

# Technical Specifications

	TL-2093	TL2095	TL-2094	TL-2091	TL-2092	TL-2096
Number of channels	2 channels	2 channels	4 channels	4 channels	4 channels	5 channels
Max Output Power (14.4v)	1000 Watts Max	2000 Watts Max	1500 Watts Max	2000 Watts Max	3000 Watts Max	3000 Watts Max
RMS Output Power (14.4v) @ 4 ohm per channel	2 x 75 Watts RMS	2 x 175 Watts RMS	4 x 75 Watts RMS	4 x 100 Watts RMS	4 x 160 Watts RMS	4 x 100 and 1 x 375 Watts RMS
RMS Output Power (14.4v) @ 2 ohm per channel	2 x 120 Watts RMS	2 x 275 Watts RMS	4 x 120 Watts RMS	4 x 140 Watts RMS	4 x 210 Watts RMS	4 x 140 and 1 x 570 Watts RMS
RMS Output Power (14.4v) @ 4 ohm (bridge)	1 x 240 Watts RMS	1 x 500 Watts RMS	2 x 240 Watts RMS	2 x 250 Watts RMS	2 x 450 Watts RMS	2 x 285 and 1 x 375 Watts RMS
RMS Output @ THD+N < 1% : @ 4 ohm per channel @ 2 ohm per channel @ 4 ohm bridge Sub channel @ 4 ohm Sub channel @ 2 ohm	2 x 60W 2 x 95W 1 x 190W n/a n/a	2 x 165W 2 x 235W 1 x 450W n/a n/a	4 x 60W 4 x 95W 2 x 190W n/a n/a	4 x 85W 4 x 120W 2 x 225W n/a n/a	4 x 135W 4 x 170W 2 x 330W n/a n/a	4 x 85W 4 x 125W 2 x 250W 1 x 280W 1 x 440W
Frequency Response	10 Hz – 25 kHz					10 Hz – 25 kHz (on 4x channels) 10 – 180 Hz (on Sub channel)
Low Pass/High Pass Filter slopes	40 dB/oct					
Low Pass Filter Range	50 – 750 Hz					n/a on 4x channels 40 – 180 Hz on Sub channel
High Pass Filter Range	50 – 500 Hz					20 – 200 Hz on 4x channels 10 – 50 Hz on Sub channel (Subsonic)
Audio Input Level Sensitivity	0.2 – 5V					
TDH @ 4 ohm load (30% Rated Power)	< 0.02%	< 0.02%	< 0.02%	< 0.02%	< 0.02%	< 0.033% on 4x channels < 0.075% on Sub channel
Signal/Noise Ratio	>90 dB					>70 dB
Channel Separation	>89 dB					
Minimum load (speaker) impedance per channel	2 ohm					2 ohm on all channels
Minimum load (speaker) impedance (bridge)	4 ohm					4 ohm on 4x channels 2 ohm on Sub channel
Overheat protection temperature	80°C					
Power Supply	DC 12V-14.4V					
RCA Audio output	Yes – built in, next to RCA audio input.	Yes – built in, next to RCA audio input.	No – But RCA “Y” splitter cables are provided.	No – But RCA “Y” splitter cables are provided.	No – But RCA “Y” splitter cables are provided.	No – But RCA “Y” splitter cables are provided.
External fuse	30A	40A	40A (must be installed in power cable - not included)	60A (must be installed in power cable - not included)	80A (must be installed in power cable - not included)	80A (must be installed in power cable - not included)
Accessories included	4x mounting screws	4x mounting screws	4x mounting screws 2x “Y” RCA splitter leads and blocks	4x mounting screws 2x “Y” RCA splitter leads and blocks	4x mounting screws 2x “Y” RCA splitter leads and blocks	4x mounting screws 2x “Y” RCA splitter leads and blocks
Remote bass controller	No					Yes (Included)
Minimum specification of Power and earth cable	8 AWG				4 AWG	
Recommended amplifier wiring kit	TL-1192 2000 Watts				TL-1191 3000 Watts	
Dimensions (length x width x height)	186 x 195 x 60 mm	239 x 195 x 60 mm	239 x 195 x 60 mm	282 x 195 x 60 mm	347 x 195 x 60 mm	385 x 195 x 60 mm

All specifications are subject to change due to continued improvement and developments.

