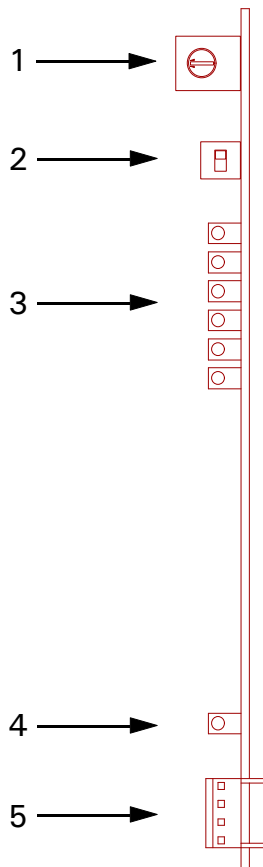
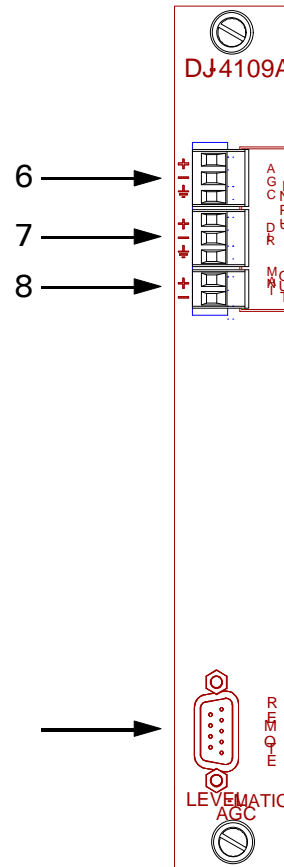


#### FRONT EDGE DESCRIPTION



#### REAR PANEL DESCRIPTION



1. **THRESHOLD:** Sets the desired output signal level which the LEVEL-MATIC is to maintain.

2. **LEVEL-MATIC BYPASS:** In the UP position this switch enables the LEVEL-MATIC circuitry and in the DOWN position disables the LEVEL-MATIC circuitry.

3. **LED GAIN DISPLAY:** These six LEDs, arranged in 3dB steps, indicate the amount of gain reduction being applied to the output to achieve a uniform output level.

4. **SIGNAL PRESENT LED:** This LED indicates the presence of signal on the output.

5. **POWER CONNECTOR:** This connector is used to power the module from the DC supply rails of the SYSTEM 41 mainframe.

