

ELECTRO-VOICE SERVICE DATA

TWEETER PROTECTION CIRCUIT ASSEMBLY (MODEL STR)

SERVICING

The Electro-Voice Model STR has been carefully designed to assure maximum trouble-free service but with ease of repair, if required.

WARRANTY

The Electro-Voice Model STR tweeter protector is guaranteed for two years from date of purchase against failures due to defects in workmanship and materials. If such failure occurs, unit will be repaired or replaced (at our option) if delivered to Electro-Voice or its service agency. There will be no charge for parts or return freight during the entire length of the warranty period; no charge for labor will be made during the first year of the warranty period. Warranty does not cover finishes or failures due to abuse or operation at other than specified ratings. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

Send all price requests, parts orders, and requests for instructions on return for repair and locations of authorized service facilities to: Service Department, Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone: 616/695-6831).

DISASSEMBLY

Carefully pry the Extruded Cover (3) out of the grooves at each end of the extruded base (1). Work the wire leads out of extruded cover.

The printed circuit board assembly slides out of the extruded base.

TWEETER PROTECTOR STR

STR CHECK OUT

1. Load Impedance 8 ohms.
(Use non-inductive load resistor—5 watt rating)
2. Input (5 watts) $6.5V \pm 5\%$ @ 3000 Hz.
Test unit by slowly increasing input voltage to 6.5 Volts $\pm 5\%$.
Relay should energize and disconnect output circuit. Adjust 75 ohm control (4) to activate relay at above voltage if necessary.
3. Decrease the input voltage level to 3.0 Volts $\pm 5\%$. The relay should de-energize connecting the output circuit.

The two above AC voltage levels set the correct operating parameters for the STR within the music spectrum.

