

## No. 129-A PRE-MIXING AMPLIFIER

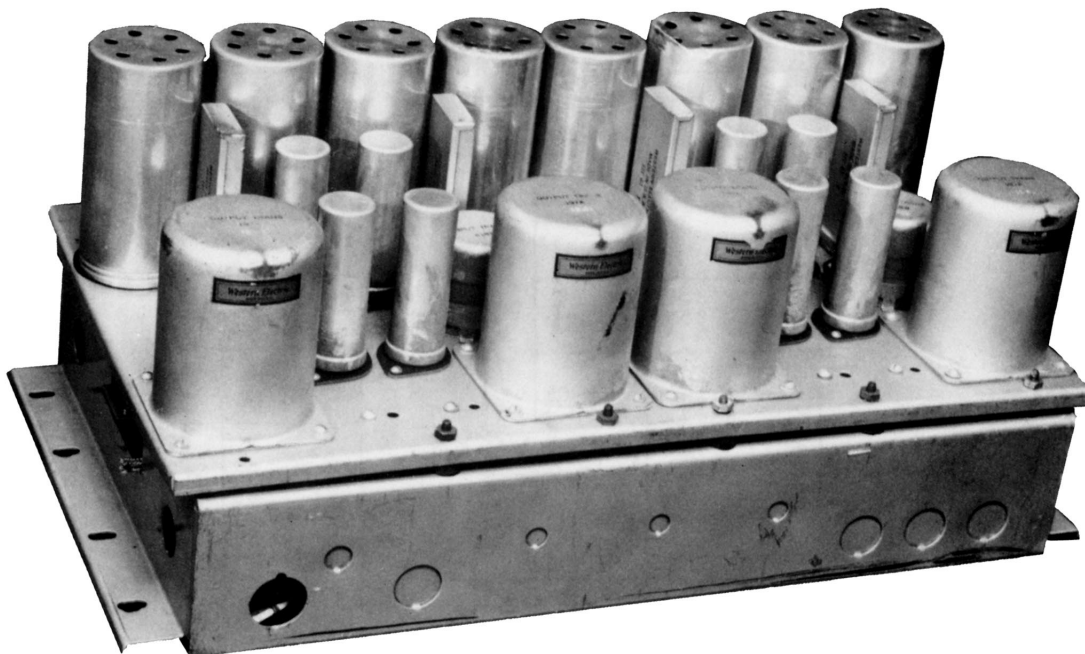


Figure 24 — 129A Pre-Mixing Amplifier.

**Use** — The 129A is particularly designed for use as a pre-mixing or booster amplifier in high quality AM and FM speech input and sound systems; it can also be connected for use as a group of "no-gain" low level bridging isolation amplifiers.

**Description** — Four identical two-stage amplifiers with fixed gain, mounted on a common chassis, comprise the 129A unit. Four electrically separate audio channels are provided in which the inputs from four low level sources (microphones or reproducers) are simultaneously and individually amplified prior to mixing. Each input transformer is arranged so that it can be rotated to provide a minimum pick-up from electromagnetic field interference. Cathode resistors are provided to permit tube checks.

### Features

- High quality pre-mixing and booster amplifier.
- Useful with no-gain low level bridging isolation amplifiers.
- Four electrically separate channels for simultaneous and individual amplification.
- Designed for minimum pick-up from electromagnetic field interference.
- Cathode resistors for tube check circuits.
- Stabilized feedback.

### Specifications

**Frequency Response:** Flat within  $\pm 1$  db over the range 50 to 15,000 cycles.

**Output Noise:** -82 dbm unweighted, -87 dbm weighted. (Normal ear sensitivity curve).

**Signal-to-Noise Ratio:** 77 db weighted, 72 db unweighted, for -10 dbm output.

**Source Impedance:** 30, 250 or 600 ohms matching. For bridging add proper input pad.

**Load Impedance:** 600 ohms.

**Gain:** 41 db.

**Output Power:** Single frequency output power for less than 1 per cent total harmonics: +16 dbm (38 milliwatts) at fundamental frequency of 400 cycles: +13 dbm (20 milliwatts) at fundamental frequency of 50 cycles.

**Power Supply (For Complete Amplifier):** Filament 6.3 volts, 3.2 amperes. Plate 275 volts, 30 milliamperes d-c. Two of the pre-amplifiers can be supplied from one source while the other two are supplied from another. 1.6 amperes filament and 15 milliamperes plate required for each half of the amplifier. 20 Type Rectifier recommended for power supply. A single 20 Type Rectifier will supply power for several 129A Amplifiers.

### VACUUM TUBES

Quantity Required	Western Electric	Commercial Receiver Types
4	348A	1620 (or 6J7)
4	or	1603
8		

**Mounting:** Designed for console mounting; also for rack mounting on 190 Type Mounting Plate (one per plate). Type 296 panel required as face mat.

