

Installation Guide

SY-1A-25R **SY-1A-25W** **SY-LVC**

Description

25W per Channel Stereo Power Amplifier, Rack Mounting
25W per Channel Stereo Power Amplifier, Wall Mounting
Stereo Line Volume Controller

SY 1A-25 Amplifiers and LVC



The SY Amplifier range and Line Volume Controller provide a means of controlling the volume level of any analogue signal with the option to directly drive stereo speakers. The following table details the main features of each of the SY amplifier products.

SY-1A-25R, SY-1A-25W and SY-LVC Features

Parameter	SY-1A-25R	SY-1A-25W	SY-LVC
Line Inputs	2 (balanced)	2 (balanced)	2 (balanced)
RS232 Control	Yes	Yes	Yes
Front Panel Volume Control	No	Yes	No
Line Outputs	None	None	2 (balanced)
Speaker Outputs	2 (Class D)	2 (Class D)	None
Output Power Rating / ch	25W @ 8R	25W @ 8R	Not applicable
Mode Switch	Yes	Yes	No

SY-1A-25R



SY-1A-25W



SY 1A-25 Amplifiers and LVC



SY-LVC



Using the SY Amplifiers

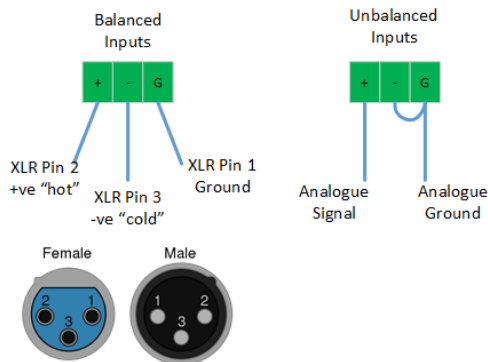
Only the SY-1A-25W has a panel mounted volume control, both the SY-1A-25R and SY-LVC can only be controlled by using RS232 commands.

At power up, all the amplifier models start at a low volume level by default. An RS232 command will be required to set the desired the volume level after the unit has been powered up.

The SY-1A-25R and SY-1A-25W are intended to be used as power amplifiers to drive stereo loudspeakers with a minimum rating of 25W at 8R per channel.

Connecting the Inputs

Both the inputs are balanced inputs, +ve, -ve and Gnd. However, if the audio signal is unbalanced the signal should connect to the +ve input and Gnd, with the -ve input also connected to Gnd, as shown in the following diagram:



Connecting the Outputs

The outputs are either Class D speaker outputs for the SY-1A-25R and SY-1A-25W, or balance analogue audio outputs for the SY-LVC. In each case the outputs must never be connected to any ground or 0V line, as doing so will damage the Class D output drivers of the SY-1A-25R and SY-1A-25W amplifiers.

SY 1A-25 Amplifiers and LVC



If you require only unbalanced audio from the SY-LVC, only use the +ve output and the G terminals to connect to the next item of audio equipment for each output channel.

Mode Switch

SW1 of the Mode Switch sets the amplifier into either stereo or mono mode. When in stereo mode, the two inputs are separate and set to the same volume level. In mono mode the two inputs are summed together and present to both outputs as a balanced mono signal.

SW2 of the Mode switch on the SY-1A-25W can switch the front panel control between adjusting the volume, or to allow setting of the stereo balance.

Switch	Off	On
SW1	Stereo	Mono
SW2 (1A-25W only)	Volume Control	Balance Control

1A-25W Bargraph Modes from SW2 Setting

Volume control is indicated on the 1A-25W by having the LED bargraph start from the lowest green LED.

Balance control is indicated on the 1A-25W by only having two LEDs lit that move up for right balance and down for left balance.

RS232 Control

All the amplifiers and the line volume controller can be controlled using RS232 commands. The RS232 communication settings are:

57600 bps 8 data-bits No parity One stop bit No handshaking

For all commands, the `\r` represents the carriage-return character, `0x0d`, and represents the space character, `0x20`.

Operation	ASCII Command
Power on the amplifier	PWR=ON\r
Power down the amplifier	PWR=OFF\r
Raise the Volume Level	VOL_UP\r
Lower the Volume Level	VOL_DOWN\r
Set the Volume Level, where xxx is in the decimal range 000 to 100 Note: All three digits are required	VOL=xxx\r
Mute On	MUTE=ON\r
Mute Off	MUTE=OFF\r
Mute Toggle	MUTE\r
Get Mute Status	MUTE?\r
Mono Mode On	MSM=ON\r
Mono Mode Off	MSM=OFF\r

SY 1A-25 Amplifiers and LVC



Power Supply Input

Only use the power supply provided with the amplifier to ensure optimal results. Using a power supply with less current output will cause the amplifier to reset to the normal lower volume level as if the amplifier was just repowered in order to protect the outputs and speakers.

Specifications

General

Power Supply	24V DC @ 3A for SY-1A-25R and SY-1A-25W 12V DC @ 1A for SY-LVC
Power Consumption	55 W max for SY-1A-25R and SY-1A-25W 0.6W for SY-LVC
RS232	57600, 8 data bits, 1 stop bit, no parity – No handshaking

Audio

Frequency Response	20 Hz to 20 kHz
Channel Separation	> 75 dB
Input Impedance	15 k ohms
Speaker Output (1A-25R & 1A-25W)	2 x 25 W into 8 ohms
THD+N (1 kHz at full power)	< 0.1%

Environmental

Operating Temperature	0 - 40 °C non condensing
------------------------------	--------------------------

Physical

	SY-LVC	SY-1A-25R	SY-1A-25W
Dimensions (W x H x D)	82 x 26 x 43	108 x 41 x 75	146 x 86 x 18
Weight	85 g	200 g	170 g

SY 1A-25 Amplifiers and LVC



Safety Instructions

To ensure reliable operation of these products as well as protecting the safety of any person using or handling these devices while powered, please observe the following instructions.

1. **ONLY USE** the power supply provided. If an alternate supply is required, check the voltage, polarity and that it has sufficient power to supply the device it is connected to.
2. **DO NOT** operate these products outside the specified temperature and humidity range given in the above specifications.
3. Ensure there is adequate ventilation as these products generate heat while operating.
4. Repair of these products should only be carried out by qualified professionals as these product contains sensitive devices that may be damaged by any mistreatment.
5. Only use these products indoors and in a dry environment. **DO NOT** allow any liquids or harmful chemicals to come into contact with this product.

After Sales Service

1. Should you experience any problems while using these product, firstly refer to the Troubleshooting section in this manual and/or your local dealer before contacting SY Technical Support.
2. When calling SY Technical Support, please provide the following information:
 - Full Product Name and Model Number
 - Product Serial Number
 - Details of the fault and any conditions under which the fault occurs.
3. These products have a two year standard warranty beginning from the date of purchase as stated on the sales invoice. For full details please refer to our Terms and Conditions.
4. The SY Product warranty is automatically void under any of the following conditions:
 - The product is already outside of its warranty period
 - Damage to the product due to incorrect usage or storage
 - Damage caused by unauthorised repairs
 - Damage caused by mistreatment of the product
5. Please direct any questions or problems you may have to your local dealer before contacting SY Electronics.

SY 1A-25 Amplifiers and LVC



NOTES:

SY 1A-25 Amplifiers and LVC



NOTES: