

规格：120\*170mm (设计出血3mm)CMYK封面250g铜版纸 内页100g书写纸 骑马钉

**MUSWAY**  
HIGH QUALITY SOUND SYSTEM

MUSWAY TECHNOLOGY CO.,LTD

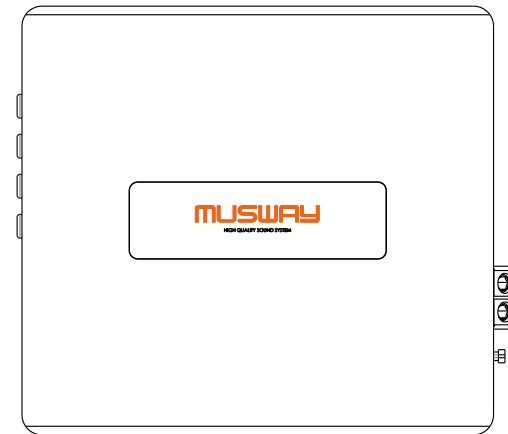
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HTTP://www.imusway.cn



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HIGH QUALITY SOUND SYSTEM



4-Channel Amplifier with 6 channel DSP

M4 USER MANUAL



Please read this manual before using

## Product description

M4 is a 4-channel amplifier and settable in bridge mode; it also features a Dual 32 bit, 330 MHz clock speed digital sound processor (DSP), standalone 24 bit AD/DA converter, essential to maximize the acoustic performance of your car audio system.

It features 4 Hi-Level signal inputs, and provides 4 amplified power outputs. It also features 2ch Line-Level signal inputs, 6ch pre-amplified output that is optimized for driving extra amplifiers .

Each output channel has available: graphically adjustable parametric equalizers, 1Hz-frequency steps electronic crossover and BUTTERWORTH or LINKWITZ filters with 6-48 dB slopes and a digital Time Alignment.

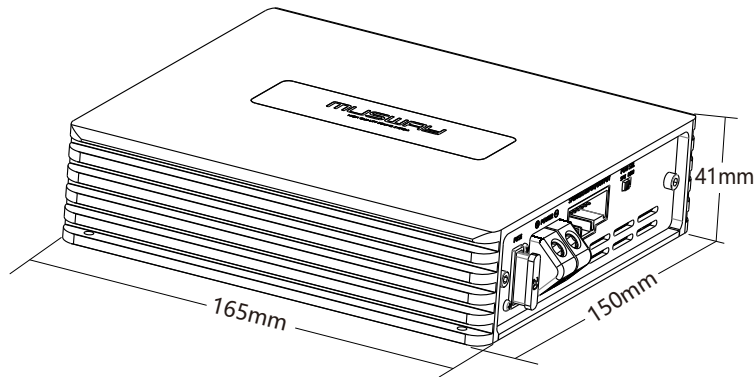
It is possible to extend the functionality of the M4 amplifier by inserting an optional Bluetooth Audio Streaming dongle.



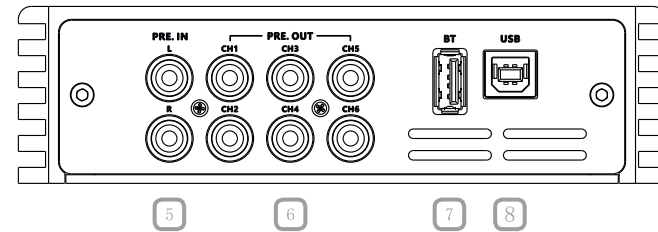
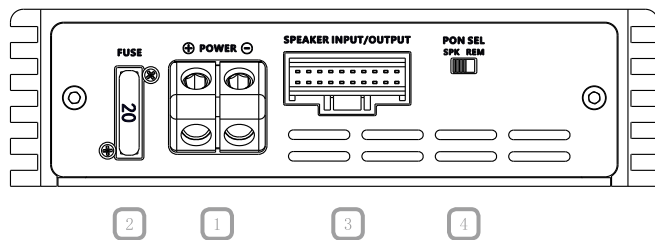
### Precautions:

Before connecting the product, carefully read this manual. Improper connections may cause damage to M4 or to the speakers in your car audio system.

### External Size



### Connection Panels–Description



#### 1 Power

+ Power (11–15 VDC): connection terminal for M4 power supply positive pole. The jack accepts a stripped cable up to  $\phi$  5mm/ with maximum section of 4 AWG . For better power transfer we recommend using cables with the largest possible cross-section and with the same cross-section as the cable connected to the negative pole.

- Power (Ground): connection terminal for the negative power supply pole of the amplifier. Connect here the negative battery cable or a cable connected to the vehicle chassis. The opening will take a stripped cable up to  $\phi$  5mm with a maximum section of 4 AWG. For better power transfer, we recommend using cables with the largest possible section and with the same section as the cable connected to the positive pole.

