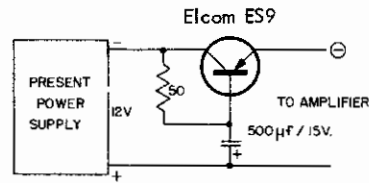


FIGURE 3—ELECTRONIC CHOKER FOR LOW COST AUDIO POWER SUPPLY

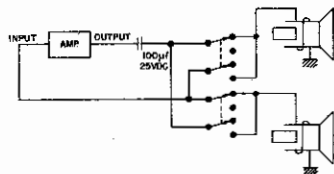


FIGURE 4—TWO STATION INTERCOM CIRCUIT

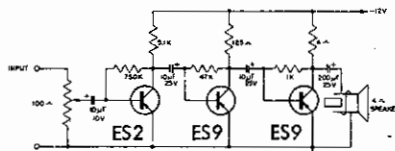


FIGURE 5—AMPLIFIER NO. 1

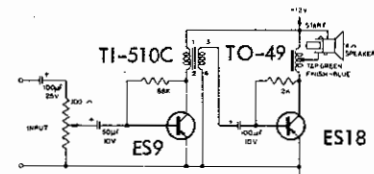


FIGURE 6—AMPLIFIER NO. 2

NOTE: Circuit operates with all amplifier circuits except No. 1. Remove 100mf capacitor for operation with circuit No. 1.

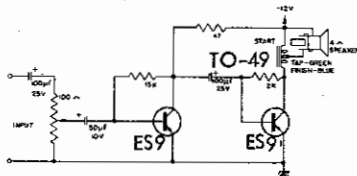


FIGURE 7—AMPLIFIER NO. 3

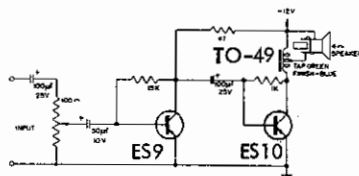


FIGURE 8—AMPLIFIER NO. 4

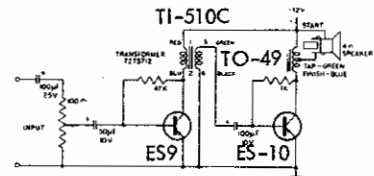


FIGURE 9—AMPLIFIER NO. 5

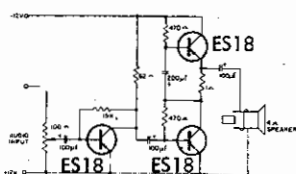


FIGURE 10—AMPLIFIER NO. 6

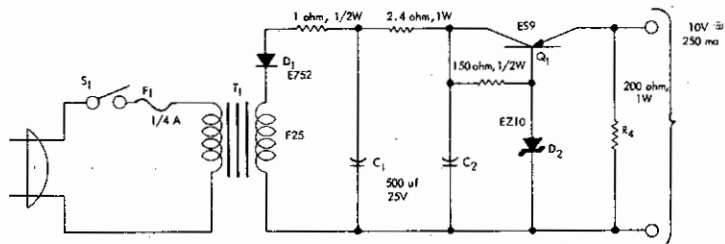


FIGURE 11 - REGULATED POWER SUPPLY