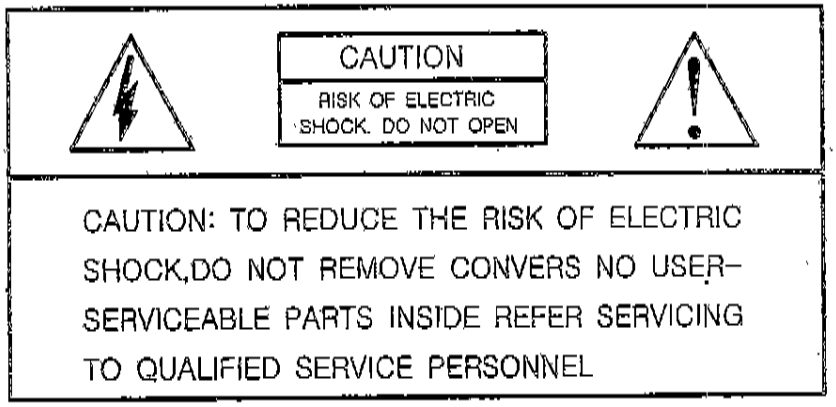
P-30A
Public Address
Amplifier
30 Watts RMS

Instruction Manual



WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK ,DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

SERVICE AND MAINTENANCE

The use of solid state circuitry and advanced manufacturing technigues built in your unit results in very high reliability, and under normal operat -ing conditions, your amplifier should not require service other than an occasional external cleaning.
Keep the original carton and packing material to use if you need to return your unit for service. Merchandise to be returned for out-of-warranty or in-warranty repair requires prior written authorization.
Please write or call toll free 1-800-645-5516 or in METRO NEW YORK 631-957-8700. We request you enclose a packing slip with the shipment that has a complete description of the problem and dated proof of purchase, if in warranty. when shipping the unit to the factory, please be sure to pack the unit well enough to withstand rough handling and use return shipping label supplied by C S I. Ship the unit FREIGHT PREPAID, TO :

C S I
200 NEW HIGHWAY- P.O. BOX 726
AMITYVILLE, NEW YORK 11701-0726

When ordering parts,please give a description or the part number, if available. Direct your order to the PARTS DEPARTMENT.
We will then advise total cost for remittance including shipping and handling.

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DESCRIPTION

The P-30A is a rugged, dependable, 30 watt, public address amplifier. This unit contains features generally not found in much higher priced models which permits it to be used with virtually any program source.

The P-30A feature 2 microphone inputs. The 2 microphone inputs may be used for high or low impedance microphone.HI-Z microphone (over 1k ohm) input is for unbalanced operation only. LO-Z microphone (up to 600 ohm) input may be operated balanced or unbalanced. The #2 microphone input is for unbalanced operation only. The #1 microphone input may be used for priority paging, which when used,removes all other program material from the amplifier while paging.

The unit has 2 AUX input for use with radio tuners, tape decks or other high impedance .high output devices. The inputs are controlled by their individual volume controls.
Outputs are provided for 4 and 8 ohms speakers and 25V and 70V constant voltage lines.

LINE OUTPUT

An output jack for connecting the unit to a booster amplifier or tape recorder is provided on the rear panel of the unit. For connection to this jack, use an RCA type phono plug.

SPECIFICATIONS

RMS POWER OUTPUT ..... 30 Watts @0.1% THD
RMS POWER BANDWIDTH ..... 30Hz to 20KHz
FREQUENCY RESPONSE (RMS 30Watts) 20Hz to 20KHz,-3dB/-1dB
Aux Input

INPUT SENSITIVITY
- Mic.1(Balanced)..... 0.5mV
- Mic.1, 2(Unbalanced)..... 0.5mV
- AUX.1, 2 ..... 100mV

HUM & NOISE
- Mic.1(Balanced 70dB
- Mic.1, 2(Unbalanced) 60dB
- AUX.1, 2 ..... 70dB