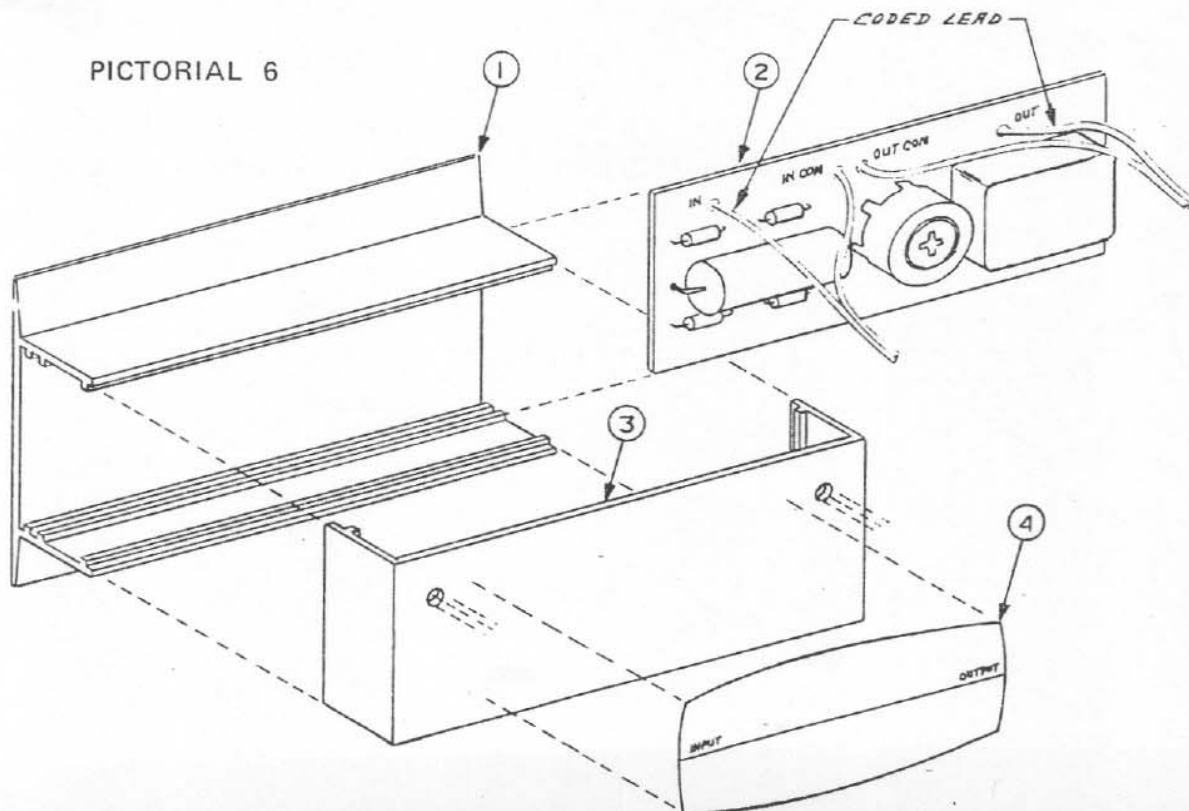
PARTS LIST

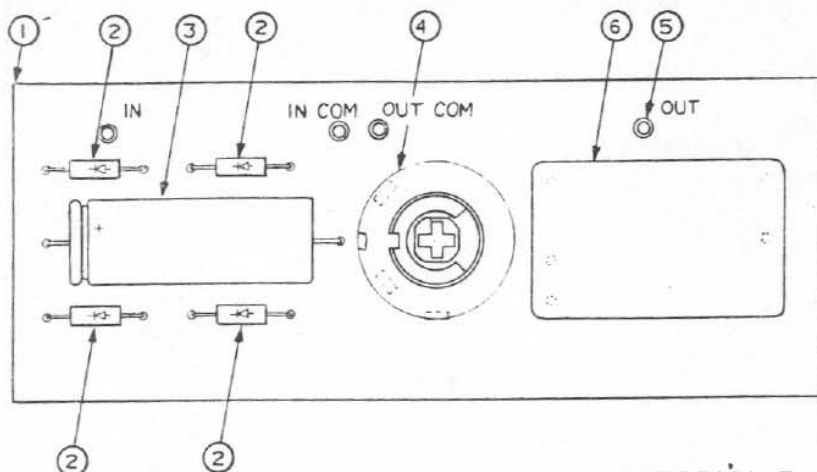
REF NO.	PART NO.	DESCRIPTION
1	79204	Base-Extruded Enclosure
2	87780	Printed Circuit Board Assy.
3	79203	Cover-Extruded
	535391	Label
	517-8968	Tweeter Protection Circuit (Complete)

PACKING PARTS

29649	Carton
535390	Sheet—Engineering Data

PICTORIAL 6

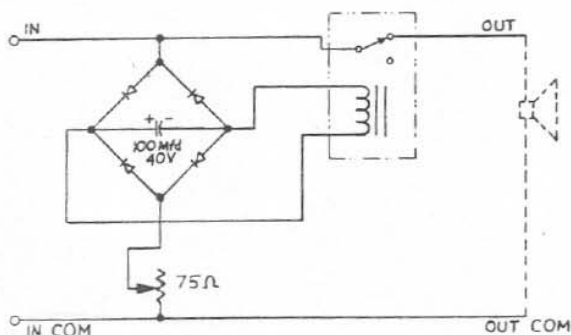




TWEETER PROTECTION CIRCUIT BOARD
ASSEMBLY (87780)

PICTORIAL 7

PARTS LIST



REF NO.	PART NO.	DESCRIPTION
1	87780	PCB Assembly (Complete)
2	A43067	Diode
3	42418	Capacitor—Electrolytic 100 µF/40V
4	46618	Resistor—Variable 75 Ω
5	27259	Terminal (Malco)
6	56141	Relay—AM Zetter (AZ 535-11-2)

TECHNICAL DATA MODEL STR

An exceedingly high number of ST350A and other Electro-Voice manufactured tweeters returned to Electro-Voice for repair have open voice coils resulting from operating the units above the specified ratings. Horn type tweeter speakers are highly efficient and do not require the high power levels of bass speakers or even midrange speakers. Tweeter speakers, by their very nature of design, cannot withstand applied high power levels directly across their terminals for other than very short durations of time. Tweeters, when employed in a speaker system, are normally equalized, allowing for more applied power to the system in the tweeter frequency range than the tweeter itself could take. This is the case with the Sentry IV's ST350A.

Damage to tweeter speakers often is a situation where accidental high input level surges occur. In recording studios where high levels are dealt with and occasionally tapes are fast wound or fast rewound with tape lifters partially down, the tweeter may receive excessive high power in its spectrum, picked up from the fast moving tape.

A second source of tweeter damage may be the result of an oscillating transistor amplifier. Oscillating transistor amplifiers are capable of supplying their rated output power limits at an inaudible frequency such as 30 kilohertz (kHz). Such energy applied across a tweeter can destroy its voice coil. Transistor amplifier oscillations are generated in the driver and output circuits of the amplifier—normally a result of poor components or poor design within the amplifier itself.

The Electro-Voice Model STR, with its electrical and mechanical design, will greatly aid in protecting tweeter speakers from excessive currents in their frequency spectrum. However, due to the vast number of musical inputs possible, a tweeter protector cannot be a 100% guarantee against tweeter burnout. In use, the E-V Model STR will trip when any excessive damaging power is applied to the tweeter speaker, thus protecting the tweeter's voice coil.

INSTALLING STR TWEETER PROTECTOR ON MODEL SENTRY IV

MOUNTING:

Locate the Model STR on the midrange horn adjacent to the crossover assembly (Pictorial 3). Use four (4) small wood or self-tapping screws. Drill holes in STR case and Sentry IV midrange horn using the proper size drill.

CONNECTIONS:

The Sentry IV Tweeter is wired REVERSE PHASE with respect to the bass speakers. Refer to the Sentry IVA system schematic and follow instructions carefully.

1. Remove wire lead between Sentry IV crossover network tweeter output terminals and the input terminals on the ST350A tweeter.
2. Connect the STR input coded striped lead to the RED crossover tweeter output terminal.
3. Connect the STR input plain lead to the BLACK crossover output terminal.
4. Connect the STR output coded strip lead to terminal T2 on the ST350A tweeter.
5. Connect the STR output plain lead to terminal T1 on the ST350A tweeter.