



Professional Sound Products

Set Up Procedure

DJ-4111-1

REMOTE LEVEL CONTROL VCA

WITH MULTI-LOCATION RAMP CONTROL

Refer to the back page for Control Record.

Refer to **SYSTEM 41 Installation Manual** for general instructions on module installation and wiring.

The DJ-4111-1 is normally operated by independent up/down dry contact switches for each channel. Up to ten (10) DJ-4137 Remote Display/Controls may be used to remotely control channel levels with visual indication of the settings. Optionally, the multi-location ramp circuit for either channel may be bypassed, allowing the channel to operate as a standard DJ-4111, with remote control from a single 10kS potentiometer.

INPUT LEVEL CONTROLS

1. Set input level controls to "N" (Normal). Gain is 0dB, input to output (remote ramp level at maximum).
2. Full clockwise increases gain 10dB from Normal.
3. For gain structure changes, see the Module Detail for Gain Programming Resistor location, and the Gain Programming Table for resistor selection.

MULTI-LOCATION RAMP CONTROL OPERATION

4. Momentary switch contacts and/or DJ-4137 Remote Display/Controls are connected to the module via the 25 pin subminiature D connector. See Connection Diagram for pin numbers. Any quantity of switch contacts (maximum of ten (10) DJ-4137 controls for each DJ-4111-1) may be wired in parallel. Contact closure of the respective switch contacts will cause the output level to smoothly increase or decrease in proportion to the duration of the switch closure.
 5. To alter the ramp rate, change the ramp rate programming resistor (see Module Detail for location) according to the formula: $R \text{ (kS)} = 9.5 \times T \text{ (seconds)}$. "T" is the time in seconds for the ramp to travel end to end.
 6. To restrict the control range, install a range restriction resistor (see Module Detail for location) according to the formula: $R \text{ (kS)} = 47 / [(50 / \text{Range}) - 1]$. "Range" is the desired restricted control range in dB. Note: "Range" is 50dB when R=infinity (as supplied by the factory, without range restriction resistor installed).
 7. **FULL OFF AT RAMP BOTTOM**. To switch channel "off" (-100dBV) when the ramp bottom is reached, move jumper JH2/JH3 (Chan 1/2) from position A to position B (see Module Detail).
 8. **RAMP BOTTOM AT POWER ON**. Normally the ramp settings are stored in a non-volatile memory during power down, and returned to these settings when power is restored. To force the ramp to start at the bottom upon power-up, move JH4/JH5 (Chan 1/ 2) from position A to position B (see Module Detail).
 9. **GANG**. To simultaneously control both channels from one ramp control circuit, move the "gang" jumper JH1 from position B to position A, and move the ramp control circuit jumper JH6/JH7 (Chan 1/2) from position A to position B for the unused ramp control circuit (see Module Detail).
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10. When using the DJ-4111-1 in a room combining system, connect a momentary contact between the +5VDC (pin 8 or 21 on the 25 pin connector) and the "RESET" screw terminal(s) on the module. "RESET" forces each channel to the bottom ("off" state) of the ramp. After linking the up/down switches for several channels, "RESET"ing these channels to "off" will cause all channels to track simultaneously with control from any paralleled switch location.
11. To "MUTE" a channel under ramp control without disturbing the ramp setting, connect a dry contact between pin 11 and pin 12 (Channel 1) or between pin 23 and pin 24 (Channel 2) on the 25 pin subminiature D connector. A contact closure will activate the mute.
12. JH10 enables battery backed-up memory. JH10 should be in the "on" position (position A) prior to operation.

OPTIONAL REMOTE CONTROL USING POTENTIOMETER

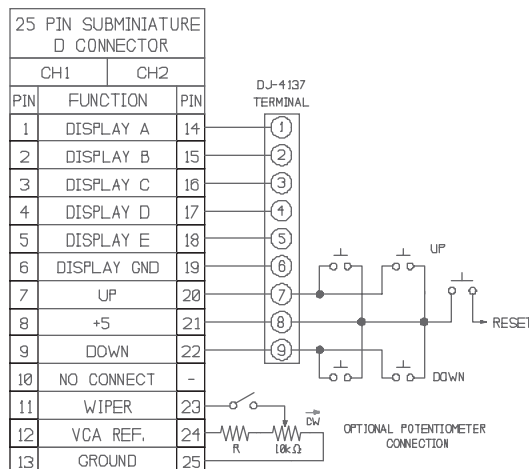
13. To control one channel from a single location 10kS linear potentiometer, first move the ramp jumper JH6/JH7 (Chan 1/2) from position A to position B. The 10kS pot is connected to the rear of the module via the 25 pin subminiature D connector. Clockwise is full "on" (0dB attenuation). See Connection Diagram, Module Detail, and Module Setup Table.
14. With no potentiometer installed the output is at the bottom of its control range. To bypass this condition, short pins 11 to 13 (Channel 1) and/or pins 23 to 25 (Channel 2). This will turn the channel full "on".
15. An SPST switch can be placed between the potentiometer wiper and pins 11/23 (Chan 1/2) if channel muting is desired without disturbing the pot setting.
16. For control range restriction, connect a resistor R (see Connection Diagram below) in series between pin 12/24 (Chan 1/2) and its respective remote potentiometer according to the formula: $\text{Range (dB)} = 50\text{dB} \times 10\text{kS}/(\text{R} + 10\text{kS})$. For example, if a 10kS resistor is added, the control range will be 25dB.
17. To simultaneously control both channels from a single remote potentiometer, move the gang jumper JH1 to position A (see Module Detail). The unused wiper pin (11 or 23), may then be used as an output to drive the wiper pin of another DJ-4111 or DJ-4111-1.

