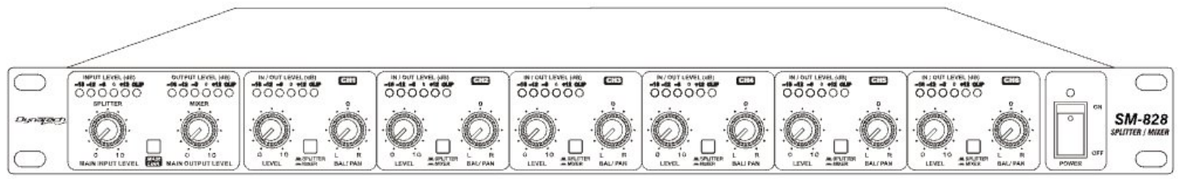
DynaTech

SM-828

User's Manual

SPLITTER/MIXER
SM-828



SM-828

SAFETY RELATED SYMBOLS





This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions.

Please read.



Protective Ground Terminal

AC mains (Alternating Current)

AC mains (Alternating Current)

ON: Denotes the product is turned on.

OFF: Denotes the product is turned off.

WARNING

Describes precautions that should be observed to prevent the possibility of death or injury to the user.

CAUTION



Describes precautions that should be observed to prevent damage to the product.

Disposing of this product should not be placed in municipal waste but rather in a separate collection.

WARNING

Power Supply

Ensure that the mains source voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

External Connection

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

Do Not Remove Any Covers

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only.

No user serviceable parts inside.

Fuse

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

Protective Ground

Before turning the unit ON, make sure that it is connected to Ground. This is to prevent the risk of electric shock.

Never cut internal or external Ground wires. Likewise, never remove Ground wiring from the Protective Ground Terminal.

Operating Conditions

Always install in accordance with the manufacturer's ints-instructions.

To avoid the risk of electric shock and damage, do not subject this product to any liquid/rain or moisture.

Do not use this product when in close proximity to water.

Do not install this product near any direct heat source.

Do not block areas of ventilation. Failure to do so could result in fire.

Keep product away from naked flames.

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions

Follow all instructions

Keep these instructions. Do not discard.

Heed all warnings.

Only use attachments / accessories specified by the manufacturer.

Power Cord and Plug

Do not tamper with the power cord or plug. These are designed for your safety.

Do not remove Ground connections!

If the plug does not fit your AC outlet seek advice from a qualified electrician.

Protect the power cord and plug from any physical stress to avoid risk of electric shock.

Do not place heavy objects on the power cord. This could cause electric shock or fire.

Cleaning

When required, either blow off dust from the product or use a dry cloth.

Do not use any solvents such as Benzol or Alcohol.

For safety, keep product clean and free from dust.

Servicing

Refer all servicing to qualified service personnel only.

Do not perform any servicing other than those introductions contained within the User's Manual.

PORTABLE CART WARNING



Carts and stands - The component should be used only with a cart or stand that is recommended by the manufacturer.

A component and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the component and cart combination to overturn.

NOTES

9 NOTES

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1 Introduction

Thank you for choosing **Dynatech. SM-828** is the good solutions for many problems of the large scale sound reinforcement systems and PA applications, and it can be used as a splitter or a mixer. For splitter application, just apply the main signal input from the MAIN IN sockets, and select the SPLITTER mode for each individual channel, then six mono outputs can be gotten. By depressing the MAIN MIX button, two further outputs can be provided.

For mixer application, select the MIXER mode for individual channel, and feed the input signal from the mono input, then six input signals can be mixed together, and output from the MAIN OUT. By depressing the MAIN MIX button, two further inputs can be provided.

Please reserve your time to read this manual before running the unit, and you will be the real master of your SM-828.

2 Features:

The **SM-828** splitter/mixer is equipped with following features:

- 1 rack size.
- SPLIT / MIX switch for each mono channel.
- 2 input, 6+2 outputs splitter.
- 8 Balance / Pan control for each channel.
- Main input and output level control.
- MAIN LINK function allows to route the MAIN IN signal to MAIN OUT, vice versa.
- Level meters for each stage.
- XLR balanced connectors for 4 mono channels, and TRS type for another 2 mono channels.
- Dual voltage unit for global operation.

