Denon C635 - old CD play

⑯ Pitch Slider
- Use this slider to adjust the play speed. Slide up to decrease the play speed, down to increase the play speed

⑰ PROG. PLAY ON/OFF button
- When this button is pressed while the PROG indicator is lit, the program play mode is set.
- The button will not function during the A-B play mode.
- The PROG. PLAY ON/OFF LED lights during the program play standby and play modes.
- When the button is pressed during the program play standby or play mode, the program play mode is cleared.

⑱ PROGRAM IN button
- Press this button to set the program input mode.
- The button will not function during the play mode.
- The PROG indicator flashes when in the program input mode.
- The PROG indicator lights when a program is set.

⑲ REPEAT button
- Press this to perform repeat playback.

⑳ TIME button
- The time display switches each time this button is pressed ("REMAIN", "ELAPSED")

㉑ TITLE button
- When the button is pressed, the text information (Disc title, track title, disc artist or track artits) is displayed.
- When the button is pressed while in the stop mode with a disc containing an MP3 ID3-Tag loaded, the file name is displayed. When pressed during playback, the display switches as shown below.

Elapsed time of currently playing track
↓
File name of currently playing track
↓
Title name
↓
Artist name
↓
Album name

㉒ FOLDER button
- When disc containing MP3 format files is loaded, in the stop mode press this button then the folder select mode is possible

㉓ A-B (A-B repeat) button
- Use this to play a set section repeatedly.
- When the button is pressed once during playback, that position is set as the A point and the "A-B" indicator flashes on the display.
- When the button is pressed again, that position is set as the B point, the "A-B" indicator stops flashing (remaining lit), and the A-B section begins playing repeatedly.
- When the button is pressed again, A-B repeat is canceled and the mode returns to the normal play mode.

㉔ Headphones jack
- For private listening, you can connect your headphones to this jack.

㉕ PHONES LEVEL control
- Use this adjust the output level of the headphones.

(2) Rear panel

① BALANCED OUT connectors
- These are active balanced outputs using XLR type connections. The CD's playback signals are output from these connectors.
- Pin layout 1: Common / 2: Hot / 3: Cold
- Applicable connector :
  Cannon XLR-3-31 or equivalent.

NOTE :
- Do not short-circuit the hot or cold pin with the common pin.

② LEVEL L/R controls
- Use these controls to adjust the level of the audio signals from the BALANCED OUT connectors.

③ UNBALANCED OUT jacks
- These are unbalanced outputs using RCA type jacks.

④ DIGITAL OUT jack
- This is a coaxial output using an RCA type jack.
- Signal format : SPDIF or IEC-958 Type II

⑤ Serial control port
- This is serial remote connector
- Applicable connector : 9-pin D-sub (male)
- Baud rate : 9600 bps
- Pin layout

RS-232C

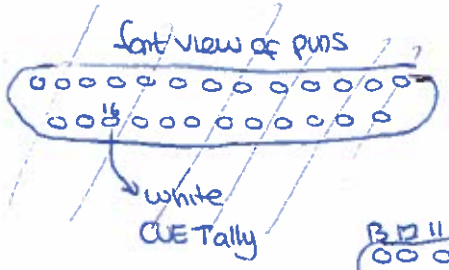
Pin No.	Signal Name	I / O
1	GND	–
6	NC	–
2	TxD	O
7	NC	–
3	RxD	I
8	NC	–
4	NC	–
9	NC	–
5	S. GROUND	–

RS-422A

Pin No.	Signal Name	I / O
1	GND	–
6	NC	–
2	TxD (RETURN)	O
7	TxD	O
3	RxD	I
8	RxD (RETURN)	I
4	NC	–
9	NC	–
5	S. GROUND	–

⑥ Parallel remote control port
- This is a parallel remote connector
- Applicable connector : 25-pin D-sub (male)
- Connecting signal layout

