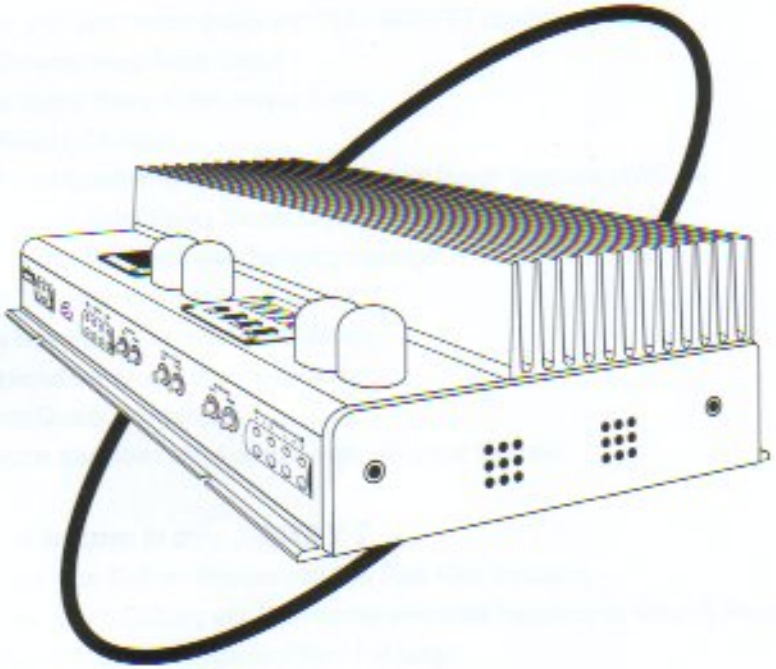
* * * * * * * * OWNER'S MANUAL * * * * * * * *

μDiMENSiON



μ-20VS V.2 / μ-40XS V.2

INTRODUCTION

Congratulations on selecting a μ-**Dimension** state-of-the-art component Power Amplifier.
Your choice of a μ-**Dimension** Power Amplifier indicates a true appreciation of fine musical reproduction.
To ensure maximum performance and safety, please follow this manual.

STANDARD FEATURES

Common features in μ-20VS V. 2 and μ-40XS V. 2

- Heavier and Clean sound quality with FULL MOSFET circuitry
- Wide Dynamic Head Room Circuit
- Double Output Power 4 ohm Versus 2 ohm
- Gold Plated RCA Jacks
- Gold Plated Speaker Terminals and High Current Power Terminals (AWG #4)
- Military Grade Glass Epoxy Double Layer PC Board
- Built-in Digital Volt Meter with displaying message
- Detent Type Volume Control
- Luxury Side Panels made by wood(Walunt)
- Professional Design and Internal Artwork
- Premium Quality Components
- No thermal shut down with 4 ohm operation(Thermal Balance)

Special features in only μ-40XS V. 2

- High Pass Filter Built-in : Relation with Low Pass Filter frequency
- 48dB / oct X-over Circuitry with Professional selectable frequency by Network Resistor
- Subsonic Filter Built-in : Subsonic Filter / Full range
- Low Pass Filter Output RCA Jacks
- Low Pass Filter Output Gain Control Volume

INSTALLATION

The quality of the installation will affect the system performance and reliability.
If you realize the complexity of the installation, you may wish to contact your local μ-**Dimension** authorized dealer.
The amplifier is generally mounted in the rear trunk area, but can be mounted other convenient areas such as beneath seat.
Please be such to locate this unit on the reasonable air circulation and protection from unusual hazards. When deciding the mounting location, it should be considered to minimize the power supply wires and speaker wires.
Minimizing both wires will provide higher audio output from the system.
It is important to ensure that the cooling fins of the heatsink are not against a panel or a surface preventing air circulation.
To avoid slipping and scratching your new μ-**Dimension** amplifier, predrill the mounting holes with f3.4 diameter drill bit when using the screws supplied in the accessory kit.
Be sure to investigate your mounting area thoroughly for electrical wires, vacuum lines, and brake or fuel lines to prevent any expensive mistakes.

CAUTION

Before drilling or cutting any holes, investigate the layout of your automobile thoroughly.
Take care when working near the gas lines or hydraulic lines and electrical wiring.
Do not use the power amplifier unmounted, attach the amplifier securely to the vehicle.

