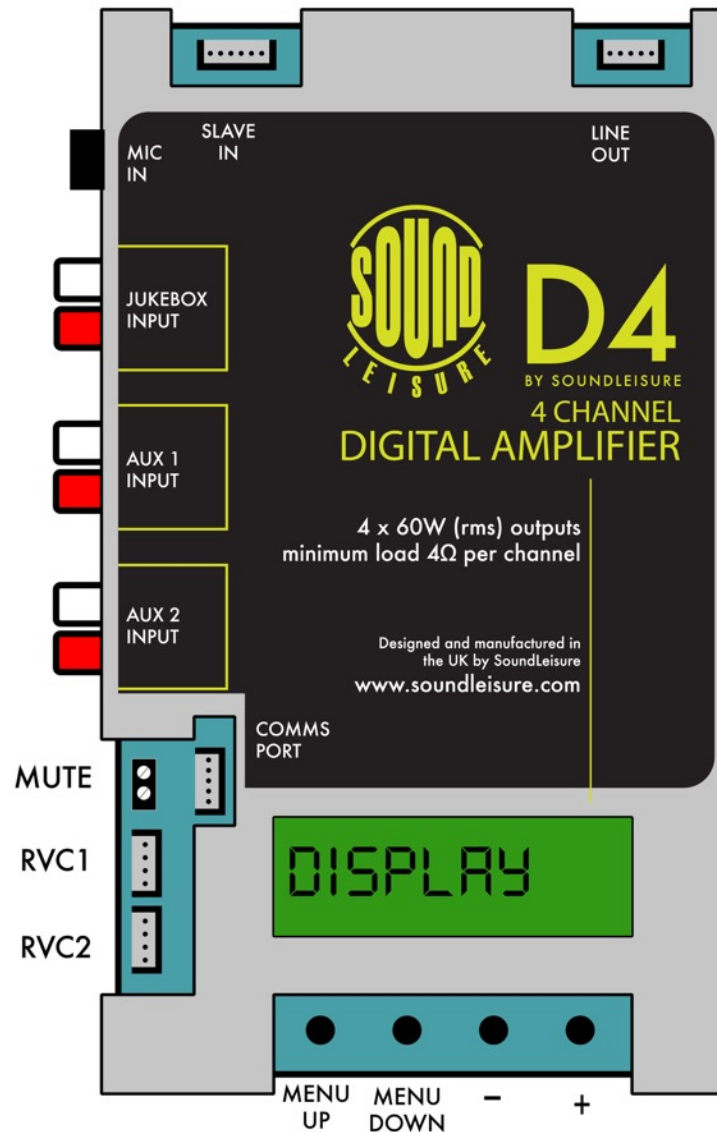


## D2 / D4 Amplifier



## D2 Specification

- 2 x 200W rms Outputs (rated into a 4Ω speaker system)
- Independent EQ control on each Channel
- 3 Stereo audio inputs (1 Jukebox and 2 Auxiliary)
- 1 dedicated microphone input
- Karaoke or Voiceover microphone setting
- Slave input and Line output
- Simple 4 button interface with LCD display
- Full fault protection with visual feedback
- Highly efficient Class D amplifier design