Pin No.	Signal Name	I / O	
1	FG	–	
14	PLAY tally	O	TTL (Iol = 20mA)
2	PLAY command	I	HCMOS (Ii = 3mA)
15	PAUSE tally	O	TTL (Iol = 20mA)
3	PAUSE command	I	HCMOS (Ii = 3mA)
16	CUE tally	O	TTL (Iol = 20mA)
4	CUE command	I	HCMOS (Ii = 3mA)
17	INDEX 2/INDEX 3 tally	O	TTL (Iol = 20mA)
5	TRACK (+) command	I	HCMOS (Ii = 3mA)
18	Tally common	–	
6	TRACK (–) command	I	HCMOS (Ii = 3mA)
19	Reserved	–	
7	SEARCH (Fwd) command	I	HCMOS (Ii = 3mA)
20	Reserved	–	
8	SEARCH (Rev) command	I	HCMOS (Ii = 3mA)
21	Reserved	–	
9	FADER START command	I	HCMOS (Ii = 3mA)
22	Tally power supply	–	+3.3V, 20mA
10	Command common	–	(Ii = 10mA)
23	Command common	–	
11	NC	–	
24	EOM tally	–	TTL (Iol = 20mA)
12	Reserved	–	
25	Reserved	–	
13	Reserved	–	



23 - white - command common
2 - blue - play command

current connection from back view of connector

end of manual

Denon C635 - add CD player

NOTE:
The tally output pin has open collector IC specifications (Imax. 20 mA, Vmax. 3.3 V), but the maximum supply current is 80 mA, so use with a total load current of 80 mA or less.

❼ External synchronized control jacks (EXT. SYNC.)
- Connect these for synchronized recording.

❽ Cascade control jacks (CASCADE)
- Connect these for continuous operation on multiple units.
- When the cascade mode is set to "ON", the start signal is output from this output jack once operation is finished. (Preset function)

(3) Display

❶ CD transport indicator

❷ Mode display portion
FILE : This lights when the file name of MP3 is displayed.
FOLDER : This lights in the folder selection mode.
TITLE : This lights when the title in the MP3 ID3-Tag or CD Text is displayed.
MP3 : This lights when a disc containing MP3 format file is loaded.
PROG : This lights in the program mode.
REPEAT, 1 : This lights in the repeat mode.
CASCADE : This lights in the cascade mode (Preset function).
ALBUM : This lights when the album name in the MP3 ID3-Tag is displayed.
ARTIST : This lights when the artist name in the MP3 ID3-Tag is displayed.

❸ CD pitch display

❹ Playing position display
- This indicates the current position within the track's totalplaying time.
- In the MP3 play mode, it may be unable to display correctly.

❺ 20 tracks music calender
- In the single track play mode, only the specified track lights.
- In the continuous play mode, everything from the specified track to the last track lights.
- Track numbers are displayed up to track 20. Track 21 and on are not displayed.
- MP3 is not displayed.

❻ Multiple display
- This displays Track No. of CD, playing time of CD, various operational information, text message, etc.

❼ Time mode indicator
ELAPSED : This lights when the elapsed time is displayed.
REMAIN : This lights when the remaining time is displayed.

❽ Infrared remote control indicator

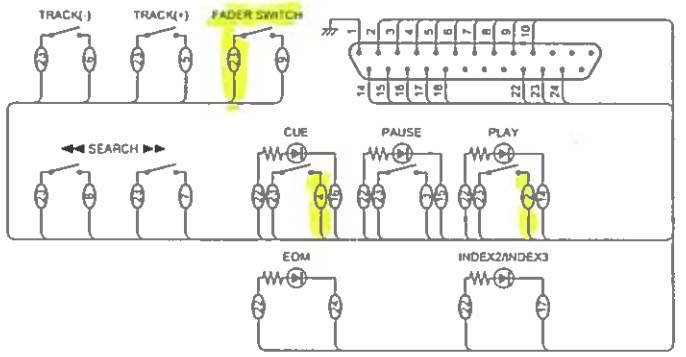
❾ Play mode indicators
- "SINGLE" lights when in the single track play mode.
- "CONT." lights when in the continuous play mode.

