

**TASCAM**  
TEAC Professional Division

# LA-3500

## Balanced Amplifier Kit

→ IF SO EQUIPPED, INSTALL METAL EXPANSION UNIT UP TO POINT  
BRIDGES ARE MOUNTED (LEAVE LYING ON MIXER) BEFORE  
INSTALLING THIS KIT.

NOTE: Figs 4 + 5 inside are a bottom view

Thank you for purchasing the TASCAM LA-3500 Balanced Amplifier Kit.

The LA-3500 includes 4 circuit board/D-sub connector assemblies and accommodates the M-3500 console to +4 dBm balanced 8 dual group outputs and 16 tape returns; two D-sub connectors will each feed the same mixes from the 3 group busses, and the other two will each receive 8 different tape returns.

Follow the instructions in this manual to correctly install and use the LA-3500.

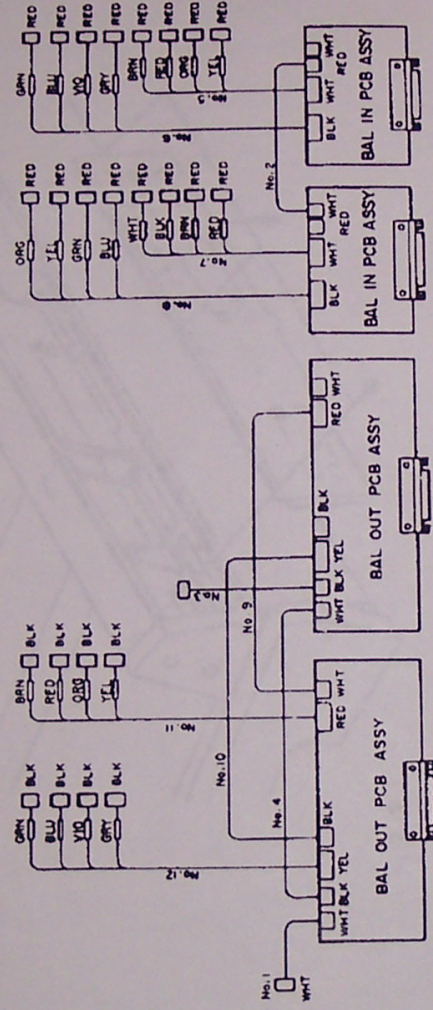
**OWNER'S MANUAL**

## PRELIMINARY

Before installing the L-A-3500, check the contents of the packing case against the parts list and diagram below:

Part No.	Nomenclature	Q'ty
5200304300	BAL IN PCB ASS'Y	2
5200304400	BAL OUT PCB ASS'Y	2
5355215900	Connection Wire Set*	1

\*Actually, every wire is pre-connected to the supplied circuit boards as shown below.



## INSTALLATION

1. Remove the meter section as follows:

If the MU-3532/3524 meter expansion unit has been installed, skip step 1-1 and go directly to step 1-2.

- 1-1. Refer to Figure 1. Remove the filler panel by removing the blind plugs then the screws beneath from the meter's left side panel (viewed from the front).