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## COMPETITION PRO

HIGH PERFORMANCE  
MOSFET CLASS AB  
CAR AMPLIFIER



TL-2093 - 2-Channel - 1,000 Watts Max - Up to 240 Watts RMS  
 TL-2095 - 2-Channel - 2,000 Watts Max - Up to 500 Watts RMS  
 TL-2094 - 4-Channel - 1,500 Watts Max - Up to 480 Watts RMS  
 TL-2091 - 4-Channel - 2,000 Watts Max - Up to 560 Watts RMS  
 TL-2092 - 4-Channel - 3,000 Watts Max - Up to 900 Watts RMS  
 TL-2096 - 5-Channel - 3,000 Watts Max - Up to 1,130 Watts RMS

# OWNER'S MANUAL

SAFETY GUIDELINES | TECHNICAL SPECIFICATIONS  
 FEATURES | INSTALLATION AND OPERATION INSTRUCTIONS

# Contents

	Page
Introduction .....	2
Control Panel Functions .....	3
Audio Input .....	3
Controls .....	4
Indicators .....	4
Speaker Connections .....	4
Power Connections .....	4
Mounting Instructions .....	5
Installation .....	5
Power / RCA connection diagrams .....	5
Speaker connection diagrams .....	6
Installation Instructions .....	7
Safety .....	9
Health Warning .....	9
General Safety .....	9
Troubleshooting .....	10
Technical Specifications .....	Back

# Introduction

Congratulations on your purchase of the Competition Pro TL-2091, TL-2092, TL-2093, TL-2094, TL-2095 or TL-2096 amplifier. After huge amounts of careful and detailed research, design, development and testing, TheLoudest.com are able to present a revolutionary range of premium car audio products.

All these class AB Mosfet amplifiers have a durable, precision-engineered, robust heavy-duty build that offers fantastic audio reproduction, and maintains such clear signal reproduction at uncompromisingly high power levels. Heavy-duty terminals ensure clean input and output connections, with the uncompromising heavy-duty aluminium heatsink keeping cool the rock-solid, advanced design double-sided board, crammed with hi fidelity audio components.

This amplifier can power coaxial/component speakers and/or subwoofers within the range of the relevant RMS power ratings. The built in 40dB/octave continuously adjustable high pass and low pass filters allow the output to be tuned to the speakers, enabling them to work more efficiently.

One of the unique features of the amplifiers is the 2-ch/4-ch switch. This allows full 4-channel operation from only 2-channel input (one RCA/phono pair from the source unit). This feature is not available on the TL-2096 model (or on the TL-2093 or TL-2095 models as these are both 2-channel models).

It is imperative that you read through this manual before installing and operating the amplifier. This will ensure correct configuration and operation. While this manual details generally how to install the amplifier, if you do not have sufficient experience or tools, it is best to have it professionally installed.

This amplifier functions best with a good quality source/head unit such as the TL-HV1. Connecting it up to a poor quality source/head unit (such as a standard, factory fitted one) may not give good results.

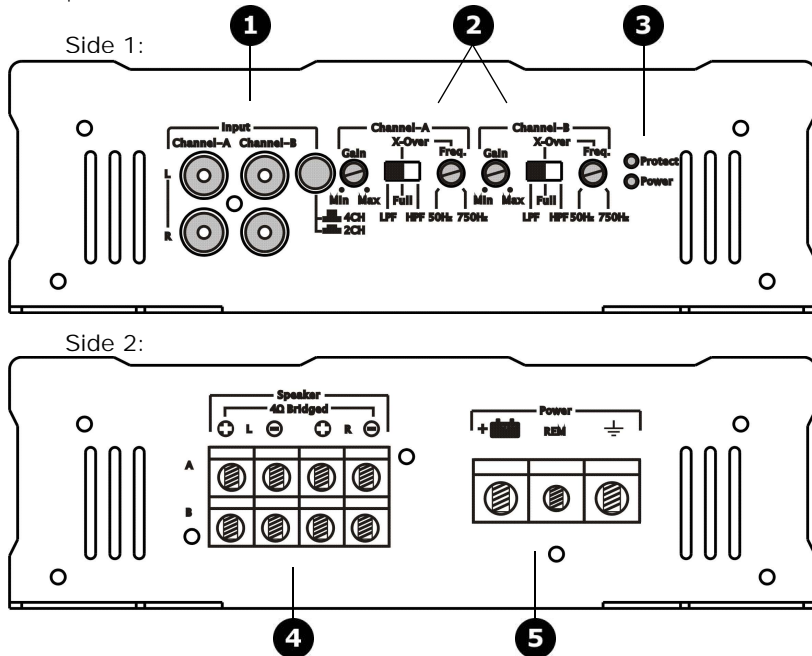
TheLoudest.com accepts no liability for any damage resulting to vehicle components when installing or operating the amplifier. It is the sole responsibility of the user to follow these instructions carefully and upgrade any vehicle components as required. Again, if you do not have sufficient experience or tools, it is best to have the unit professionally installed.