3 CONNECTIONS

Leave your entire system (including the DN-C635) turned off until all connections between the DN-C635 and other components have been completed.

■ Connection precautions
- Before proceeding with connections or disconnections of cables and power cords, be sure to turn all system components off.
- Ensure that all cables are connected properly to the L (left) and R (right) jacks.
- Insert plugs fully into the terminals.
- Connect the CD output jacks to the amplifier CD or AUX input jacks.

■ Remote control connections



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The rating of REMOTE connector pin 22 (TALLY POWER SUPPLY) is 3.3 V, 80 mA maximum.
Avoid currents in excess of the rating.

■ Installation precautions
- If the DN-C635 is placed near an amplifier, tuner or other components, noise (induced hum) or beat interference may result (especially during AM or FM reception).
  If this occurs, separate the DN-C635 from other components or reorient its position.

NOTE:
- Use this unit in a horizontal orientation.
  When the unit is used with the front panel facing upward (and the unit us in a vertical orientation) or when the front panel is on an incline, the unit will not operate properly.

Denon S10C - new CD player

Parallel Control

Parallel control has two modes, normal mode and hot start mode.
The MODE 1,2 pins are used to switch this mode.

❑ Parallel remote mode switching

• Parallel remote mode is switched according to the status of parallel remote inputs #5 and #6.

MODE 1	HIGH	HIGH	LOW	LOW
MODE 2	HIGH	LOW	HIGH	LOW
FUNCTION	NORMAL	Reserved	HOT START 1	HOT START 2

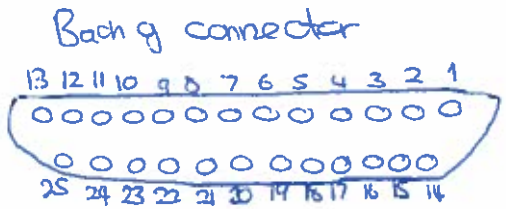
Hot Start 1: Hot list #1 - #10 can be played from the parallel remote.
Hot Start 2: Hot list #11 - #20 can be played from the parallel remote.

Hot start is a function that starts playback instantaneously from the preset point.

Hot Start mode can be switched to Hot Cue using "Para Rem Mode" in the "Preset setting".
If the mode is set to the Hot Cue mode, when Hot Start input is performed, playback does not start immediately and instead switches to the standby state at the start point.

❑ Hot Start Assignment

If one of the HOT START terminals is shorted when the RELOAD terminal is in the shorted state, the current track is assigned to the shorted Hot Start number (reload function).
For details on assigning Hot Start, see "Playing back from track hot points (Hot Start playback)" (☞page 27).



❑ About Connections

• Normal Mode

NO.	DN-501C	
	I/O	NAME
1	-	GND
2	I	PLAY
3	I	PAUSE
4	I	CUE
5	I	MODE 1
6	I	MODE 2
7	I	SEARCH ►►
8	I	SEARCH ◄◄
9	I	FADER START
10	-	GND
11	I	SKIP BACK
12	I	Reserved
13	I	Reserved
14	O	PLAY TALLY
15	O	PAUSE TALLY
16	O	CUE TALLY
17	I	Reserved
18	I	Reserved
19	I	Reserved
20	O	STOP TALLY
21	O	EOM TALLY
22	-	TALLY POWER SUPPLY
23	-	GND
24	I	TRACK +
25	I	TRACK –

• Hot Start Mode / Hot Cue Mode

NO.	DN-501C	
	I/O	NAME
1	-	GND
2	I	PLAY
3	I	PAUSE
4	I	CUE
5	I	MODE 1
6	I	MODE 2
7	I	RELOAD
8	I	HOT START 1(11)
9	I	HOT START 2(12)
10	-	GND
11	I	HOT START 3(13)
12	I	HOT START 4(14)
13	I	HOT START 5(15)
14	O	PLAY TALLY
15	O	PAUSE TALLY
16	O	CUE TALLY
17	I	HOT START 6(16)
18	I	HOT START 7(17)
19	I	HOT START 8(18)
20	O	STOP TALLY
21	O	EOM TALLY
22	-	TALLY POWER SUPPLY
23	-	GND
24	I	HOT START 9(19)
25	I	HOT START 10(20)

