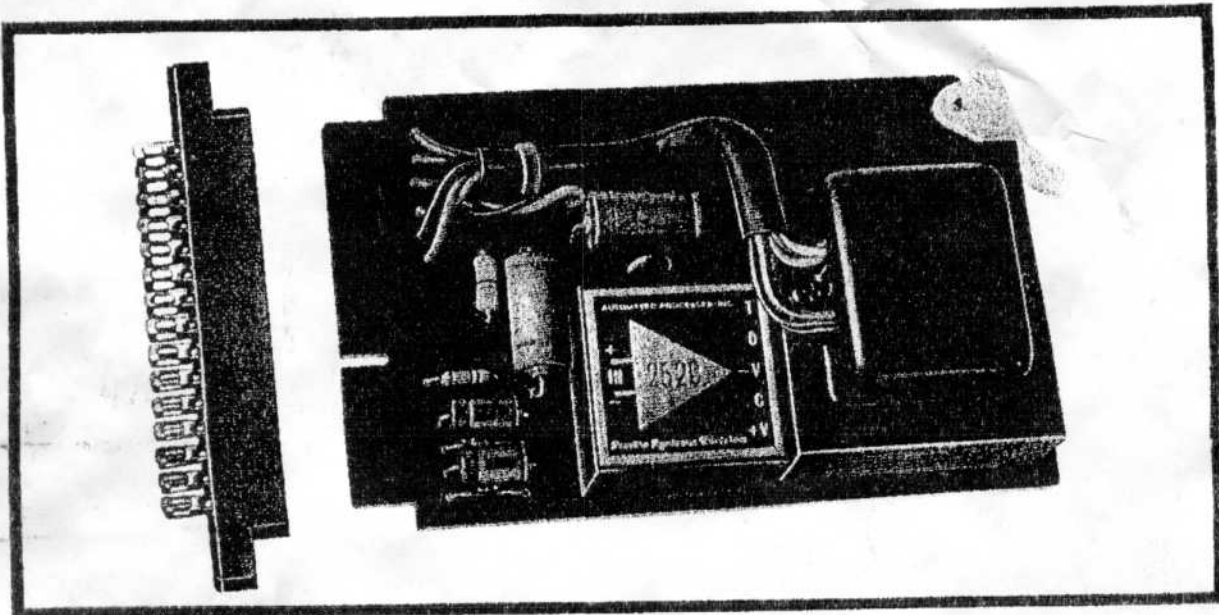


Line, Booster, or Combining Amplifier MODEL 325



Features

- Bridging or combining function input.
- Three transformer coupled outputs.
- Gain externally adjustable.
- Low noise and distortion.
- High output (+30 dBm).
- Reverse polarity and overload protected.
- Small interchangeable plug-in card
- Utilizes the Model 2520 Audio Operational Amplifier.

Description

The Model 325 is unique in its design as a bridging amplifier and a differential active combining network with transformer coupled output.

All of the connections for the two modes of operation are accomplished at the external connecting socket. A companion terminal board containing a precision summing network is also available.

The Model 325 makes use of Automated Processes' 2520 operational amplifier as its active element and therefore exhibits the reliability, long life and uniformity which are characteristic of this device.

Gain of the Model 325 may be conveniently and accurately adjusted through a 40 dB range to a maximum of 49 dB by the use of an appropriate fixed resistor on the external connector, or made variable within this range by the use of a potentiometer. By means of transformer connections, gain may be reduced to unity. Optimum signal to noise ratio and low distortion characteristics

are maintained independent of gain settings within the ratings of the amplifier. Since mode of operation, choice of impedance, and gain selection are accomplished on an external connector, all Model 325 amplifiers in a system are completely interchangeable.

The output transformer of the Model 325 is of unique design and contains three independent secondary windings. Each winding is capable of simultaneous outputs in excess of +20 dBm into 600 ohms. Continuous undistorted power output of +30 dBm into 600 ohms is available by strapping all three secondary windings in series at the connector. The unit is short circuit protected and cannot be damaged by input overloads. The Model 425 companion Summing Network gives complete freedom of choice as to number of inputs to be summed up to 22, with gain set between unity and 20 dB.

The Model 325 operates from a bipolar power supply of from ± 12 to ± 20 volts permitting great latitude in system design and assurance of stability under normal operating conditions.

It is reverse polarity protected and will withstand transients as high as ± 30 volts preventing damage from power line surges and power supply malfunctions. Tightly regulated supplies are therefore not required. Power decoupling is also provided to prevent signal coupling in the power supply lines.

Up to eleven amplifiers can be mounted in Model 411 Card Frame, which is $3\frac{1}{2}$ " high, 6" deep, and 18" wide. Five amplifiers can be mounted in Model 405 Card Frame, which is $3\frac{1}{2}$ " high, 6" deep and 10" wide.

The Model 425 Summing Network mounts between adjacent amplifiers in either card frame and therefore does not require additional space.

The Model 325 is supplied with mating connector and is equipped with a color coded card extractor handle.