3 Useful data

Please write your serial number here for future reference.

Serial Number:
Date of purchase:
Purchased at:

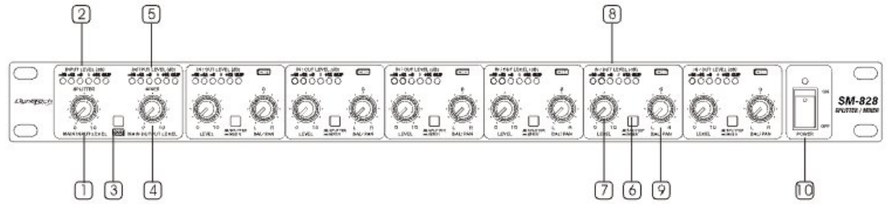
NOTES 9

8 Technical Specifications

AUDIO INPUTS	Connectors	XLR and 1/4" TRS
	Type	RF filtered, servo-balanced input
	Impedance	50 kOhms balanced, 25 kOhms unbalanced
	Nominal operating level	-10 dBV to +4 dBu
	Max. input level	+21 dBu balanced and unbalanced
	CMRR	Typ. 40 dB, > 55 dB @ 1 kHz
AUDIO OUTPUTS	Connectors	XLR and 1/4" TRS
	Type	Electronically servo-balanced output stage
	Impedance	60 Ohms balanced, 30 Ohms unbalanced
	Max. output level	+22 dBu balanced and unbalanced
SYSTEM SPECIFICATIONS	Frequency response	5 Hz to 200 kHz, +/- 3 dBu
	S/N ratio	>95 dBu, unweighted, 22 Hz to 22 kHz
	THD	≦0.002 % typ. @ +4 dBu, 1kHz, gain 1
FUNCTION CONTROLS	Main input level	variable
	Main output level	variable
	Level	variable for each channel
	Balance/pan	placing in the stereo field
FUNCTION SWITCHES	Main Link	links the main input signal to the main output
	Split/mix	changeover from split to mix mode for each channel
INDICATORS	Input level (main)	6-digit LED display: -18/-12/-6/0/+12/Clip
	Output level (main)	6-digit LED display: -18/-12/-6/0/+12/Clip
	Input/output level	6-digit LED display: -18/-12/-6/0/+12/Clip
POWER SUPPLY	Mains Voltages	USA/Canada 120V ~, 60 Hz
		U.K./Australia 240V ~, 50 Hz
		Europe 230V ~, 50 Hz
	Power Consumption	max. 15 Watts
	Fuse	100 - 120 V ~: T 500 mA H
		220 - 240 V ~: T 315 mA H
	Mains Connection	Standard IEC receptacle
PHYSICAL	Dimensions (H*W*D)	483(W)x195(D)x44(H)mm (19"x7.54"x1.7")
	Net Weight	2.6 kg(5.73lb)
	Shipping Weight	3.5 kg

4 Control Elements

4.1 The Front Panel



1. MAIN INPUT LEVEL control

This knob is used to adjust the level of the main input signal, and its adjustable range goes from -∞ to +10dB.

2. INPUT LEVEL meter

This 6-digit meter tells you the level of the main input signal. While the Clip LED lights up, please turn down the main input signal, otherwise, the system will be distorted.

3. MAIN LINK control

Use this switch to link the MAIN IN with the MAIN OUT.

4. MAIN OUTPUT LEVEL control

This knob is used to adjust the level of the main output signal, and its adjustable range goes from -∞ to +10dB.

5. OUTPUT LEVEL meter

This 6-digit meter tells you the level of the main output signal. While the Clip LED lights up, please turn down the main signal at either each input stage or the main output stage, otherwise, the system will be distorted.

6. SPLIT / MIX

Use this switch to select the specific operational mode for each individual mono channel.

For SPLITTER mode, please let the switch released, and the main input signal can then be split into each mono channel output.