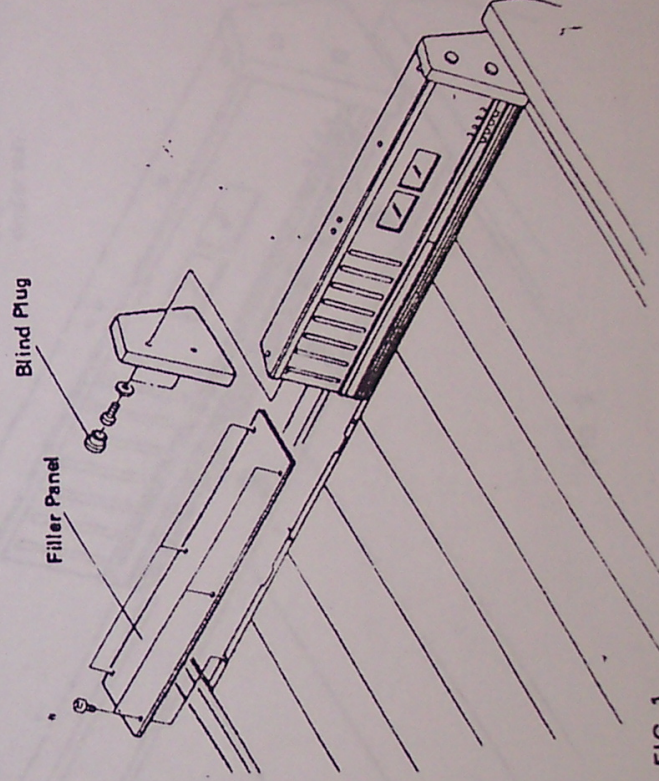


FIG. 1

- 1-2. Refer to Figure 2 and remove the screws that hold the standard meter rear panel in place.
- 1-3. Remove the meter rear panel by pulling it up.
- 1-4. Remove the screws that hold the meter chassis to the console.

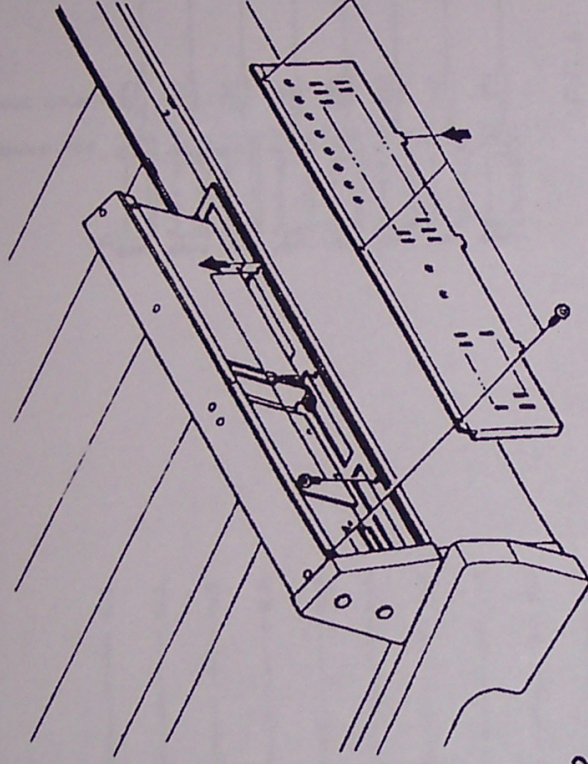


FIG. 2

- 1-5. Refer to Figure 3 and slide the meter unit backward then lift it up.

Lay the removed meter unit against the console with the wires coming from the unit left connected.

- If the MU-3532/3524 Meter Expansion Unit has been mounted, remove that unit as well in a similar way.

