IRP®

Professional Sound Products

Set Up Procedure

DJ-4107A

9 BAND TRANSVERSAL EQUALIZER

Refer to back page for control record.

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

Refer to **DJ-4107A Data Sheet** for product specifications.

INTRODUCTION

Traditional equalizers assembled with individual tuned filters produce frequency response ripples because of inexact combining of adjacent filters. While these responses may be of small direct importance for sound quality, their presence reflects an extraneous transient ringing which may compromise sound quality. Ripples as small as 1dB in the combined response could produce transient ringing errors only 20dB below the desired signal.

To suppress this ringing, better sounding equalizers frequently employ low Q filters, reasoning that if each filter rings less, the combined transient response will be free of extraneous ringing. While reducing ringing, the highly interactive controls require an exasperatingly long time to adjust to a desired system response.

The TEQ® transversal filter solves this problem fundamentally and structurally. The transient response is not the result of a sum of individual transient responses but is the weighted response of tapped delay chains. Thus the transient response is synthesized from a single fixed response circuit. The resulting ideal transient response is reflected in the small ripple response specifications of the TEQ® Transversal Equalizer.

CONFIGURATION

1. REMOTE VCA CONFIGURATION: Locate the the pin-jumper JH1 on the lower edge of the TEQ module. This jumper either enables or disables the remote VCA function. If the remote VCA is not to be used in this installation, be sure the jumper is set in the DISABLE position.

2. OUTPUT GAIN: An Output Gain Programming Resistor may be used to alter the gain of the equalizer if higher output level is required. See the Module Detail for the resistor location and Gain Programming table for recommended resistor values.

3. Install the module into the mainframe and wire. Refer to the diagram and the function chart for the DB-9 connector to properly wire the remote VCA function if it is to be used.

IRP Professional Sound Products
1111 Tower Lane ● Bensenville, IL 60106 ● U.S.A.
PHONE: 800-255-6993 ● 630-860-1993
FAX: 630-860-1997

SETUP PROCEDURE USING PINK NOISE ANALYZER

1. Set BYPASS LEVEL to the midpoint position (50% ROTATION) for unity gain.

2. Set all 9 controls bands to the full clockwise position.

3. Choose system bandwidth. Select either 80Hz-8kHz or 20Hz - 20kHz.

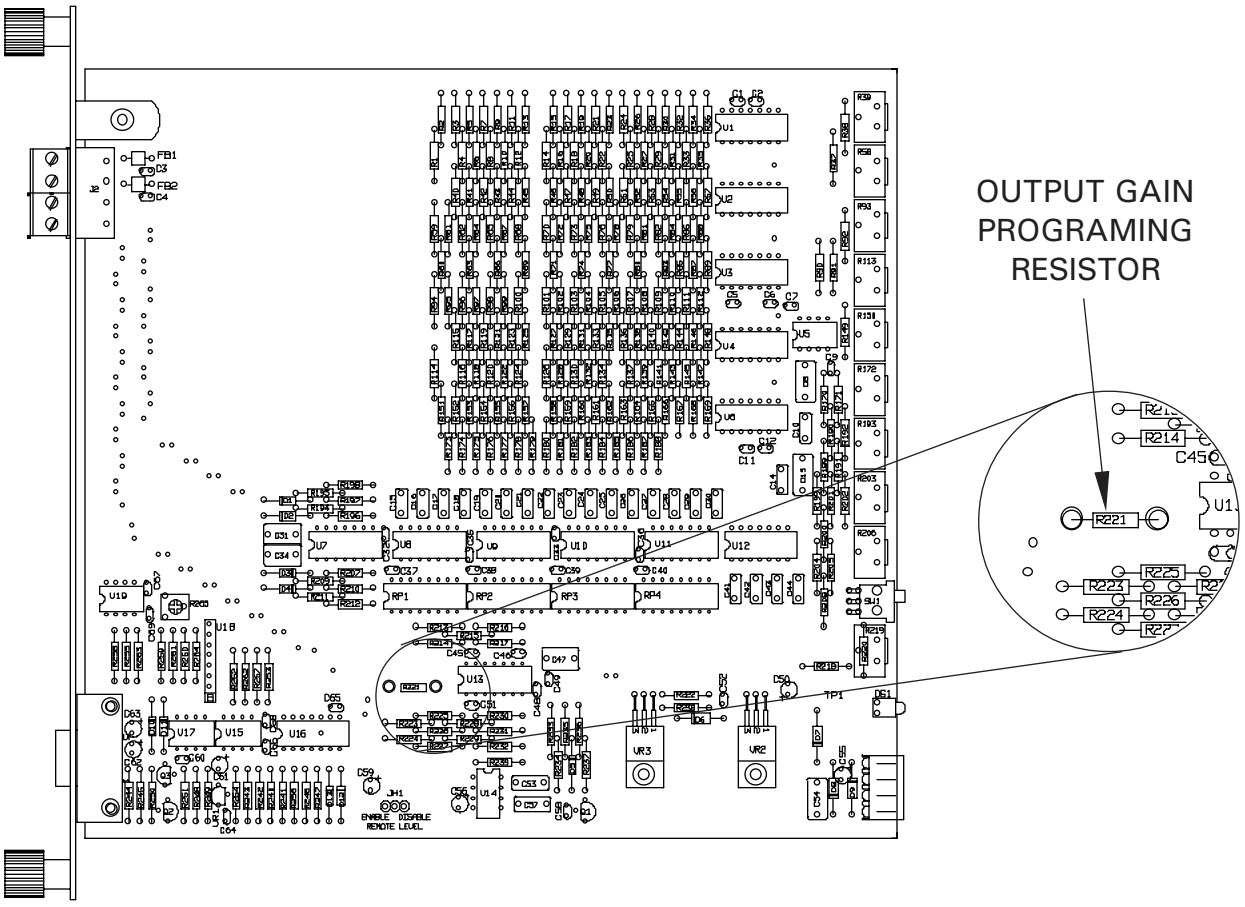
4. If using remote VCA control, set control for desired system output level.

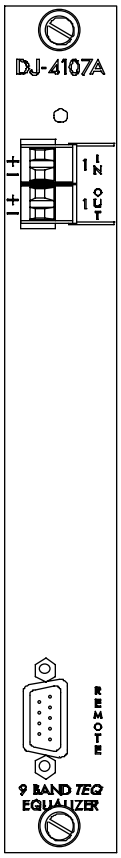
5. Adjust the nine EQ control bands for the desired response using small changes in potentiometer settings. Move sequentially from band to band. Large differences between adjacent band settings will cause no audible degradation in the output sound quality of the Transversal Equalizer.

6. Adjust the BYPASS LEVEL control to compensate for the gain change caused by the equalization procedure. Alternate the position of the EQ/BY switch and compare perceived levels. To make the EQ and BYPASS levels the same, adjust the BYPASS LEVEL CONTROL to the equivalent percieved output level when in the BYPASS mode.

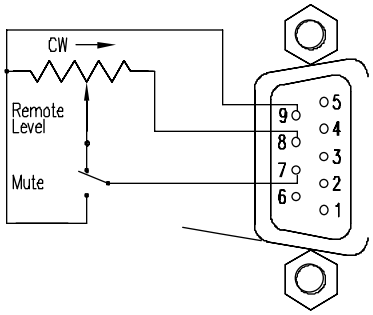
7. Record switch and control settings in the Control Record section and on the Documentation Panel.

MODULE DETAIL

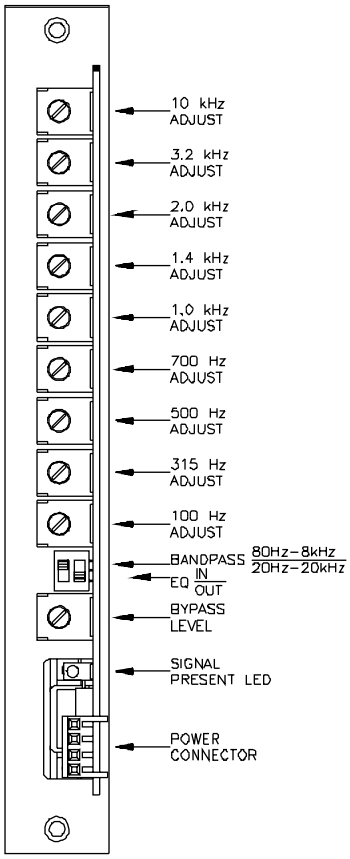




REAR PANEL



REMOTE INPUT



FRONT EDGE CONTROLS

1. 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.

2. DB-9 CONNECTOR: Refer to the diagram above for the DB-9 pin configuration.

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

Control Record

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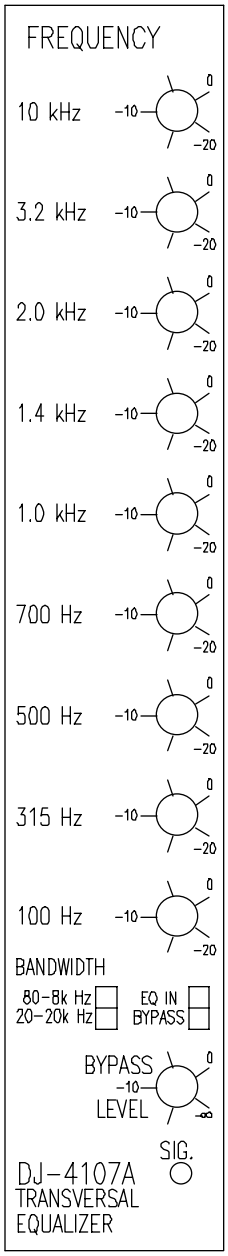
Record on the Documentation Panel pictorial to the right all switch and control settings. This must match the Documentation Panel in the mainframe.



GAIN PROGRAMING

GAIN PROGRAMMING RESISTOR	NORMAL GAIN (dB)	MAXIMUM GAIN (dB)
NONE	-10	0
12kΩ	-5	5
4.7kΩ*	0	10
2.2kΩ	5	15
1kΩ	10	20

Mainframe # _____

Module Position # _____

Contractor _____

Installer _____

Job _____

Date _____