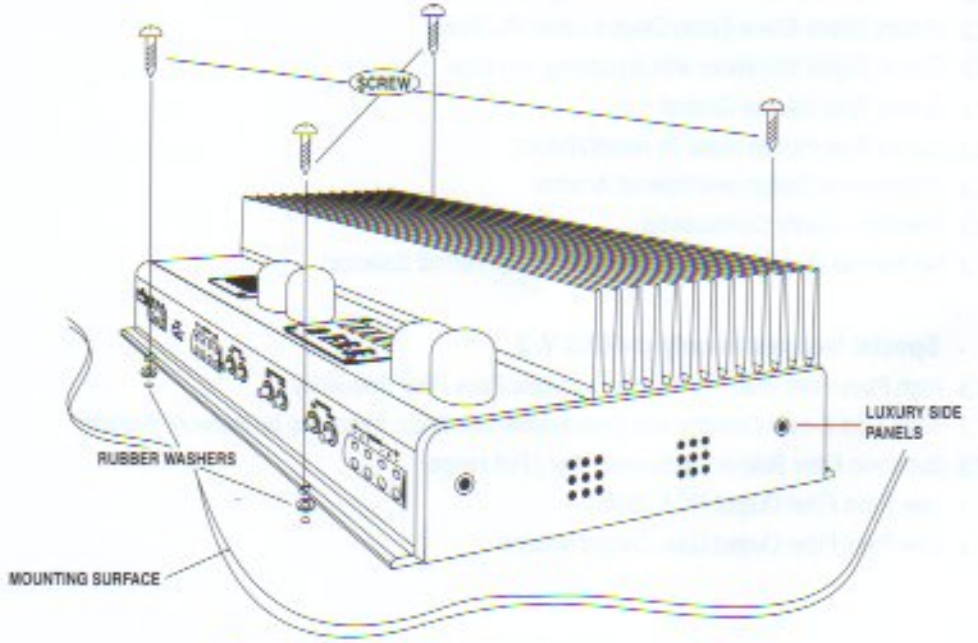


Fig.1. INSTALLATION OF AMPLIFIER

POWER SUPPLY CONNECTIONS

The +12V DC and ground wires should be heavy gauge stranded copper wire with heavy insulation, the wire gauge should be 4 AWG or larger.
In addition, it has a 12V turn on wire and it should be 18 AWG.

+12V POWER

This terminal is connected directly to the battery terminal with a 4 AWG wire or larger and do not connect to CAR fuse block.

GROUND

This terminal is the electrical ground and must be fastened securely to the vehicle chassis.
The 4AWG wire is recommended for this connection.
Ensure that all paint, coating or other insulations are removed from around the hole area.

REMOTE TURN ON

Many radio's or other music sources have an output terminal for connection of the remote turn-on of the power amplifier.
If a radio doesn't have a remote turn-on feature, then you can use the antenna relay wire which activates the antenna motor.
But you must take notice if the antenna is lowered when the tape player is operating.
In this case, you cannot use the antenna relay wire to operate the remote turn-on.

CAUTION

To begin, make +12V wire connection, secondly the ground connection and finally the remote connection.
Furthermore, the +12V wire must always be fused at the battery end for protection against possible damage.
If you need to replace the power fuse, replace it with a same value shown on the surface of the fuse.
Using a fuse of a different type or rating may result a serious hazard.

SIGNAL INPUT CONNECTIONS

This amplifier has RCA connectors for low level input.
Adjustment of input level is accomplished by the gain control.
Adjusting this control allows the amplifier gain to be controlled so as to match and balance each channel.

