

Modus



**USER MANUAL | PTA-5700M | 5-Channel Amplifier | Marine Grade |
Deutsch Style Connectors | Compact Heat Sink Design**



ACTEQ™



CLASS D



Welcome to Modus.

You've chosen precision performance that works seamlessly in the background of every adventure. These instructions will help you unlock your system's full potential.

Take a moment to review these guidelines, then keep this guide handy for future reference. Your journey starts now.

If you have any technical questions, please contact:

Customer care: 805-790-7383

Online support: <https://support.modusglobal.com>

Register your purchase now to receive future firmware updates and warranty coverage. Purchase receipt is required.

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What's Included

When first unpacking this product, please check that the package contains each of the items listed below. If something is missing, please contact the place of purchase.

- 1x Marine amplifier
- 1x RCA input harness
- 1x Speaker output harness
- 1x T10 Torx bit
- 1x T20 Torx bit
- 4x Mounting Torx screws (M4.16 x 58.42mm, T20)
- User manual and warranty card

Introduction

The amplifier features the following:

- ACTEQ™ microprocessor controlled protection
- Full-range Class D amplifier
- 5-channel output, bridgeable
- 2Ω stereo stable
- MOSFET PWM (Pulse Width Modulated) power supply
- RCA low level input
- Variable input gain control
- Variable low pass filters for CH 1- 5
- Variable high pass filters for CH 1-4
- Variable bass boost for CH 5
- Infrasonic filter for CH 5
- Thermal, short, overload, under voltage and over voltage protection
- Weatherproof

Warning

Please read and understand all instructions before using your product. Failure to follow these instructions could result in injury and/or damage which may void the warranty.

Important Safety Precautions

- Do not open or attempt to repair this product yourself. Dangerous high voltages are present which may result in electric shock.
- To avoid risk of electronic shock or damage to the product, do not expose the product to water spray or submersion. If this occurs, immediately unplug the power cable and send the product to your local dealer or service center as soon as possible.
- Never adjust the product in situations while driving or operating a vehicle or vessel. Staying safe is your primary responsibility.
- If the product emits smoke, strange noises, odors, or shows any other abnormal signs, immediately disconnect it from the power supply. Discontinue use and contact your dealer or our technical support team. Using the product in this condition may result in permanent damage to the system.
- Servicing must be performed only by an authorized technician. Contact our technical support team for any service-related questions.

Installation Precautions

- Installation must be performed by a professional. Contact our technical support team for any installation-related questions.
- Before installing any electrical accessories to your vessel, always make sure the vessel's electrical system is equipped to handle the extra electrical load.
- Before installation, disconnect the vessel battery's negative terminal to prevent product damage, fire, or injury.
- Always connect the power cable (red) to the vessel's battery through the fuse to prevent short circuits.
- Use only the installation parts provided. Using other mounting methods may void the warranty.
- Before use, the amplifier must be fully mounted and secured in the vessel. All wiring should be properly insulated and fastened. Failure to do so may cause damage.
- Observe the safety and operating instructions of the devices which are connected to this product.
- **Do not** use any harsh or abrasive cleaning agents. To clean the product, use a dry, lint-free cloth, or if needed, a mild cleaner such as glass cleaner.

Protect Our Environment

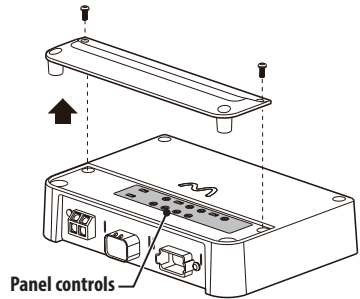
Do not dispose of the product with normal household waste. Follow local regulations for electronic disposal to help protect the environment.