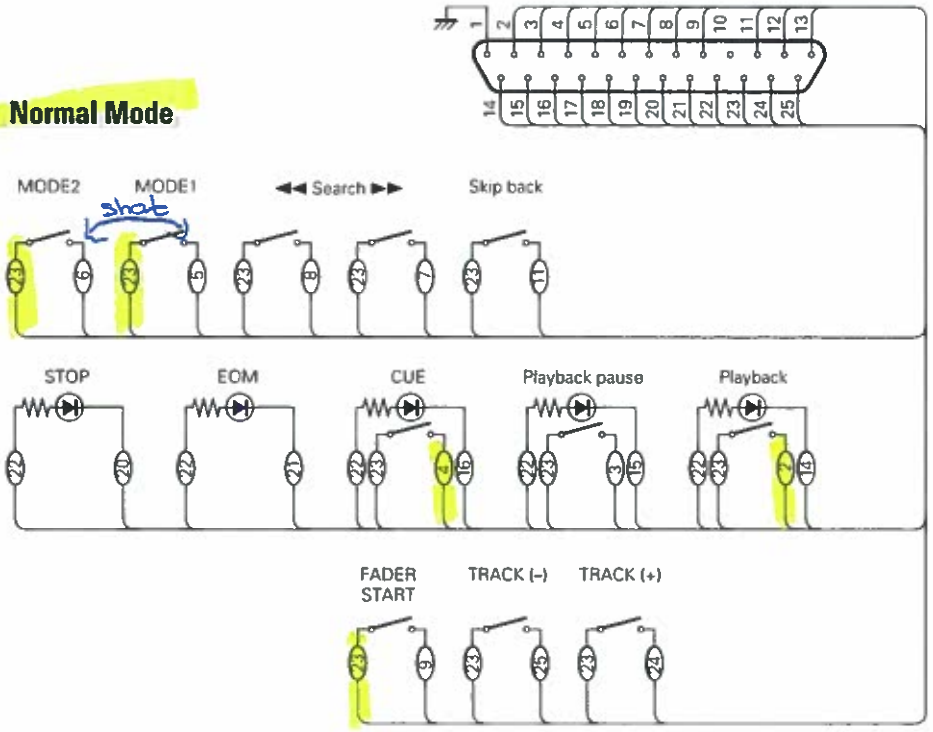
• In Hot Cue mode, the status switches to standby for hot start input.
• The () contents indicate the assignment for Hot Start 2 mode.

Denon S10C - new cd player

❑ Remote Control Connection

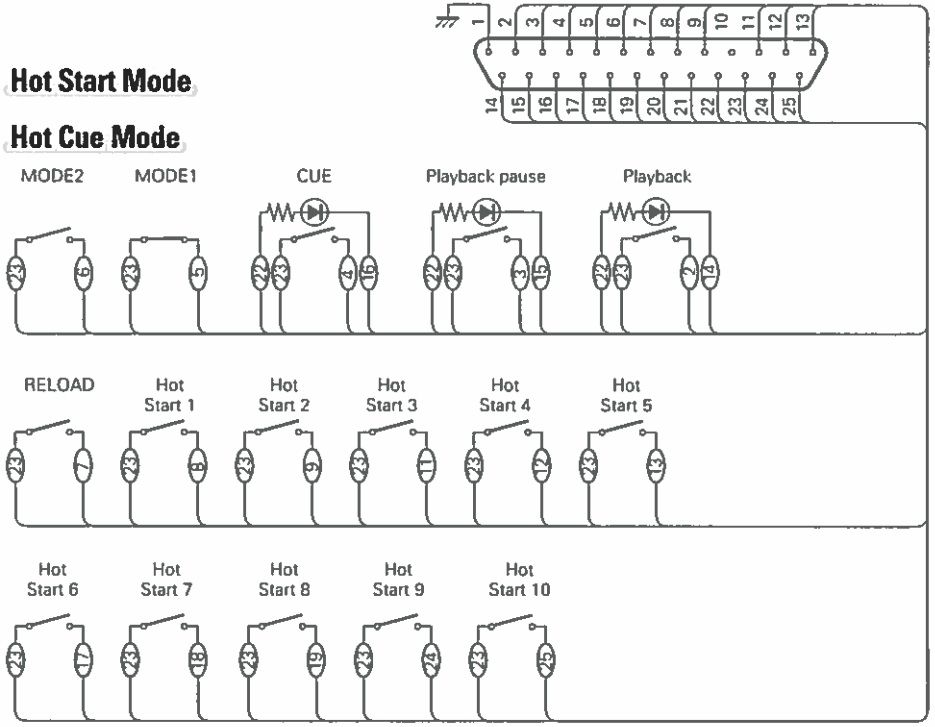
• Connection Example

Normal Mode

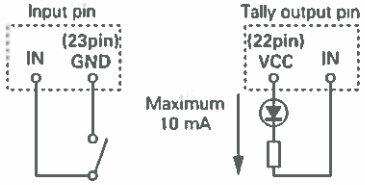


Hot Start Mode

Hot Cue Mode



It is assumed that the input pins and Tally output pins are used as follows.



- Tally output pin is an open collector. (Maximum current: 10 mA, maximum voltage: 5.5 V)
- Input pin is 5 V for Vcc TTL specification.
- The maximum current supplied by the Tally Power Supply (22 pin) is 100 mA.
- The input/output logic is active low (negative logic).

NOTE

Power is supplied to the external remote controller from Pin No.22 (Tally Power Supply) from this terminal. However, as the maximum rating for this pin is +5 VDC 100 mA, select circuit and current controls (resistance values) so as not to exceed the rating. Using this equipment when the rated value is exceeded may cause damage to the equipment, which may also lead to fire or a similar unexpected accident.

3. Dual Stereo Line Input Module

3.1. Panel Controls

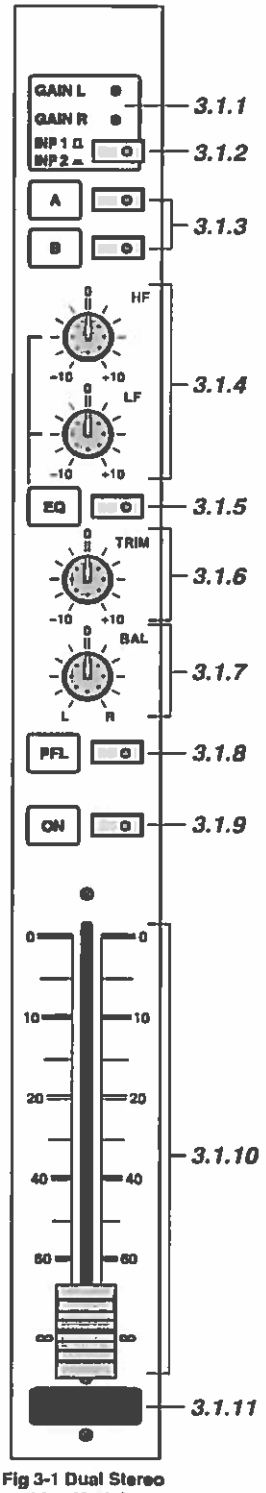


Fig 3-1 Dual Stereo Line Module

3.1.1. Course Gain Adjustment

Two preset pots are available for adjustment of the input gain for the left and right line levels of Input 1. The pots provide 16dB of gain adjustment allowing an input range of +6dB to -10dB, reference 0dB output. Fine level adjustment of Input 1 gain can be made by using the Trim knob. The gain for Input 2 can be altered by adjusting two potentiometers on the PCB (See Section 3.3.9).

