

# Data Sheet

**jensen transformers**  
INCORPORATED

## JE-TSS-M2 JENSEN TWIN SERVO MICROPHONE PREAMP

The Jensen Twin Servo Microphone Preamplifier as described in the Jensen 16A/B Data sheet is now available direct from Jensen Transformers as an assembled and calibrated PC board. The JE-TSS-M2 circuitry features the JE-16-B microphone input transformer, and two JE-990-C discrete operational amplifier gain stages to give a gain adjustment range of 17 to 60 dB with a single dual-ganged pot. By employing DC servo feedback and DC bias injection circuitry, the need for electrolytic capacitors in the audio signal path has been completely eliminated. The resulting preamp excels both in laboratory measurements and listening tests. Bandwidth of the circuit is -3 dB at 0.375 Hz and 150 kHz. The distortion at (worst case) 20 Hz is less than 0.04% and the maximum input level without a pad is +8dBu. The sound is transparent and noise free, without a trace of edginess that is common to less stable designs. It makes all other preamps sound "thin" and "distant" by comparison.

The JE-TSS-M2 PC card version of the Jensen Twin Servo Mic Preamp has the following features:

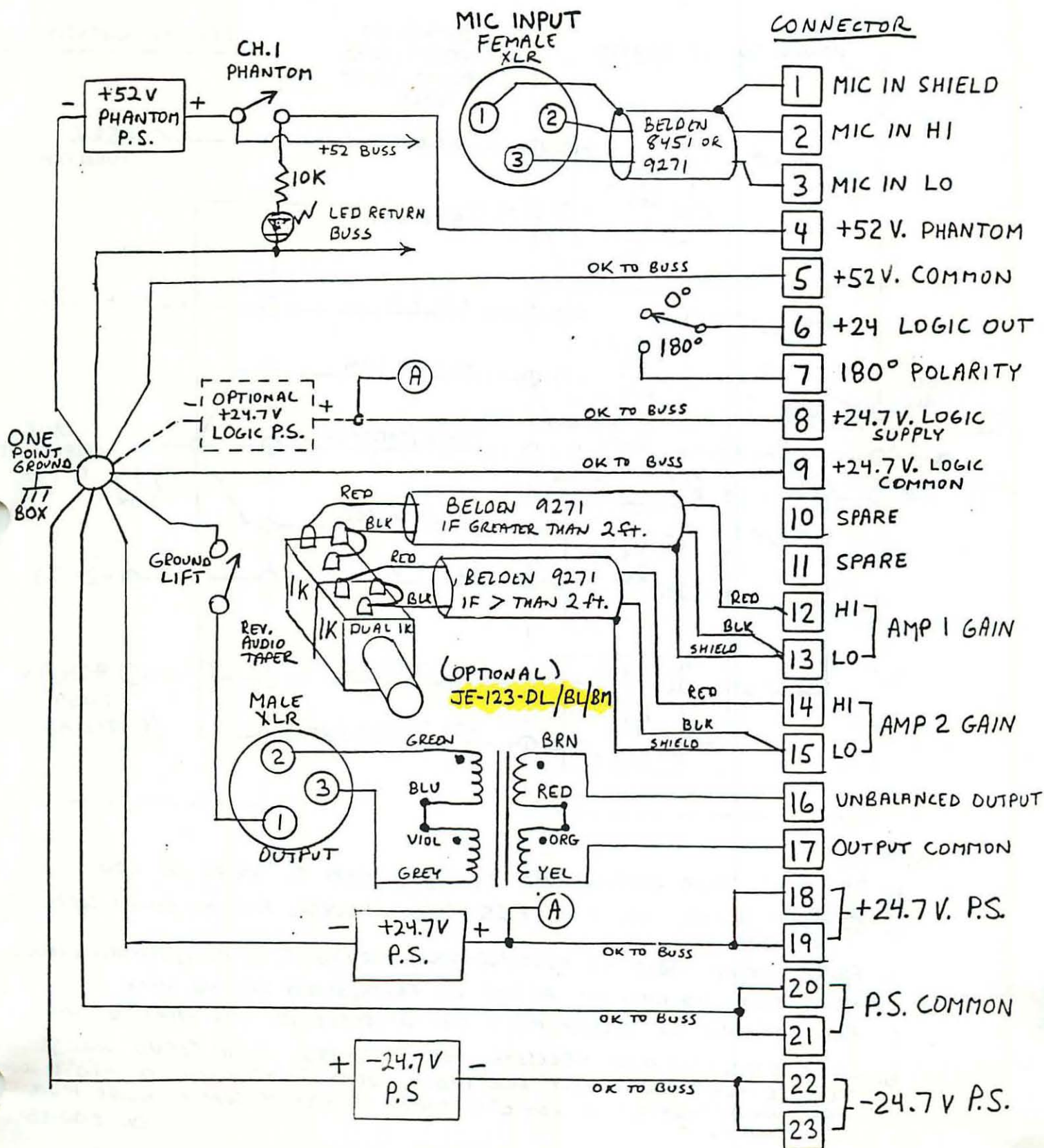
- \*\* Glass epoxy PC board 5.25" X 9" with 23-pin Elco Varicon 2-piece, gold plated, metal-to-metal connector. PC board is supplied with mating connector. Component height above board is 1.25".
- \*\* Contains circuitry described in Jensen JE-16-A/B Data Sheet plus:
  - On-card universal phantom microphone power circuitry (+52 Volts required from external supply) provides correct voltages for both 48 Volt and 12 Volt microphones.
  - On-card relay can be wired to reverse polarity by exchanging input transformer primary leads (standard) or can be (optionally) wired to build out the source impedance of ultra-low Z microphones such as Schoeps to 150 Ohm. Relay operation requires only an external SPST switch.
  - Gain adjustment is brought out to PC connector to allow remote location of 1K dual reverse audio taper potentiometer (not supplied with card, but available separately).
- \*\* Superior components used throughout:
  - Socketed JE-990-C Modules are used for gain stages
  - Roederstein (Resista) 1% metal film resistors
  - Polystyrene capacitors in audio path
  - Gold-plated, bifurcated relay contacts
- \*\* Power Requirements:
  - Bipolar 24 Volts (regulated) at 100 mA per side.
  - +52 Volts at 10 mA for universal microphone powering.
  - Optional +24 Volt relay logic supply can be used to separate audio and logic power supplies, if desired.
- \*\* Pricing: \$459.00 for 1 to 19 units. Quantity pricing for 20 or more units is available upon request.