LINE OUTPUT : 0.5V @ 10K ohm

SPEAKER OUTPUT ..... 4, 8 ohms, 25V (21 Ohms) and 70V (163 Ohms) line

TONE CONTROL ..... 0dB/-10dB at 10KHz
AC SUPPLY VOLTAGE ..... 120V AC 50/6Hz
AC POWER CONSUMPTION
- Stand-by ..... 10 Watts
- @Max. RMS Output ..... 100 Watts

CONTROLS ..... 2Mic. Vol.
2Aux. Vol.
1Master Vol.
1Tone Control
1Power on/off switch

DIMENSION (H x W x D) ..... 3 1/2" x 11 7/16 x 7 1/2"
WEIGHT ..... 9 1b 4 oz

INSTALLATION

1. POWER :

The P-30A Amplifier is to be operated from a 120V AC 50/60 Hz power source. The power required for this amplifier is clearly indicated on the back panel. (Refer to figure 1)

2. INPUT CONNECTIONS :

Make connections to the microphone (high or low impedance)and auxiliary inputs with the POWER SWITCH in the OFF position and set corresponding volume control to zero to avoid damage to the speakers and the amplifier from hum pickup. (Feedback)

a. MICROPHONE CONNECTIONS. (Refer to figure 2) : A Switchcraft type A3M Microphone connector or equivalent is required for making connections to the Microphone inputs and audio shielded cable is required for all balanced and unbalanced microphone input connections.

BALANCED MICROPHONE INPUT CONNECTIONS(MIC. #1 only) : Using 2 conductor shielded cable, connect each of the two center conductors of the cable to prongs #2 and #3 of the A3M Microphone connector. Connect the shield of the cable to prong #1 of the A3M Microphone connector.

UNBALANCED MICROPHONE INPUT CONNECTIONS (MIC. #1 & #2) : Using single conductor shielded cable,connect the center conductor of the cable to prong #2 of the A3M Microphone connector. Connect the shield of the cable to prong #1 of the A3M Microphone connector.

b. AUXILIARY INPUTS : The auxiliary input receptacles and all other phono type receptacles, require an RCA Type phono plug (Cinch-jones #13A) or equivalent.

3. SPEAKER CONNECTION :

The rear panel of the amplifier contains a 5 screw terminal strip for connection of speakers

a. 25V and 70V constant Voltage line connections (Refer to figure 4)
IMPORTANT NOTE : When the 25V and 70V constant voltage lines are used, a line-matching transformer must be used with each speaker.

b. 4 and 8 OHM LINE CONNECTIONS
Generally, the speaker lines are connected directly between the appropriate COM terminal on the 5 screw terminal strip and the terminal corresponding to the impedance of the speaker or of the voltage.

IMPEDANCE MATCHING

1. INPUT IMPEDANCES :

A radio tuner or tape deck with a high impedance output may be plugged directly into the AUX INPUT. A high or low impedance microphone is connected directly to the microphone input.
PRIORITY PAGING : The amplifier features a transistorized circuit which automatically removes all program material from the amplifier and permits microphone #1 to take over for special or emergency announcements. This electronic switch is operated from the microphone, which must contain a single-pole switch,normally open for actuating this circuit.
A turntable with a high impedance ceramic or crystal cartridge may be connected to an AUX input.
If it is desired to use one or several stations of an intercom system for paging, the output line from the intercom may be connected to an AUX input, providing that the intercom uses an unbalanced line system.
In this case, connection to the amplifier should be made by means of a shielded wire. If a balanced line intercom system or a local telephone system with balanced lines is used, connection to the amplifier should be made though a balanced to unbalanced line transformer to the AUX input using an appropriate telephone line matching transformer. (TLT-1)

2. SPEAKER IMPEDANCES :

Speaker impedance taps for 4 and 8 ohm speakers are provided on a terminal strip on the rear panel of the unit. Also, outputs for 25V and 70V constant voltage lines are provided. To connect the full power output directly to speaker or horn which has a voice coil impedance of 4 and 8 ohms,connect the speaker directly to the proper impedance tap on the terminal strip. Be sure the speaker or horn is capable of handling a sufficient power output of the amplifier or permanent damage to the speaker or horn may result. If it is desired to use a number and variety of speakers, the speakers must be arranged in various series or parallel arrays to provide proper impedance matching or the 25V or 70V constant voltage lines must be used. If the constant voltage lines are use, line-matching transformers must be used with each speaker. This is the preferred method for multi-speaker installation.

CABLE REQUIREMENTS

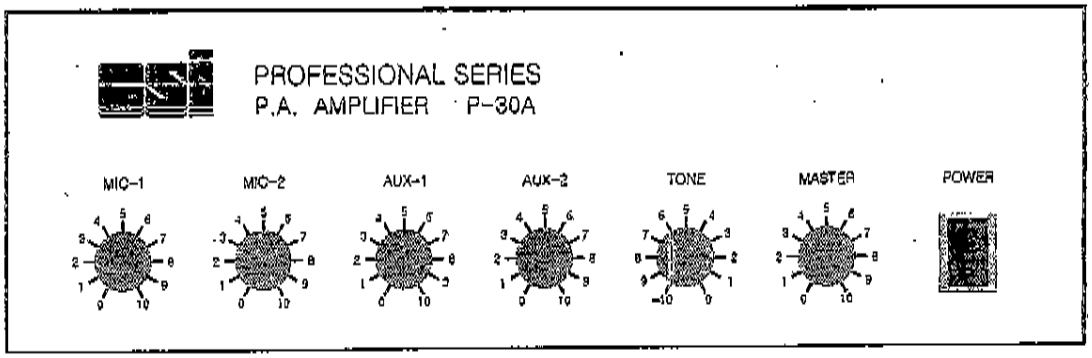
1. INPUT CABLES : All input lines to the amplifier, microphone and AUX inputs, require SHIELDED audio cable.
   Single-conductor sielded cable is required for the AUX inputs and the HI-Z and LO-Z unbalanced microphone inputs.
   Two-conductor shielded cable is required for the LO-Z balanced microphone input.
2. OUTPUT CABLES : Output cabling need not be shielded in most cases and should be of sufficient gauge to minimize losses due to the resistance of the wire over long runs (insertion loss). Cable thinner than 18 ga is not recommended.Long runs require 16 ga or heavier.
   * In some cases where the output cable is run in close proximity to unshielded intercom cables, when the amplifier is being used for paging by the intercom system, the amplifier may require shielded output cabling to prevent audio feedback or interference.

CONTROLS

1. FRONT PANEL CONTROLS :
   a. The POWER SWITCH is located at the extreme righthand side of the front panel. When switching the amplifier on,the red lighted switch will become illuminated.
   b. MICROPHONE VOLUME CONTROL : Rotating the microphone controls clockwise increases the gain of the microphone inputs.
   c. AUX VOLUME CONTROL : Rotating the AUX controls clockwise increases the gain of the AUX input.
   d. MASTER VOLUME CONTROL : Rotating the master control clockwise increases the gain of all inputs simultaneously. The preliminary adjustment of the P.A amplifier should be done with the master volume control set at approximately 1/2 of maximum clockwise rotation with individual controls at zero or "1". The master volume control may then be used to raise or lower the volume of all input simultaneously.
   e. TONE CONTROL : Rotating the Tone control clockwise increases the treble and counterclockwise increase the bass. Tone is flat at center.

2. UNIT PROTECTION DEVICES.
   Unit uses thermal and current-limiting-circuit protection to help prevent amplifier damage due to incorrect wiring, shorted speaker lines or amplifier being overdriven.
   a. LINE FUSE PROTECTION : The line fuse protects the amplifier from damage if the unit is severely overdriven. Constant overdriving of amplifier will result in damage requiring repair.
   (not covered by warranty)
   b. OUTPUT FUSE PROTECTION : The output fuse protects both amplifier and speaker loads. If the Fuse blows, turn the power switch off and replace with fuse of the proper type and rating. If the fuse continues to blow, check the speaker writing for a short circuit. Use of improper substitute fuses which cause damage to the unit will void the warranty.