All the six models of amplifier in this range generally share the same features, with the main difference between the models being the number of channels and the power output.

Keep this manual in a safe place so it is accessible for future reference.

# Control Panel Functions

The control panel functions are illustrated as follows:



## 1. Audio Input/Output

### Input

This section features pairs of RCA phono sockets, each pair has one "L" (white - top), and one "R" (red - bottom) RCA socket. These are for the audio input from the source unit. A source unit that supplies a "line level" (pre amp) audio output in the form of RCA phono plugs is required to connect to the input (via a phono extension lead). A high quality shielded lead is recommended as this will help reduce the possibility of noise entering the system. The 2-channel models have one pair of RCA inputs, and the 4-channel models have two pairs of RCA inputs (Front – A, and Rear – B). The 5-channel model has a third pair of RCA inputs for the subwoofer channel.

### Output

On the 2-channel models, situated to the right of the RCA input sockets, is a pair of RCA output sockets. The audio output can be connected to another amplifier's audio input. This means when connecting another amplifier, an additional audio input lead is not needed to be run all the way from the source unit, but can be run from this amplifier's audio output.

For the 4-channel and 5-channel models that do not have RCA outputs, two RCA adaptor leads have been included. One lead can be plugged into the L input, and one into the R input. The leads enable one RCA input from the head unit for L and R, and also provide one spare L and R socket that can be used as an output.

### Switch

Also featured on this section of 4-channel models is a 2-ch/4-ch switch. Essentially, this saves using splitter leads or adaptors if only one RCA output is available, allowing one RCA input while utilising the full functionality of the 4-channel amplifier.

With the 2-ch/4-ch switch off (not pushed in), two pairs of RCA inputs can be used. The input pair plugged into the input "Channel-A", will control the speaker(s) connected to the Channel A outputs, while the input pair into the input "Channel-B", will control the speaker(s) connected to the Channel B outputs.

With the 2-ch/4-ch switch on (pushed in), one pair of RCA inputs can be used. The input pair plugged into the input "Channel-A", will be used for both Channel A and Channel B outputs. This saves having to use RCA splitting leads/adaptors.

To clarify, here are two examples:

1). The source unit has two RCA outputs, "front" and "rear". Front is connected to Channel A input, and rear is connected

to Channel B input. A pair of front speakers are connected to the Channel A outputs, and a subwoofer is connected to Channel B outputs. Settings at the source unit (such as gain, bass boost, etc) can be applied to Channel A ("front") and Channel B ("rear") independently at the source unit. The 2-ch/4-ch switch is set to off (not pushed in).

2). The source unit has one RCA output. It is connected to the Channel A input. As in the first example, a pair of front speakers are connected to the Channel A outputs, and a subwoofer is connected to Channel B outputs. Settings at the source unit (such as gain, bass boost, etc) can not be applied to Channel A and Channel B independently at the source unit, because both Channel A and Channel B are sharing the same input. Any independent changes can be made on the side panel of the amplifier. The 2-ch/4-ch switch is set to on (pushed in).

The 5-channel model includes a 4CH/SUB switch. Pressing this in will enable the amplifier to use the signal from the other 4 channels for the subwoofer input signal, to be used when a dedicated subwoofer input is not required/available.

**2. Controls** – This section features a gain control knob ("Gain"), a crossover selector switch ("LPF / FULL / HPF"), and the variable crossover filter frequency control knob ("Freq."). The changes made here affect the speaker(s) connected to the output.

**Gain** - Turning the gain knob to the right (clockwise) will increase the volume, and to the left (anti-clockwise) will reduce the volume. It is important to understand that the amount of gain needed is proportional to the level of the signal coming from the source unit. For example, it is possible for the gain knob to be at only a quarter of its maximum, but the amplifier is actually outputting to its full potential. This could be because the source unit is supplying slightly more power than normally expected. Please see "Installation" section for how to calibrate the amplifier to the output of the source unit using the gain knob.