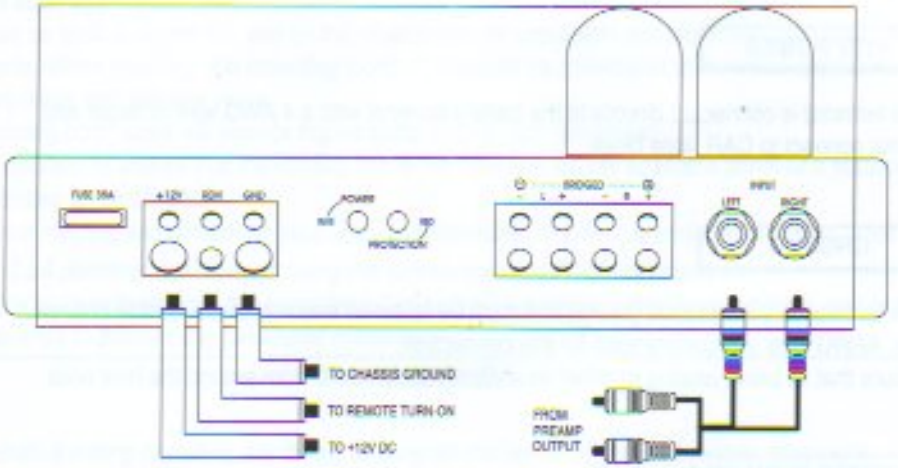


Fig.2. POWER & SIGNAL INPUT CONNECTIONS (μ-20VS V.2)

FRONT CHANNEL

The RCA-jacks of FRONT INPUT are the "Line-in" terminals and are to be connected with your radio/cassette or CD player.
Make sure you put the left channel to the RCA jack marked "Left", the right Channel to the RCA-jack marked "Right".
As you can see, 4ch amplifier gives you the possibility to connect a second (or more) amplifier to your system via FRONT LPF OUTPUT.
Adjustment of LPF output level is accomplished by LPF gain control.

REAR CHANNEL

The RCA-jacks of REAR INPUT are the connectors for low level input.
Adjustment of input level is accomplished by the gain control.

SIGNAL INPUT CONNECTIONS

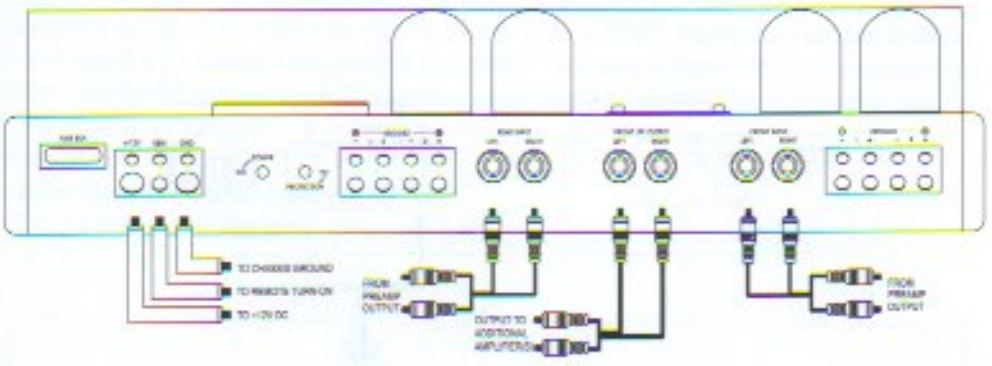


Fig.3. POWER & SIGNAL INPUT CONNECTIONS (μ-40XS V.2)

SPEAKER OUTPUT CONNECTIONS

The speaker wires should be connected to the speaker terminals on the amplifier. Notice that most speakers have a polarity marking such as a "+" or a dot on the speaker terminals and these markings denote the positive terminals of the speaker and are used as a guide to phase the speaker. Improper phasing causes a loss of bass response. For optimum performance, speaker impedances should be 4 ohms or greater.

CAUTION

Never connect any speaker lead to the car chassis or other lead.
This can cause severe damage to your stereo system.
If you have an OHMMETER, please use it to check for short circuitry and speaker resistance.

This amplifier has the BRIDGE / STEREO Switch in itself.
There is no need to select the BRIDGE or STEREO.
You can connect the speakers to each channel in STEREO MODE and simultanously you can connect one SUBWOOFER to the speaker terminal same as the BRIDGE mode.
That is, this model can be operated in 3-way speaker systems.

The 3-way Speaker Mode is achieved from the following procedure.

(1) Connect one Subwoofer in Bridge Mode. (Fig.4.)
(2) Connect the 2 Speaker in Stereo Mode. (Fig.5.)

