

AUDIO SIGNAL DELAY

Refer to back page for Control Record.

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

Refer to **DJ-4132-21 Data Sheet** for product specifications and functional diagram.

LEVEL CONTROLS

1. Set INPUT and OUTPUT level controls to "N" (Normal). The INPUT control should be mid-range and the OUTPUT control should be full clockwise. Gain will be unity (0dB) input to output.
2. Input sensitivity may be increased by clockwise rotation of INPUT control, with a maximum of 10dB gain. If the red CLIP LED flashes, reduce input sensitivity.
3. Rotate the OUTPUT control counterclockwise to reduce output level as required. Note: Best signal quality results when input clipping occurs simultaneously with maximum signal level of the sound system. Full dynamic range of the DJ-4132-21 is then utilized.

DELAY CONTROLS AND PRESETS

All delay presets are set in COARSE (16 millisecond) and FINE (1 millisecond) increments. Total delay is the sum of these two settings. Refer to the table below to determine the preset values required to achieve the desired delay.

ADJUSTING PRESET VALUES

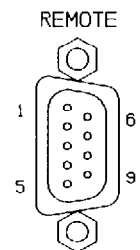
1. The DJ-4132-21 is shipped with pin jumpers installed to link Channel 1 and Channel 2 presets. Activating a preset on either channel will engage the same preset on both channels when the jumper is in place. Whenever specific delay presets need to be independently selected for either output channel, remove the preset bridging jumper(s) as required.
2. On the 10-position DIP switch, turn OFF switch 1. This disables remote control.
3. Turn ON DIP switch position 2 to activate local preset control.
4. Starting at position 10 for PRESET 1, CHANNEL 1, turn ON one preset for one output at a time. The corresponding LED will illuminate to display the preset activation. Adjust both the COARSE and FINE controls to the proper delay value for that preset. Turn OFF each preset before proceeding to the next switch position.

DELAY SETTINGS

COARSE		FINE	
SETTING	DELAY, ms	SETTING	DELAY, ms
0	0	0	0
1	16	1	1
2	32	2	2
3	48	3	3
4	64	4	4
5	80	5	5
6	96	6	6
7	112	7	7
8	128	8	8
9	144	9	9
A	160	A	10
B	176	B	11
C	192	C	12
D	208	D	13
E	224	E	14
F	240	F	15

REMOTE CONTROL SOCKET

PIN	DESCRIPTION
1	CH1 PRESET 1
2	CH1 PRESET 2
3	CH1 PRESET 3
4	CH1 PRESET 4
5	CH2 PRESET 1
6	CH2 PRESET 2
7	CH2 PRESET 3
8	CH2 PRESET 4
9	GROUND



WHEN ADJUSTMENTS ARE COMPLETED

1. Ensure that the channel ON/OFF switches for all desired delay outputs are restored to the ON position.
2. Turn OFF DIP switch position 2 to disable local preset control.
3. Turn ON DIP switch position 1 to enable remote preset selection via the remote control connector.
4. Pin-outs to this connector are listed in the table on the preceding page. The remote switch logic inputs are internally pulled-up to +15V. A dry contact switch (or open collector transistor logic) closure between the logic input and ground (pin 9) remotely activates a particular preset.
5. In the system wiring, ensure that only one preset for each output is active at any one time. Although no damage will occur, simultaneous activation of multiple presets will not likely result in the desired delay time.
6. Record switch and control settings in the Control Record section, and on the documentation panel.

The following features are provided for ease of setup and problem diagnosis:

DIP Switch Position 1: Remote control enable. In the ON position, the DJ-4132-21 will allow preset activation via the rear panel 9-pin remote connector. Normally this switch is left ON when the system is in service.

DIP Switch Position 2: Local control enable. In the ON position, DIP switch positions 3 thru 10 are active for preset control during setup and/or service. Normally this switch is left OFF when the system is in service.

DIP Switch Positions 3 thru 6: PRESET 4 thru PRESET 1 (respectively) for Channel 2.

DIP Switch Positions 7 thru 10: PRESET 4 thru PRESET 1 (respectively) for Channel 1. In the ON position, these switches activate the selected delay preset. Note: Switch position 2 must be ON for these switches to be functional.

PRESET ACTIVE LEDs: These LEDs illuminate to indicate which preset is currently active. They are useful for diagnosing wiring problems between the remote control switches and the DJ-4132-21. Only one LED for each channel should be illuminated at any time.