**Crossover ("X-Over")** - The crossover switch has three settings, "LPF" (Low Pass Filter), "FULL" (No filter applied / off) and "HPF" (High Pass Filter). If either the LPF or HPF are selected, the "Freq." knob (variable crossover filter frequency) is used to fine tune the filter. The knob controls the frequency at which the attenuation starts.

**Low Pass Filter** – This filter lets low frequencies through, and cuts out high frequencies and should be used when connecting subwoofers to the output. This will cut out high frequencies that the subwoofer(s) are not designed to reproduce, and so only output the bass from the signal. The Freq. knob controls the highest frequency range that is sent to the subwoofer(s). The range is adjustable, from 50 to 500 Hz with a slope of 40 dB per octave. The value that this should be set to changes depending on the subwoofer(s), enclosure and vehicle used. This can be set by starting with the knob position fully clockwise, then turning the knob anti clockwise very slowly until the best result is heard. This may take some time to get exactly right. It is advisable to play music of the genre that will most commonly be listened to as this is set. It is also advisable to use different tracks when configuring the LPF.

When set correctly, the subwoofer is able to work more efficiently, and the upper frequency range reproduced is configured to the equipment, surroundings and user taste.

**High Pass Filter** – This filter lets high frequencies through, and cuts out low frequencies and should be used when connecting full range speakers such as 6"x9" speakers to the output. This will cut out sub/low bass frequencies that the speakers can not reproduce at high volumes, and so allow the speakers to operate more efficiently. The Freq. knob controls the lowest frequency range that is sent to the speakers. The range is adjustable, from 50 to 500 Hz with a slope of 40 dB per octave. The value that this should be set to changes depending on the speakers used. This can be set by starting with the knob position fully anti clockwise, then turning the knob clockwise very slowly until the best result is heard. This may take some time to get exactly right. It is advisable to play music of the genre that will most commonly be listened to as this is set. It is also advisable to use different tracks when configuring the HPF.

When set correctly, the speakers are able to work more efficiently, and the lower frequency range reproduced is configured to the equipment, surroundings and user taste.

**"FULL"** – No filter is applied when the switch is set to "FULL"; the full range of frequencies are reproduced and output to the speakers. In other words the filters are OFF.

**5-channel model** – No Low Pass Filters are included on the A and B channels, because subwoofers should be connected to the "Sub" channel. A "Subsonic" filter is included on the Sub channel, which performs the same function as the "High Pass Filter" described above, but operates from Off (0 Hz) to 200 Hz. The 5-channel model also includes a Remote Gain control for the subwoofer channel. This connects to the "Remote" socket. The gain controller can be positioned in the front of the vehicle so that the level of the output of the subwoofer channel can be adjusted from the front. Connection is optional.

## 3. Indicators

**Power indicator** - This LED will light when power, remote and earth are all connected to the amplifier. If this LED is not on, there is a problem with one of these connections.

**Protection Indicator** - This LED will light if the amplifier has detected a fault and if it is not already damaged, has shut down to protect itself from permanent damage. This may be due to one of the following: low voltage, excessive heat, short circuit or overload. If this happens disconnect the amplifier and investigate the problem.

**4. Speaker connections** – This section consists of the outputs (left and right) for all channels, and are in the form of screw terminals for attaching the speaker cables. Undo the screw head enough to slot a stripped end of speaker cable into the terminal, and then tighten the screw. Please see wiring diagrams in the "Installation" section for how to connect a range of speakers/subwoofers to the amplifier. To operate a channel in bridge mode, connect "L" "+" to "R" "-". The minimum load impedance when bridging is 4 ohm, the minimum load impedance per channel when using L and R individually, is 2 ohm.

**5. Power Connections** – This section is labelled "Power" and is where all the power leads are connected to the amplifier.

Particular care must be taken when connecting, NOT to cross/touch any of the cables together. From left to right, "+" is the positive connection from the battery, "REM" is the remote or ignition connection and "-" is the negative or earth connection.