For MIXER mode, please engage this switch, and now, the mono channel input signal will be sent to the main output bus, combined with the main input signal on condition that the MAIN LINK is activated, you can get the mixed signal output from the MAIN OUT sockets.

Further, also for the MIXER mode, you can route the mono channel input signal to the mono channel output directly.

7. LEVEL control for each channel

This knob is used to adjust the level of each mono channel, and its adjustable range goes from -∞ to +10dB,definitely, In SPLITTER mode, this control is used to determine the output level of each individual mono channel. While in MIXER mode, this control can be used to determine how much the mono channel input signal is sent to the main output bus and/or each individual mono channel output.

8. INPUT / OUTPUT LEVEL meter

This 6-digit meter tells you the output level of each mono channel, while the Clip LED lights up, please turn down the level control, otherwise, this channel will be distorted.

4 Control Elements

9. BALANCE / PAN control

Generally, the main section uses the stereo input and output, while, for each individual channel, mono application is configured. So, if the stereo main signal is split into the mono channel output, or the mono input signal is routed to the stereo main output bus, please use this knob to determine the proportion between the left and the right.

10. POWER SWITCH & POWER LED

This switch turns on/off the unit. When the unit is powered on, the LED will light up.

4.2 The Rear Panel



11. FUSE HOLDER

Before you attempt to connect and operate the unit, please make sure that your local voltage matches the voltage on the fuse-holder cover.

Caution: The fuse protecting the AC supplies circuits of this unit. The fuse can only be changed by a qualified technician, in the event of a fault or changing the supply voltage. If the fuse continues to blow after replacing, discontinue use of this unit before repaired.

12. AC inlet

This connector is meant for the connection of the supplied main cord. Do not insert power cable into the unit until the voltage has been correctly set. Do not plug power cable into AC power until voltage has been correctly set.

13. MAIN INPUTS

These two XLR balanced connectors are used to input the main stereo signal. In SPLITTER mode, it can be split into each mono channel output.

14. MAIN OUTPUTS

These two XLR balanced connectors are used to output the main stereo signal. By depressing the MAIN LINK, It can be linked with the MAIN IN directly.