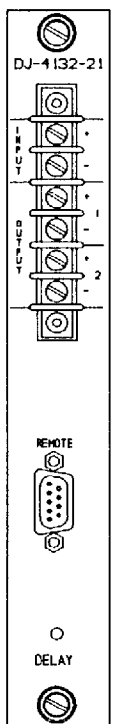
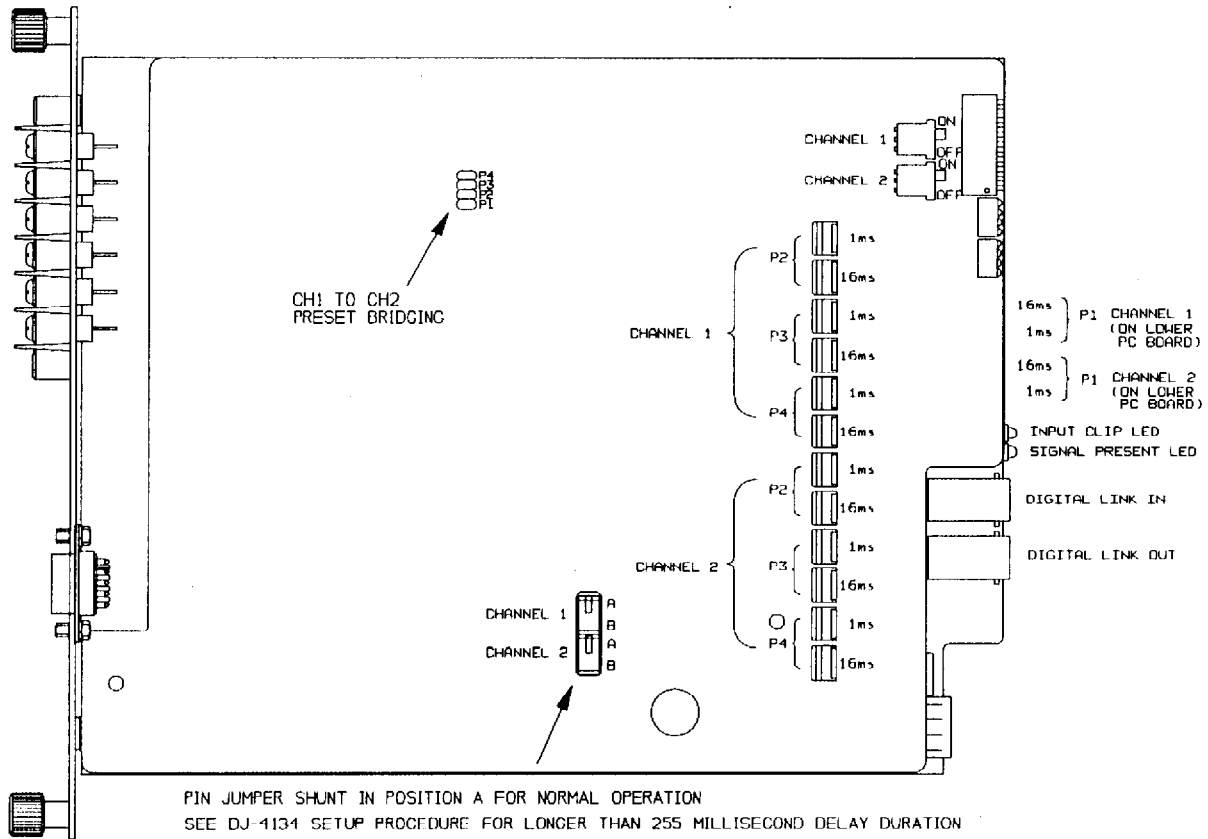
OUTPUT ON/OFF switches: The output ON/OFF switches can be used for ease in identifying the particular delayed signal displayed on a time domain graph display (such as a TEF® analyzer). These switches are also used to adjust the delay value of one active output at a time.

The DJ-4132-21 is shipped with pin-jumpers installed to link the four presets for Channel 1 and Channel 2. Activating a preset on either channel will engage the same preset on both channels when the jumper is in place. Whenever specific delay presets need to be independently selected for either output channel, remove the preset bridging jumper(s) for PRESET 1, PRESET 2, PRESET 3, or PRESET 4 as required.

