



DESCRIPTION

The Model STR tweeter protector is a device which protects tweeters from potentially damaging input levels. The Electro-Voice STR was specifically designed for use with the Sentry™ IV and other systems using the ST350A tweeter. It can also be used with systems using tweeters such as the Model T35 and T350.

The STR is a relatively simple, electro-mechanical voltage-sensing device which opens the tweeter circuit when potentially damaging input level is reached. When input level is safe, the tweeter circuit is again closed. Opening and closing of the circuit is accomplished by a sensitive, but ruggedly built, relay with an approximate 1 millisecond throw time. Release time is approximately 3 milliseconds.

The STR is ideal in situations where accidental high input level surges may occur or where the speakers are in a difficult location to get to, such as above a proscenium arch. In recording studios where high levels are dealt with, and occasionally tapes are fast-wound or fast-rewound with tape lifters partially down, the STR provides adequate tweeter protection. In systems for high level sound reinforcement, particularly with rock and other types of music with inordinate amounts of high frequency energy, the tweeter protector helps to ensure long-lasting, reliable operation.

APPLICATION NOTES

Most sensing devices which are strictly electrical allow only a certain voltage level to pass before the tweeter is disconnected, regardless of time duration. Since most speakers are able to withstand higher power over very

short periods of time (as in wave front peaks and short surges), such a device tends to limit the dynamic range of the tweeter.

The STR employs a special electro-mechanical design which enables wider dynamic range. High power level signals of short time duration which will not damage the tweeter are passed through the device. This allows for uninterrupted wide dynamic range program material and actually increases *effective* power-handling of the whole system. Signals with high *average* power levels (potentially damaging) are stopped from reaching the tweeter.

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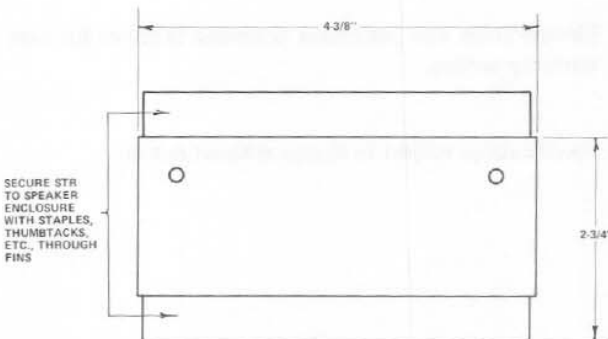


FIGURE 1 – Dimensions

APPLICATION NOTES

When the tweeter protector is in use, the speaker will operate normally until potentially damaging input levels to the tweeter are reached. As the relay opens the circuit, a slightly audible click will be heard. This is a warning that

the power level to the tweeter is too high. Either the input power should be reduced, or high frequencies should be attenuated one additional position at the crossover. In situations where the tweeter is operating near the threshold of its power handling capability, the tweeter protector may oscillate, switching the tweeter rapidly in and out of the circuit. Again, the power level should be reduced either by lowering the input power level, or by attenuating the high frequencies at the crossover.

CONNECTING THE STR

The STR is an in-line device which should be inserted between the tweeter and the crossover. The wires marked "output" should be connected to the terminals on the tweeter, the striped lead corresponding to the T1 or positive terminal on the tweeter. The wires marked "input" go to the crossover. (See Figure 3.)

WARRANTY (Limited) – The Electro-Voice Model STR tweeter protector is guaranteed for five years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not cover finish or appearance items or malfunction due to abuse or operation at other than specified conditions. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee.

For correct shipping address and instructions on return of Electro-Voice products for repair and locations of authorized service agencies, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (Phone: 616/695-6831).

Electro-Voice also maintains complete facilities for non-warranty service.

Specifications subject to change without notice.

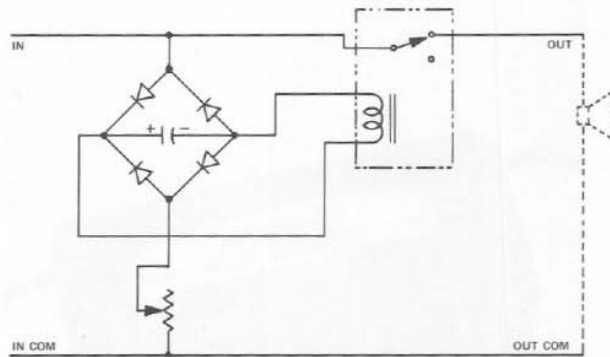


FIGURE 2 – Wiring Diagram

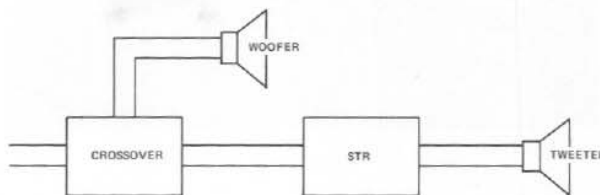


FIGURE 3 – Application Block Diagram