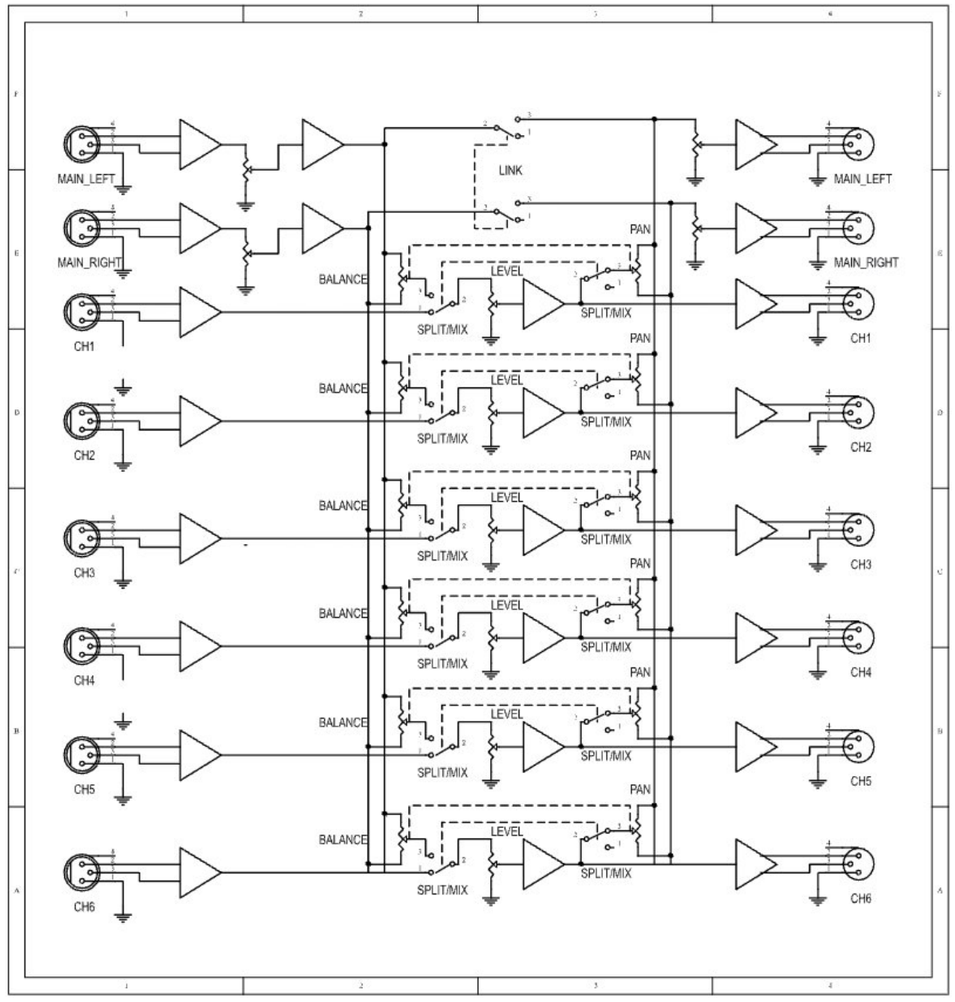
15. INPUT for the mono channel

For Channel 1~4, use the XLR balanced connectors to input the mono signal, while, for Channel 5~6, please use the TRS type.

16. OUTPUT for the mono channel

For Channel 1~4, use the XLR balanced connectors to output the mono signal, while, for Channel 5~6, please use the TRS type.

Block Diagram 7

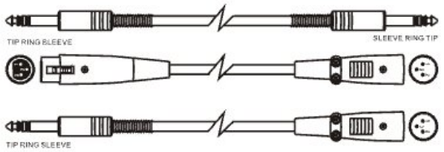


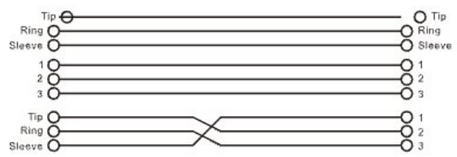
6 Installation & Connection

b. In Line Connection

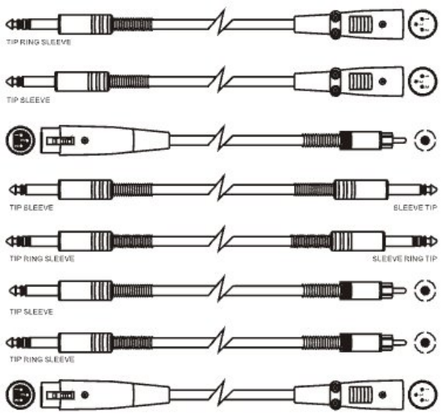
For these applications, the SM-828 provides XLR connectors and 1/4" TRS phone jack to easily interface with most professional audio devices. Follow the configuration examples below for your particular connection.

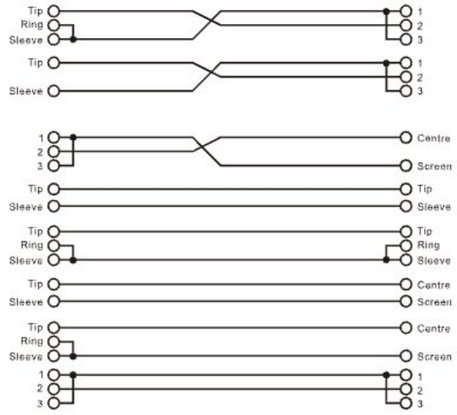
• Balanced





• Unbalanced





Rack Mounting

The most secure mounting is on a universal rack shelf available from various rack manufactures or your music dealer. The SM-828 fits into one standard 19" rack unit of space. Please allow at least an additional 4" depth for the connectors on the rear panel. Be sure that there is enough air space around the unit for sufficient ventilation and please do not place the SM-828 on high temperature devices such as power amplifiers etc. to avoidoverheating.

