

Film-Tech

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10.0 The KT-31 and KT-33 Control/Monitor Panels

10.1 Introduction

The KT-33 Control Panel contains the master level adjustment and input selection for the Kintek System. With the KT-31 Monitor Panel, the KT-33 provides a full monitoring facility, including a VU meter and a rack-mounted loudspeaker.

10.2 Front and Rear Panels

Refer to Figure 10.1. Front Panels of the KT-31 AND KT-33.

KT-33:

1. Master Fader. This control sets the level for the theatre.
2. Selector. This switch determines the input signal for the entire system.
3. Fader Amplifier Emergency Bypass. If the exciter lamp is lit, the preamplifier is functioning, and all other components seem to be operating, yet no sound is heard, press this button to test for a malfunction in the fader amplifier.

KT-31:

4. Monitor Loudspeaker.
5. Monitor Level Control. Once calibrated, the monitor level reflects the theatre sound level.
6. VU Meter. The meter shows the relative sound levels in the theatre.
7. Selector. This switch chooses the amplifier output to be

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monitored:

LB: for future Kintek
products

R: right

S: surround

L: left

RB: for future Kintek

C: center

products

All: left, center, right, and surround channels

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Refer to Figure 10.2. Rear Panel of the KT-33.

1. Inputs. Use the non-sync and auxiliary inputs for tape recorders, phono preamplifiers, or other non-film signals. Refer to Section 10.4.3 for connection information.

2. Accessory Connector. DC power from the KT-22 and sense inputs from the power amplifiers connect here.

3. Auxiliary Fader. This control is used when another processing system is interfaced with the Kintek system. CONNECTED TO
SHAFT OF
MASTER FADER

4. Outputs.

5. VU Meter Adjustment. This trimmer is used to calibrate the VU meter on the KT-31 .

6. Monitor Panel Connector. The cable from the KT-31 plugs in here.

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10.3 Specifications

KT-33:

Power Requirements 120 VAC, 50 Hz or 60 Hz, 20 watts
maximum. Consult the factory for
operation with other line voltages.

Dimensions 3 1/2" H X 19" W X 10 1/2" D.
(88.9 mm H X 483 mm W X 260 mm D.)

Weight 8 1/2 pounds.
(3.85 kilograms.)

KT-31:

Power Requirements provided by the KT-33 via the
special cable.

Dimensions 7" H X 19" W X 3" D.
(177.8 mm H X 483 mm W X
76.2 mm D.)

Weight 5 1/4 pounds.
(2.38 kilograms.)

Kintek products are manufactured under one or more of the
following U.S. patents: 3,681,618; 3,714,462; 3,789,143;
4,101,849; 4,097,767. Other patents pending.

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10.4 Installation

10.4.1 Unpacking and Mounting

Remove the unit carefully from its shipping carton. Mount the KT-31 and KT-33 in the equipment rack. Both units were carefully inspected and tested at the factory. Contact your dealer in the event of any problems. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.

10.4.2 Precautions

When locating any electronic equipment near heat sources, provide adequate clearance for ventilation. Excessive heat shortens the life of any electronic component. Avoid high humidity and water.

Mounting electronic equipment and connecting cables as far as possible from motors and large power transformers lessens the possibility of 60-Hz hum being heard in the system.

10.4.3 Connections

Use the special cables supplied with the units.

AC Power. The unit draws approximately 20 watts. No AC power switch is provided, but the unit can be connected to the switched AC outlet in an equipment rack or to an accessory outlet on adjacent sound equipment.

KT-33:

In systems with a KT-28 Automation Interface Unit: The film

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and auxiliary outputs of the KT-28 are wired to the KT-33 inputs. Refer to Section 8.0.

In systems without the KT-28: The output of the KT-41 Preamplifier connects to the film input. Other signal inputs connect to the non-sync and auxiliary inputs.

The output of the KT-33 goes to the KT-21.

KT-31:

Only one connection is necessary for the operation of the KT-31: plug the special connector into the marked jack of the KT-33.