3.1.2. Input 1/Input 2 Select Button

This button switches the module between receiving input 1 (with the switch released) and input 2 (with the switch depressed, and the red LED on). Input 1 is fed from the XLR sockets and Input 2 is situated on the D-Type Remote connector. If the optional internal gram amplifier has been fitted, the turn-table should be connected to Input 2.

3.1.3. Output Select

The signal from the dual stereo module can be routed to either output A, output B, to both, or to neither. When a red LED is illuminated, it indicates that the signal is routed to that output.

3.1.4. Equalisation (Optional)

Dual Stereo LineThe HF (treble) and LF (bass) controls are used to adjust the equalisation of the signal. The HF EQ boosts and cuts the signal by ± 7.5dB at 8kHz. The LF EQ boosts and cuts the signal by ± 7.5dB at 100Hz.

3.1.5. EQ Enable Button (Optional)

With the EQ button depressed, the Equalisation described above is switched into the signal path. The red LED illuminates when the button is depressed. To bypass the EQ section, release the button.

3.1.6. Trim Knob

The Trim knob provides an additional ±15dB of gain to fine-tune the signal level.

3.1.7. Bal Knob

The Balance knob is used to adjust the stereo image of the signal on the stereo line input. Full anti-clockwise reduces the right channel by -3dB and increases the left channel by +6dB. Full clockwise reduces the left channel by -3dB and increases the right channel by +6dB.

3.1.8. Pre-Fade Listen (PFL) Button

With the PFL button depressed, the incoming signal on this channel is routed to the PFL bus so that it can be heard in the Monitors section (by selecting Auto-PFL). The PFL only operates when the fader is fully down, unless jumper J11 is not fitted when the PFL will operate with the fader either up or down. PFL is active when the Yellow LED is illuminated in the button.

3.1.9. On Button

The On button can be used to start and stop (selectable by jumper settings) a remote piece of equipment, as well as working in conjunction with the fader open signal to allow output from the channel. For the fader to operate, the On button must be illuminated. The Green LED in the button glows at two brightnesses. If the fader is down when the On button is pushed, the LED glows at half brightness and the circuitry can be regarded as being armed. To activate the circuitry, the fader should be moved away from the down position - the LED then glows with full power.

If the On button is pushed while the fader is already away from the down position, the remote circuitry will be enabled as soon as the button is pushed.

3.1.10. Fader

The 100mm long throw ALPS VCA fader provides a unity gain (0dB) when fully open. The scale shows the attenuation. The fader open signal is produced by a voltage detecting op-amp and is disabled when the fader is in the fully down position. The fader open signal is used for the fader starttimer functions. The channel input is routed to the outputs whenever the fader is open and the On switch and output switch are selected.

3.1.11. Scratch Pad

A white pad is provided at the bottom of the module on to which you can write the function of the channel, for example, “CD 1”.

3.2. Rear Panel

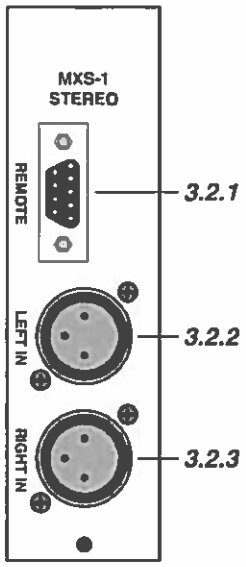


Fig 3-2 : Dual Stereo Line Rear Panel

3.2.1. Remote Connector

The 9 pin D-Type plug remote connector provides the balanced input for Line 2 and the remote outputs for the Start and Stop functions. Note that there is just one start and stop remote for both inputs.

The following pins are used for the connections :

Pin 1 : Opto isolated start NPN collector.
Pin 2 : Opto isolated start NPN emitter.
Pin 3 : Opto isolated stop NPN collector.
Pin 4 : Opto isolated stop NPN emitter.
Pin 5 : Input 2 Left Phase.
Pin 6 : Input 2 Left Non-Phase.
Pin 7 : Screen/Chassis.
Pin 8 : Input 2 Right Phase.
Pin 9 : Input 2 Right Non-Phase.

When the gram amp option is used with the stereo channel, the record deck connections should be made to Input 2 on this connector. The left and right screen connections from the record deck should be connected to the left and right non-phase pins (6 and 9) respectively.

3.2.2. Left Input Connector

This XLR 3 pin socket is used for the the left channel input of Input 1 and is electronically balanced. It has the following connections :

Pin 1 : Screen.
Pin 2 : Phase.
Pin 3 : Non-phase.

3.2.3. Right Input Connector

This XLR 3 pin socket is used for the the right channel input of Input 1 and is electronically balanced. It has the following connections :

Pin 1 : Screen.
Pin 2 : Phase.
Pin 3 : Non-phase.

3.3. Module Options and Jumper Settings

The dual stereo line module can be configured in a number of different ways depending on the jumper options set on the board. The options available are :

- Select remote start/stop for line input 1 or line input 2.
- Enable continuous momentary start from channel On button.
- Select momentary or latched start.
- Set channel to start the timer automatically.
- Enable/disable the remote stop.
- Enable or disable the auto pre-fade listen fader cancel.

The gain of Input 2 can be defined by adjusting two potentiometers on the PCB. An option is available for fitting the module with an internal gram amplifier, so that a turntable can be connected directly to the dual stereo input.

3.3.1. Summary of Jumper Settings for Dual Stereo Line Input Module

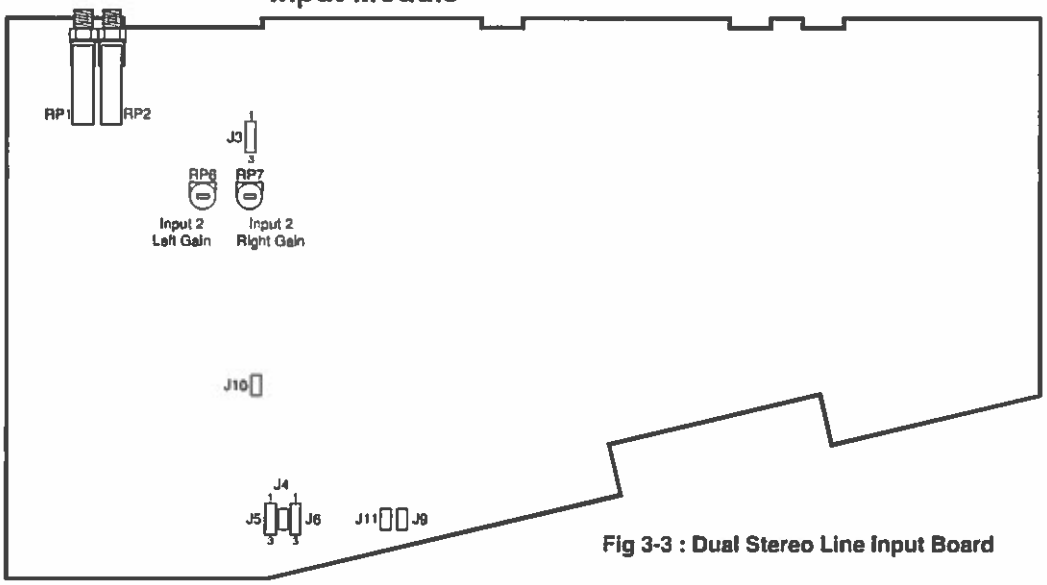


Fig 3-3 : Dual Stereo Line Input Board

Jumper	Set Over Pins	Effect
J3	1 & 2	Remote start and stop operates with line input 2 (D-Type Input).
	2 & 3	**Remote start and stop operates with line input 1 (XLR input).**
	None	Remote start and stop operates with both inputs.
J4	1 & 2	Enable continuous momentary start from channel on button.
	None	**Disable continuous momentary start from channel on button.**
J5	**1 & 2**	**Momentary start.**
	2 & 3	Latched start.
	None	Start function does not work.
J6	**1 & 2**	**Fader stop.**
	2 & 3	Fader and button stop.
J9	**1 & 2**	**Auto timer start.**
	None	No auto timer start.
J10	1 & 2	Remote stop is disabled.
	None	**Remote stop operates.**
J11	**1 & 2**	**Auto pre-fade cancelled by PFL button or fader open.**
	None	Auto pre-fade cancelled by PFL button only.