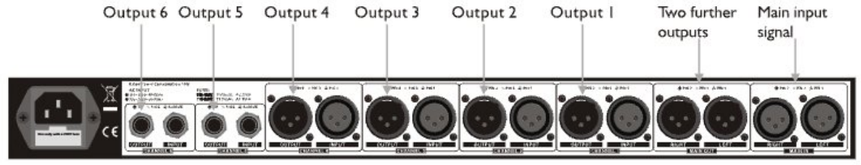
Application 5

From the panel introduction on the chapter 3, you must have caught a clear answer to " What is it?" in your mind as to our SM-828, SPLITTER / MIXER, hereafter, we will show you the further explanation on "How to use it?", So that, you can be the real master of this unit.

How to use SM-828 as the splitter

Sometimes, in the large scale PA / sound reinforcement systems, you may be disturbed by this kind of problems: one pre-send signal needs to be monitored by several groups, or the main mix output of the console should be transited to several power amplifiers, etc. And now, with your SM-828, you will get the best solution.

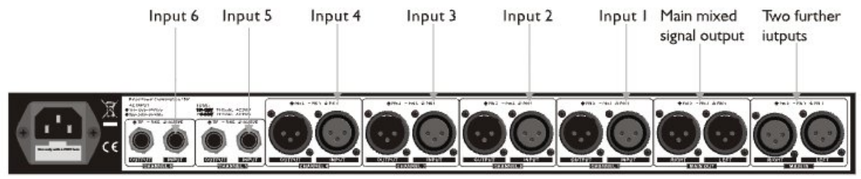
Connect the SM-828 into your systems as the demonstrated, you can split a specific main input signal into up to 6 outputs. With the MAIN LINK button depressed, 2 further outputs are added.



In this application, use the SPLIT/MIX switch to select the SPLITTER operational mode for each mono channel, apply the main signal from the MAIN IN sockets, and get the 6 outputs from the mono OUTPUT sockets of each channel. While the MAIN LINK is engaged, the MAIN OUT will also be linked with the MAIN IN signal, and two further outputs are provided.