# Mounting Instructions

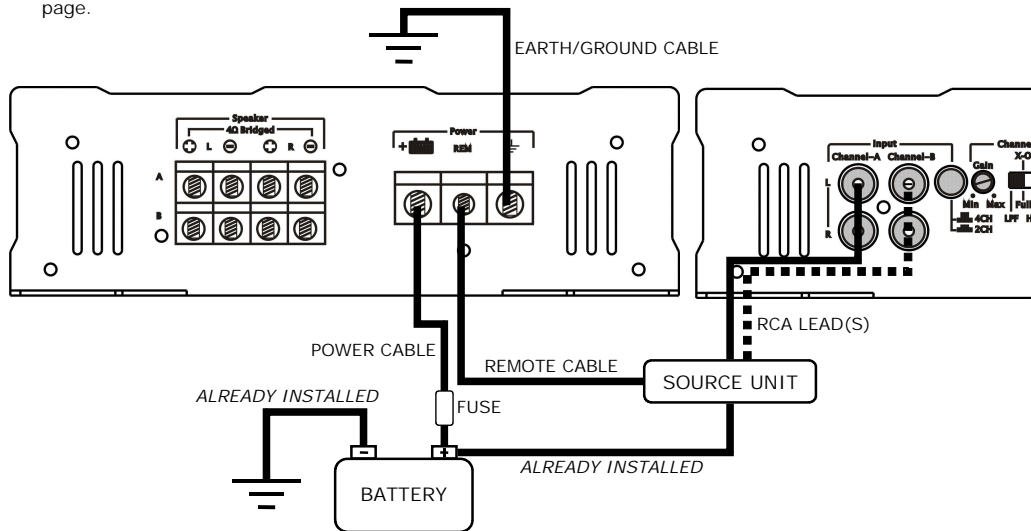
Before mounting, please read the "Installation" section. The best place to mount the amplifier is somewhere where it will not get damaged, eg. by items in the boot of the vehicle. The amplifier dissipates heat using its heat sink; somewhere with sufficient space and air would be fine. Therefore placing the amplifier in between items, placing items on top of it, or mounting it upside down is not advisable. This amplifier must be installed horizontally (flat – facing the sky) with plenty of air around it, or the amplifier may be in serious risk of damage. Examples of surfaces to mount on are the floor of the boot or fake floor of boot (MDF). Never mount the amplifier on its side. Never mount the amplifier onto a subwoofer box as this can damage the amplifier. Never mount the amplifier outside of the car, in the engine bay or anywhere where it has a risk of getting wet. Normally it is best to attach the amplifier to a board, and then attach the board to the car body. This is good practice to avoid noise problems.

Before mounting, make sure that the surface is suitable and free from any obstructions. Use the amplifier as a template and mark where the holes are to be drilled with a pencil or pen. Drill the pilot holes with a drill bit of diameter smaller than that of the screws. Then place the amplifier on the surface and tighten the screws until they are holding the amplifier securely in place.

# Installation

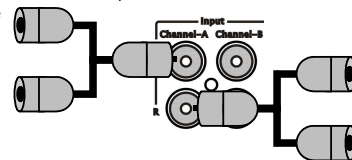
It is important to follow the instructions that start on page 7, while referring to the diagrams.

Power connection/RCA connection diagrams - Below is a diagram of the basic completed installation of the power cables and RCA leads on the amplifier. The speaker connection diagrams follow on the next page.

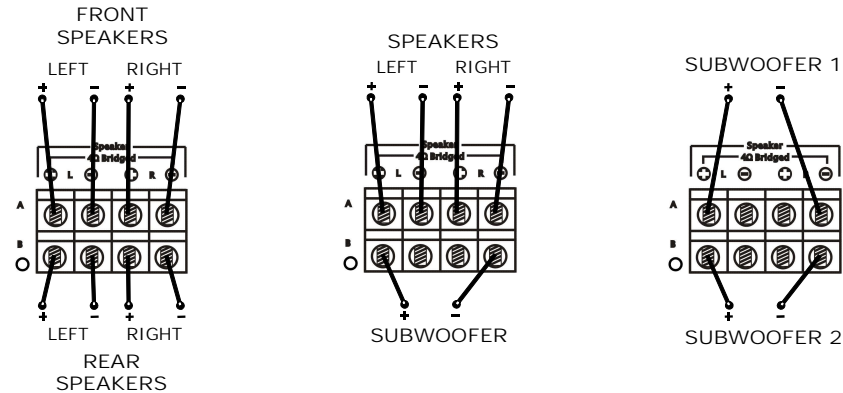


There are no RCA/phono outputs on the 4-channel or 5-channel models. RCA outputs on an amplifier enable a phono lead to be used to connect the RCA output on one amplifier to the RCA input on another amplifier. This can be useful in situations where only one RCA output from the source unit is available.