Gain Control Pots: Conductive Plastic Dual 1K Reverse Audio Taper Potentiometers  
Allen Bradley -- \$11.06 (any quantity)  
Bournes -- \$15.21 (any quantity)

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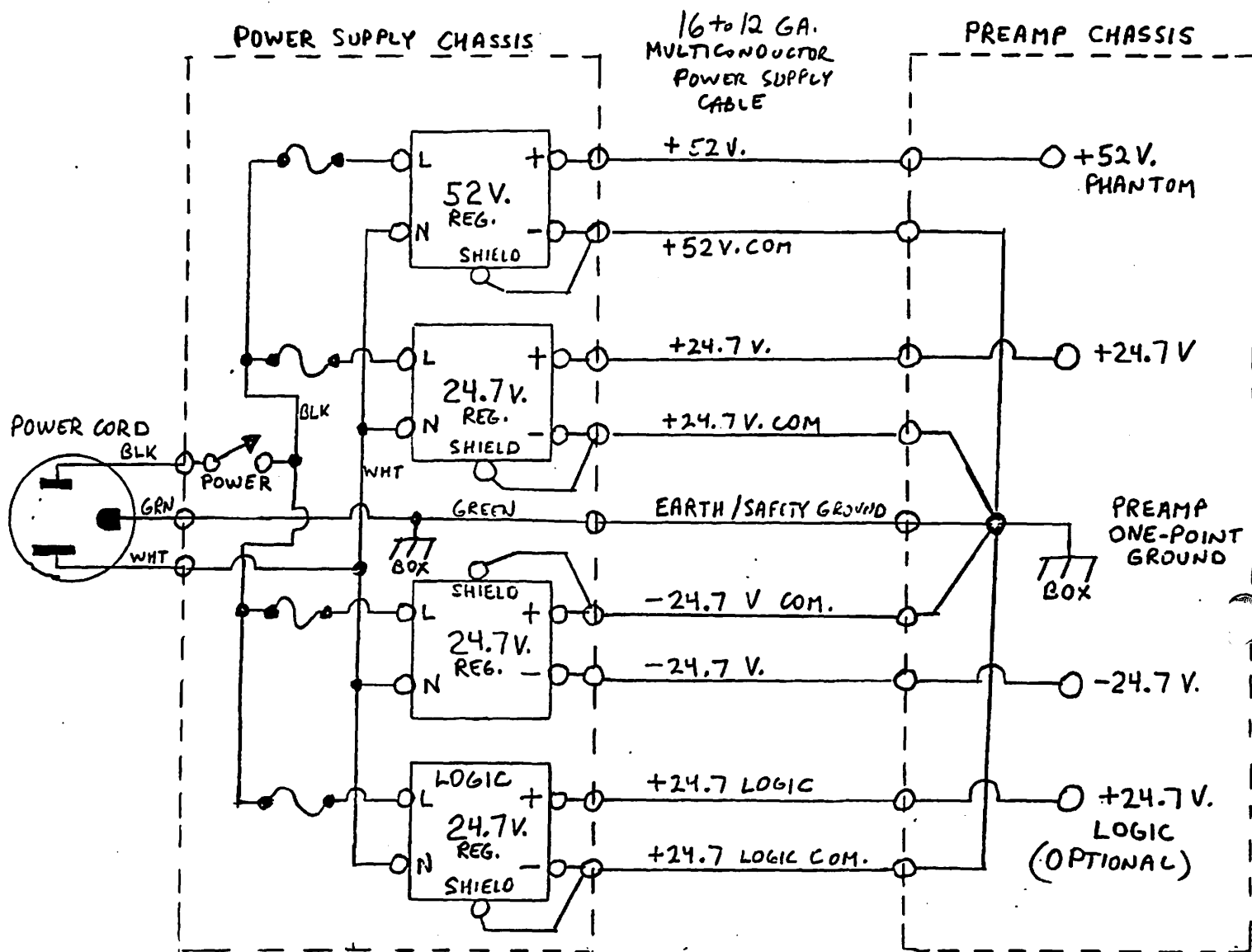


REV.  
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# TWIN SERVO APPLICATIONS:

SAFE, CLEAN POWER SUPPLY  
FOR HIGH QUALITY AUDIO  
SHOWING PROPER GROUNDING &  
ROUTING OF POWER SUPPLY WIRING



## NOTES:

1. 24.7 VOLT POWER SUPPLIES ARE POWERTEC OEM II SERIES OR EQUAL
2. 52 VOLT POWER SUPPLY IS TSS-006 UNIVERSAL PHANTOM POWER SUPPLY CARD. OR EQUAL
3. POWER SUPPLY CABLE IS MULTIPLE-CONDUCTOR (16 GA. MINIMUM) CONTROL CABLE
4. NOTE THAT NO CURRENT FLOWS IN EARTH/SAFETY GROUND WIRE
5. ALL COMMONS IN PREAMP MUST TIE DIRECTLY TO ONE-POINT GROUND
6. LOGIC SUPPLY IS NOT NECESSARY FOR TSS-M2 TWIN SERVO CARDS. TO USE +24.7 VOLT SUPPLY FOR LOGIC, DELETE "+24.7 V. LOGIC COMMON" CONDUCTOR AND CONNECT "+24.7 VOLT LOGIC" CONDUCTOR TO +24.7V SUPPLY INSIDE POWER SUPPLY BOX.

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