Clarion

DTX460S

6-Channel DSP Car Amplifier

Owner's Manual

Safety Instructions

- For your safety, please read this Owner's Manual thoroughly before use and operate the unit correctly.
- After reading, store this manual in an easily accessible place (e.g., glove box) for future reference.

⚠ WARNING

- Do not disassemble or modify this unit. Failure to comply may lead to accidents, fire or electric shock.



- Stop using the unit immediately if issues such as no sound occur; continued use may cause accidents, fire or electric shock. Contact your authorized dealer or local Clarion service center for inspection and repair.



- Cease operation right away if foreign objects enter the unit, water intrusion, smoke emission or abnormal odor is detected. Consult your authorized dealer or nearest Clarion service support window promptly.



- All installation and reinstallation work requires professional expertise. For safety, please entrust the work to your purchasing dealer or Clarion service center.



- Disconnect the vehicle battery negative terminal before any wiring work. Failing to do so may create short circuits, resulting in electric shock or bodily injury.



- When drilling mounting holes on the vehicle body, confirm the routing of pipes, fuel tank and electrical wiring to avoid contact or damage to these components. Damaged pipelines may trigger fire or vehicle malfunctions.



⚠ CAUTION

- Complete all wiring connections in accordance with official specifications. Incorrect wiring may cause fire or safety accidents.



- Only use the supplied accessories in the designated manner. Use of non-specified parts may damage internal components or lead to insecure mounting, resulting in malfunctions or safety hazards.



- After finishing cable connections, secure all cables with cable clamps or insulating tape. Friction between loose cables and vehicle body panels can wear insulation and trigger short circuits, which may lead to accidents or fire.



To Authorized Dealers

This booklet serves as both the Owner's Manual and Warranty Certificate. Please fill in the purchase date, store name, address and contact phone number completely before handing it over to the customer.

WARRANTY CERTIFICATE In-Store Service

※ Warranty Period	Purchase Date Year Month Day	1 Year

※ Customer Information	Address Name Telephone ( )

※ Fields marked with ※ are mandatory; incomplete entries will render this certificate invalid.

If the product malfunctions within the warranty period, present this warranty document and visit the original dealer store for repair service.
If you cannot reach the original dealer due to relocation, gift transfer or other reasons, please contact us separately for support solutions.

※ Dealer Information	Store Name & Address TEL. ( )

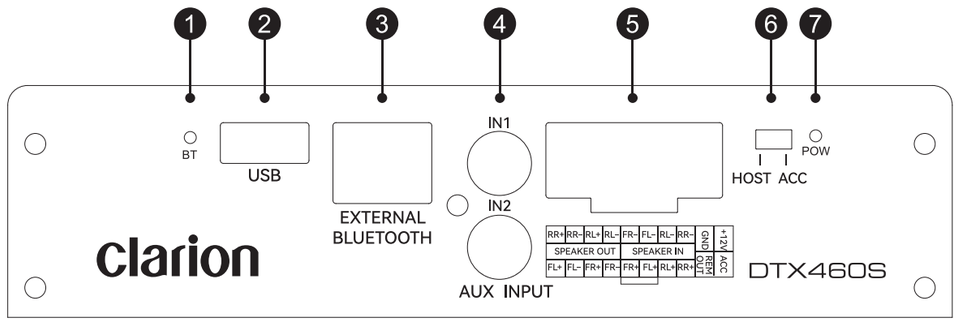
Free Repair Terms (Please Read Carefully)

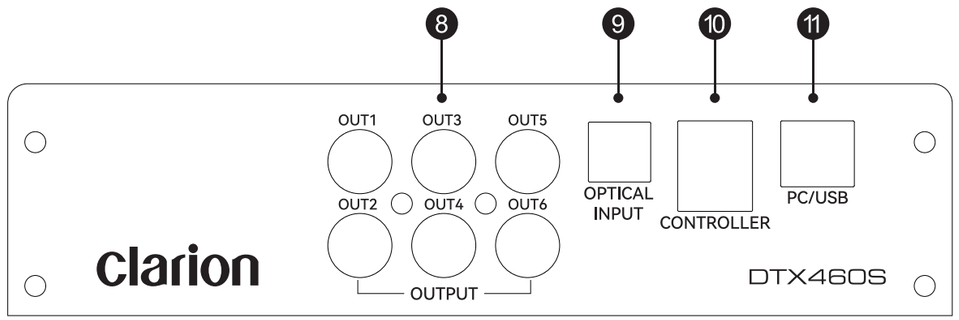
1. If the product malfunctions under normal operation in compliance with all instructions specified in the Owner's Manual and warning labels affixed to the unit, free repair service shall be provided within the warranty period at the store of purchase or our authorized service network.
2. To apply for free warranty repair within the valid warranty term, please bring the product together with this Warranty Certificate to your original dealer store.
3. If relocation, gift transfer or other reasons prevent you from visiting the registered original dealer for repair, refer to the Clarion Authorized Service Network Directory included with the unit, then consult the nearest official service center.
4. Repair service will be chargeable even within the warranty period for the following cases:
   a. Malfunction or damage caused by improper operation, unauthorized maintenance or modification of the unit.
   b. Faults or damage resulting from collision, dropping or impact after installation in the vehicle.
   c. Damage or breakdown induced by fire, salt fog, chemical corrosion, earthquake, typhoon, flood, lightning strike, other natural disasters or public incidents.
   d. Failures arising from long-term commercial use, or operation outside standard passenger vehicles (such as marine vessels, household mains power supply, etc.).
   e. This Warranty Certificate is incomplete, missing mandatory information including purchase date, customer name and authorized dealer name.
   f. Natural wear, abrasion, aging of consumable parts under regular use, as well as tape-related malfunctions.
5. Replacement copies of this Warranty Certificate will not be issued; please keep it properly.