Two phono splitter leads (or "Y" leads) have been included with the amplifier to allow another amplifier to share the same RCA output from the source unit if required. The leads convert one RCA socket on the "L" input of the amplifier, into two RCA sockets, and convert one RCA socket on the "R" input of the amplifier into two RCA sockets, as illustrated in the diagram to the right of this text.

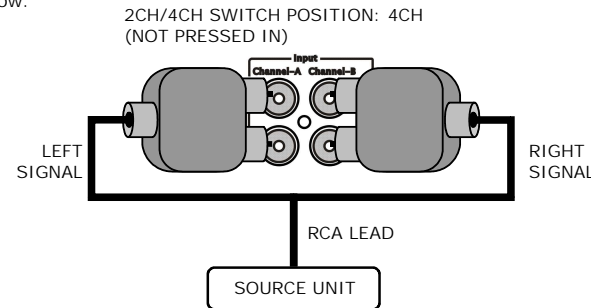


Speaker connection diagrams – Below are three diagrams that illustrate how to connect speakers and/or subwoofers to the amplifier in different combinations. The speakers named "left" or "right" can be full range speakers or component speakers. In the event of component speakers being connected, it is the crossover that the + and – of the channel connect to. These are illustrated on the output connections of a 4-channel model.



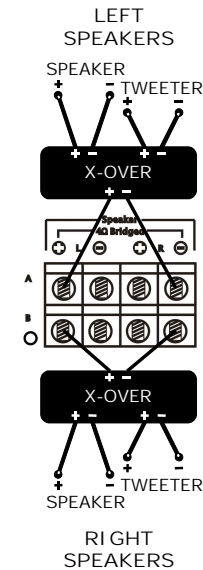
Two 4 ohm subwoofers can be connected to the subwoofer channel on the 5-channel model, connect + on both subwoofers to the + on the subwoofer channel, and connect – on both subwoofers to the – subwoofer channel.

In the event that two extremely high power component speakers are to be connected to the amplifier (either 4-channel or 5-channel models) that require the amplifier to operate in dual bridge 2-channel stereo mode (one left output and one right output), specific connections must be made, as detailed below.



The input from the source unit must come in the form of an RCA pair (one left and one right). The left RCA plug is connected to the input socket of one of the supplied adaptors. The plugs on the adaptor are then placed onto the "Channel-A" input sockets. It may be a tight fit, but the adaptor will be securely held when pushed into place. This means that "Channel-A" is now the left input/output side of the amplifier. The right RCA plug is connected to the input socket of the other supplied adaptor. The plugs on the adaptor are then placed onto the "Channel-B" input sockets. This means that "Channel-B" is now the right input/output side of the amplifier. This is illustrated in the diagram above this text. Ensure that the 2ch/4ch switch is set to 4-ch (not pressed in).

The crossover connecting the left speakers connects to the Channel A bridge output, and the crossover connecting the right speakers connects to the Channel B bridge output. This is illustrated in the diagram to the right of this text.



### Installation Instructions

If you do not have sufficient experience or tools to carry out the installation, it is imperative that you seek the assistance of someone who does, or have the amplifier professionally installed.

TheLoudest.com accepts no liability for any damage resulting to vehicle components when installing or operating the amplifier. It is the sole responsibility of the user to follow these instructions carefully and seek professional advice if required.

The TL-1192 2000w amplifier wiring kit is strongly recommended for use with the TL-2093, TL2095, TL-2094 and TL-2091 amplifiers. It contains the components mentioned in the installation instructions below. Failing this, 8 AWG power/earth cable and a 30-60A fuse installed in the power cable is an absolute minimum (see back page for fuse rating details).

The TL-1191 3000w amplifier wiring kit is strongly recommended for use with the TL-2092 and TL-2096 amplifiers. It contains the components mentioned in the installation instructions below. Failing this, 4 AWG power/earth cable and an 80A fuse installed in the power cable is an absolute minimum.