CONTROLS AND FUNCTION



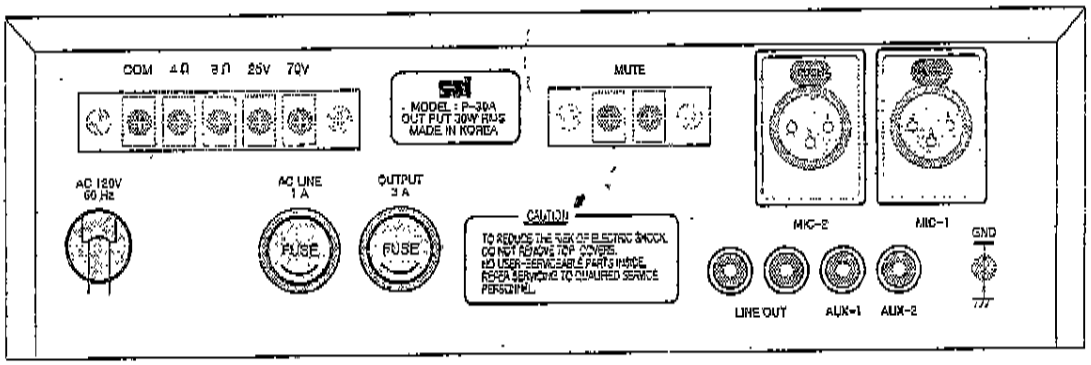
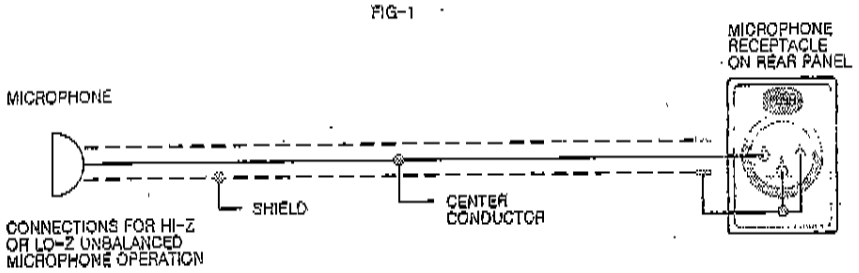


FIG-1



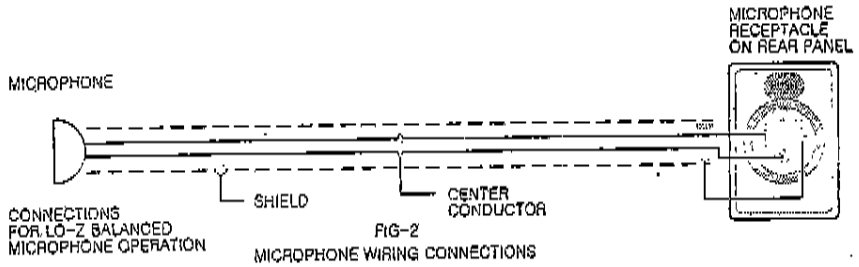
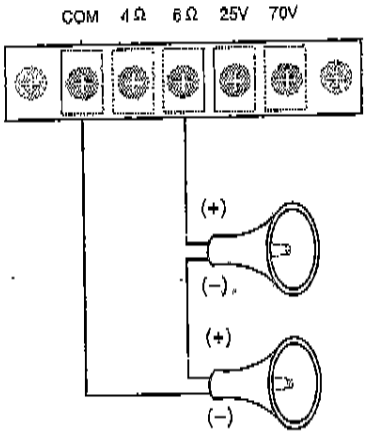


FIG-2
MICROPHONE WIRING CONNECTIONS

INSTALLATION OF SPEAKERS

VOLTAGE	11V	15.5V	25V	70V
IMPEDANCE	4 ohm	8 ohm	21 ohm	163 ohm

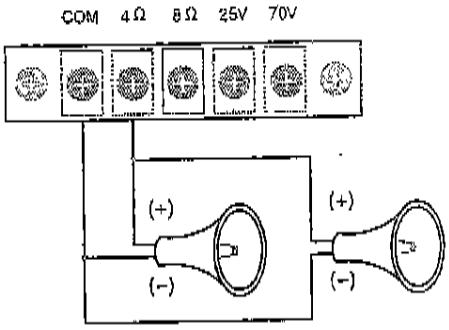
Connecting Speakers in Series
When there is more than one spea -ker in a sound system, you must determine the total impedance of the speakers before you can make the correct connection. In the exa- mple two 4Ωspeakers are connec- ted in series. To determine the tot -al impedance of speakers connec -ted in series, add the impedance of all the individual speakers.