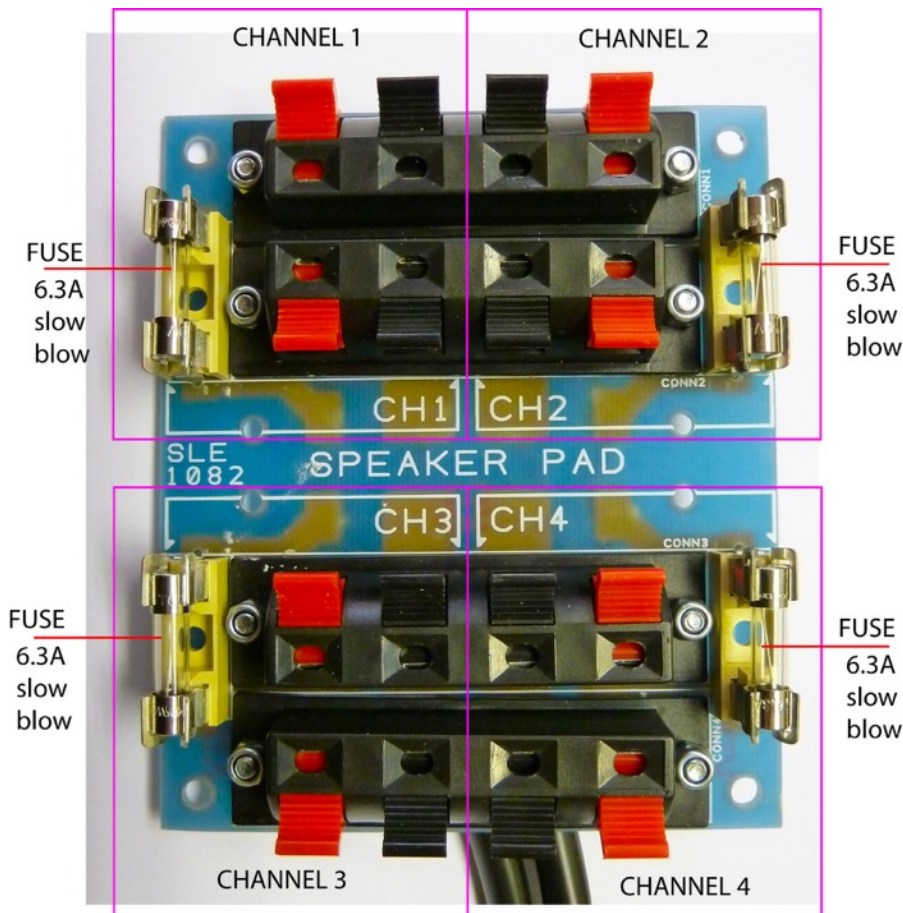
**WARNING : THIS AMPLIFIER RUNS ON A 240V SUPPLY. TURN MACHINE OFF PRIOR TO REMOVING THE AMPLIFIER OR COMMENCING ANY WORK**

## D4 Specification

- 4 x 60W rms Outputs (rated into a 4Ω speaker system)
- Independent EQ control on each Channel
- 3 Stereo audio inputs (1 Jukebox and 2 Auxiliary)
- 1 dedicated microphone input
- Karaoke or Voiceover microphone setting
- Slave input and Line output
- Simple 4 button interface with LCD display
- Full fault protection with visual feedback
- Highly efficient Class D amplifier design

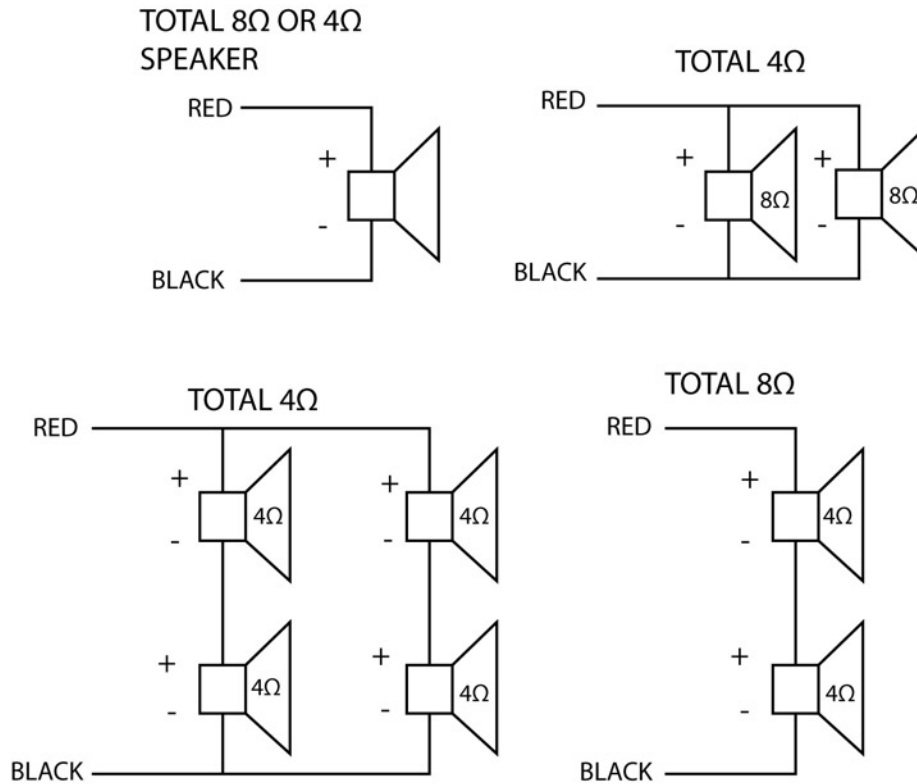
**WARNING : THIS AMPLIFIER RUNS ON A 240V SUPPLY. TURN MACHINE OFF PRIOR TO REMOVING THE AMPLIFIER OR COMMENCING ANY WORK**

