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# STD850D STD202D STD401D

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COMPETITION AMPLIFIERS

USER'S GUIDE 1-4channel car audio power amplifier





ITALY www.gt-trading.it

# INTRODUCTION

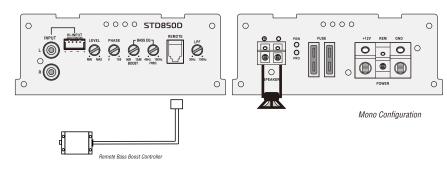
Thanks and congratulations for chossing this mobile audio for your amplification needs .The amplifiers have been significantly improved throughout years to assure quality and reliability. The latest technology has been incorporated into every product providing you with incredible power and unparalleled sound quality.Our simple, highly developed circuitry contributes to low distortion and the ultimate in efficiency. That's why we are sure that your new amplifier will provide you with a sound value you can enjoy for years to come.

# PRECAUTIONS

- Pay utmost attention if you install the amplifier into the driver's compartment.
- Use only in cars with a 12 Volt negative ground.
- Before wiring, disconnect the cable from the negative battery terminal to avoid short circuits or electrical shocks. Make the correct connections.
- Do not connect the positive and negative cable of the amplifier to the original cables of the car because of its low capacity.
- Do not damage pipe or wiring when drilling holes.
- Arrange the wiring so it is not crimped or pinched by a sharp metal edge.
- Do not install the amplifier in locations which might hinder vehicle operations and do not install in locations with any moisture. Use the installation materials provided with the amplifier.
- Do not use bolts or nuts in the brake, airbags or other safety relevant systems to make ground connections.
- <u>Warning!</u> Amplifiers may produce sound pressure levels that exceed the threshold at which hearing loss may result. They may also impair a driver's ability to hear traffic sounds or emergency vehicles. Practice safe listening when listening to your audio system. When the amplifier works in particularly hard conditions, it can research up to 90°C. Make sure its temperature is safe before touching it. This amplifiers are developed for motor vehicle use only.

| Power Supply<br>Power supply voltage     | : 10 - 16 VDC            |
|------------------------------------------|--------------------------|
| Amplifier Stage                          |                          |
| <i>Output power</i> (RMS) @ 14,4V / 4 Ω  | : 500 Watt x 1           |
| Output power (RMS) @ 14,4V / 2 Ω         | : 850 Watt x 1           |
| Output power (max.) @ 14,4V / 4 $\Omega$ | : 1000 Watt x 1          |
| Output power (max.) @ 14,4V / 2 $\Omega$ | :1700 Watt x 1           |
| Distortion (THD)                         | : <0,5%                  |
| S/N Ratio                                | : >90dB                  |
| Input sensivity                          | : 200mV - 6,0V           |
| Filters                                  |                          |
| Low pass filter/slope                    | : 30 Hz - 150 Hz / 24dB  |
| Bass Boost Frequency                     | : 0 - 12dB / 40 - 100 Hz |
| Other Functions                          |                          |
| Fuse                                     | : 40 A x 2               |
| Max size (W x H x L)                     | : 135 x 52 x 300 mm      |

#### STD850D CONFIGURATION SAMPLES



# **USER'S GUIDE**

# STD850D REAR PANEL

1. Speaker Terminal

*Connect the (+) and (-) clamps to your subwoofers. Be sure of right polarity.* 

<u>Warning!</u> Never connect the speaker cables to the vehicle body. Don't use speaker impedance lower than  $2\Omega$ .

2. LED's

The Power LED lits green if the amplifier is in use. The Protect LED lits red if the amplifier is in saftey mode.

3. Fuses

These fuses protects the amplifier against internal electrical damage. Change them only to other fuses with the same value.

4. Power Terminal

• GROUND: Connect the GND terminal to the chassis ground. Please use a 10mm<sup>2</sup> cable or bigger. The max length of the ground wire has to be 1m.

• REMOTE: Connect the remote terminal to the remote output of your headunit. The amplifier automatically turns on as soon as a signal is received (TURN ON). The remote connection of the Power -terminal (REM) won't be used.

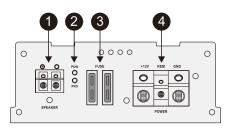
• +12V: Connect this terminal to the battery "+" (Plus)- pole. Please use a 10mm<sup>2</sup> cable or bigger. Always protect this wire by installing a fuse within 30cm of the battery terminal connection.

#### STD202D FRONT PANEL

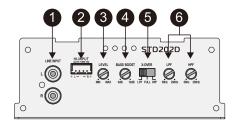
- 1. RCA Input Left and right RCA inputs.
- 2. *Hi Input Connector High level inputs left and right to connect the amplifier to the radios speaker outputs. The amplifier automatically turns on as soon as a signal is received (TURN ON).*
- 3. Level Controller Controls the left and right channels output level.
- 4. Bass Boost Controller Controls the bass boost at 45Hz between 0 and +12dB.
- 5. Crossover Switch Switches the amplifier channels in full range, low pass or high pass mode.
- 6. Frequency Controller

Controls the low pass or high pass frequency of left and right channels between 50Hz and 250Hz. Only in use if the crossover switch is in Low Pass (LP) or High Pass (HP) position.