Access Panel Controls

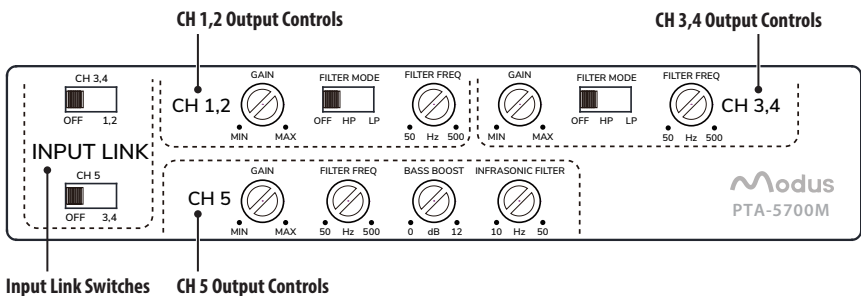
The controls are located on the top panel and hidden under a screwed cover. To access the controls, you need to unscrew and remove the cover.

With the aid of the supplied T10 Torx bit, loosen the two Torx screws (M3 x 5mm, T10) as illustrated, then take the cover off to access the controls. (The amplifier mounting screws will need to be removed to access the panel controls).

Replace the cover using the two M3 T10 Torx screws.



Panel Controls



Speaker Output Controls (Channels 1–5)

GAIN Control

Adjust the input sensitivity for each pair of channels. Set the GAIN control so the amplifier reaches full power just as the signal from your source unit starts to clip.

Important: Do not set the gain higher than necessary. Excessive gain increases distortion and can damage speakers.

FILTER MODE Switch (Channels 1–4 only)

Select the type of crossover filter applied to the channel.

- When setting to **HP** (High Pass), only frequencies above the FILTER FREQ setting are sent to the speakers. Use for midrange or high-frequency drivers.
- When setting to **LP** (Low Pass), only frequencies below the FILTER FREQ setting are sent to the speakers. Use for subwoofers or woofers.
- When setting to **OFF** (Full Range), no filtering is applied; the speakers receive the full audio spectrum.

FILTER FREQ Control (Channels 1–4 only)

Set the crossover frequency (50-500 Hz).

- When **FILTER MODE** is set to **HP**, speakers reproduce only frequencies above the selected value.
- When **FILTER MODE** is set to **LP**, speakers reproduce only frequencies below the selected value.
- When **FILTER MODE** is set to **OFF**, This control has no effect (full-range signal is passed).

FILTER FREQ Control (Channel 5 only)

Set the low-pass crossover frequency for the subwoofer channel. The Channel 5 speaker will only reproduce frequencies below the value you select (50-500 Hz).

BASS BOOST Control

Increase the output level of low bass frequencies on Channel 5, with a wide Q=1 50Hz EQ. Use sparingly – excessive boost can cause distortion and may damage the subwoofer.

INFRASONIC FILTER Control

Remove extremely low frequencies (10-50 Hz) that may be below your subwoofer's capabilities. This protects the subwoofer and improves overall clarity. Turn clockwise to increase the cutoff frequency (more filtering) or counter-clockwise to decrease it (less filtering).

Input Link Switches

Use the two input switches to generate 5-channel output from five or fewer inputs on your source unit.

CH 3, 4 Switch

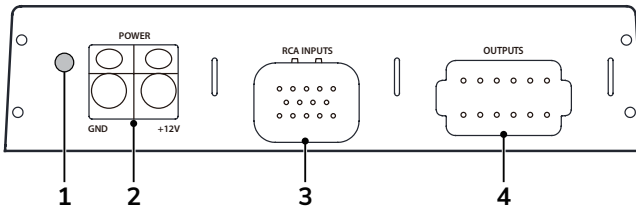
When setting to **OFF**, output channels 3 and 4 are fed from input channels 3 and 4; when setting to the **1, 2** position, output channels 3 and 4 are fed from input channels 1 and 2.

CH 5 Switch

When setting to **OFF**, output channel 5 is fed from input channel 5; when setting to the **3, 4** position, output channel 5 is fed from input channels 3 and 4.

For application, see the section "Signal Input Wiring" on page 9.

Panel Connectors



1 Status LED Indicator

Indicates whether the unit is operating normally or has an error. See "Status LED Indication" on page 6.

2 POWER Terminals

GND: Connect to the closest point on the grounding plate.

+12V: Connect to the positive terminal of the 12V battery.

3 RCA INPUTS Harness Connector

Connect to the supplied RCA input wiring harness. The RCA wiring harness has a blue "REM" wire for connection to the remote output wire from the source unit.