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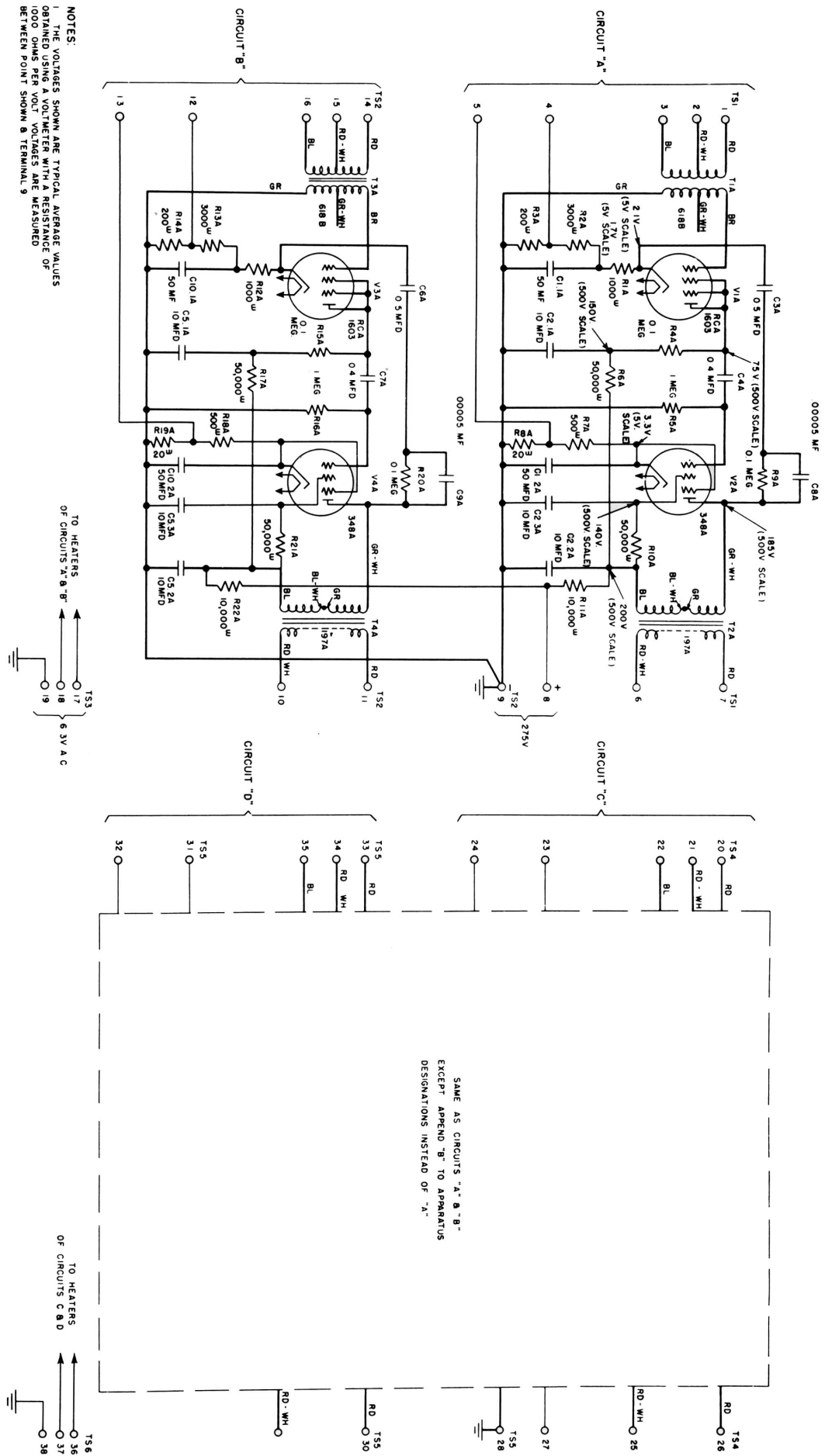


FIG. 1 — Schematic

# Western Electric Company

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### Typical Apparatus List

<i>Designation No.</i>	<i>Apparatus</i>
C1A, C10A C10A, C10B	Mallory type FP Electrolytic Cond. with Bakelite mounting plate number A93410-1 50-50 mfd. 150V in 1" dia. x 3" Can Cat. No. FPD-214
C2A, C5A C2B, C5B	Mallory type FP Electrolytic Cond. with Bakelite mounting plate No. A93410-1, 10-10-10 mfd.—450V in 1" dia. x 3" Can Cat. No. FPT-3B9
C3A, C6A C3B, C6B	0.5 mfd. Cornell Dubilier Dykanol Cond. PC-1728
C4A, C7A C4B, C7B	230A Cond.
C8A, C9A C8B, C9B	0.00005 MF Cond. Cornell Dubilier type 5R  International Resistance Company
R4A, R15A R4B, R15B	0.1 meg. WW-3 resis. with lug terms.
R9A, R20A R9B, R20B	0.1 meg. $\pm 5\%$ BT-1
R1, R12	1000 ohms BW-1 $\pm 5\%$ Resis.
R2, R13	3000 ohms BW-1 $\pm 5\%$ Resis.
R3, R14	200 ohms BW-1 $\pm 5\%$ Resis.
R7, R18	500 ohms BW-1 $\pm 5\%$ Resis.
R8, R19	20 ohms BW-1 $\pm 5\%$ Resis.
R5, R16	1 meg. BT-1 $\pm 5\%$ Resis.
R6, R10 R17, R21	50000 ohms BT-1 $\pm 5\%$ Resis.
R11, R22	10000 ohms BT-1 $\pm 5\%$ Resis.
T1A, T3A T1B, T3B	618B Input Transformer
T2A, T4A T2B, T4B	197A Output Transformer
TS1, TS2 TS4, TS5	700A Terminal Strip
VS1A, VS3A VS1B, VS3B	Vacuum tube socket #33-1-C per KS-7741
VS2A, VS4A VS2B, VS4B	KS-10067, type 39-PG-1-E socket  Aerovox Special Type E mounting ring 1½ dia. furnished with a 1 lg. clamp scr.

All apparatus is Western Electric unless otherwise specified.