* * * * * SPEAKER OUTPUT CONNECTIONS (μ-20VS V.2) * * * * *

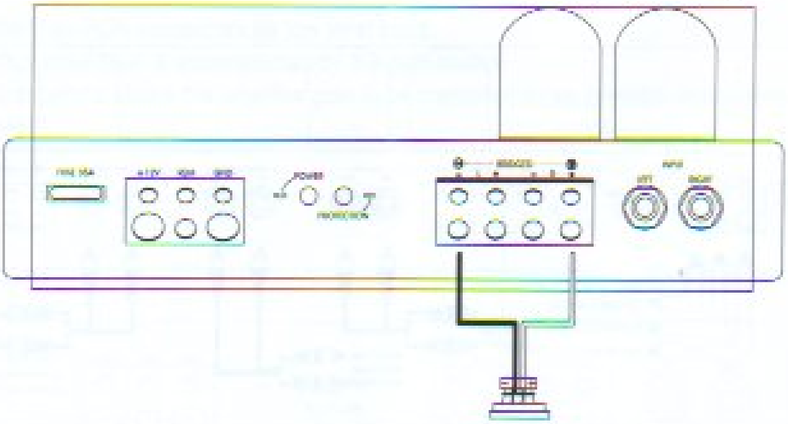


Fig.4. SPEAKER OUTPUT CONNECTION-BRIDGE MODE (μ-20VS V.2)

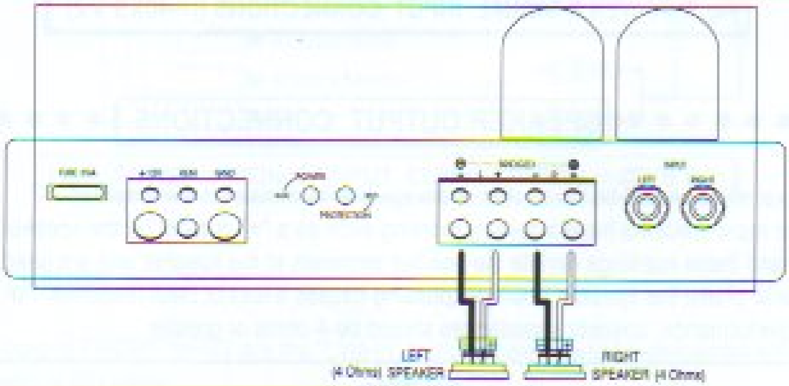


Fig.5. SPEAKER OUTPUT CONNECTION-STEREO MODE (μ-20VS V.2)

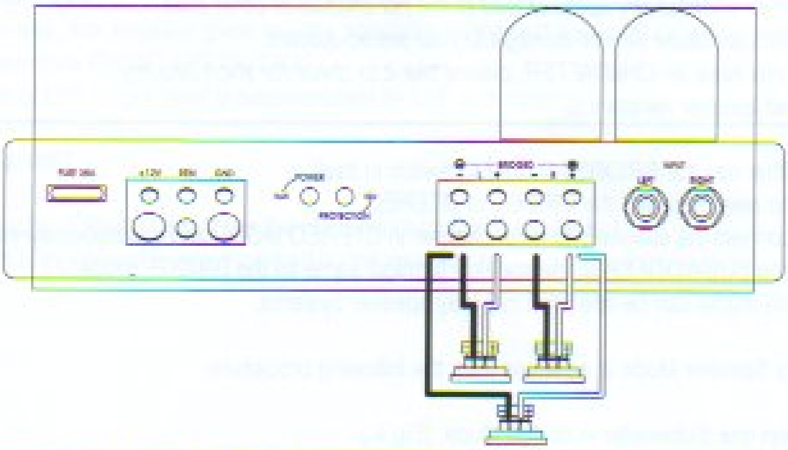


Fig.6. SPEAKER OUTPUT CONNECTION-3-WAY MODE (μ-20VS V.2)

***** SPEAKER OUTPUT CONNECTIONS (μ-40XS V.2) *****

This amplifier can give you four selection of speaker mode to suit your preference. Before making the speaker connections, make sure that the RIGHT, LEFT, FRONT, REAR channels and positive (+) and negative (-) polarities are correctly connected. The usage of lower-impedance speakers may lead to overheating and damages. The speaker wires should be connected to the speaker terminal on the amplifier adequately.

Please see the Fig.7, Fig.8, Fig.9, Fig.10.

1. Mono Mode (2 Channel Mode)

This function is available when Crossover is off.