10.5 Operation

10.5.1 System Alignment

1. Follow the full alignment procedure in Section 1.5.1.
2. Per these instructions, an SPL reading of 79 dBc should have been measured using a pink-noise loop and with all channels operating. With the pink-noise loop running and the meter selector turned to "all," set the VU level control on the rear of the KT-33 so the meter reads "-6" VU.
3. With the pink-noise loop running, adjust the monitor level on the KT-31 for a comfortable listening volume. Use the red arrows to mark the setting.
4. Stop the projector and remove the loop. Run an Academy print. Check the monitor level and VU meter.
5. For normal operations, only the level control on the KT-33 needs to be adjusted to maintain a proper listening level in the booth.

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10.6 Theory of Operation

10.6.1 Flow Chart

10.6.2 Schematic and Board Layouts

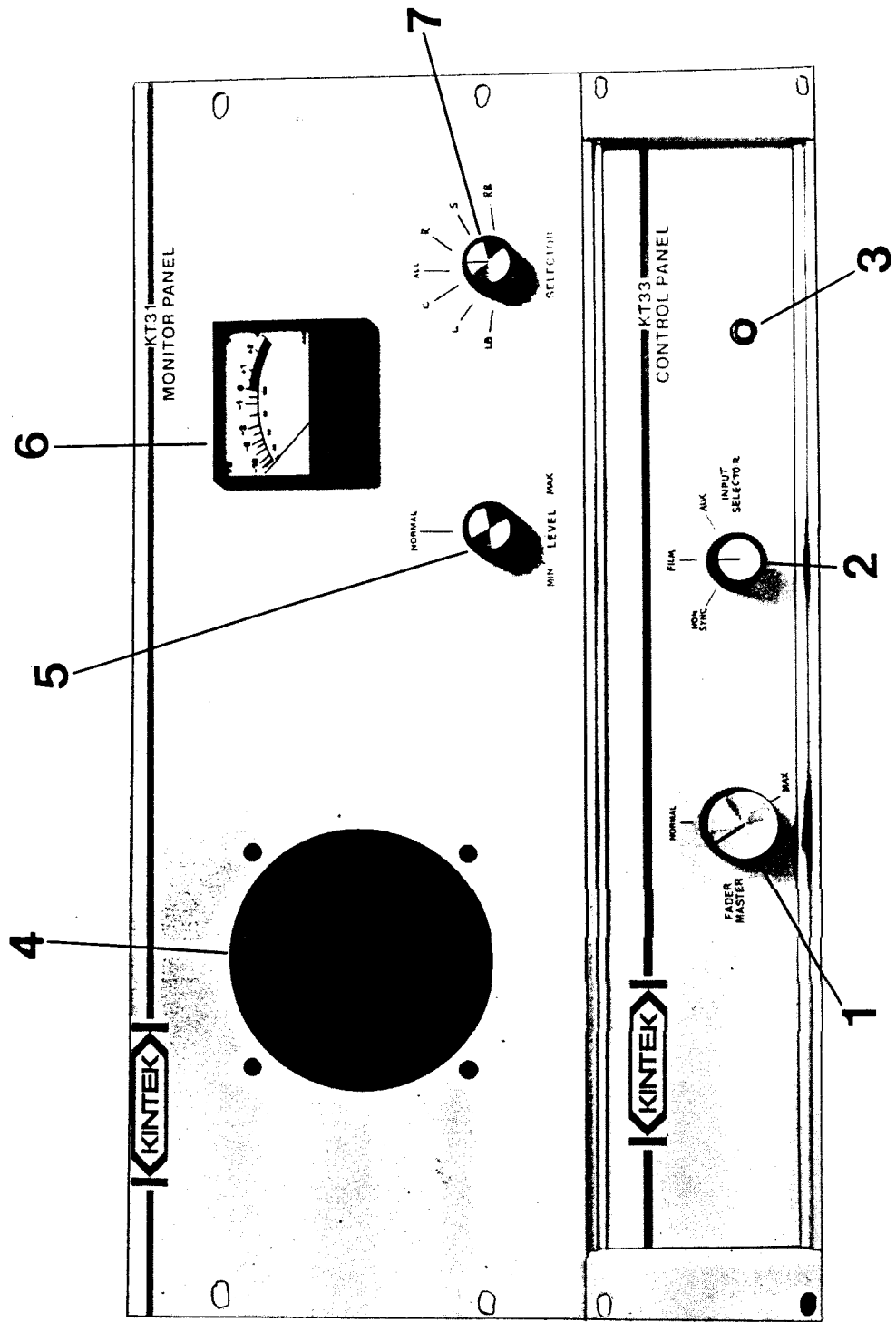


Figure 10.1. Front Panels of the KT-31 and KT-33.