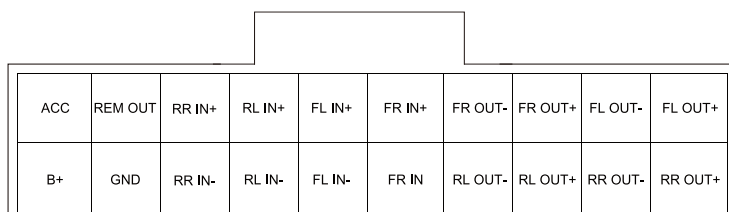
In order to correctly connect the ground (-), use a screw that is already present on the metal part of the vehicle; If necessary, remove any paint residue or grease, using a tester to make sure there is continuity between the negative terminal (-) on the battery and the mounting point. If possible, connect all of the grounds on the audio components to the same grounding point. This helps reduce most of the interference than can occur in audio reproduction.

## 2 FUSE

**FUSE** 30A blade protection fuse needs to be replaced, use same type and value as the original.

## 3 System Connector

Connector for the cable harness.  
Make sure that you only use the original cable that comes with the amplifier to connect the M4 with your car radio.  
Pin assignment show as below:



## 4 PON SEL

Power On method selection.

M4 can be turned on/off using the following 2 methods:

- I .By connecting REMOTE IN terminal with a Remote out signal coming from an after market audio source or ACC.
- II .Through the Hi Level input. The M4 is activated by connecting an amplified head unit output to the Ch1 input channel. To disable the Speaker Turn on function, move the indicated switch to the right to 'REM' position.

NOTE: Power on by ACC is recommend. In case of there' s no ACC signal on the vehicle, choose 'SPK' as an alternative solution.

## 5 PRE IN

**PRE IN** auxiliary low-level stereo signal input.  
The M4 comes with an auxiliary stereo signal input to connect an external stereo pre-amplifier source.

## 6 PRE OUT

**PRE OUT** Pre-amplified signal output.  
6CH pre-amplified output optimized to drive amplifiers for external speakers, such as subwoofer etc..

## 7 BT

USB connection to connect the external Bluetooth for music streaming.

## 8 USB

USB connection to connect the product to a PC in order to manage the functions using M4 software. The connection is USB 1.1/2.0/3.0 compatible.

## Quick install Guide

### Mounting Precautions

Before starting your installation, disconnect the battery's negative terminal.

Choose a site that provides adequate ventilation around the amplifier.

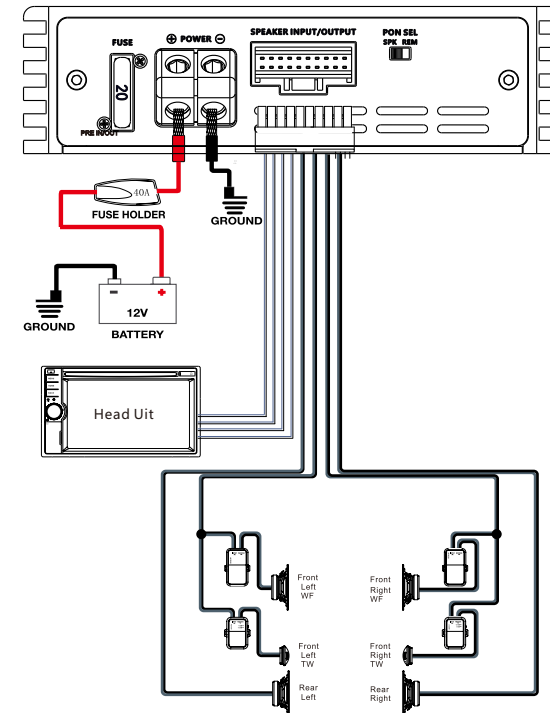
Mounting any amplifier in a confined space without any air movement can still damage internal circuits over time. If this amplifier work on condition that high temperature, will shorten its service life.

Prior to installation, plan the wire routing to avoid any possible damage to the wire harness. All cabling should be protected against possible crushing or pinching hazards. Also avoid routing cables close to potential noise sources such as electric motors, high power accessories and other vehicle harnesses.

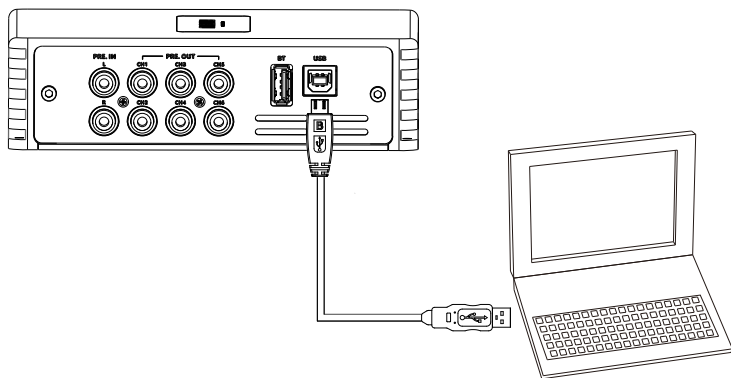
- Mount the amplifier on rigid surface. Do not install the amplifier on plastic or other combustible material.
- Use the multipoint connector provided to connect to an amplified source. The signal to be applied must be balanced signal and have a DC level above 5V.
- Use the multipoint connector provided to connect to speakers.
- Turn on M4, Guided procedure to set the desired car audio system.