TWO 4 OHM SPEAKERS

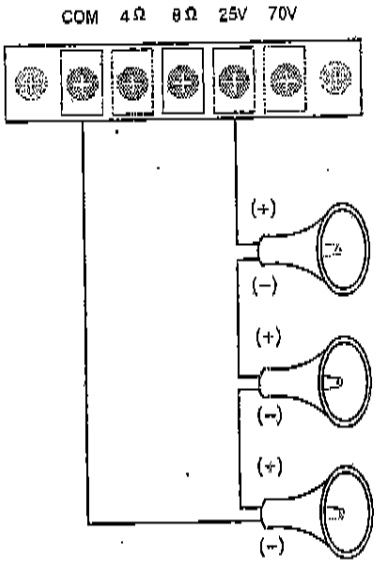
Connecting Speakers in parallel
To arrive at the correct impedance for connecting speakers in parallel, as in the example, divide the numb -er of speakers(two) into the imped -ance of single speaker (8Ω).

Note : Remember all speakers must have the same impedance when using this formula.



TWO 8 OHM SPEAKERS

For 25 Volt Line or 21 ohm

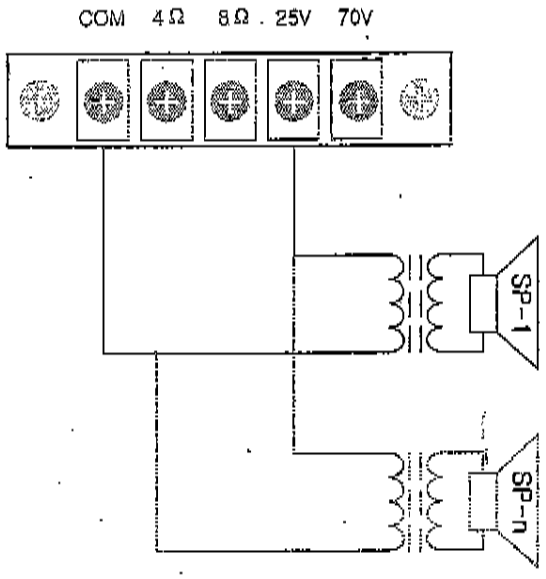


Three 8ohm SPEAKERS

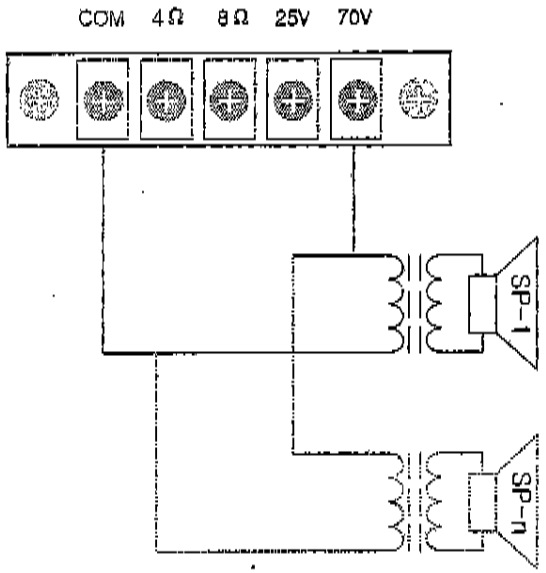
FIG-3

HOW TO CONNECT LINE MATCHING TRANSFORMERS IN PARALLEL

(25 volt line or 70 volt line)