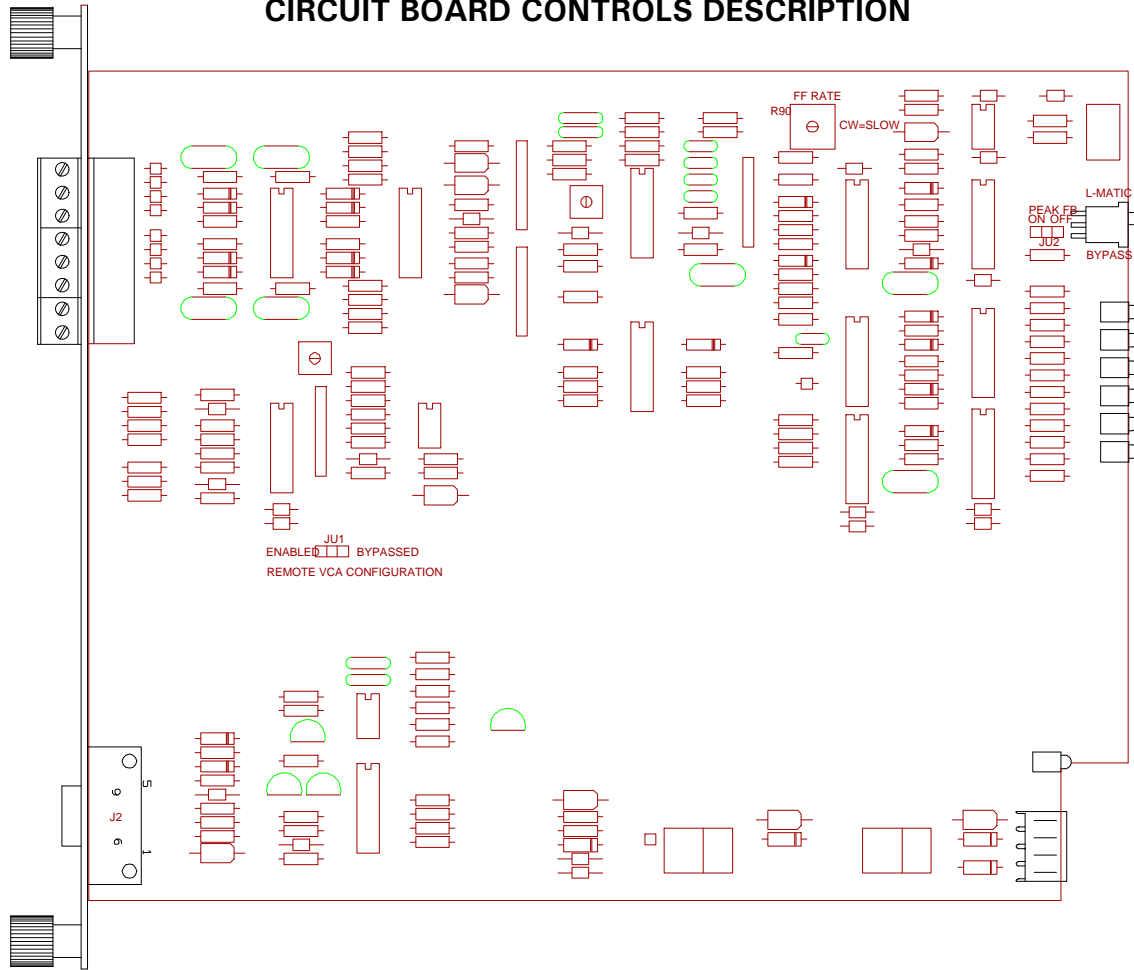
6. **AGC INPUT:** This is an electronically balanced line level input which is affected by the LEVEL-MATIC circuitry.

7. **DIR INPUT:** This is an electronically balanced line level direct input which is unaffected by the LEVEL-MATIC circuitry. This input can be used for program material or any signal that dynamic responses are desirable to hear.

8. **MAIN OUT:** This is an electronically balanced line level output which is the sum of the AGC INPUT and DIR INPUT.

9. **REMOTE:** The remote muting and level control for the MAIN OUT, and the remote enable of the LEVEL-MATIC circuitry are accessed via this DB-9 connector. See Figure 1.

## CIRCUIT BOARD CONTROLS DESCRIPTION



1. **FF RATE:** This FEEDFORWARD RATE control adjusts the response rate of the LEVEL-MATIC circuitry to different input levels. Mid setting is best for most systems. Full counter clockwise (CCW) quickens the response and full clockwise (CW) slows the response.
2. **PEAK FB:** This jumper either enables (ON) or disables (OFF) the PEAK FEEDBACK control. When disabled, overall gain is then controlled only by the FEEDFORWARD control, preventing compression of short duration signals.
3. **REMOTE VCA CONFIGURATION:** This jumper either enables (ENABLED) or disables (BYPASS) the REMOTE VCA. If the REMOTE VCA is not used, be sure the jumper is in the (BYPASS) position.
4. **DB-9 CONNECTOR:** Refer to the diagram below for the DB-9 pin configuration.

Pin	Function
1	N/A
2	N/A
3	N/A
4	N/A
5	Remote LEVEL-MATIC Enable
6	Ground
7	Wiper
8	Voltage Reference 10VDC
9	Ground