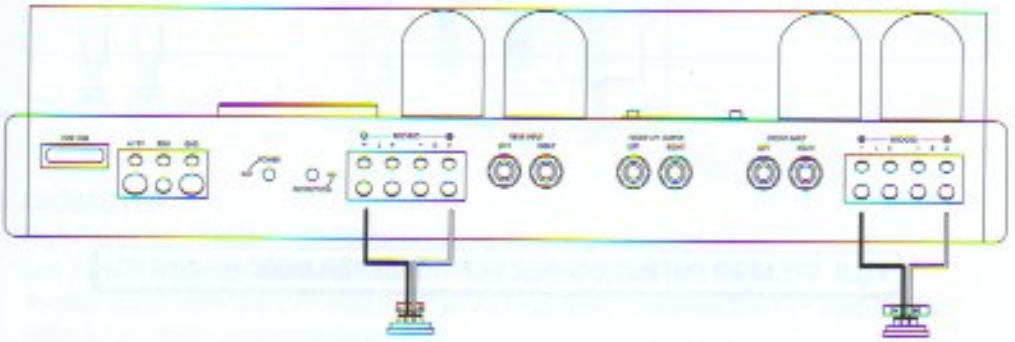


Fig.7. SPEAKER OUTPUT CONNECTION-MONO MODE (μ-40XS V.2)

2. STEREO Mode (4Channel Mode)

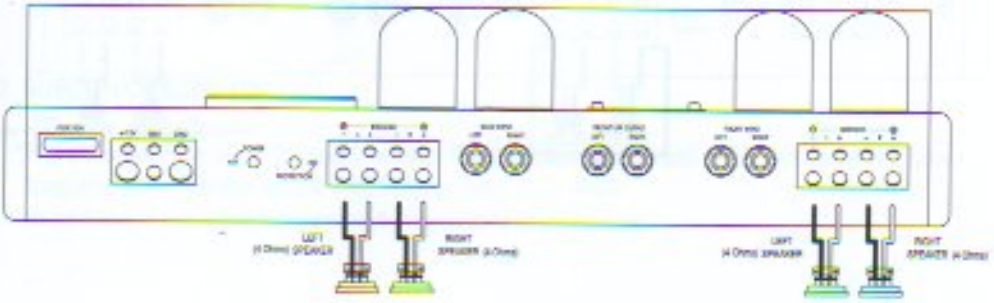


Fig.8. SPEAKER OUTPUT CONNECTION-STEREO MODE (μ-40XS V.2)

3. MIXED MONO MODE (3 Channel Mode)

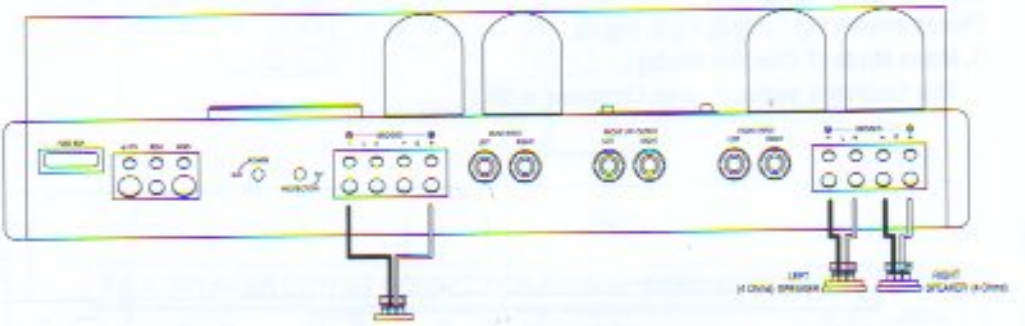


Fig.9. SPEAKER OUTPUT CONNECTION-3 SPEAKER MODE (μ-40XS V.2)

4. MIXED MODE MODE (5 Speaker System)

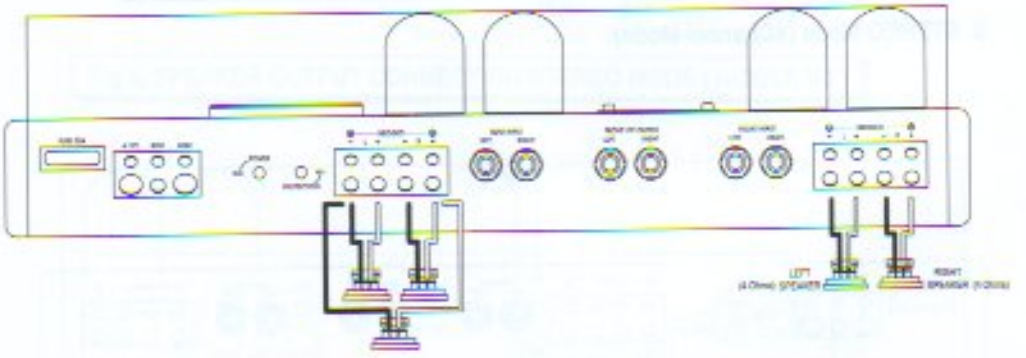
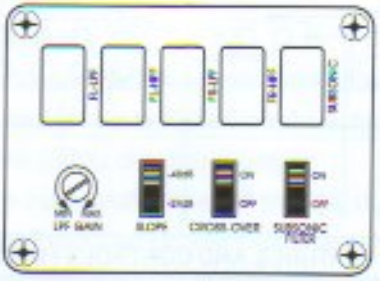