4 Speaker Outputs Harness Connector (CH 1-5)

Connect to the supplied speaker output wiring harness.

Status LED Indication

Normal operation

White light: The amplifier is powered on and operational.

Error indication

Yellow light steady: Amplifier temperature too high.

Yellow light flashing: Vessel battery too low (below 9V).

Purple light flashing: Vessel battery too high (above 17V).

Red light flashing: Amplifier overload, speaker shorted or impedance too low.

Note: When the status LED shows an error indication, the amplifier will be put in the protection mode (or not operational). Check the LED color indication to determine what has caused the protection mode to trigger.

Amplifier Setup Procedure

1. Secure the amplifier in your vessel. See the section "Mounting" on page 7.
2. Disconnect the negative terminal on the battery to prevent a short circuit.
3. Connect audio inputs. See the section "Signal Input Wiring" on page 8.
4. Connect audio outputs. See the section "Speaker Output Wiring" on page 10.
5. Connect to power supply. See the section "Power Connection" on page 11.
6. Recheck all wiring to ensure correct and secure power/input/output connections.
7. Set all input gain controls (**GAIN**) to the minimum position, and set all filter controls (**FILTER FREQ**) to the desired frequency points.
8. Reconnect the negative battery terminal.
9. Turn on the source unit, and the amplifier will turn on automatically.
10. Set the source unit to its Maximum Unclipped Level. Then adjust the amplifier's input gain control (**GAIN**) to match the source unit's output signal. It's best to use a distortion detector or other measurement tool to properly adjust the gain control (**GAIN**).
11. If necessary, fine-tune the controls to achieve the best results.

Important notes on input gain control

- The input gain control (**GAIN**) is designed only to match the amplifier's input level to the output level of your source unit. It is not a volume control!
- Never adjust the input level to maximum unless your input level requires it.
- Failure to note these instructions will result in an input overload to the amplifier and excessive audio distortion. It can also trigger protection mode, or may cause damage to the amplifier or your speakers.

Mounting

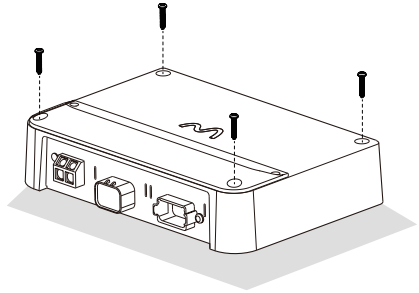


See the section “Installation Precautions” on page 3.

Before you drill or cut any holes, investigate your vessel’s layout very carefully. Take special care when you work near the gas tank, fuel lines, hydraulic lines and electrical wiring.

Mount the amplifier in the location away from moisture, and where connection cables are not pinched or damaged by sharp objects.

1. Find a suitable location in the vessel to mount the amplifier. Make sure there is sufficient air circulation around the intended mounting location.
2. Secure the amplifier with the four supplied Torx screws (M4.16 x 58.42mm, T20):
 - a. Use the four screw holes on the amplifier to mark the mounting holes on the mounting surface.
 - b. Drill the mounting holes in the mounting surface.
 - c. Place the amplifier in position, and fix the amplifier on the mounting surface using the four supplied screws. Secure the screws with the aid of the supplied T20 Torx bit.



Horizontal Positioning

If installing the amplifier in a confined space, leave at least four inches of clearance around it for ventilation.

Vertical Positioning

The amplifier should be mounted vertically with the connectors facing downward for weatherproof. Ensure the mounting surface is strong and solid enough to support the amplifier’s weight. Improper mounting may cause accidents, injury, or damage.

Wiring



See the section “Installation Precautions” on page 3.

For safety, disconnect the negative terminal of the vessel battery prior to wiring.

Use only high quality cables for reliable installation to minimize signal or power loss.