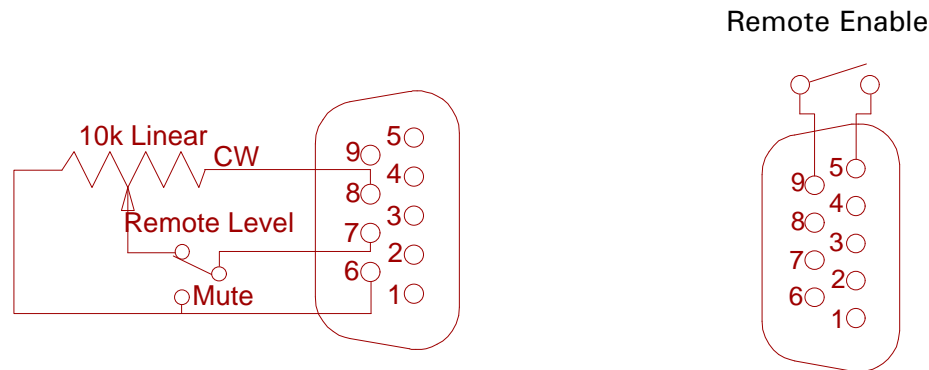


Figure 1

## SET UP PROCEDURE

1. Set the LEVEL-MATIC BYPASS switch to the (BYPASS) position.
2. Rotate the THRESHOLD control to the full clockwise position.
3. Adjust the microphones and overall system gain to the acceptable operating level. (Below feedback level)
4. Set the LEVEL-MATIC BYPASS switch to the (LEVEL-MATIC) position.
5. Rotate the THRESHOLD control counter clockwise (CCW) until the LED GAIN DISPLAY shows a small gain reduction (the second and third LED, -3dB and -6dB, occasionally lit) for a typical talker at a normal distance from a microphone. Setting the amount of attenuation for normal levels in this fashion allows for upward expansion of lower level talkers.
6. If the response rate of the LEVEL-MATIC does not seem to be responding satisfactorily to the different input levels, the FEEDFORWARD RATE control can be adjusted to increase the response time (CCW) or decrease the response time (CW). See CIRCUIT BOARD CONTROLS DESCRIPTION for the location of this control.
7. If the compression of short duration signals is deemed unnecessary, the PEAK FEEDBACK control can be defeated by placing the jumper in the (OFF) position. See CIRCUIT BOARD CONTROLS DESCRIPTION for the location of this control.
8. If a remote level control, remote mute or remote enable control are going to be used in the system, these controls can now be interfaced to the DJ-4109A. In order to use the remote level control or remote mute function, the REMOTE VCA CONFIGURATION jumper must be in the (ENABLED) position. See CIRCUIT BOARD CONTROLS DESCRIPTION for the location of this control.

Full clockwise rotation of the remote level control will result in no attenuation, counter clockwise rotation will result in a reduced MAIN output level.

When using the remote enable function, the LEVEL-MATIC BYPASS switch, located on the front edge, must be placed in the (BYPASS) position. A contact closure of pin 5 to pin 9 (ground) of the DB-9 connector, will enable the LEVEL-MATIC circuitry. Refer to Figure 1.

9. The LEVEL-MATIC should now be functioning properly.

# Control Record

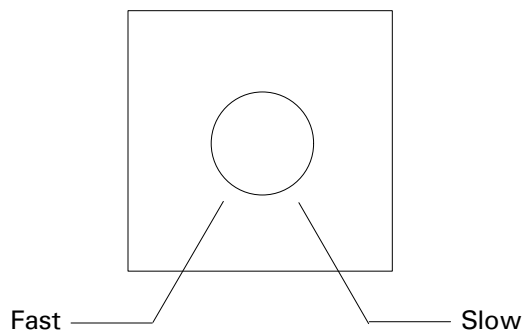
## DJ-4109A LEVEL-MATIC® AGC

Record all control settings on the documentation panel pictorial.  
This must match the documentation panel in the mainframe.

JUMPER CONFIGURATION CHART			
Peak Control		ON*	OFF
Remote VCA Configuration		ENABLED	BYPASSED*

\* Denotes Factory Setting

### FEED FORWARD RATE CONTROL



Mainframe # \_\_\_\_\_

Module Position # \_\_\_\_\_

Contractor \_\_\_\_\_

Installer \_\_\_\_\_

Job \_\_\_\_\_

Date \_\_\_\_\_

THRESHOLD  
dBV

LEVEL-MATIC  
BYPASS

0

G  
A  
I  
N  
-3

-6

-9

d  
B  
-12

-15

DJ-4109A  SIG.  
 LEVEL-MATIC  
 AGC