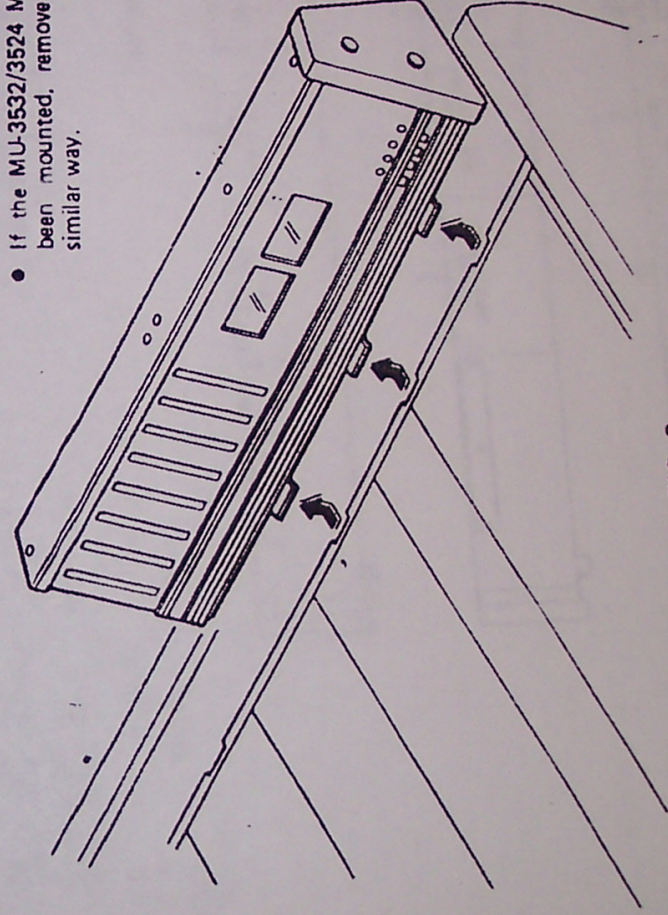


FIG. 3

2. Refer to Figure 4 and plug the provided wires no. 5 through no. 8 into the INPUT JACK PCB Assembly.

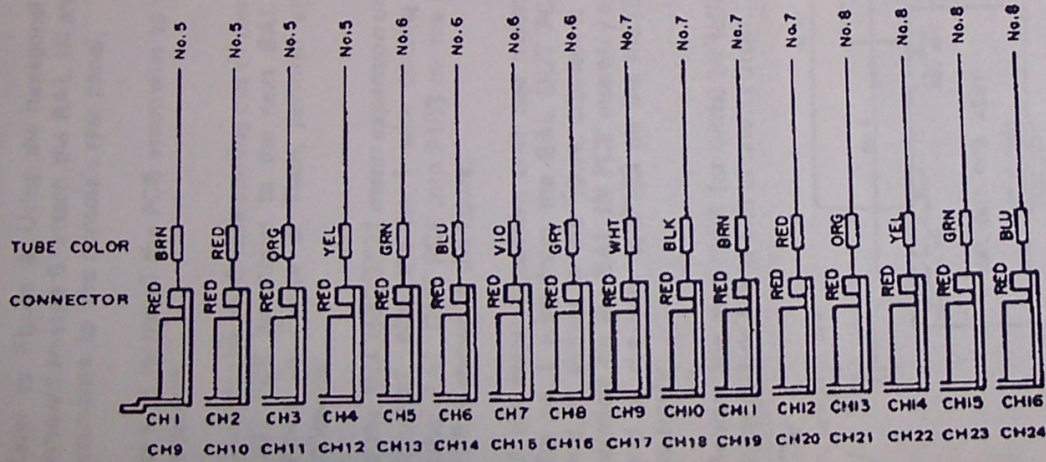


FIG. 4:  
*bottom view*

M-3500-32/24  
M-3500-24ST

3. Refer to Figure 5 and plug the provided wires no. 11 and 12 into the GRP 1-8 connectors on the JACK (C) and (D) PCBs.

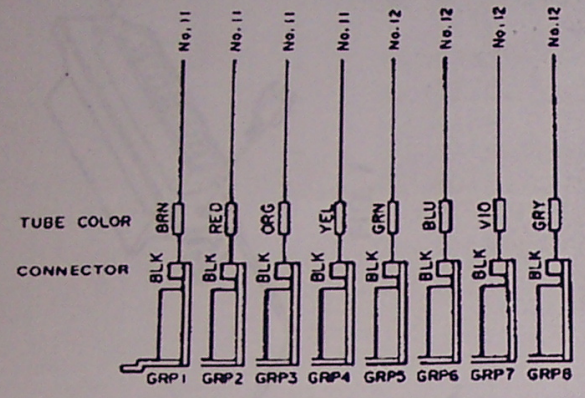


FIG. 5  
*bottom view*

4. Remove the four small blank panels from the console's rear panel as shown in Figure 6.

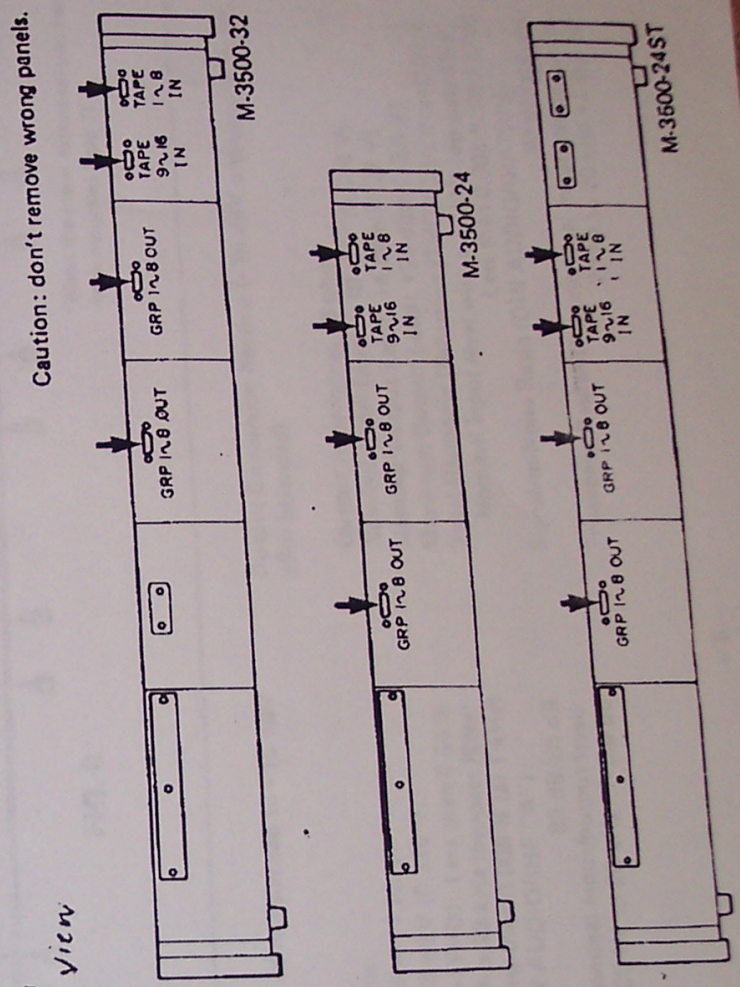


FIG. 6

5. Remove hexagonal nut screws from the D-sub connector on the provided BAL IN PCB and BAL OUT PCB assemblies as shown in Figure 7.

6. Refer to Figure 8. Using the hexagonal nut screws removed in step 5, attach the BAL IN and OUT PCB assemblies to the console's rear panel.

Be sure to install the PCB assemblies to their correct locations.

7. Connect the no. 3 wire coming out of one of the BAL OUT PCB assemblies to the next BAL IN PCB as shown in Figure 8. Then, perform either of the following:

*If the MU-3532/3524 meter expansion unit was NOT mounted, plug the no. 1 wire coming out of the other BAL OUT PCB into P103 on the METER (A) PCB as shown in the figure.*

*If the meter expansion unit was mounted, unplug the no. 1 wire from the BAL OUT PCB assembly, and, as shown in the figure, connect it to the WHT terminal on the BAL IN PCB assembly and the other end of the wire to P103 on the METER (A) PCB assembly.*

8. Replace the meter unit (or units) by following above steps (1-1 or 1-2 to 1-5) in reverse order.

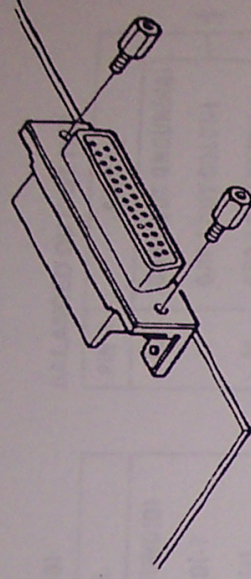


FIG. 7

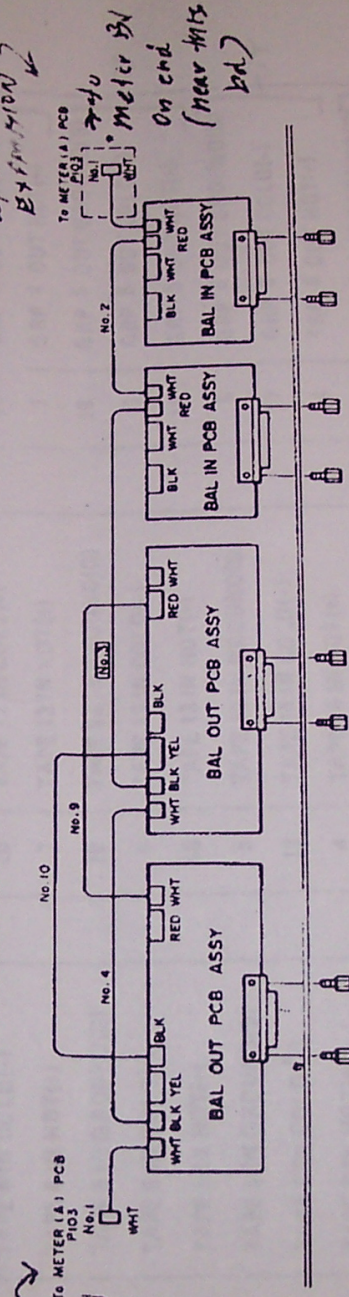


FIG. 8

## SPECIFICATIONS

Input Conversion Section (+4 dBm balanced to -10 dBV unbalanced)