Repair Record	

※ This Warranty Certificate only provides free repair service subject to the terms and conditions stated herein, without limiting your statutory consumer rights. For inquiries regarding post-warranty repair matters, please contact your original dealer or Clarion official support.

Unit Port Introduction





1. Bluetooth indicator
2. USB2.0 connector
3. External Bluetooth connector
4. RCA input connector
5. High-level input /output and power connector
6. Machine start mode switch
7. Power indicator
8. RCA output connector
9. Optical input connector
10. Controller connector
11. PC/USB External device connector

RR+	RR-	RL+	RL-	FR-	FL-	RL-	RR-	GND	+12V
SPEAKER OUT				SPEAKER IN				REM OUT	ACC
FL+	FL-	FR+	FR-	FR+	FL+	RL+	RR+		

Screen Configuration

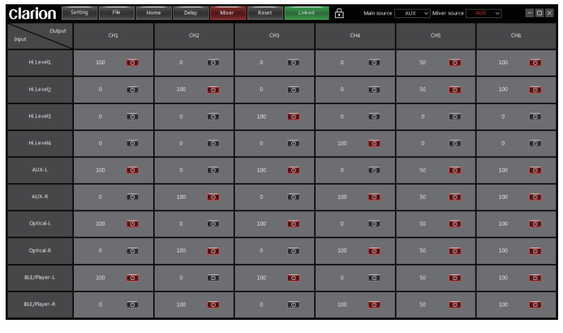
[Main]



[Time Alignment] Sub-window 1



[Mixer Setting] Sub-window 2



Possible to control an audio effect for each speaker at Main Screen
Realize a sophisticated sound according to adjusting a detailed sound effect on Sub-windows

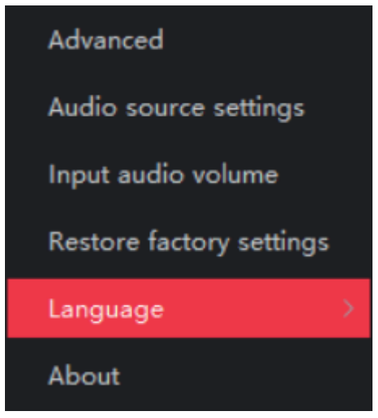
Handle with Care

- Download this software to your laptop, then connect the matching Clarion amplifier model with the dedicated USB data cable included with the device.
- Do not control this application while driving
- Require a car-audio expertise to maximumly use an adjustment function



① Settings Button

Click to open various setting interfaces, including noise gate setup, language switching, firmware upgrade and other functions.



← Advanced settings, main source attenuation volume, noise gate switch

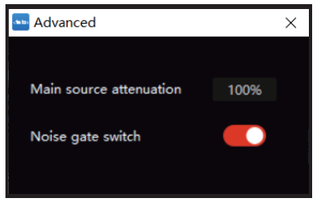
← Sound effect linkage for audio sources (high level, low level, Bluetooth)

← Volume adjustment for all audio sources OEM head unit, external source, optical fiber, Bluetooth, player

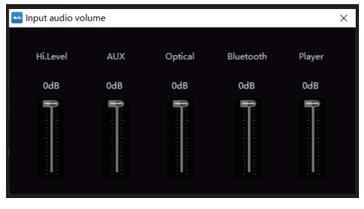
← Restore all factory default parameters

← Interface language switching, Chinese and English available

← Check current software version and perform firmware upgrade



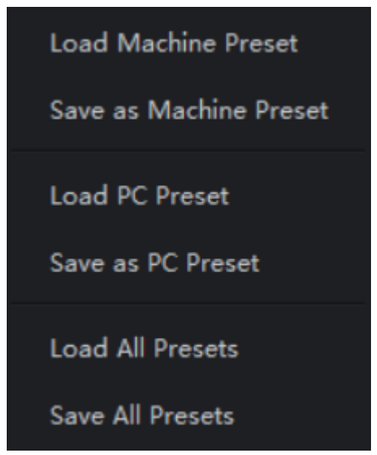
Advanced Setting Window



Multi-source Volume Setting Window

② Memory Preset Function Area

Used to save, load full-system tuning parameters and copy memory presets.