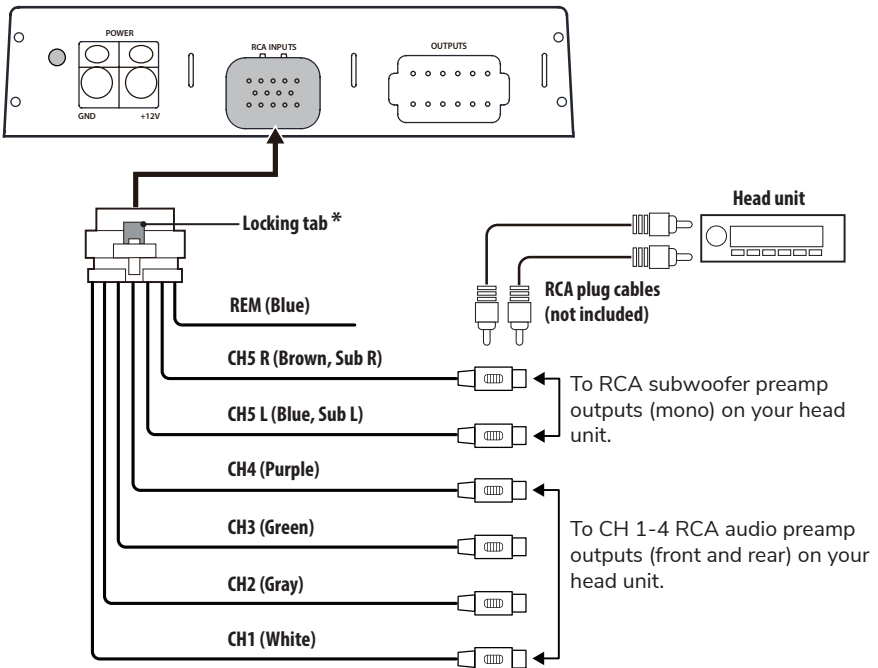
Make sure cables are not squeezed or damaged by sharp edges. Use rubber bushings for penetrations.

Make sure all the cables are securely connected and bare wires are properly insulated.

Reconnect the negative battery terminal only after all cable connections are correctly and securely made.

Signal Input Wiring

The amplifier features 5-channel RCA jacks to accept preamp line level input from your head unit. The RCA input offers great input flexibility and provides an exceptional clean sound from the head unit.



* To disconnect the wire harness from the connection, push up the locking tab on the wire harness, then pull out the wire harness.

Note:

Using RCA plug cables, connect to the corresponding RCA audio preamp outputs of your head unit. To minimize noise entering the signal chain, use high-quality, well-insulated RCA cables. Route the RCA cables away from large cable loops, electric fan and power cables.

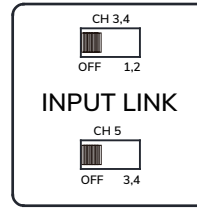
5 Inputs to 5 Outputs

If your head unit has 5 RCA pre-amp outputs, apply the following setup.

1. Connect the 5 RCA outputs on your head unit to CH 1 - 5 inputs on the amplifier according to the numbered channels.

2. Set both Input Link Switches to the **OFF** position.

The amplifier will output in five channels from five inputs.



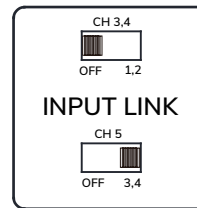
4 Inputs to 5 Outputs

If your head unit has 4 RCA pre-amp outputs, apply the following setup.

1. Connect the 4 RCA outputs on your head unit to CH 1 - 4 inputs on the amplifier according to the numbered channels.

2. Set **CH 3, 4** switch to the **OFF** position, and set **CH 5** switch to the **3, 4** position.

The amplifier will output in five channels from four inputs.



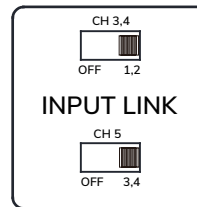
2 Inputs to 5 Outputs

If your head unit has 2 RCA pre-amp outputs, apply the following setup.

1. Connect the 2 RCA outputs on your head unit to CH 1 - 2 inputs on the amplifier according to the numbered channels.

2. Set **CH 3, 4** switch to the **1, 2** position, and set **CH 5** switch to the **3, 4** position.

The amplifier will output in five channels from two inputs.