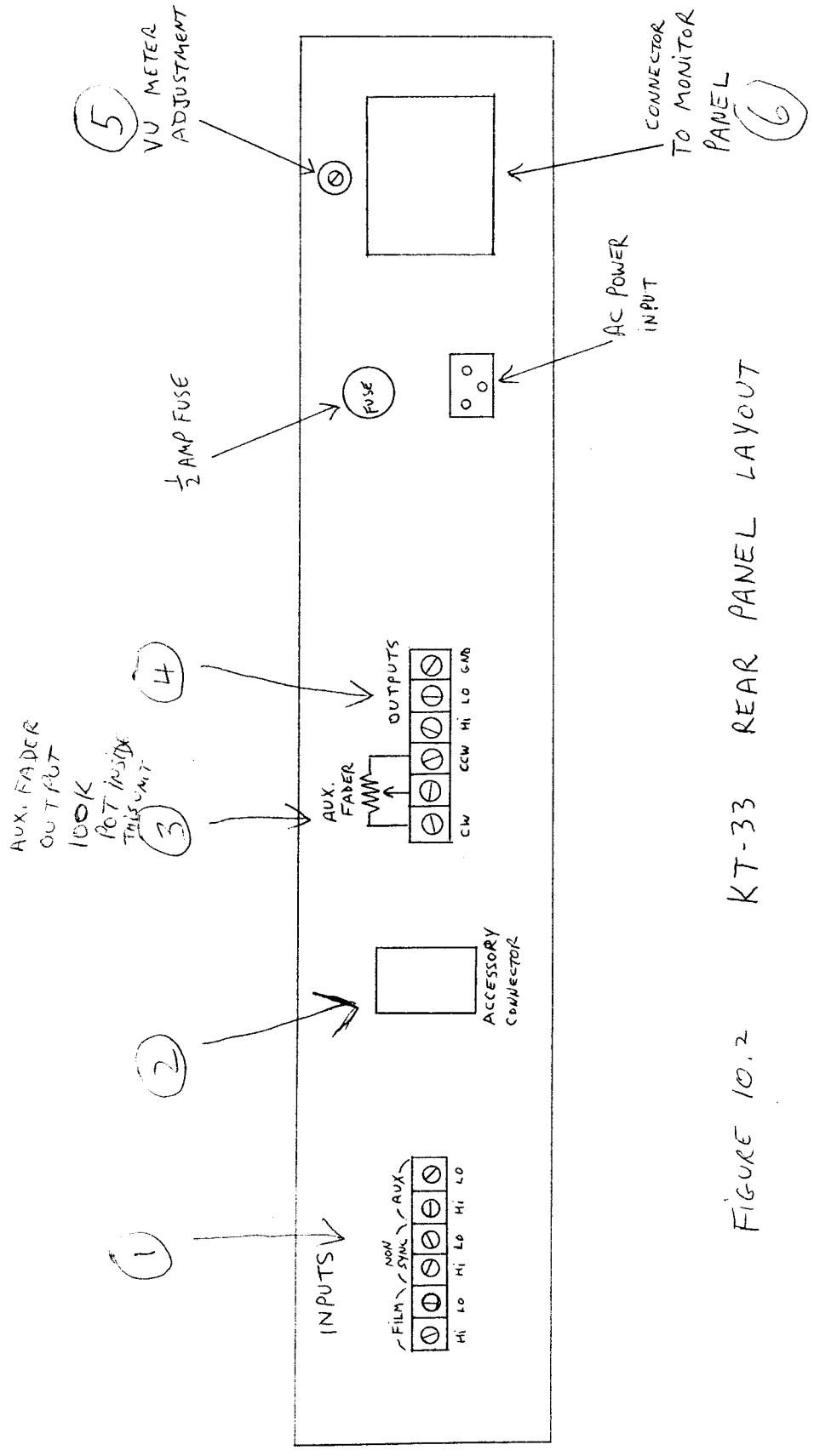


FIGURE 10.2 KT-33 REAR PANEL LAYOUT