Before starting the installation it is advisable to disconnect the negative terminal of the vehicle battery. This ensures the battery will not short if the wires are accidentally crossed during installation, and is generally good practice when making electrical changes. Please be warned that after disconnecting the battery, your control unit (head unit) may require a code to be entered, some car alarms may also sound. Therefore it is best to disable the alarm before installation and enable it again after installation is complete.

Connect the power (+) cable (red cable) directly to the positive terminal of your vehicle battery by unscrewing the nut on the positive terminal and slipping on the power lead connector, before replacing and tightening the nut. The TL-1191/TL-1192 wiring kits include a battery terminal block which ensures a very clean connection. There is a fuse holder and fuse already installed on this cable if purchased as part of the TL-1191/TL-1192 wiring kit. If not using the kit, you will need to install one about 60 cm from the battery (check back page for correct fuse ratings).

This power cable then needs to be run to where the amplifier will be mounted. Look around the engine bay for a place to run the cable through to the inside of the vehicle. Suitable points are usually bonnet pull grommets or air intake holes. This positive wire needs to be protected from damage. Failure to protect it from damage could lead to a vehicle fire. When you have been able to feed the cable to the inside of the car, try to hide the cable as well as possible on its way to the amplifier (under carpet, or inside panels).

The TL-1191/TL-1192 kit includes a connector already installed on the end of the power cable; this will need to be removed for the cable to be connected to the amplifier. Strip the end of the cable and slide the end into the power (+) terminal of the amplifier, and then tighten.

Competition Pro amplifiers are capable of delivering extremely high power levels. Therefore tight, reliable and clean power connections at both ends are very important, and ensure maximum performance.

Connect the earth (-) (or ground) cable (black cable) to a solid, bare metal point on the vehicle's chassis. A common place for this is the boot catch; however any existing substantial bolt or screw that makes contact with the car's body near the amplifier is sufficient (connection must be made to bare metal, so any paint at the connection point must be stripped). If there is no existing point, you can make one by drilling into the car's body. This should be done carefully as a last resort, ensuring that none of the car's electronics or any other component is going to be damaged. A clean connection is needed, so scraping away the paint for the connection is required. The length of the earth cable needs to be as short as possible, the one supplied with the TL-1191/TL-1192 kit will connect to the negative (-) amplifier terminal (if a ring is installed already on the cable, this will need to be removed so that the cable can be

connected to the amplifier in the same way that the power cable connected to the positive terminal of the amplifier), the other end has a ring connector installed and is to be bolted to the earthing point.

Connect the remote cable (thin blue wire) from the source unit's (head unit's) remote output. This is called a variety of things including "remote", "aerial", "electric antenna", "REM" and "remote turn on". To do this you will need to have access to the back of the source unit; it will need pulled out. Please refer to the source unit's manual to find the right wire to use. When the remote cable is attached to the remote output of the source unit, leave the source unit pulled out for the moment, and run the remote cable to where the amplifier is, down the same side of the vehicle as the power cable. As with the power cable, try to hide it under panels and carpet. Slide the connector into the "REM" terminal and tighten.

Connect the audio signal lead(s) (RCA phono leads) to the "line level(s)" or "pre-out(s)" of the source unit. The pre-out(s) of the source unit should be in the form of two RCA phono sockets. Simply plug your lead into the sockets, ensuring red goes to red, and white (or black) goes to white (or black). Then run the lead all the way to the amplifier. To minimise noise, please ensure that the audio signal lead is run well away from the power leads. It is normally best to run it down the opposite side of the car. If the cables are too close, a high pitched whine can get into the system; this is engine noise.

If your source unit has no pre-outs, it is probable that it is not of sufficient quality to work well with the amplifier; if it is giving poor quality audio then the amplifier will simply amplify this poor quality audio. However, if a line output converter is purchased, it would convert speaker outputs to a line level and enable you to operate the amplifier. As mentioned, the output may not be of a great quality.

Connect the speaker cable from your speaker(s) (and/or component(s)/subwoofer(s)) to the amplifier. Some configurations are illustrated on page 6. It is advisable to cut the speaker cable to size. Never connect or disconnect speakers when the amplifier is on; you risk permanently damaging the speakers.

Once you have checked that all the connections are good and solid, re-connect the negative terminal of the battery. If anything goes wrong, disconnect it immediately and investigate. The amplifier's power LED should be lit. If not, or the protection LED is lit, please refer to the "Troubleshooting" section.