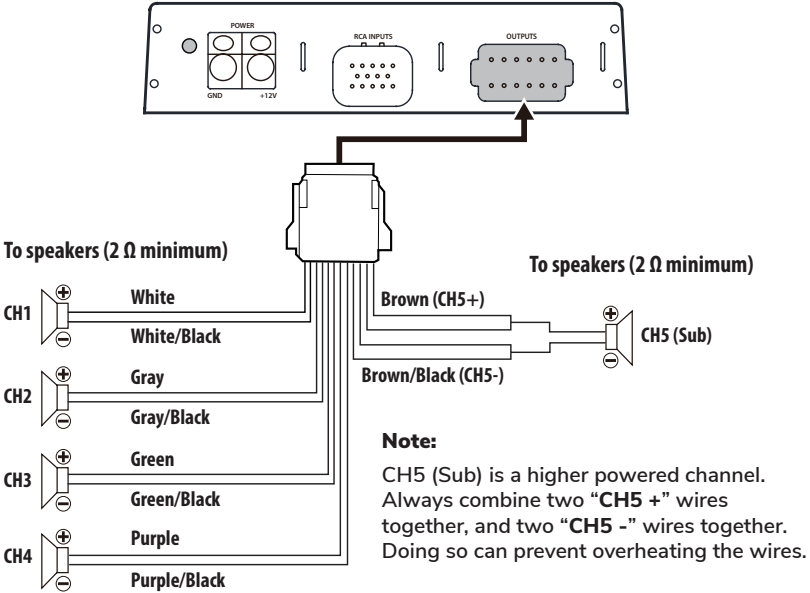
Speaker Output Wiring

Note: Do not connect speakers with an impedance lower than the one specified in the illustration below.

Use 12 AWG (or heavier) wires if extending the speaker wires.

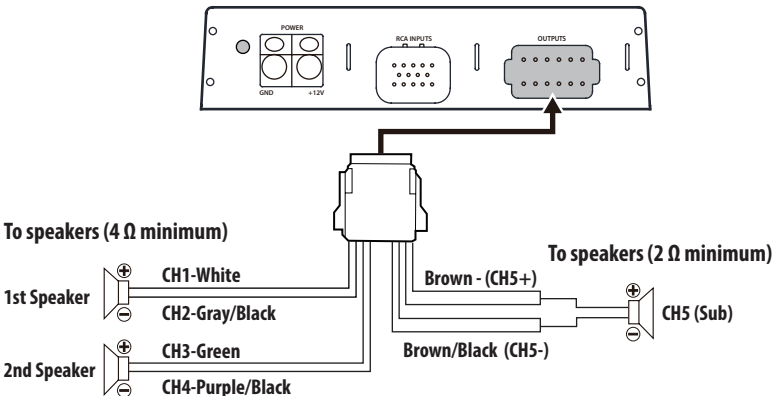
Observe speaker polarity. Make sure the speaker wires are securely and properly insulated.

5-Channel Output

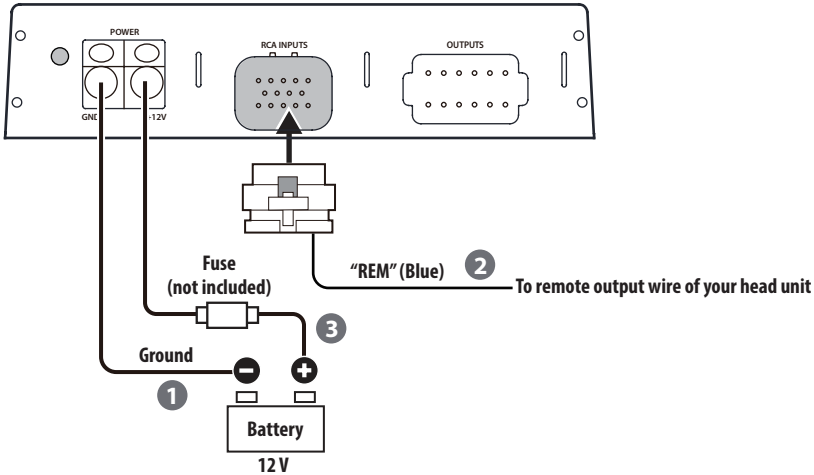


Bridged Output

You can bridge channels to create a single channel with twice the power.