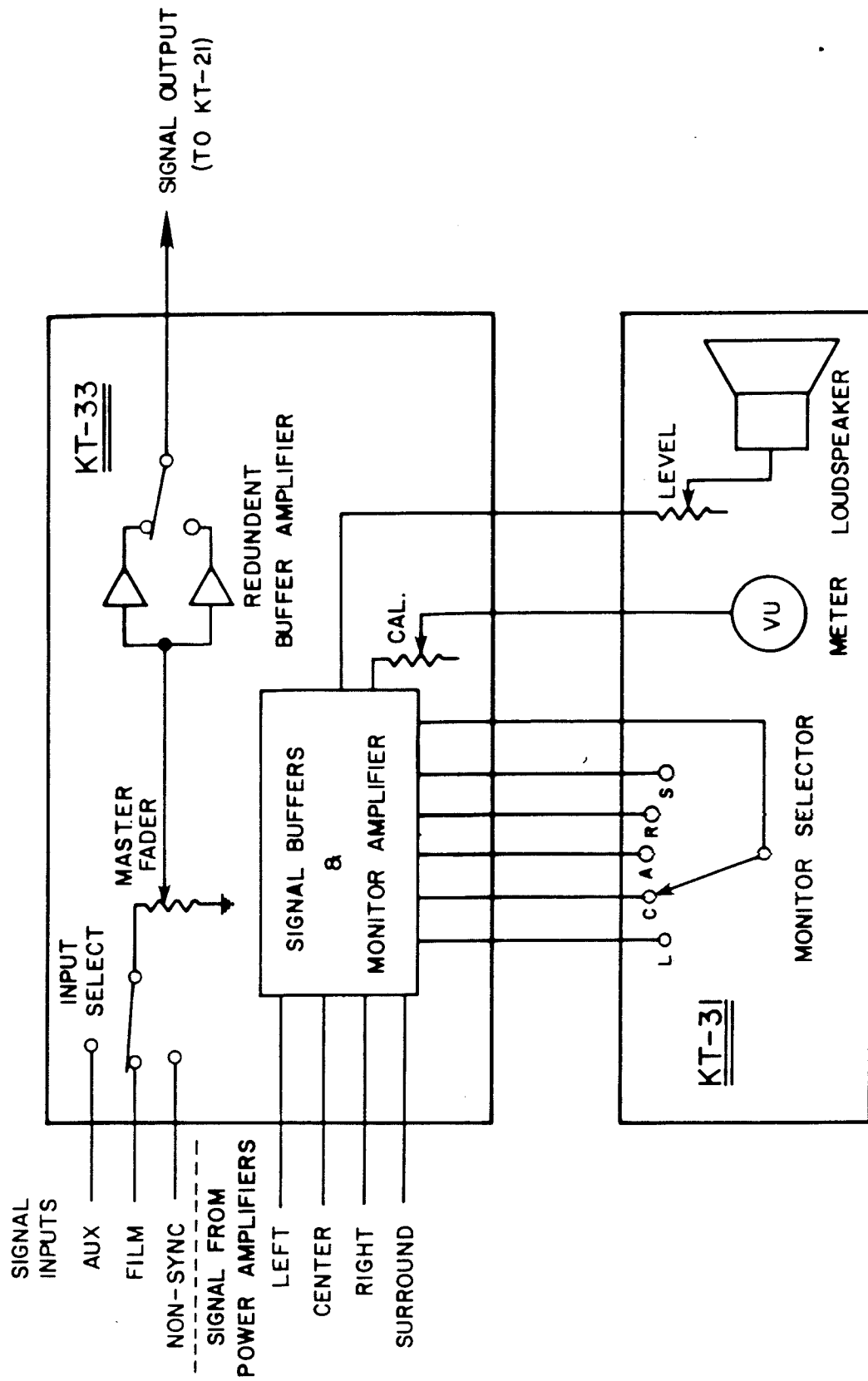
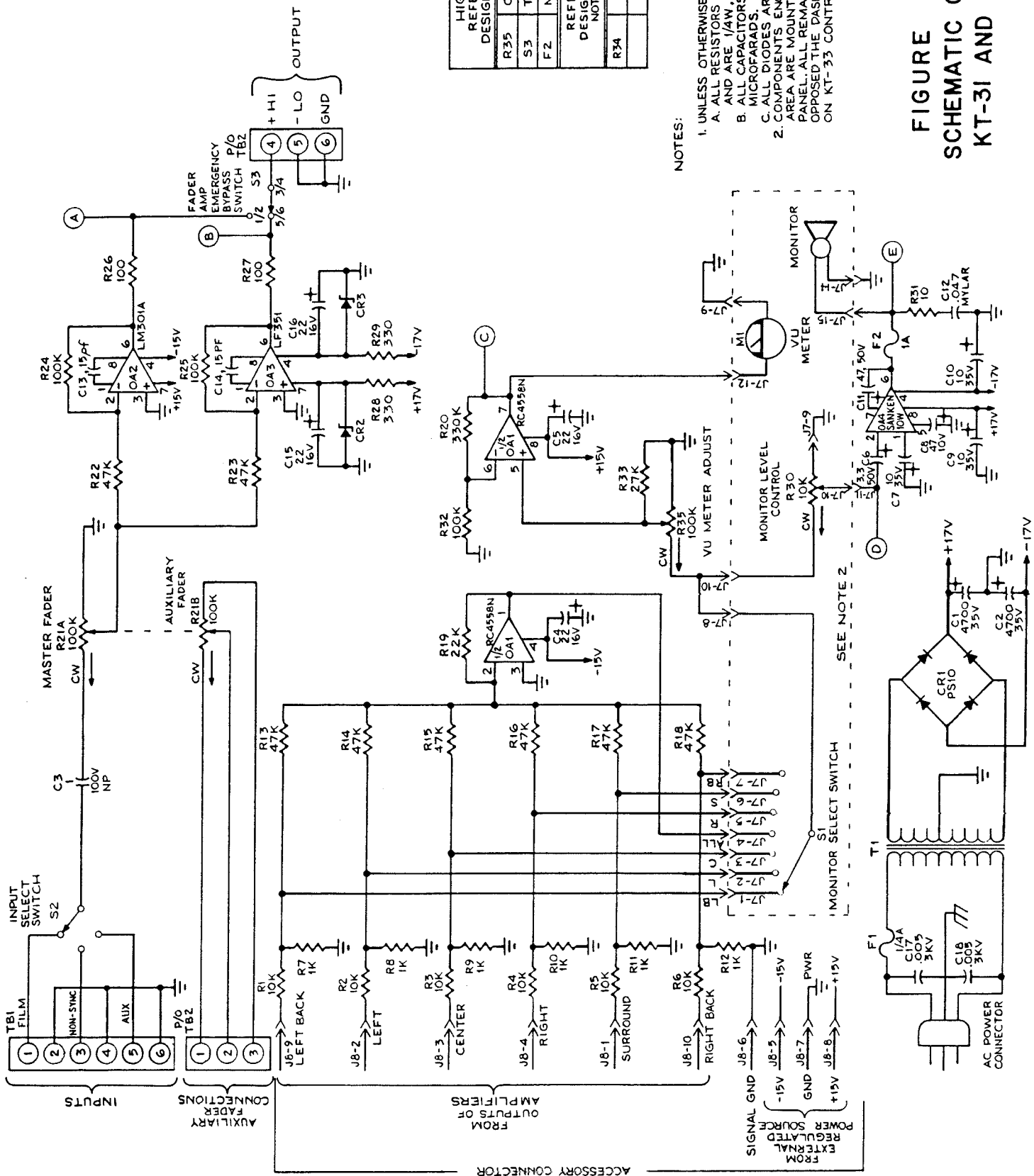


FIGURE 10.3. FLOW CHART OF THE KT-31 & KT-33.