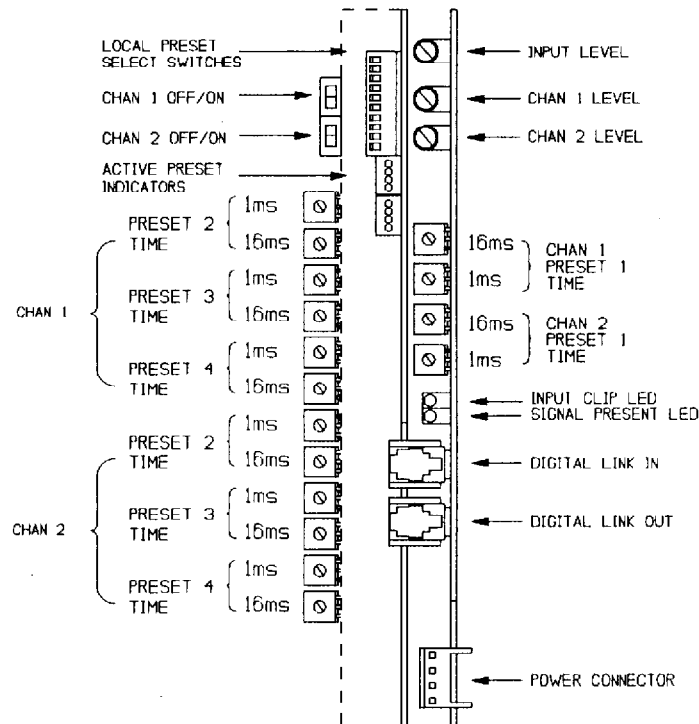
Caution: Always reduce the output level to all corresponding power amplifiers when changing delay presets, and whenever adjusting the delay values during setup. Whenever delay values are changed, existing information in the digital bit-stream must pass through the Digital-to-Analog converter before any new delay value is correctly synchronized. Unsynchronized (old) digital information can create unpleasant, unpredictable noises in the output.

The delay presets are designed for simple re-configuration of source and listener location in an end-use facility. Design parameters for the DJ-4132-21 do not provide for changing delay presets in a live environment (e.g., as a live performance production technique)!

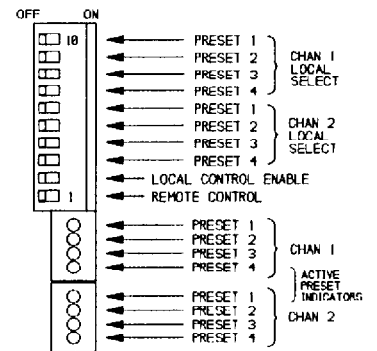
MODULE DETAIL



REAR PANEL



FRONT EDGE CONTROLS



ENLARGED DETAIL
LOCAL PRESET SETUP SWITCHES
& PRESET SELECT LED INDICATORS

Control Record

DJ-4132-21 AUDIO SIGNAL DELAY

Record all control settings on the Documentation Panel pictorials to the right. These should match the Documentation Panels in the mainframe.

	COARSE	FINE	TOTAL
Delay Setting Output 1, Preset 1			
Delay Setting Output 1, Preset 2			
Delay Setting Output 1, Preset 3			
Delay Setting Output 1, Preset 4			
Delay Setting Output 2, Preset 1			
Delay Setting Output 2, Preset 2			
Delay Setting Output 2, Preset 3			
Delay Setting Output 2, Preset 4			

		OFF/ON	
ON	OUTPUT 1	P1	
		P2	
OFF		P3	
		P4	
ON	OUTPUT 2	P1	
		P2	
OFF		P3	
		P4	
CONTROL ENABLE	LOCAL	REMOTE	
OUTPUT 1	ACTIVE		
OUTPUT 2	ACTIVE		
DELAY SETTINGS			
milliseconds			
OUT 1		1	
TOTAL		16	
		1	
TOTAL		16	
		1	
TOTAL		16	
OUT 2		1	
TOTAL		16	
		1	
TOTAL		16	
		1	
TOTAL		16	
DJ-4132/4133 DELAY PRESETS			

INPUT	N	
OUTPUT 1	N	
OUTPUT 2	N	
DELAY SETTINGS		
milliseconds		
OUT 1	<input type="text"/>	16
TOTAL	<input type="text"/>	1
OUT 2	<input type="text"/>	16
TOTAL	<input type="text"/>	1
CLIP	<input type="radio"/>	
SIG.	<input type="radio"/>	
LINK IN		
LINK OUT		
DJ-4132-2 DELAY		

Contractor _____

Installer _____

Job _____

Date _____