Power Connection



1 Using a 4 AWG (or heavier) wire, connect the **GND** terminal on the amplifier to the negative terminal of the battery.

2 Connect the blue wire (labeled **"REM"**) of the supplied RCA input harness to the remote output wire of your head unit.

The remote connection is used for power control, so that the amplifier can automatically turn on or off every time the head unit is turned on or off.

Use 20 AWG (or heavier) wire if extending the remote connection wire.

If your head unit does not have the remote turn-on wire, connect the **"REM"** wire to the accessory power of your vessel. Ensure your head unit also turns on and off with the ignition to prevent noise.

3 Using a 4 AWG (or heavier) wire, connect the **+12V** terminal on the amplifier to the positive terminal of the battery.

Note: For short-circuit protection, properly fuse the power cable which is connected to the positive battery terminal. Keep the fuse within 18" (45 cm) of the vehicle battery.

Troubleshooting

Need assistance? Before reaching out to our support team, try these quick solutions. If your Modus system still isn't performing to your expectations, our in-house support team is ready to help you get back to creating perfect moments. We're here when you need us.

Problem	Solution
No power.	Check that the power cable connections are securely and properly made (e.g. secure ground connection).
	Check that the blue wire (labeled "REM") is connected.
	Check external fuse and replace if blown.
	The built-in fuse has blown. Send the amplifier to our customer service for repair. Never attempt to open the amplifier yourself.
Status LED flashes red.	Reset the amplifier by turning it off and on again.
	Check that speaker impedance is 2 ohms or above for stereo use or 4 ohms and above for bridged use.
	Check for damaged or shorted speaker or speaker wire.
No sound.	Check that RCA audio input connection is correct and secure.
Low output.	Input gain level is too low. Reset the input level control.
	Check the frequency filter settings.
Distorted sound.	Check that the input gain control is set to match the output level from your source unit. Always try to set the input gain level as low as possible.
	Check that the frequency filter is set correctly.
	Check for short circuits on the speaker wires, or broken wires.
Hissing sound.	Try to set the source unit volume as high as possible (without distortion) and set the input gain level on the amplifier as low as possible.
Engine noise (static type).	This is usually caused by poor quality RCA cables, which can pick up radiated noise. Use only high quality RCA cables and route them away from the power cables, large wire loops and electric fan.
Engine noise (alternator whine).	Check that the amplifier is properly grounded to the negative battery terminal (-).
	Check that your source unit is properly grounded.
Amplifier gets very hot.	Check the minimum speaker impedance for the amplifier is correct.
	Check that there is good air circulation around the amplifier. In some applications, it may be necessary to add an external cooling fan.

Specifications

Audio

RMS output power.....	CH 1-4 (front/rear speakers) 150W x 4 @ 2Ω 85W x 4 @ 4Ω 300W x 2 @ 4Ω bridged CH 5 (subwoofer) 550W x 1 @ 2Ω 330W x 1 @ 4Ω
Min. speaker impedance.....	2Ω stereo, or 4Ω bridged
Total harmonic distortion (THD).....	<0.1%
Frequency response	20Hz – 22kHz
Signal-to-noise ratio.....	>100dB
Channel separation.....	>50dB
Low pass filter (LPF).....	50 – 500Hz (for CH 1-5)
High pass filter (HPF).....	50 – 500Hz (for CH 1-4)
Infrasonic filter.....	10 to 50Hz (for CH 5 only)
Bass boost.....	0 to 12dB (for CH 5 only)

General

Power supply.....	12 VDC (allowable 9 – 17 VDC)
Current consumption (Max)	100A
Protection circuitry.....	Overload, short circuit, thermal, low and high voltage protection
Input gain control	350mV – 5V variable
Ingress protection.....	Weatherproof (when mounted vertically with connectors facing downward)
Dimensions (W x H x D)	10.6" x 2.45" x 7.2" (269 x 62 x 183 mm)
Weight.....	8.97 lbs (4.07 kg)

Specifications are subject to change without notice.

USER MANUAL

Modus

www.modusglobal.com

Customer Service 805-790-7383

Tech Support: <https://support.modusglobal.com>



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