Input Impedance: 37k ohms  
 Nominal Input Level: +4 dBm (1.23 V)  
 Nominal Output Level: -10 dBV (0.316 V)  
 Total Harmonic Distortion (THD): Less than 0.05 %  
 Nominal input level with a 30 kHz low-pass filter:  
 Less than 0.008 % (at 1 kHz)

Signal-to-Noise Ratio (DIN AUDIO/IHF "A"):  
 83 dB/86 dB  
 Frequency Response (at nominal input/output level):  
 20 Hz to 20 kHz +/-0.5 dB

Output Conversion Section (-10 dBV unbalanced to +4 dBm balanced)

Output Impedance: 75 ohms  
 Nominal Input Level: -10 dBV (0.316 V)  
 Nominal Output Level: +4 dBm (1.23 V)  
 Maximum Output Level: +25 dBm (13.8 V)  
 Total Harmonic Distortion (THD): Less than 0.05 %  
 Nominal input level with a 30 kHz low-pass filter:  
 Less than 0.008 % (at 1 kHz)

Signal-to-Noise Ratio (DIN AUDIO/IHF "A"):  
 97 dB/100 dB  
 Frequency Response (at nominal input/output level):  
 20 Hz to 20 kHz +/-0.5 dB

## PIN ASSIGNMENTS

The Balance Input and Output D-sub connectors have each 25 pins. Their assignments are as follows:

BALANCED INPUT (1-8)

PIN #	SIGNAL
25	TAPE 1 IN GROUND(G)
12	TAPE 1 IN COLD(-)
24	TAPE 1 IN HOT(+)
11	TAPE 2 IN GROUND(G)
23	TAPE 2 IN COLD(-)
10	TAPE 2 IN HOT(+)
22	TAPE 3 IN GROUND(G)
9	TAPE 3 IN COLD(-)
21	TAPE 3 IN HOT(+)
8	TAPE 4 IN GROUND(G)
20	TAPE 4 IN COLD(-)
7	TAPE 4 IN HOT(+)
19	TAPE 5 IN GROUND(G)
6	TAPE 5 IN COLD(-)
18	TAPE 5 IN HOT(+)
5	TAPE 6 IN GROUND(G)
17	TAPE 6 IN COLD(-)
4	TAPE 6 IN HOT(+)
16	TAPE 7 IN GROUND(G)
3	TAPE 7 IN COLD(-)
15	TAPE 7 IN HOT(+)
2	TAPE 8 IN GROUND(G)
14	TAPE 8 IN COLD(-)
1	TAPE 8 IN HOT(+)
13	Not Connected

BALANCED INPUT (9-16)

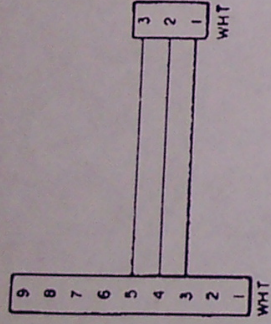
PIN #	SIGNAL
25	TAPE 9 IN GROUND(G)
12	TAPE 9 IN COLD(-)
24	TAPE 9 IN HOT(+)
11	TAPE 10 IN GROUND(G)
23	TAPE 10 IN COLD(-)
10	TAPE 10 IN HOT(+)
22	TAPE 11 IN GROUND(G)
9	TAPE 11 IN COLD(-)
21	TAPE 11 IN HOT(+)
8	TAPE 12 IN GROUND(G)
20	TAPE 12 IN COLD(-)
7	TAPE 12 IN HOT(+)
19	TAPE 13 IN GROUND(G)
6	TAPE 13 IN COLD(-)
18	TAPE 13 IN HOT(+)
5	TAPE 14 IN GROUND(G)
17	TAPE 14 IN COLD(-)
4	TAPE 14 IN HOT(+)
16	TAPE 15 IN GROUND(G)
3	TAPE 15 IN COLD(-)
15	TAPE 15 IN HOT(+)
2	TAPE 16 IN GROUND(G)
14	TAPE 16 IN COLD(-)
1	TAPE 16 IN HOT(+)
13	Not Connected