HIGHEST REFERENCE DESIGNATIONS	
R35	C18
S3	T1
FZ	M1
REFERENCE DESIGNATIONS NOT USED	
R34	

NOTES:

- UNLESS OTHERWISE SPECIFIED:
 - ALL RESISTORS ARE EXPRESSED IN OHMS AND ARE 1/4W, 5%
 - ALL CAPACITORS ARE EXPRESSED IN MICROFARADS.
 - ALL DIODES ARE IN5242.
- COMPONENTS ENCLOSED WITHIN DASHED AREA ARE MOUNTED ON KT-31 MONITOR PANEL. ALL REMAINING COMPONENTS OPPOSED THE DASHED AREA ARE MOUNTED ON KT-33 CONTROL PANEL.

FIGURE 10.4
SCHEMATIC OF THE
KT-31 AND KT-33

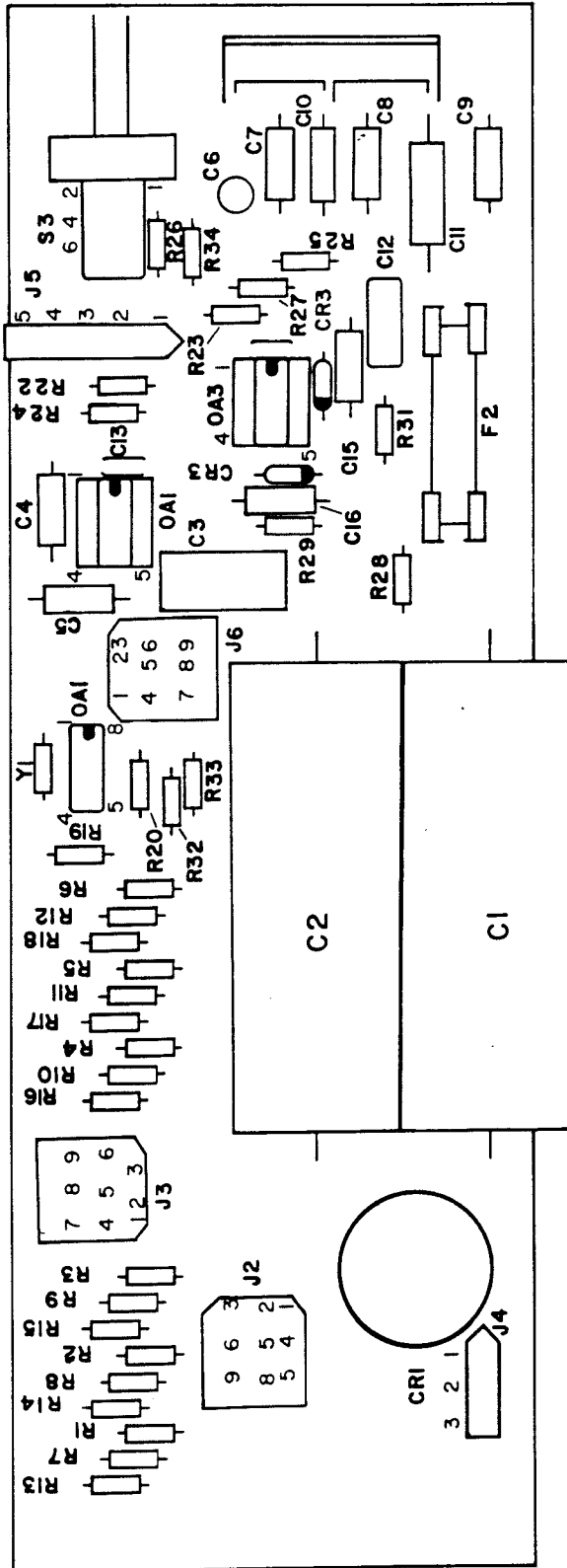


FIGURE 10.5
BOARD LAYOUT OF THE KT-31 AND KT-33