Finally, all that is left to do is calibrate the amplifier and speakers with the source unit:

1. If using brand new speakers, do not proceed to the next step until you have "run in" the speakers by playing music at relatively low-medium volumes for approx 20 mins.
2. Turn the gain knobs on the amplifier all the way down.
3. If applicable, select the required filters on both the channel control panels.
4. Play a CD or similar of music or audio that will be typically played.
5. Turn the gain control on the source unit to around 70 – 80% of it's maximum.
6. Slowly increase the gain knob of each channel on the amplifier until you can hear distortion, one at a time.
7. Turn the gain knob on each channel of the amplifier to just before this distortion occurs (if no distortion can be heard, this is fine!).
8. Test the system and make any equalisation changes on the source unit or the amplifier (frequ. knob if using the filters) according to taste, it may take some time to adjust all the amplifier settings to get the most from the setup.
9. If any equalisation changes are made, repeat stages 2 to 8 until satisfied
10. Never exceed the source unit gain that you used to calibrate the system, and NEVER continue to operate speakers if you can hear distortion as this will damage the speakers.

Remember: It is possible for the amplifier gain knobs to be at only a quarter of their maximum, but the amplifier is actually outputting to its full potential. This could be because the source unit is supplying slightly more input power than normally expected.

# Safety

## Health Warning

The Competition Pro range of car audio is built for very high power handling. Listening to music at such high powers is potentially capable of causing physical side effects such as nausea or even permanent side effects such as hearing loss. It is therefore absolutely essential that conservatism and a high sense of judgement are observed when in operation.

TheLoudest.com accepts no liability for hearing disorders, nausea or other side effects caused by this equipment.

## General Safety

Playing loud music in a vehicle can hinder your sense of what is going on around you on the road, including your ability to hear your vehicle, and other vehicles around you. We recommend listening at low or moderate levels while driving.

TheLoudest.com accepts no liability for injury, property damage or otherwise resulting from the use or misuse of this equipment.

Do not use any chemicals when cleaning this equipment. Please use a clean dry cloth.

Do not install this unit outside the car, or anywhere where it could become damp or humid, or where it can become exposed to the sun. It should be installed in a dry and ventilated area inside the car.

Never connect or disconnect phono/RCA inputs or speakers when the amplifier is on; this can permanently damage the speakers. Always do this when it is off.

Never open the amplifier up. Doing so would put you at risk of an electric shock. None of the internal parts are serviceable by the user. In the case of the unit needing repair or maintenance, please take it to a qualified professional, or contact support@theloudest.co.uk

# Troubleshooting

Problem	Possible Cause(s)	Solution
Power LED off	No (or poor) power, remote or ground connections  Blown fuse	Verify connections both at amplifier and at other ends  Replace Fuse
No Output (Power LED on)	Earth cable not connected  Speakers not connected  Gain down on either amplifier or source unit  Speaker(s) blown  Faulty/disconnected RCA leads	Check earth cable at amplifier end and vehicle chassis end  Verify speaker connections at amplifier, and also at the speakers  Verify gain/eq controls  Disconnect speakers one at a time to pinpoint defective speaker  Check/replace RCA leads
No Output (Protect LED on)	Amplifier is overheated  Vehicle's battery is supplying something other than 12V	Review mounting position and conditions  Check vehicle's battery and charging system
Distorted output	Source unit/amplifier gain set too high  Source unit is not capable of good audio reproduction  Speaker(s) blown	Re-calibrate amplifier with source unit  Replace/upgrade source unit  Disconnect speakers one at a time to pinpoint defective speaker
Bass is weak	Dual voice coils on subwoofer wired out of phase  Bad speaker connections  Subwoofers connected out of phase  Eq settings are reducing bass power  Poor quality subwoofer(s)  Enclosure too small for subwoofer	Try swapping over + and - on one of the voice coil connections  Check speaker connections at subwoofer and amplifier ends  Check the + and - connections all match, swap to test  Verify all eq settings on amplifier and source unit, especially "subsonic" and "LPF" settings on amplifier  Use TL-1122 subwoofer(s)  Increase enclosure size
Blowing fuses	Excessive output levels	Lower gain
Amplifier switches on and off	No (or poor) power, remote or ground connections  Low voltage from battery	Verify connections both at amplifier and at other ends  Test battery, replace if necessary

If your amplifier is still not functioning correctly after checking through the "troubleshooting" section, please contact our support team at:

support@theloudest.co.uk