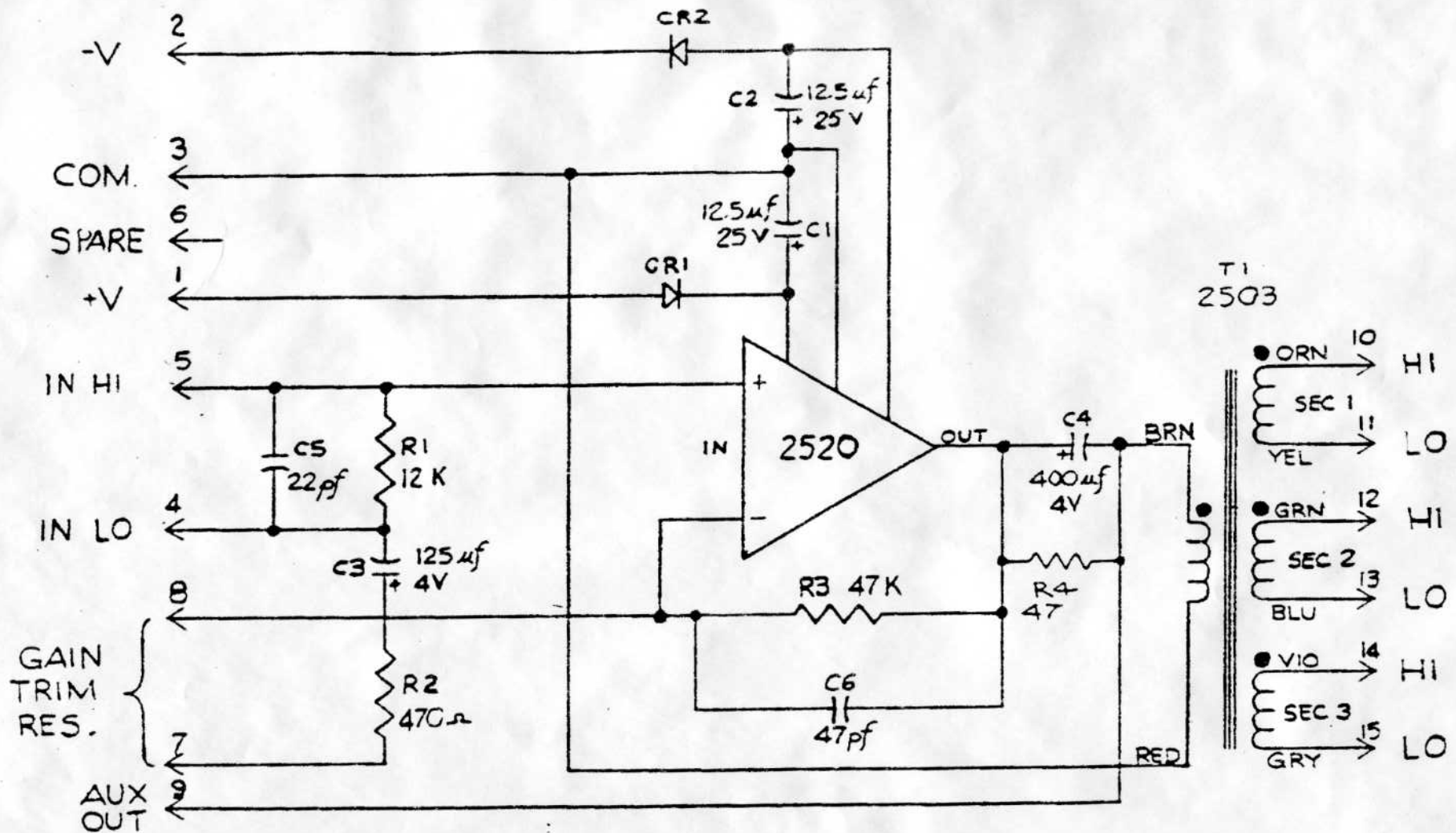
-----325 LINE AMP PINOUT-----

]A---- 1[+12 to +18 VDC-----BUS-----
]B---- 2[-12 to -18 VDC-----BUS-----
]C---- 3[PWR/AUDIO COMMON/GND-BUS-----
]D 4[INPUT LOW (common,tie to a gnd)
]E 5[NON-INV (+) INPUT HIGH
]F 6[SPARE N.C.
]H 7[Gain trim resistor
]J 8[Gain trim resistor
]K 9[AUX direct op-amp OUTPUT
]L 10[OUTPUT 1 HIGH
]M 11[OUTPUT 1 LOW
]N 12[OUTPUT 2 HIGH
]P 13[OUTPUT 2 LOW
]R 14[OUTPUT 3 HIGH
]S 15[OUTPUT 3 LOW

NOTES:

FOR 325-2 models:

]H 7[FET mute voltage input,
]J 8[INVERTING INPUT gain strap



MODEL 325 LINE AMPLIFIER SCHEMATIC