Fig.10. SPEAKER OUTPUT CONNECTION-5 SPEAKER MODE (μ-40XS V.2)

******** THE FUNCTIONS OF CROSSOVER ********

We would like to introduce the finest function of the amp to you as belows.
The special functions of **μ-40XS V.2** are CROSSOVER & SUBSONIC FILTER.
As you can see the drawing of crossover, there are many functions on crossover.
Please understand these below instructions in order for you to enjoy maximum performance.



1. CROSSOVER

*High Pass Filter (24dB/oct, 48dB/oct) works via front output speaker.
*Low Pass Filter (24dB/oct, 48dB/oct) also works via LPF output RCA Jacks.
In other words, HPF and LPF work together via Front output speakers and LPF output RCA jacks automatically when Crossover is ON.
*LPF GAIN adjusts the LPF output level.
*SLOPE : You can select the slope between 24dB/oct and 48dB/oct.
*NETWORK RESISTOR
Frequency of HPF, LPF, and SUBSONIC FILTER can be adjustable by changing Network Resistors.

2. SUBSONIC FILTER ON

*The subsonic filter 40Hz (Network resistor fixed) allows to suppress or cut out unwanted Low frequencies, which are mostly inaudible anyway.
In addition, it can work independently regardless of crossover.

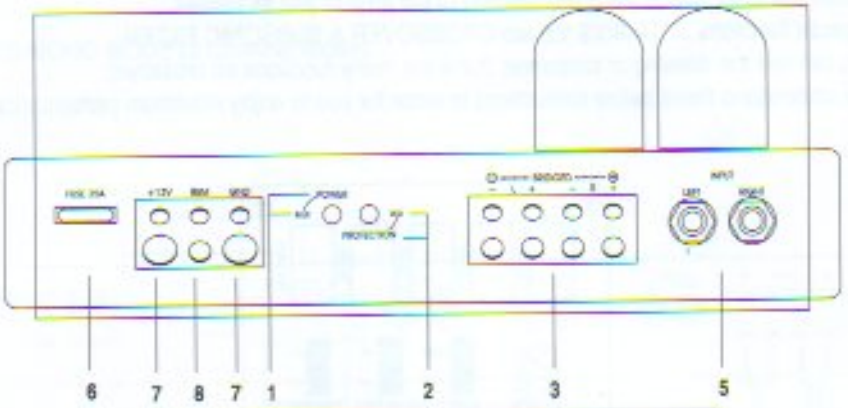


Fig. 11. FEATURES AND CONTROLS (μ-20VS V.2)