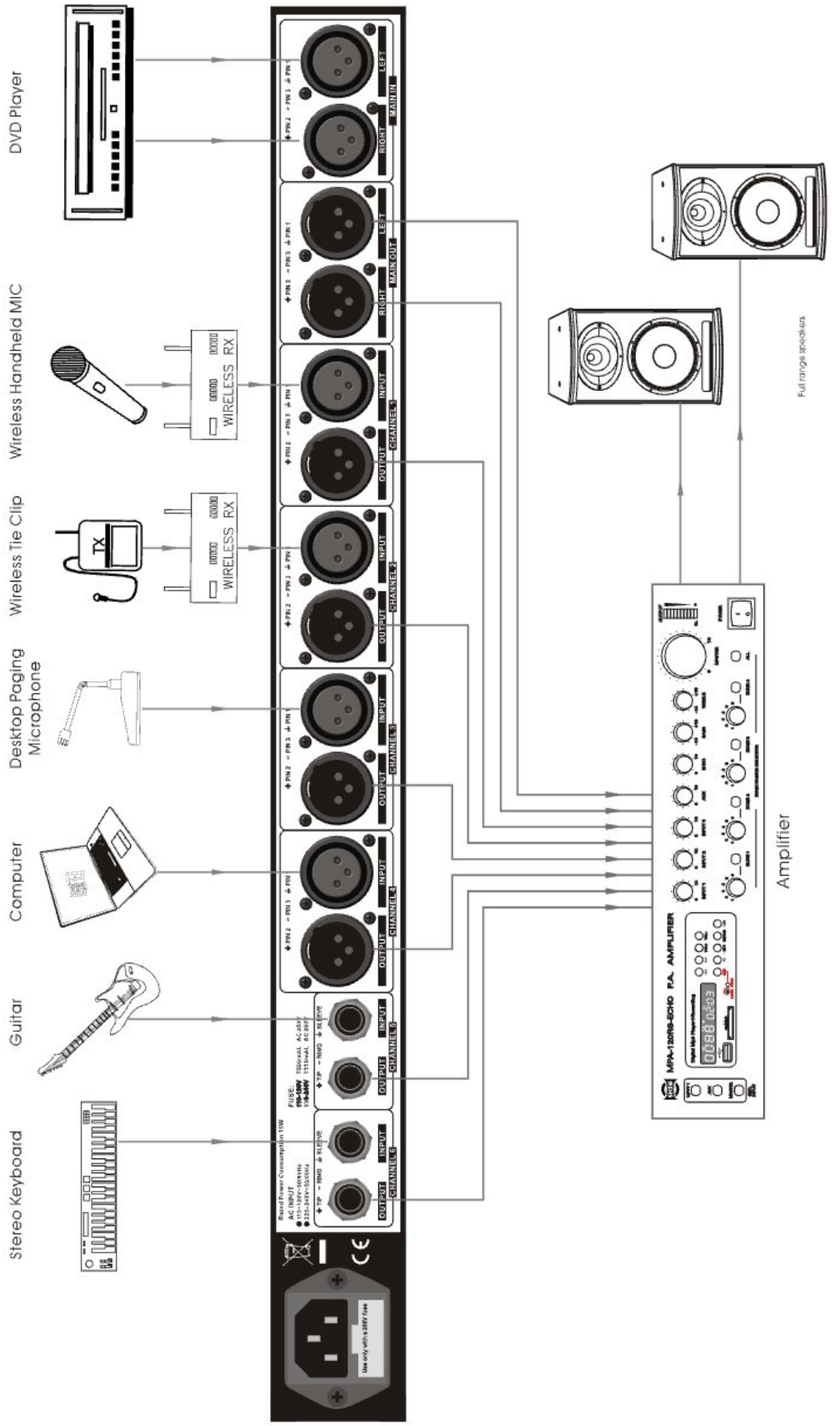
How to use SM-828as the mixer

This application is widely used for the mixing of one group main stereo signal with several mono signals.



In this application, use the SPLIT/MIX switch to select the MIXER operational mode for each mono channel, input the signal from the mono INPUT of each channel, and output the main mixed signal from the MAIN OUT sockets. While the MAIN LINK is engaged, the MAIN IN will also be linked with the MAIN OUT signal, and two further input signals can be mixed with the main output signal.

5 Application



6 Installation & Connection

Mains Connection

This is a dual voltage unit. Please ensure that the SM-828 is set to the correct supply voltage before plugging the power cord into the wall outlet, use the same fuse as marked on the fuse holder at the AC power connection socket.
Do not insert power cord into the unit until voltage has been correctly set. Do not plug the power cord into AC power until voltage has been correctly set.
The mains connection of the SM-828 is made by using the enclosed mains cord and a standard IEC receptacle. It meets all of the international safety certification requirements.

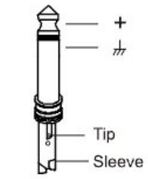
Audio Connection

The SM-828 presents with balanced XLR connectors and 1/4" TRS phone jack, it can be interfaced by several ways to support a variety of applications without any signal loss.

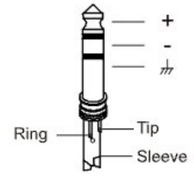
a. Wiring Configuration

Either the 1/4" TRS (Tip-Ring-Sleeve) phone jack or the XLR servo connector can be wired in balanced and unbalanced modes, which will be determined by the actual application status, Please wire your systems as the following examples:

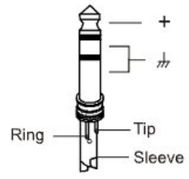
- For 1/4" Phone jack



TS Type Unbalanced

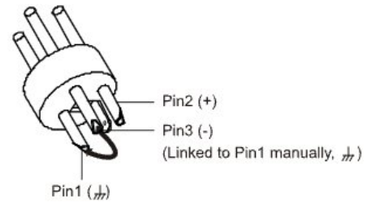


TRS Type Balanced

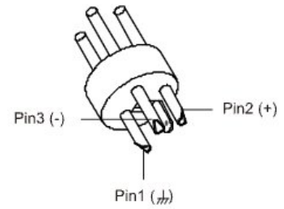


TRS Type Unbalanced

- For XLR connector



XLR Type Unbalanced



XLR Type Balanced