#### STD850D REAR PANEL







# STD202D REAR PANEL

#### 1. Speaker Terminal

Connect the channels left and right to the speakers left and right. Be sure of right polarity. Use only the outputs left + and right - to bridge the channels. In bridged mode you have to use the inputs left and right.

<u>Warning!</u> Never connect the speaker cables to the vehicle body. Don't use speaker impedance lower than 2  $\Omega$  in stereo or 4  $\Omega$  in bridged mode.

# 2. *LED's*

The Power LED lits green if the amplifier is in use. The Protect LED lits red if the amplifier is in saftey mode.

3. Fuse

This fuse protect the amplifier against internal electrical damage. Change it only to other fuse with the same value.

# 4. Power Terminal

• GROUND: Connect the GND terminal to the chassis ground. Please use a 6mm<sup>2</sup> cable or bigger. The max length of the ground wire has to be 1m.

• REMOTE: Connect the remote terminal to the remote output of your headunit. The amplifier automatically turns on as soon as a signal is received (TURN ON). The remote connection of the Power -terminal (REM) won't be used.

• +12V: Connect this terminal to the battery "+" (Plus)- pole.

Please use a 6mm<sup>2</sup> cable or bigger. Always protect this wire by installing a fuse within 30cm of the battery terminal connection.

## STD850D FRONT PANEL

 Frequency Controller Controls the amplifiers low pass frequency 30Hz and 150Hz.
Remote Level Controller

Connect the remote controller to this terminal to adjust the subwoofer level from your driver seat.

3. Bass EQ

*Controls the bass boost at the FREQ selected frequency between 0 and +12dB by the BOOST controller.* 

- 4. Level Controller Controls the left and right channels output level.
- 5. RCA Input

Left and right RCA inputs.

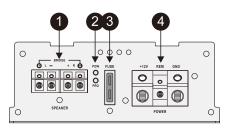
6. *Hi Input Connector* 

High level inputs left and right to connect the amplifier to the radios speaker outputs. The amplifier automatically turns on as soon as a signal is received (TURN ON).

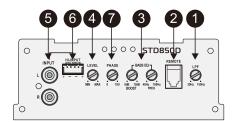
7. Phase shift

Controls the amplifiers phase shift 0-180°.

#### STD202D REAR PANEL



STD850D FRONT PANEL



# **USER'S GUIDE**

STD401D TECHNICAL SPECIFICATIONS

| Power Supply         |             |
|----------------------|-------------|
| Power supply voltage | : 10 - 16 V |
|                      |             |
| Amplifier Stage      |             |

| <i>Output power</i> (RMS) @ 14,4V / 4 Ω                 | : 75 Watt x 4  |       |
|---------------------------------------------------------|----------------|-------|
| <i>Output power</i> (RMS) @ 14,4V / 2 Ω                 | : 120 Watt x 4 |       |
| <i>Output power</i> (RMS) @ 14,4V / 4 Ω bridged         | : 240 Watt x 2 |       |
| <br><i>Output power</i> (max.) @ 14,4V / 4 Ω            | : 150 Watt x 4 |       |
| <br>Output power (max.) @ 14,4V / 2 $\Omega$            | : 240 Watt x 4 |       |
| <i>Output power</i> (max.) @ 14,4V / 4 $\Omega$ bridged | : 480 Watt x 2 |       |
| <br>Distortion (THD)                                    | : <0,5%        | 10000 |
| <br>S/N Ratio                                           | : >85dB        |       |
| <br>Channel separation                                  | : >65dB        |       |
| <br>Input sensivity                                     | : 500mV - 6,0V |       |
| <br>                                                    |                |       |

# Filters

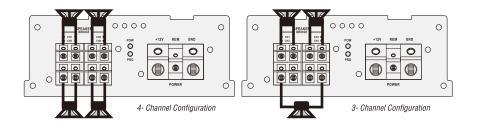
| Low pass filter/slope  | : 50 Hz - 4000 Hz / 12dB |
|------------------------|--------------------------|
| High pass filter/slope | : 20 Hz - 4000Hz / 12dB  |
| Bass Boost Frequency   | : 0 - 12dB @ 45 Hz       |

