



BACKGROUND MUSIC PRODUCT ISOLATING TRANSFORMER

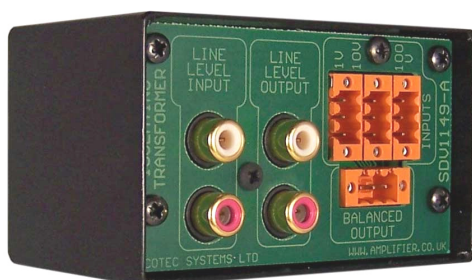
SDV1149-A: MULTI-FUNCTION, ISOLATING TRANSFORMER

FEATURES

- ISOLATES MUSIC SOURCES WITH “NOISY” GROUNDS FROM OTHER MUSIC EQUIPMENT
- PREVENTS GROUND LOOPS
- MIXES STEREO TO MONO
- SPLITS STEREO INPUT TO TWO MONO INPUTS
- COUPLES SIGNALS FROM SPEAKERS TO LINE INPUTS
- CONVERTS FROM RCA (PHONO) INPUTS TO TERMINAL BLOCK CONNECTIONS
- COMPACT
- LOW COST
- LIGHTWEIGHT
- CUSTOM DESIGNS AVAILABLE

APPLICATIONS

- BACKGROUND MUSIC SYSTEMS
- MUSIC SYSTEM EXTENSION/ALTERATIONS
- HARD DRIVE/MP3 PLAYER ISOLATION
- SATELLITE TV AUDIO SIGNAL ISOLATION
- NOISE SUPPRESSION IN HI-FI SYSTEMS
- SIGNAL COUPLING FROM 100V LINE SPEAKERS
- SIGNAL COUPLING FROM LOW IMPEDANCE SPEAKERS



DESCRIPTION

The SDV1035-100 is a versatile isolation transformer module. It can be used to isolate music sources from other music equipment. Music sources (particularly PC based) can be noisy due to ground coupled noise. The SDV1149-A module breaks this link and significantly reduces coupled noise.

Because the module decouples the ground link it eliminates “earth loops”.

As well as isolating the module mixes stereo input signals to twin mono signals for background music systems.

The unit can also be used to couple the signal from a speaker to line level. The module works with both 100V line and low impedance speakers. This provides a cost effective method to easily extend existing music system.

Please contact EcoTec Systems Ltd. for a confidential discussion of your requirements and further application information.

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SPECIFICATIONS



Absolute maximum ratings

Operating free air temperature, T_A -10°C to 40°C
 Storage temperature range, T_{stg} -40°C to 70°C

Stresses beyond those listed under absolute maximum ratings may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated “recommended operating conditions” is not implied.

Recommended operating conditions

	MIN	TYP	MAX	UNIT
INPUT LINE VOLTAGE, V_L		1		V _{rms}
FREQUENCY RANGE	200		20,000	Hz
OPERATING FREE AIR TEMPERATURE, T_A	0	20	40	°C

Electrical characteristics at a free air temperature of 25°C

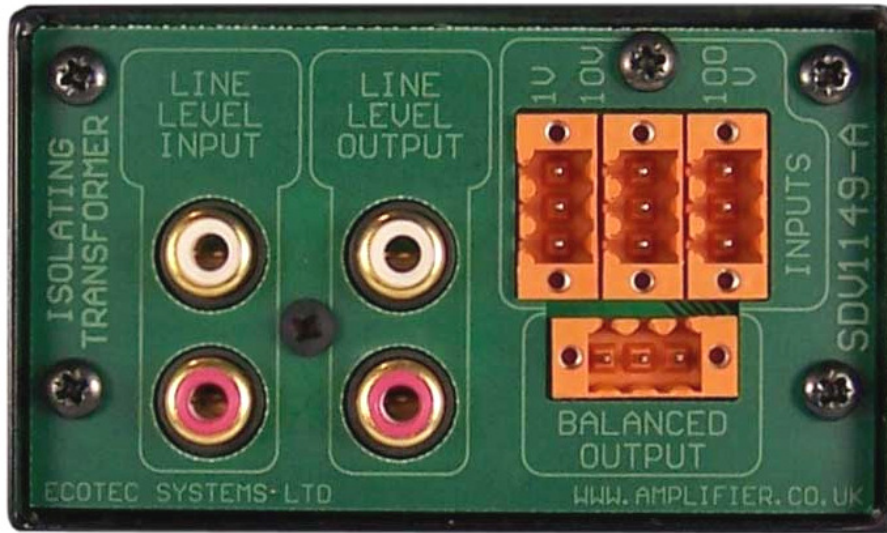
PARAMETER	NOTES/TEST CONDITIONS	VALUE			UNIT
		$V_{RS} = 55\text{ V}$			
		MIN	TYP	MAX	
R_{IN}	AUDIO INPUT IMPEDANCE (Other input options available)		10		K Ω
I_{RS}	INPUT CURRENT $R_L = 1\text{ K}\Omega$		0.1		mArms
P_{Cont}	POWER OUT (CONTINUOUS) $R_L = 1\text{ K}\Omega, f = 1\text{ KHz}$		100		mWrms
SNR	SIGNAL TO NOISE RATIO $R_L = 1\text{ K}\Omega$ (in audio band)		-90		dB

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CONNECTION DETAILS



The isolating transformer module has been designed such that the user can rapidly connect up the unit and begin testing. The connections are described below:



Pin	Identifier	Function	Remarks	
LINE LEVEL INPUT (PHONO)				
1	L	Left Stereo channel	Mixed with Right channel	
2	R	Right Stereo Channel	Mixed with Left channel	
3	GND	Case of Phono(s)	Isolated from output ground	
LINE LEVEL OUTPUT (PHONO)				
1	L	Left Stereo channel	Mixed mono signal	
2	R	Right Stereo Channel	Mixed mono signal	
3	GND	Case of Phono(s)	Isolated from input ground	
1Vrms INPUT				
1	GND	Isolated Ground	Ground	
2	+ve	Audio high	1Vrms balanced input	
3	-ve	Audio low	1Vrms balanced input	
10V/10W LOW IMPEDANCE INPUT FROM SPEAKER				
1	GND / No connection		Ground/Earth/No connection	
2	Speaker +ve	Audio high	Input from speaker	
3	Speaker -ve	Audio low	Input from speaker	
100V LINE INPUT FROM SPEAKER				
1	GND / No connection		Ground/Earth/No connection	
2	Speaker +ve	Audio high	Input from speaker	
3	Speaker -ve	Audio low	Input from speaker	
BALANCED OUTPUT				
1	GND	Isolated Ground	Ground	
2	+ve	Audio high	Mono Signal	
3	-ve	Audio low	Mono Signal	

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SUGGESTED CONNECTION OPTIONS



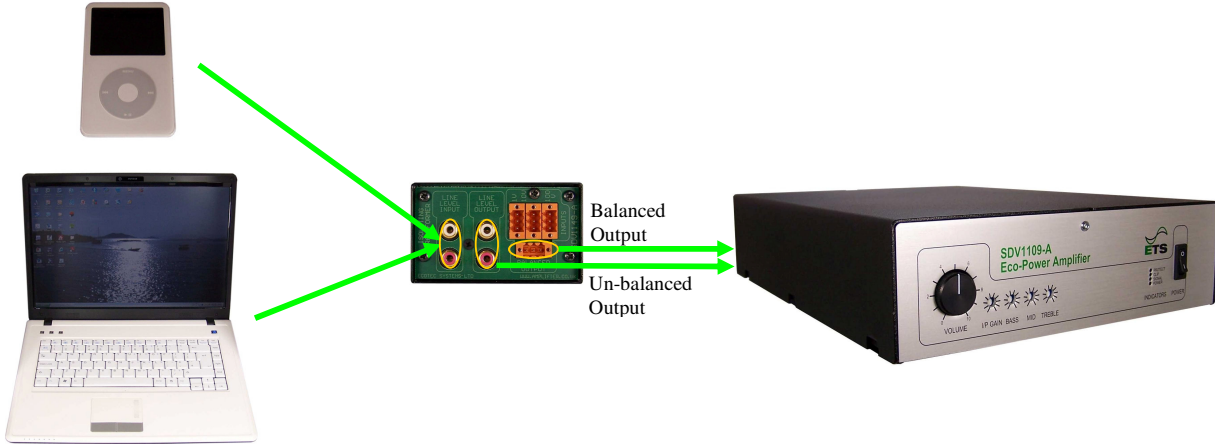
Below is an illustration of some of the connection permutations of the SDV1149-A isolating transformer module.

- 1) Connect Hard Drive, Computer, Laptop, MP3 player to Music System

Music Source

SDV1149-A

Music Equipment

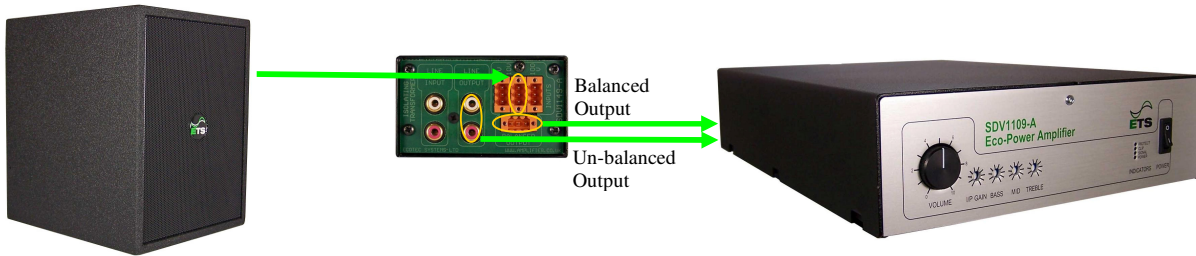


- 2) Couple signal from low impedance speaker to Music System

Low Impedance Speaker

SDV1149-A

Music Equipment

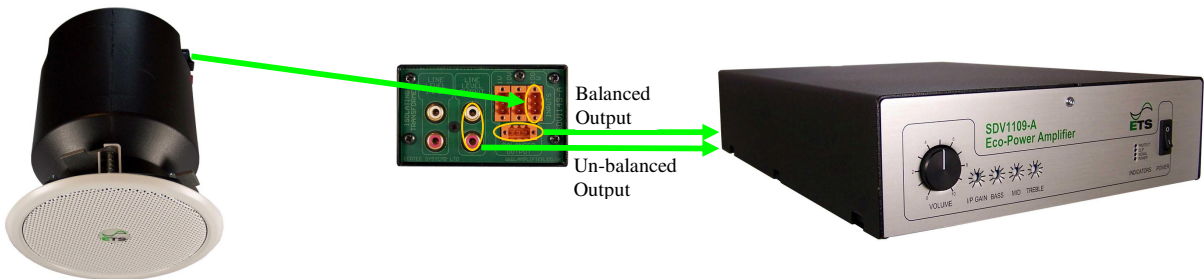


- 3) Couple signal from 100V speaker to Music System

100V Line Speaker

SDV1149-A

Music Equipment



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