## Connecting Speakers



Each channel can take a minimum load of 4Ω.  
Resistances higher than this can be used but the output power will be reduced.  
Resistances lower than this may cause the amplifier to enter a fault condition.

The following diagrams show different speaker configurations:



Each channel on the speaker matching pad should be connected independently. Under no circumstances should a single ground line be used to connect all the speakers back to the pad, doing so will cause the amplifier to enter a fault condition.

## Auxiliary Inputs

The amplifier can be used to play audio from auxiliary sources when the Jukebox is idle. To interface correctly with the amplifier the sources should output at least a line level (1Vpp) stereo signal.

The amplifier has 2 stereo auxiliary inputs which are prioritised, this allows automatic switching between sources without the need for an external switch box.

### Auxiliary 1 has priority over auxiliary 2

If sources are connected to both inputs only auxiliary 1 will be heard

If the source connected to auxiliary 1 is turned off the amplifier will switch to auxiliary 2

If the source connected to auxiliary 1 is turned on again the amplifier will switch back to auxiliary 1

Using the menu system a switch over time between 2 and 60 seconds can be set for the auxiliary inputs. This is the time that an auxiliary signal must be present before the amplifier will switch to it.

The display will show a count down when the amplifier is preparing to switch inputs.

## Microphone Input

The amplifier has a dedicated microphone input that is setup to accept a low impedance (~600Ω) passive microphone. Active or wireless microphones can be used but any external gain controls should be set low.

## Line Output

The amplifier provides a stereo line level audio output for connection to other amplifiers, if required the microphone signal can be output separately.

## Slave Input

If 2 D2 or D4 amplifiers are used together a special link between the Line Output of the first amplifier and the Slave Input of the second amplifier can be made. This link will configure the second amplifier as a slave and adjust all internal settings accordingly. Features which can not be used on a slave amplifier, such as the auxiliary inputs, will be hidden.

## Using the Amplifier

By default the amplifier LCD display will show the active input along the top line and the Remote Volume Control (RVC) level along the bottom line.

On the D4 amplifier, the display will show the RVC level for channels 1 and 2 for 10 seconds and then show the RVC level for channels 3 and 4 for 10 seconds.

To change the settings on the amplifier a simple 4 button system is used. Pressing the Menu Up button or the Menu Down button will cycle through the different menus, using the + or – buttons will increment or decrement the current menu. The display will return to its default state, showing the active input and RVC levels, if no buttons are pressed for 1 minute. When the display returns to this state any changes to the menus will be saved.

## Menu Description

The following is a list of the different menus and their functions:

### Channel 1 Stereo Mono Switch (Shown as Channel 1/3 on the D4)

This menu is used to set the amplifier in Stereo or 2 channel Mono. For most installs the amplifier should be left in Mono which will give independent control of each channel.

If the appropriate speakers are installed the amplifier can be used in stereo, all settings for channel 2 will now be taken from channel 1 and the volume for both channels will be controlled from a single RVC control.

On the D4 amplifier channels 3 and 4 are also linked as a stereo pair.

If the amplifier is set in stereo all controls for channel 2 are hidden, on the D4 amplifier this applies to channel 3 as well.

Menus 2 to 6 are repeated for each channel, the top line of the display will show which channel is currently selected.

### Channel Master

This menu sets the maximum volume level that can be achieved with the RVC. To set this level, reduce the value to around 50% and turn the RVC to full. With a song playing gradually increase the value until the maximum volume required in that area is reached. Once this value is set the RVC can be used to control the volume from MUTE up to the value set by this menu.

