



# TL-DBE

2-Channel Line Output Converter with Digital Bass Enhancer

Owner's Manual



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## TABLE OF CONTENTS

Introduction / Safety.....	3
Features / Package Contents.....	4
Control Functions.....	5
Wiring.....	8
Specifications.....	10
Dimensional Drawings.....	11
Warranty.....	12

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### Owner's Manual

#### INTRODUCTION

Congratulations on the purchase of your new MTX gear. For over 50 years MTX remains an American family-owned manufacturer full of passionate enthusiasts just like you. Thank you for counting on us to help you "Amplify The Ride"!

For best performance and longevity of your audio gear, we recommend you have your new MTX product installed by an Authorized MTX Dealer. Their installation knowledge and expertise will ensure you get the most out of your new equipment while safeguarding against potential issues. Also, please read your product warranty carefully and retain your receipt and original carton for possible future use.

We're here to help with any installation or technical support. Visit [www.mtx.com](http://www.mtx.com) to chat, call 1-800-225-5689 to speak with an MTX Technical Support representative, or visit [www.youtube.com/user/MTXAudioUSA](http://www.youtube.com/user/MTXAudioUSA) to view product videos.

Don't forget to register your new MTX product. Visit [www.mtx.com/productregistration](http://www.mtx.com/productregistration) or scan the QR code below.

Model # \_\_\_\_\_

Serial # \_\_\_\_\_

Dealer's Name \_\_\_\_\_

Date of Purchase \_\_\_\_\_



#### SAFETY

- Please read and follow these instructions to prevent injury and damage to the unit.
- If you are unsure about installing the system by yourself, please have it installed by a qualified MTX technician.
- Whenever working on the vehicle, it is recommended to disconnect the battery prior to starting work. Failure to do so may lead to a risk of electric shock or equipment damage.

When connecting power and ground wires ensure that the red power wire is fused at the point where it is connected to the vehicle's battery. Failure to do so can result in damage to the vehicle if a short circuit develops between the vehicle connection point and the product.

**⚠ WARNING:** This symbol with "WARNING" is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**⚠ CAUTION:** This symbol with "CAUTION" is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



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## Owner's Manual

### FEATURES

- Corrects Bass Roll-off at Higher Volumes Typical of Many Factory Head Units
- Variable Bass Enhancement
- Low / High Level Input Up To 40V
- Multiple Turn-on Options (DC / Rem / Audio)
- Selectable Load Resistance
- Selectable Ground Isolation
- Remote Level Control

### PACKAGE CONTENTS

- 2-CH Line Output Converter
- External Bass Control (EBC) Remote Knob
- QR Code Insert
- Accessories Pack
  - (1) Hex Wrench 2.5mm
  - (4) Washer Head Screws ST4X20
  - (2) PPH Screws ST3X12
  - (2) 4-Pin Phoenix Connectors
  - (1) Slotted Screw Driver 45mm



# TL-DBE

## 2-Channel Line Output Converter with Digital Bass Enhancer

### Owner's Manual

### CONTROL FUNCTIONS



- Gain Control** - The gain control matches the input sensitivity of the line output converter to the source unit being used. The TL-DBE will operate with up to 40V of input voltage.
- Clip LED** - The Clip LED is used to set the gain. The LED will illuminate orange as a visual indicator of when the pair of channels have reached the maximum unclipped output level.
- Power LED** - The Power LED illuminates blue when the TL-DBE is powered on and operating in the normal battery voltage range. The under / over voltage protection activates if the battery voltage drops below 9V, or exceeds 16.5V, and the Power LED turns off.
- Load Select Switch** - This switch is used to simulate the load of a speaker when the high level inputs are connected to a factory audio system that requires this to operate normally. The default setting is 20k / no load.
  - 20 $\Omega$**  - Best suited for late model Dodge / Chrysler / Jeep / Ram / Fiat vehicles equipped with OEM base sound system. (No separate factory amplifier)
  - 60 $\Omega$**  - Best suited for late model Dodge / Chrysler / Jeep / Ram / Fiat vehicles equipped with a separately amplified OEM "premium" sound system.
  - 20k $\Omega$**  - Best suited for all other applications.



# TL-DBE

## 2-Channel Line Output Converter with Digital Bass Enhancer

### Owner's Manual

5. **Ground Isolation Switch** - This switch allows you to configure the way the device ground and audio signal ground are coupled or decoupled inside the TL-DBE to address potential noise in the audio path in some installations. The switch has 3 positions; GND, ISO, and 200 ohms. The unit ships from the factory in the ISO position.
  - GND** - Device ground and audio ground are tied together.
  - ISO** - Device ground and audio ground are separate.
  - 200Ω** - There is 200 ohms of resistance between device ground and audio ground.
  
6. **Turn On Mode Switch** - This switch controls how the TL-DBE is turned on and off. The default and preferred position is DC.
  - DC** - Detects DC offset voltage when using high level (speaker) inputs to turn the device on.
  - Audio** - Detects the audio signal on the high level (speaker) inputs and only turns the unit on when audio is present.
  - REM** - Turns the device on when +12V is applied to the REM IN terminal.
  
7. **Bass Enhancer Control** - This is used to adjust the level of Bass Enhancement. When adjusted correctly the bass level should increase proportionally with the rest of the audio as the volume level is increased.
  
8. **Signal Control** - This is used to set the signal / volume level that the Bass Enhancement circuitry activates as the factory source unit begins to compress or roll off the bass at higher volumes.
  
9. **Status LED** - The Status LED illuminates orange when the Bass Enhancement circuitry is activated.
  
10. **Power Terminal (+12V)** - This terminal is connected to +12V battery power with 14 AWG wire and dedicated fuse, typically where the amplifier or source unit is powered depending on the installation.
  
11. **Ground Terminal** - This terminal is connected to chassis ground with a 14 AWG wire, typically where the amplifier or source unit is grounded depending on the installation.
  
12. **Remote In Terminal** - This terminal is connected to the "remote" wire from the source unit and is used to turn the TL-DBE on when the Turn On Mode switch is set to REM and +12V is applied. The TL-DBE also features automatic turn-on modes that detect DC offset voltage or an audio source signal from the head unit. A remote wire is not needed when using the automatic turn-on feature.
  
13. **Remote Out Terminal** - This terminal connects the TL-DBE remote output to your amplifier's remote input.



# TL-DBE

## 2-Channel Line Output Converter with Digital Bass Enhancer

### Owner's Manual

14. **High Level Inputs** - These terminals connect to the speaker-level outputs of your factory source unit or amp. **Note:** The intended application of the TL-DBE is to receive the audio signal from the factory audio system using the high-level (speaker) inputs. The Low Level RCA inputs are only used if the TL-DBE is being installed after a Line Output converter such as the TL-4.5L.
15. **Low Level RCA Inputs** - These RCA inputs connect to the line level outputs of your source unit.
16. **RCA Outputs** - The RCA outputs are connected to the inputs of your amplifier or sound processor.
17. **External Bass Control (EBC) Port** - This port connects to the included MTX EBC to remotely control the output level of the TL-DBE.



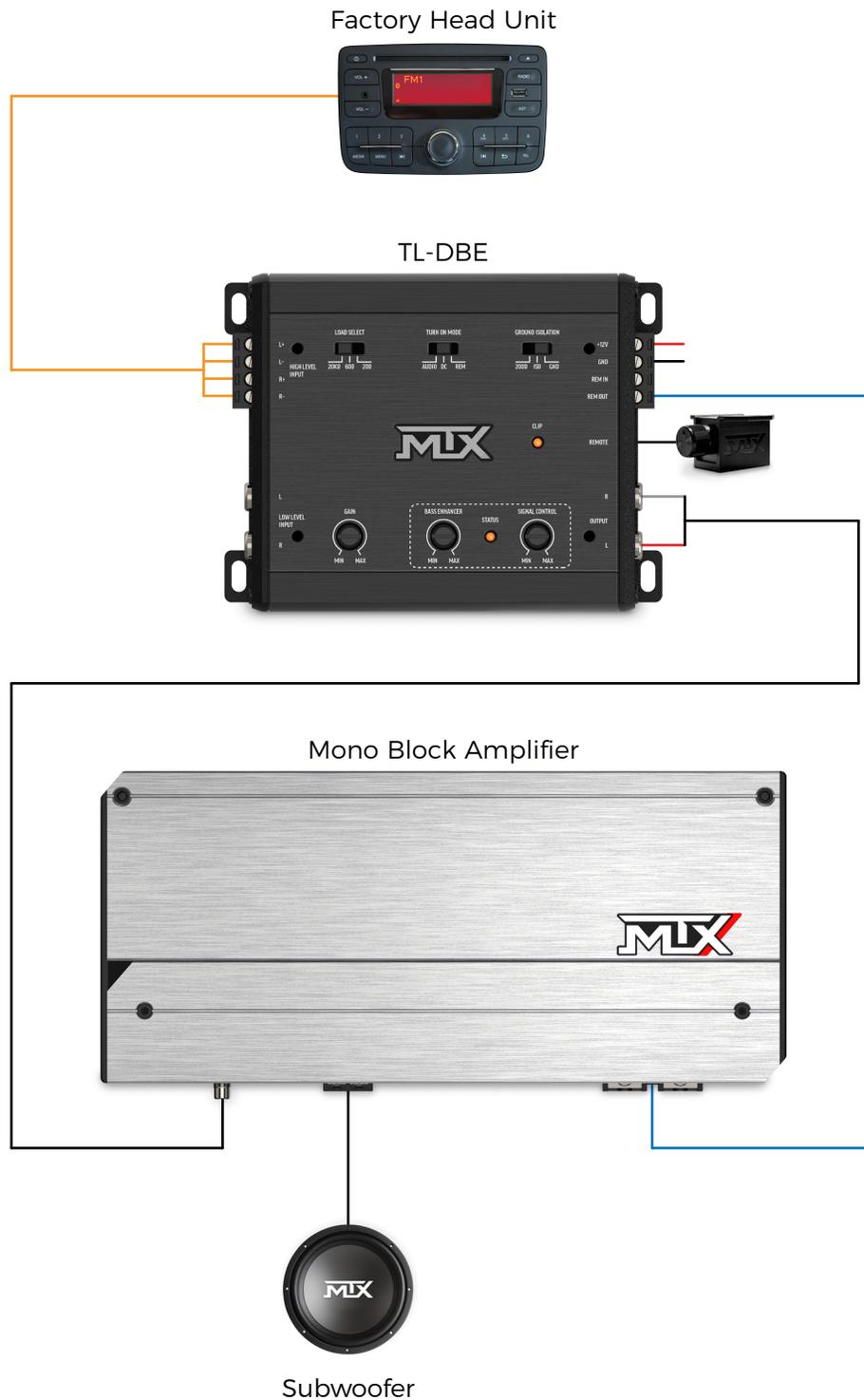
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### Owner's Manual

#### WIRING

**Example 1** - TL-DBE receives high level input signal from factory head unit speaker outputs.



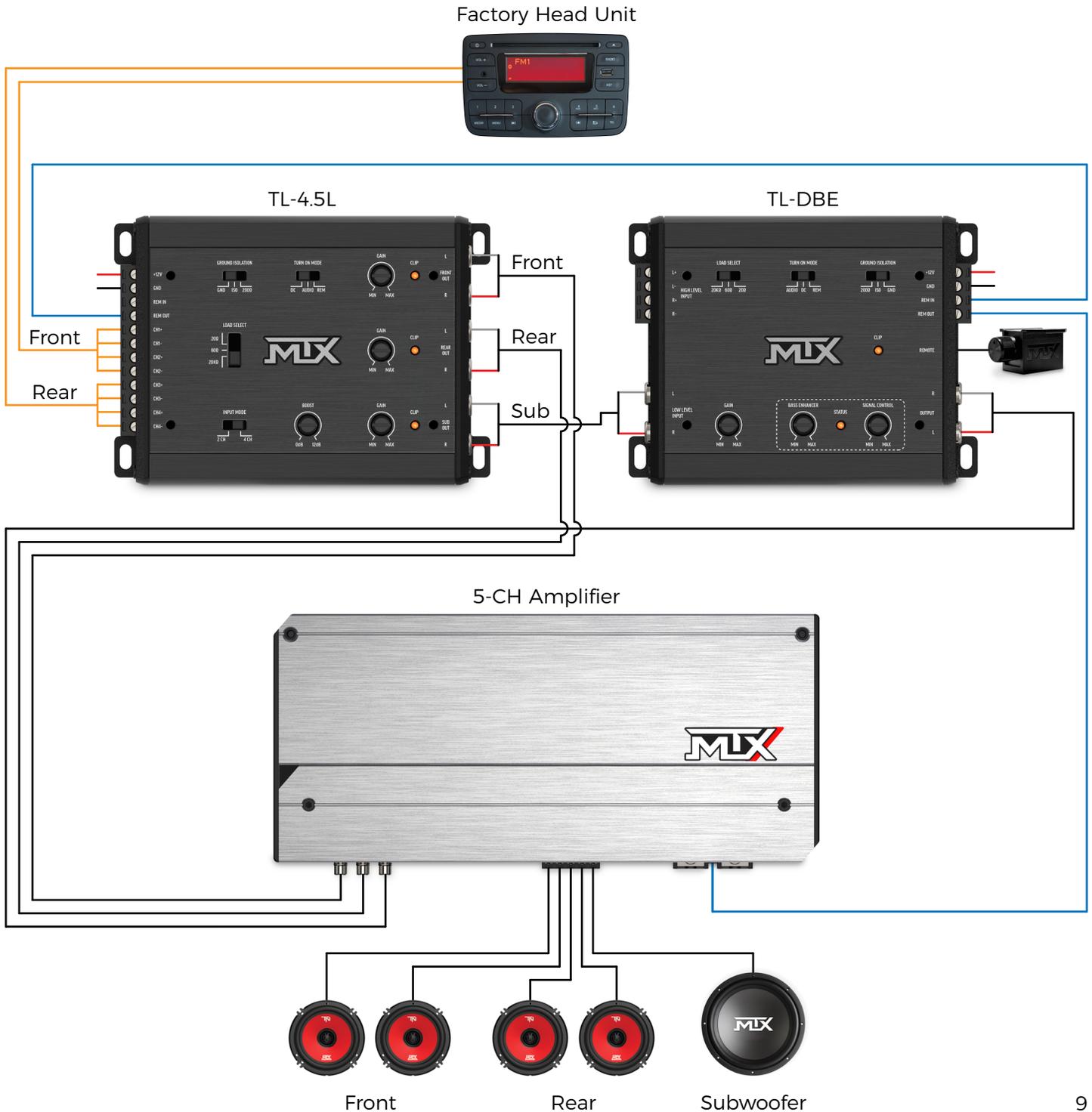
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### Owner's Manual

#### WIRING

**Example 2** - TL-DBE receives low level (RCA) input signal from separate TL-4.5L line output converter.



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### Owner's Manual

#### SPECIFICATIONS

PARAMETERS	
Type	2-CH Line Output Converter with Digital Bass Enhancer
Maximum Speaker Level Input	40Vrms / 400W (20k $\Omega$ Setting)
Input Impedance	Selectable (20 $\Omega$ , 60 $\Omega$ , 20k $\Omega$ )
Preamp Outputs	2
Maximum Output Level	8.5Vrms
Output Impedance	80 $\Omega$
Total Harmonic Distortion	0.08%
Signal to Noise Ratio	>88dB
Frequency Response	20Hz - 20kHz
Recommended Fuse Rating	1A

PHYSICAL	
Product Dimensions (HxWxD)	1-1/8" x 5" x 3-7/8" (28.00mm x 126.00mm x 97.20mm)





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Owner's Manual

## MITEK WARRANTY

MiTek Mobile products (including, but not limited to: MTX, ThunderLink, ThunderWire, Coustic, Streetwires, Xtant, BassSlammer, and Thunder Marine) purchased in the USA from an AUTHORIZED MITEK DEALER are guaranteed against defects in material and workmanship for two years. The warranty period begins the day the product is purchased by the end user, and this warranty is limited to the original retail purchaser of product. Products found to be defective during the warranty period will be repaired or replaced with equivalent product by MiTek at no charge. This warranty is void if it is determined that unauthorized parties have attempted repairs or alterations of any nature, and the warranty does not extend to cosmetics or finish. MiTek disclaims any liability for other incurred or consequential damages resulting from product defects. MiTek's total liability will not exceed the purchase price of the product.

We're here to help! If you experience an issue with any of our products, please contact our customer service technical line at 1-800-CALL-MTX to help troubleshoot your issue. If after speaking with our technical experts it is determined that your product is defective, the technician will provide you with a Return Authorization number and all relevant details you'll need to process your claim quickly.



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