GAIN PROGRAMMING

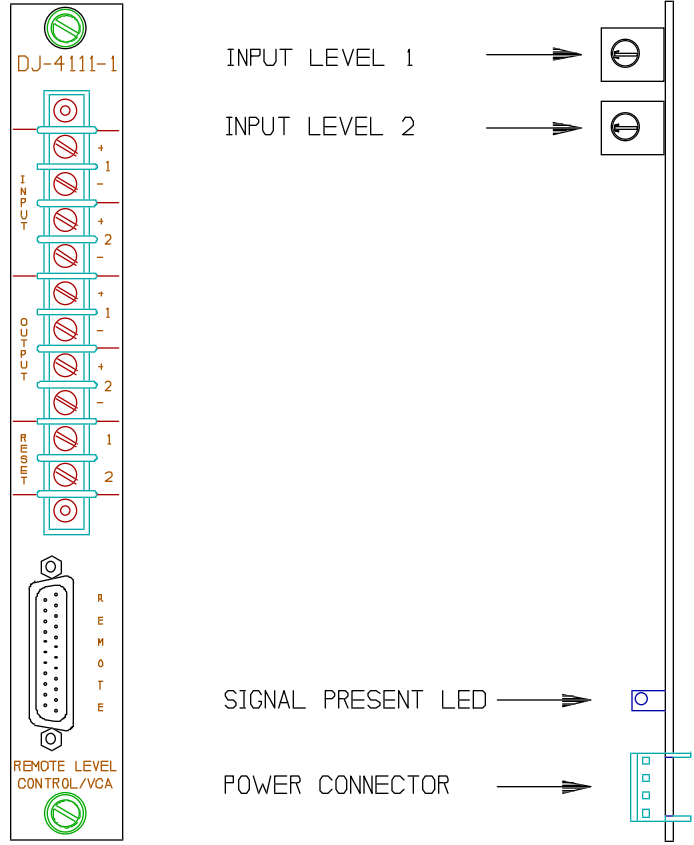
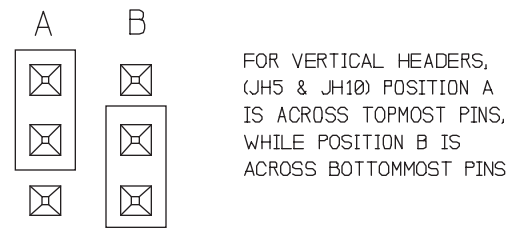
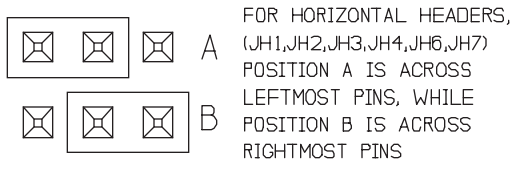
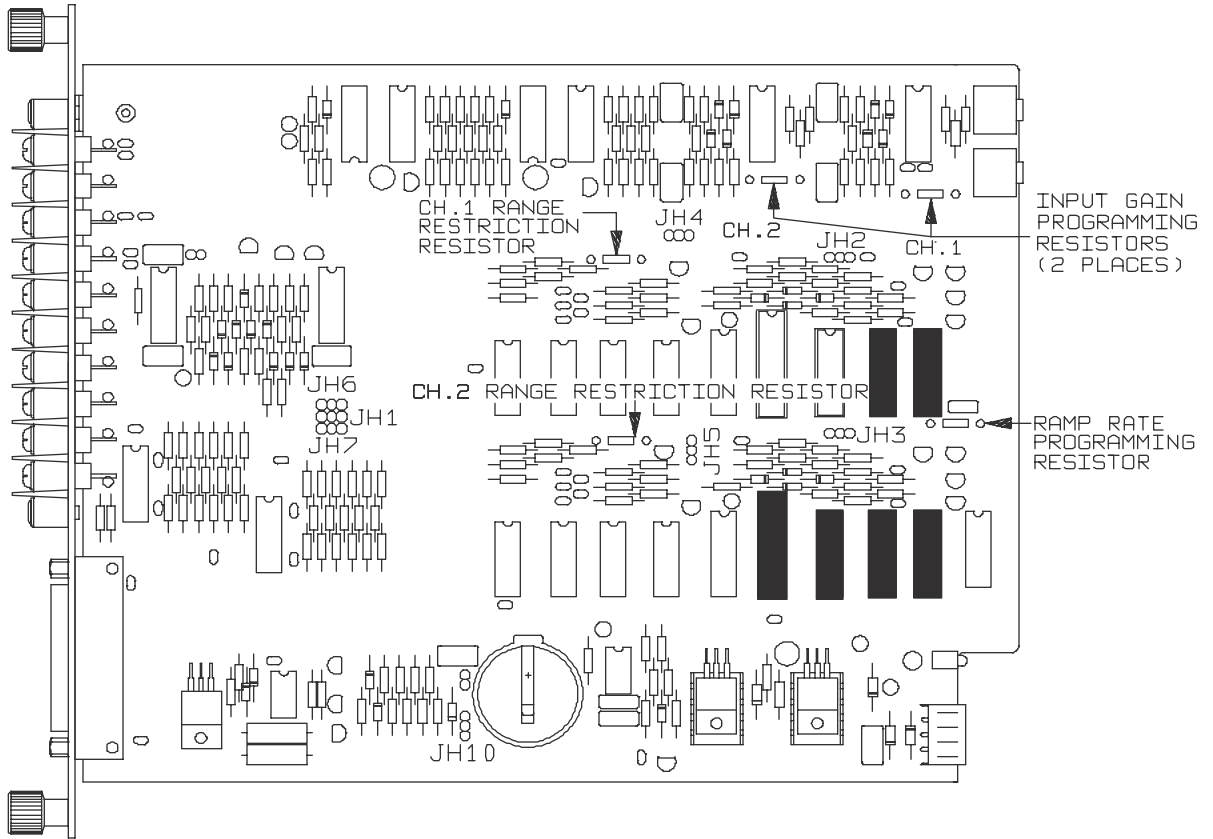
GAIN PROGRAMMING RESISTOR	NOMINAL GAIN (dB)	MAXIMUM GAIN (dB)
NONE	-10	0
12k Σ	-5	5
4.7k Σ *	0	10
2.2k Σ	5	15
1k Σ	10	20

* Denotes factory supplied value

TYPICAL CONNECTION DIAGRAM



MODULE DETAIL



JUMPER POSITIONS

REAR PANEL

FRONT EDGE PANELS

Control Record

DJ-4111-1

REMOTE LEVEL CONTROL/VCA WITH MULTI-LOCATION RAMP CONTROL

Record on the Documentation Panel pictorial to the right all control settings. This must match the Documentation Panel in the mainframe. Indicate the appropriate jumper positions and resistor changes in the Module Setup Table below.

MODULE SETUP TABLE

JUMPERS	JH1	JH2	JH3	JH4	JH5	JH6	JH7	JH10
A								
B								
RAMP RATE PROGRAMMING RESISTOR:								k Σ
CHANNEL 1 RANGE RESTRICTION RESISTOR:								k Σ
CHANNEL 2 RANGE RESTRICTION RESISTOR:								k Σ
CHANNEL 1 GAIN PROGRAMMING RESISTOR:								k Σ
CHANNEL 2 GAIN PROGRAMMING RESISTOR:								k Σ



Mainframe # _____

Module Position # _____

Contractor _____

Installer _____

Job _____

Date _____