# Other Functions

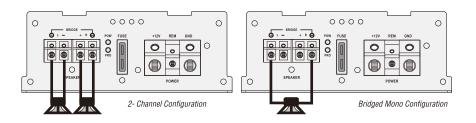
| Fuse                 | : 40 A x 1          |
|----------------------|---------------------|
| Max size (W x H x L) | : 135 x 52 x 230 mm |

| Power supply voltage                             | : 10 - 16 VDC           |
|--------------------------------------------------|-------------------------|
|                                                  | . 10 10 000             |
| Amplifier Stage                                  |                         |
| <i>Output power</i> (RMS) @ 14,4V / 4 Ω          | : 100 Watt x 2          |
| <i>Output power</i> (RMS) @ 14,4V / 2 Ω          | : 195 Watt x 2          |
| <i>Output power</i> (RMS) @ 14,4V / 4 Ω bridged  | : 390 Watt x 1          |
| <i>Output power</i> (max.) @ 14,4V / 4 Ω         | : 200 Watt x 2          |
| <i>Output power</i> (max.) @ 14,4V / 2 Ω         | : 390 Watt x 2          |
| <i>Output power</i> (max.) @ 14,4V / 4 Ω bridged | : 780 Watt x 1          |
| Distortion (THD)                                 | : <0,5%                 |
| S/N Ratio                                        | : >85dB                 |
| Channel separation                               | : >65dB                 |
| Input sensivity                                  | : 500mV - 6,0V          |
| Filters                                          |                         |
| Low pass filter/slope                            | : 50 Hz - 250 Hz / 12dB |
| High pass filter/slope                           | : 50 Hz - 250 Hz / 12dB |
| Bass Boost Frequency                             | : 0 - 12dB @ 45 Hz      |
| Other Functions                                  |                         |
| Fuse                                             | : 40 A x 1              |
| Max size (W x H x L)                             | : 135 x 52 x 230 mm     |

#### STD401D CONFIGURATION SAMPLES



#### STD202D CONFIGURATION SAMPLES



#### JSER'S GUIDE

# **USER'S GUIDE**

#### STD401D FRONT PANEL

2./7. RCA Input

Channel 1 & 2 and 3 & 4 RCA inputs.

## 1./8. Hi Input Connector

High level inputs left and right to connect the amplifier to the radios speaker outputs. The amplifier automatically turns on as soon as a signal is received (TURN ON).

# 3./9. Level Controller

Controls the 1 & 2 and 3 & 4 channels output level.

# 4. Crossover Switch

Switches the amplifier channels 1 & 2 in full range or high pass mode. If position 3/4CH is selected the channels 1 & 2 are working and will get the audio signal from the inputs 3 & 4. When hit DUPE mode, the channels 1 & 2 analog channels 3 & 4 functionality.

#### 5. Frequency Controller

Controls the high pass frequency of channels 1 & 2 between 10Hz and 500Hz. Only in use if the crossover switch (4.) is in High Pass (HP) and 4CH position.

### 6. Input mode

2C H/4CH input mode 2CH mode input CH3/4 and output CH1/2/3/4 4CH mode input ch1/2/3/4 output ch1/2/3/4

# 10. Crossover Switch

Switches the amplifier channels 3 & 4 in full range or high pass mode / low pass .

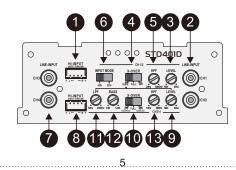
#### 11./13. Frequency Controller

Controls the low pass frequency of channels 3 & 4 between 50Hz and 4000Hz. Only in use if the crossover switch (10.) is in Low Pass (LP) position. Or Controls or high pass frequency of channels 3 & 4 between 10Hz and 500Hz. Only in use the crossover switch(10.) is in High Pass(HP) position.

# 12. Bass Boost Controller

Controls the channels 3 & 4 bass boost at 45Hz between 0 and +12dB.

# STD401D FRONT PANEL



## STD401D REAR PANEL

1. Speaker Terminal 1 & 2

Connect the channels left and right to the speakers left and right. Be sure of right polarity. Use only the outputs left + and right - to bridge the channels. In bridged mode you have to use the inputs left and right.

<u>Warning!</u> Never connect the speaker cables to the vehicle body. Don't use speaker impedance lower than  $2 \Omega$  in stereo or  $4 \Omega$  in bridged mode.

2. Speaker Terminal 3 & 4

Connect the channels left and right to the speakers left and right. Be sure of right polarity. Use only the outputs left + and right - to bridge the channels. In bridged mode you have to use the inputs left and right.

<u>Warning!</u> Never connect the speaker cables to the vehicle body. Don't use speaker impedance lower than 2  $\Omega$  in stereo or 4  $\Omega$  in bridged mode.

# 3. *LED's*

The Power LED lits green if the amplifier is in use. The Protect LED lits red if the amplifier is in saftey mode.

4. Power Terminal

• GROUND: Connect the GND terminal to the chassis ground. Please use a 6mm<sup>2</sup> cable or bigger. The max length of the ground wire has to be 1m.

• *REMOTE: Connect the remote terminal to the remote output of your headunit. The amplifier automatically turns on as soon as a signal is received (TURN ON). The remote connection of the Power -terminal(REM) won't be used.* 

• +12V: Connect this terminal to the battery "+" (Plus)- pole. Please use a 6mm<sup>2</sup> cable or bigger. Always protect this wire by installing a fuse within 30cm of the battery terminal connection.

## STD401D REAR PANEL