Note : Items in bold are set as default when shipped.

3.3.2. Select Remote Start/Stop for Line Input 1 or 2

There is just one set of remote start and stop connections for both Line Inputs 1 and 2. Jumper J3 selects which input is connected to the piece of equipment that needs to be controlled remotely. With J3 set over pins 1 and 2, the remotes will only operate when Input 2 is selected. With J3 set over pins 2 and 3, the remotes will only operate when Input 1 is selected.

If J3 is not set, the remote start and stop will operate whether Input 1 or Input 2 are selected.

3.3.3. Enable Continuous Momentary Start From On Button

The On button can be made to remotely Start and Stop external equipment. If you require each press of the On button to just send a Start signal, then set jumper J4. This might be useful for a piece of external equipment which only has one remote input for starting and stopping.

If jumper J4 is not Set, each press of the On button will alternately send Start and Stop signals.

3.3.4. Start Select - Momentary or Latched

The remote start can be made either momentary or latched by setting the jumper J5 to 1 and 2 (for momentary) or 2 and 3 (for latched). If no jumper is set, the Start remote does not operate.

3.3.5. Stop Select - On Fader Down, or With Button Up

The input which is being remotely started can be remotely stopped as well. There are two options available for stopping : To remotely stop when the fader is down, set the jumper J6 over pins 1 and 2. To remotely stop when the fader is down or the On button is pressed up, set J6 over pins 2 and 3.

3.3.6. Set to Start the Timer Automatically

Each of the channels can be configured so that the timer on the meter bridge is controlled by the use of the fader. This may be useful for timing the duration of music tracks. Set jumper J9 to control the timer with the module fader being configured. Remove jumper J9 to disable timer control.

When controlled by a channel fader, the timer operates in the following way. When the fader is opened, if the timer is not already running, it will reset the counter and start the timer. If the timer is already running when the fader is opened, the counter begins counting but freezes for 3 seconds, so that you can view and note the "start" time. After three seconds the counter will jump to show the increasing time and will then continue.

The timer will be stopped by a manual stop. The timer can only be reset when in the Stop mode.

3.3.7. Disable the Remote Stop Function

The remote Stop function can be disabled by setting J10. Leaving the jumper off enables the remote Stop function.

3.3.8. Cancel the Automatic Pre-fade Listen

The PFL function can be cancelled by the fader opening or by using the PFL button if jumper J11 is set. When Jll is off, the PFL function is not cancelled by the fader open signal.

3.3.9. Gain Adjustment for Input 2

The gain for the secondary stereo line input (on the D-Type connector) is altered by adjusting two single turn 20k potentiometers, RP6 and RP7, on the circuit board. Placement of the pots is shown in Fig 3-4.

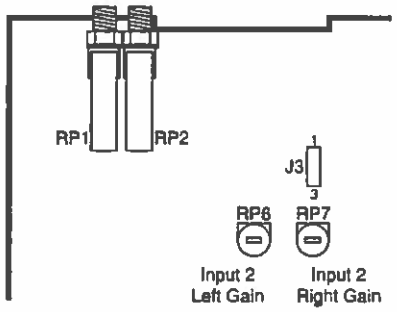


Fig 3-4 : Input 2 Gain Adjustment

The pots provide 16dB of gain adjustment allowing an input range of +6dB to -10dB, reference 0dB output. RP6 controls the left input whilst RP7 controls the right input.

3.3.10. Using the Optional Gram Amplifier

An RIAA equalised gram(aphone) amplifier can be fitted to the dual stereo module so that a turntable can be connected directly to the input. The amplifier takes the form of a PCB which is added to the stereo module, together with one or two minor board modifications.

For the gram amplifier to operate, the turn-table must be connected to Input 2 (the D-Type connector) of the dual stereo module.