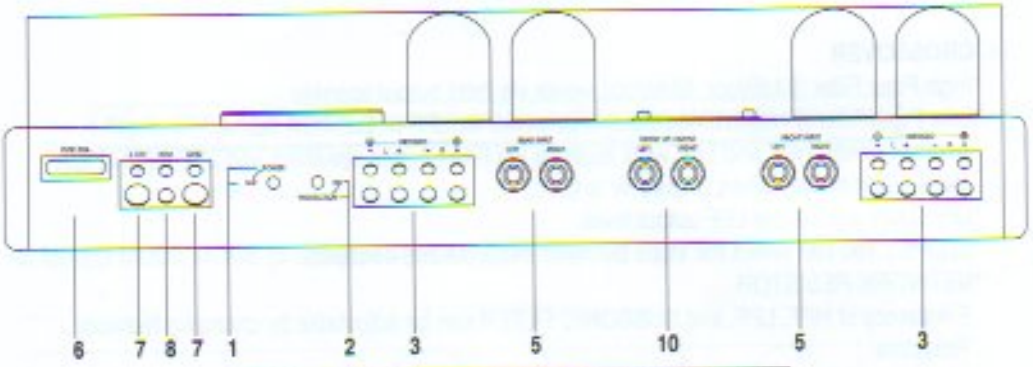
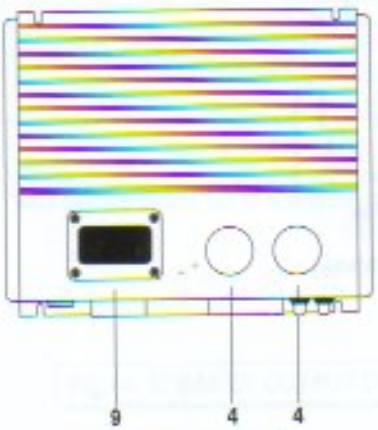
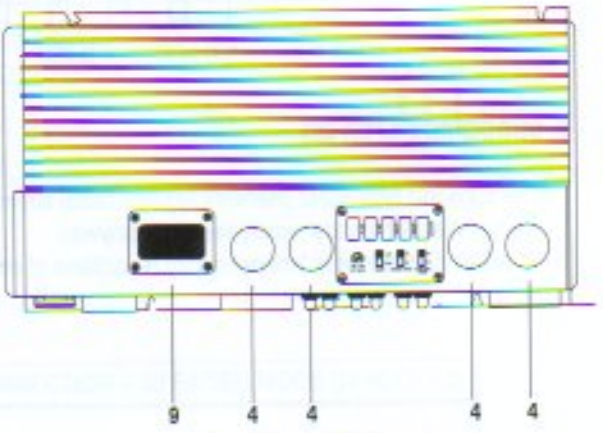


Fig.12. FEATURES AND CONTROLS (μ-40XS V.2)



μ-20VS V.2



μ-40XS V.2

1. **Power LED (Blue)**
2. **Protection LED (Red)**
3. **Speaker Terminals**

   It allows the connection of speakers to the amplifier.
4. **Input Level Controls**

   This is for adjusting input sensitivities.

   To adjust the sensitivity, turn the controls fully counterclockwise to minimum.

   Adjust the radio / head unit volume knob to maximum volume, then turn the level controls on the amplifier clockwise until audible distortion occurs.

   Each level controls adjust the input sensitivites of left and right channel separately.
5. **RCA Low Level Input Jacks (Front channel and Rear channel)**

   It allows left and right input channels to be connected to the amplifier using RCA jacks.
6. **Fuse**

   It protects both the amplifier and automobile electrical system from fault conditions

   It is a standard automotive fuse.
7. **Power Connection**

   It connects +12V DC power wire from the battery and also connects GND wire from a connection point on the vehicle chassis.
8. **Remote**

   This connects the control wire switch which allows the amplifier to be turned on and off by the head unit.
9. **Digital Volt Meter**

   It indicates the current battery voltage and message.
10. **Low Pass Filter Output Jacks**

    LPF works via RCA Jacks when crossover is on.

    Full range works via RCA Jacks when crossover is off.

SPECIFICATIONS

	μ-20VS V.2	μ-40XS V.2
❑ Continuous power output		
• 4 Ohm , Stereo	: 75W x 2 (RMS)	50W x 4 (RMS)
• 2 Ohm , Stereo	: 150W x 2(RMS)	100W x 4(RMS)
• 4 Ohm , Bridge	: 300W x 1(RMS)	200W x 2(RMS)
❑ Frequency Response	: 10Hz - 50KHz	10Hz - 50KHz
❑ Total Harmonic Distortion	: < 0.05%	< 0.05%
❑ Signal to Noise Ratio	: > 102dB	> 102dB
❑ Input Sensitivity	: 300mV - 3V	300mV - 3V
❑ Input Impedance	: 20 KOhm	20 KOhm
❑ Damping Factor	: >250	>250
❑ Stereo Separation	: > 70dB	> 70dB
❑ Fuse Rating	: 25A	50A
❑ Output Impedance	: 2 - 8 Ohms	2 - 8 Ohms
❑ Crossover		Selectable HPF -24dB/oct -48dB/oct Selectable LPF -24dB/oct -48dB/oct Subsonic Filter -18dB/oct
❑ LPF OUT Level (Adjustable)		44.2mV - 830mV
❑ Digital Volt Meter	:$3\frac{1}{2}$	$3\frac{1}{2}$
❑ Dimension (W x H x D)m/m	: 272 x 97.5 x 222	462 x 97.5 x 222