### **Channel Bass**

This menu sets the Bass Equalizer of the current channel. It can provide a cut or boost of 15dB.

### **Channel Middle**

This menu sets the Middle Equalizer of the current channel. It can provide a cut or boost of 15dB.

### **Channel Treble**

This menu sets the Middle Equalizer of the current channel. It can provide a cut or boost of 15dB.

### **Channel Microphone Volume**

This menu sets the Microphone Volume of the current channel it is independent of the RVC level.

Setting this menu to MUTE will stop the microphone working on this channel.

### **Aux Input 1**

This Menu sets the master volume level for Auxiliary Input 1. It should be set using the same method outlined in menu 2.

### **Aux Input 2**

This Menu sets the master volume level for Auxiliary Input 2. It should be set using the same method outlined in menu 2.

### **Aux Input Time**

This menu sets the time that an auxiliary input must be present before the amplifier will switch to it.

The value can be between 2 and 60 seconds.

### **Microphone Bass**

This menu sets the Bass Equalizer of the Microphone Input. It can provide a cut or boost of 10dB.

### **Microphone Middle**

This menu sets the Middle Equalizer of the Microphone Input. It can provide a cut or boost of 10dB.

### **Microphone Treble**

This menu sets the Treble Equalizer of the Microphone Input. It can provide a cut or boost of 10dB.

### **Microphone Voiceover / Karaoke**

If Voiceover is selected whenever the microphone is used the music will be muted, the music will un-mute when the microphone is no longer being used.  
If karaoke is selected the music and microphone will be heard together.

**Line Out Master**

This menu sets the volume level of the Line Output, it is independent of the RVC level.

**Line Out Microphone Volume**

This menu sets the volume of the microphone sent to the Line Output

**Line Out Voiceover / Karaoke**

If Voiceover is selected whenever the microphone is used the Line Out music will be muted, the music will un-mute when the microphone is no longer being used.  
If karaoke is selected the Line Out music and microphone will be heard together.

**Troubleshooting**

|                       |  |
|-----------------------|--|
| No Display            | Ensure the amplifier power lead is connected and the Jukebox is switched ON  |
| No Sound              | Ensure speakers are connected correctly and the amplifier is showing an input is active.<br>Ensure the RVC level is not showing MUTE |
| Sound Cutting Out     | When the sound cuts out check which fault is shown on the amplifier display, compare to the list below                               |
| Auxiliary not working | Ensure the auxiliary source level is at least 1Vpp and that the auxiliary volumes are not set to minimum                             |

The following faults may be shown on the amplifier display:

## **Over Current**

This refers to an amplifier channel drawing more current than it should and will result in the audio cutting in and out. Check the speaker impedance is above 4  $\Omega$  and that there are no shorts on the speaker line.

## **Over Temperature**

This indicates that an amplifier module has reached its temperature threshold and has shutdown to prevent damage. Check the fans in the Jukebox are clean and working.

## **Low Voltage**

The mains supply to the amplifier is below 200V AC (in the UK) and the amplifier has shutdown. The Jukebox will not work reliably at this voltage level, increase the voltage to the standard 235V AC.

If the Jukebox has been modified to run on a 110V supply the low voltage level is around 95V AC.

| ENGINEER'S NOTES |
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### **IMPORTANT SAFETY INSTRUCTIONS**

- This appliance must be connected to a mains socket with a protective earth connection.
- The mains plug is the designated 'disconnection device' and as such should be readily operable.
- It must not be placed near to a radiator, heat source, or direct sunlight.
- Naked flame sources such as lighted candles must not be placed upon it.
- This appliance should not be exposed to dripping, splashing or have objects containing liquid placed upon it.
- Wall mounted appliances must be securely fixed to the wall in accordance with the installation instructions contained in this manual. The wall needs to be flat and solid, a minimum of 4 rawl bolts is advised, because of the weight.
- Fuses should be replaced like for like at all times.
- Terminals marked with the symbol below are considered hazardous live and external wiring connected to these terminals requires installation by an instructed person or the use of ready made contact leads.

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