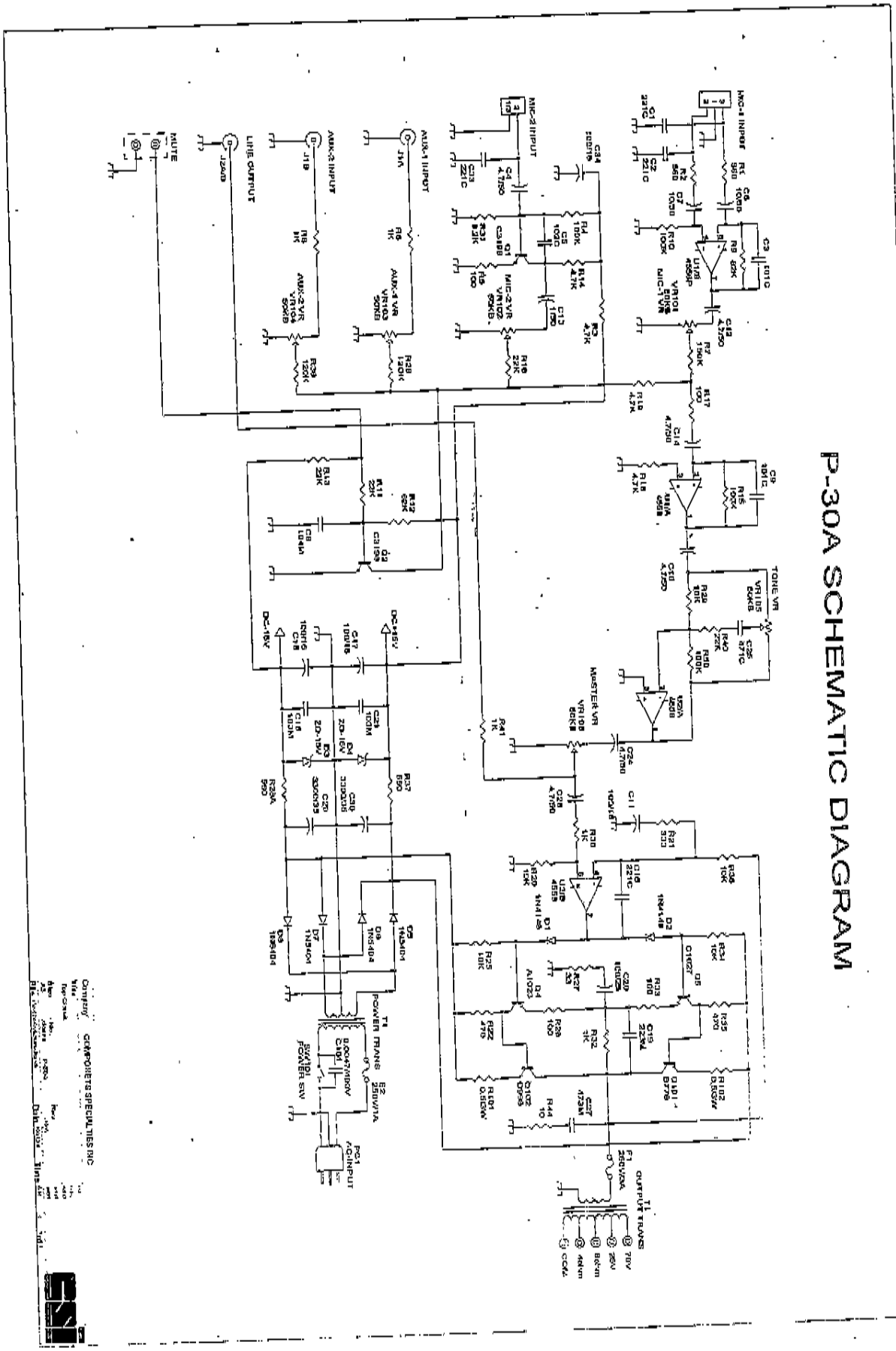


25V line transformers



70V line transformers

FIG-4


P-30A SCHEMATIC DIAGRAM