**NOTE:** Before turning on the system, Set the head-unit output level at a lower level approximately 20% of its maximum excursion, to avoid damaging the speakers during calibration.

## Typical application



## Initial System Start-Up



Connect a PC to Computer connection terminal of M4 with the included USB cable.

Install the M4 in your vehicle before you connect a PC to it . Turn the ignition key to the ACC or ON position.

When you open sound manager for M4 on a PC, you can set/adjust the audio settings on the PC.

Caution before installing:

This Program runs under Microsoft Windows XP, Vista, 7 or 8 operating system.

Recommended specifications

OS: Windows XP, Windows Vista , Windows 7

CPU: 1.6 GHz or higher

Memory: 1 GB or higher

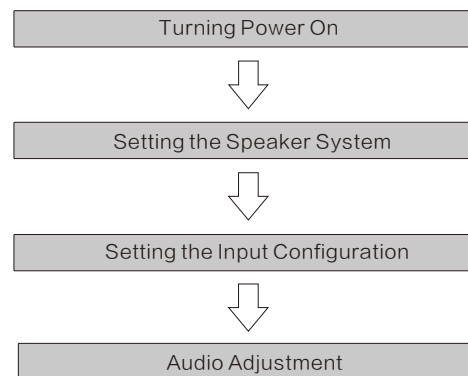
HDD: 512 MB or more available space

Display: 1024 × 576 or higher

Download and save the software for M4 before connecting the amplifier to your personal computer.

## Before You First Use the Unit

When you first use the unit, set the following:



### **⚠ WARNING:**

Check again the configuration of the crossovers , the speakers' setup.

Wrong type of crossover or inappropriate parameter may cause speakers permanent damage, especially tweeters without passive crossover.

**NOTE:** The M4 is on when the logo on the top lights up in orange. After 8 seconds to become operative.

## TECHNICAL SPECIFICATIONS

### POWER SUPPLY

Voltage:	8 – 15 VDC
Switched off:	<0.1 mA
Consumption@14.4VDC2Ω MaxMusicalPower:	20A
Remote IN	8– 15 VDC(1mA)
Remote OUT	8 – 15 VDC (200 mA)
Fuse	20 A

### AMPLIFIER STAGE

Distortion–THD(1kHz@4Ω,90%Power):	0.05%
Bandwidth(–3dB,2VRMS,4Ω):	15Hz–22kHz
S/N ratio @ A weighted, 1V, Max Power:	95 dB A
Dampingfactor@1kHz,2VRMS,4Ω:	>70
Input sensitivity:	5 V RMS(Hi–level);0.5V RMS(line–level)
Inputimpedance:	13Ω (High–level);47K(Line–level)
LOAD IMPEDANCE (MIN):	
4Ch Stereo:	2Ω
2Ch–Bridge(1–2)(3–4):	4Ω
OUTPUT POWER (RMS) @ 14.4 VDC, 1% THD:	
4Ch@4Ω:	55W x 4
4Ch@2Ω:	70W x 4
2Ch–(Bridge1/2;3/4;)@4Ω:	150W x 2
OUTPUT POWER (RMS) @ 14.4 VDC, 10% THD:	
4Ch@4Ω:	75W x 6
4Ch@2Ω:	85W x 6
2Ch–(Bridge1/2;3/4;)@4Ω:	170W x 2

### SIGNAL CONNECTIONS

RCA Pre–Out:	4V RMS Max
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### DIGITAL SIGNAL PROCESSOR (32 bit )

Crossover:	Full / Hi Pass / Lo Pass / Band Pass
Crossover type and slope:	Linkwitz @ 6/12/18/24/30/36/42/48 dB – Butterworth @ 6/12/18/24/30/36/42/48 dB
Crossover Frequency:	1Hz step @ 20 – 20k Hz
Phase inversion:	0° / 180°
Output Equalizer	31Band Parametrics Equalizers: ± 12 dB;
Time Alignment Distance	0 – 346 cm / 0 – 136 in.
Time Alignment Delay	0 – 10 ms
Time Alignment Step	0,02 ms; 2,8 cm / 1.1 in.
Time Alignment Fine Set	0,02 ms; 0,7 cm / 0.27 in.
Presets (Local Stored)	6 Presets

### GENERAL REQUIREMENTS

PC connections	Micro USB (1.1 / 2.0 / 3.0)
Software/PC requirements:	Microsoft Windows (32/64 bit): XP, Vista, Windows 7, Windows 8,Windows10
Graphic card min. resolution:	1024x 768
Ambient operating temperature range:	0 ° C to 55 ° C (32° F to 131° F)

### SIZE / WEIGHT

Max size (mm):	165 x 150 x 41
Net Weight (kg):	1.5