BALANCED OUTPUT (1-8)

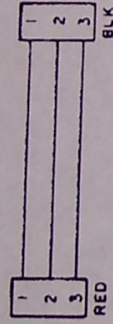
PIN #	SIGNAL
25	GRP 1 OUT GROUND(G)
12	GRP 1 OUT COLD(-)
24	GRP 1 OUT HOT(+)
11	GRP 2 OUT GROUND(G)
23	GRP 2 OUT COLD(-)
10	GRP 2 OUT HOT(+)
22	GRP 3 OUT GROUND(G)
9	GRP 3 OUT COLD(-)
21	GRP 3 OUT HOT(+)
8	GRP 4 OUT GROUND(G)
20	GRP 4 OUT COLD(-)
7	GRP 4 OUT HOT(+)
19	GRP 5 OUT GROUND(G)
6	GRP 5 OUT COLD(-)
18	GRP 5 OUT HOT(+)
5	GRP 6 OUT GROUND(G)
17	GRP 6 OUT COLD(-)
4	GRP 6 OUT HOT(+)
16	GRP 7 OUT GROUND(G)
3	GRP 7 OUT COLD(-)
15	GRP 7 OUT HOT(+)
2	GRP 8 OUT GROUND(G)
14	GRP 8 OUT COLD(-)
1	GRP 8 OUT HOT(+)
13	Not Connected

Both balanced output D-sub connectors have the same pin assignments and carry the same signals.

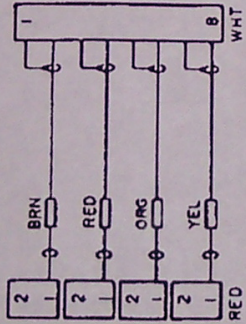
Supplied Wires - Wire/Contact Configurations



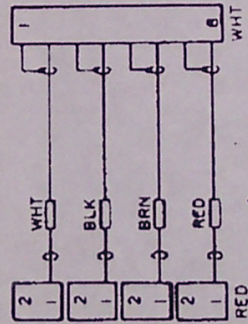
No. 1



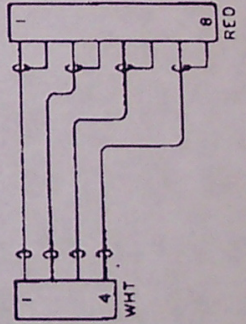
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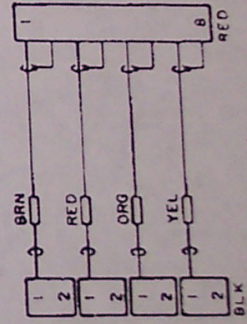
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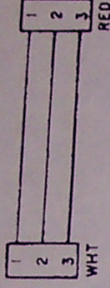
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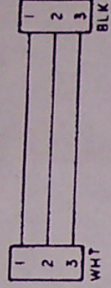
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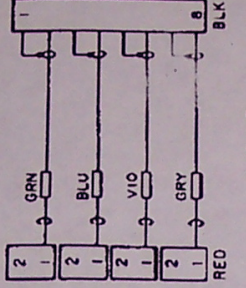
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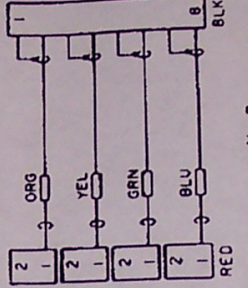
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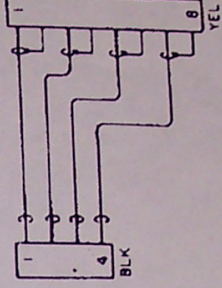
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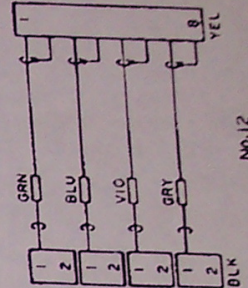
No. 6



No. 8



No. 10



No. 12