← Load local device built-in sound presets

← Save sound preset to local device

← Load single sound preset file from computer

← Export single sound preset file to computer

← Import full-system tuning file from computer

← Export full-system tuning file to computer

③ Main Interface

Independently adjust sound parameters for each speaker on the main screen.

Fine-tune all kinds of sound effects in sub-windows to create layered, high-quality in-car listening experience.

④ Time Alignment Setting

Click to enter the sound field time alignment configuration page.

⑤ Mixer Setting

Click to enter the mixer parameter configuration page.

⑥ Reset Settings

Click to open custom settings and restore factory default parameters.

⑦ Connection Status

Linked — When the indicator light turns green (Linked), the device is connected successfully.

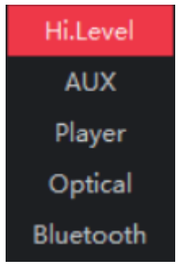
Unlink — When the indicator light turns red (Unlink), no device is currently connected.

⑧ Encryption Settings

Click to set a password lock for this device.

⑨ Main Audio Source Switch Area

Click to enter audio source switching page



← Factory head unit

← External audio source

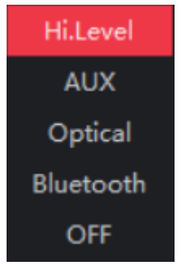
← Media player

← Optical fiber

← Bluetooth audio

⑩ Mixing Audio Source Setting Area

Turn on / off mixing function for each external audio source separately



← High-level input

← External AUX input

← Optical fiber

← Bluetooth

← Disabled



① EQ Curve Viewer

Displays the equalization tuning curves of all output channels.

② Crossover Filter

View the current parameter configuration of crossover filters.



Freq: Crossover cutoff frequency

Adjustment range: 20Hz–20kHz

Slope: Filter attenuation slope

Available slopes for each filter type:

Butterworth: -6, -12, -18, -24, -30, -36, -42, -48dB/Oct

Bessel: -6, -12, -18, -24, -30, -36, -42, -48dB/Oct

Linkwitz-Riley: -12, -24, -36, -48dB/Oct

Type: Filter type

Three filter options available: Butterworth, Bessel, Linkwitz-Riley

③ Parametric EQ Band Table

Adjust equalization parameters for each independent frequency band.

④ Reset EQ Parameters

Click the Reset button to restore the factory default EQ values of the current channel.

⑤ EQ Bypass Switch

Click the Bypass button to temporarily disable all EQ effects of the current channel.

⑥ Enable Parametric EQ Mode

Click the P.EQ button to activate parametric EQ;

Graphic EQ mode is set as software default.

⑦ EQ Curve Preview Window

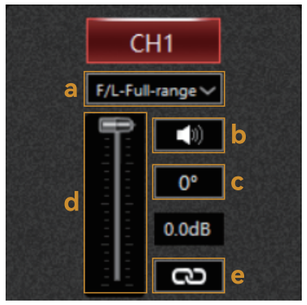
Display and check the EQ curve of the specified channel on the chart.

⑧ DSP Volume – External Source Volume Control

Adjust input volume of external sources such as Bluetooth and high-level input, adjustable range: -60dB ~ +6dB.

⑨ Channel Setting Panel

Used to manage EQ parameters and select output channels for tuning.



a: Speaker Type Selector

Assign corresponding speaker type and input channel to this output channel.

b: Output Channel Toggle

Independently enable or disable each output channel.

c: Phase Polarity Switch

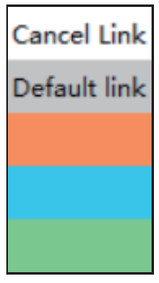
Adjust phase status of the output channel

0° Normal Phase 180° Reverse Phase (180° phase flip)

d: Fine Gain Adjust Slider

Slider for precise trimming of output gain level.

e: Channel Parameter Link Function



Copy full parameter sets from other linked output channels synchronously.
When linking is activated, all EQ parameters of the linked channel will be copied to the current channel.

No parameter synchronization

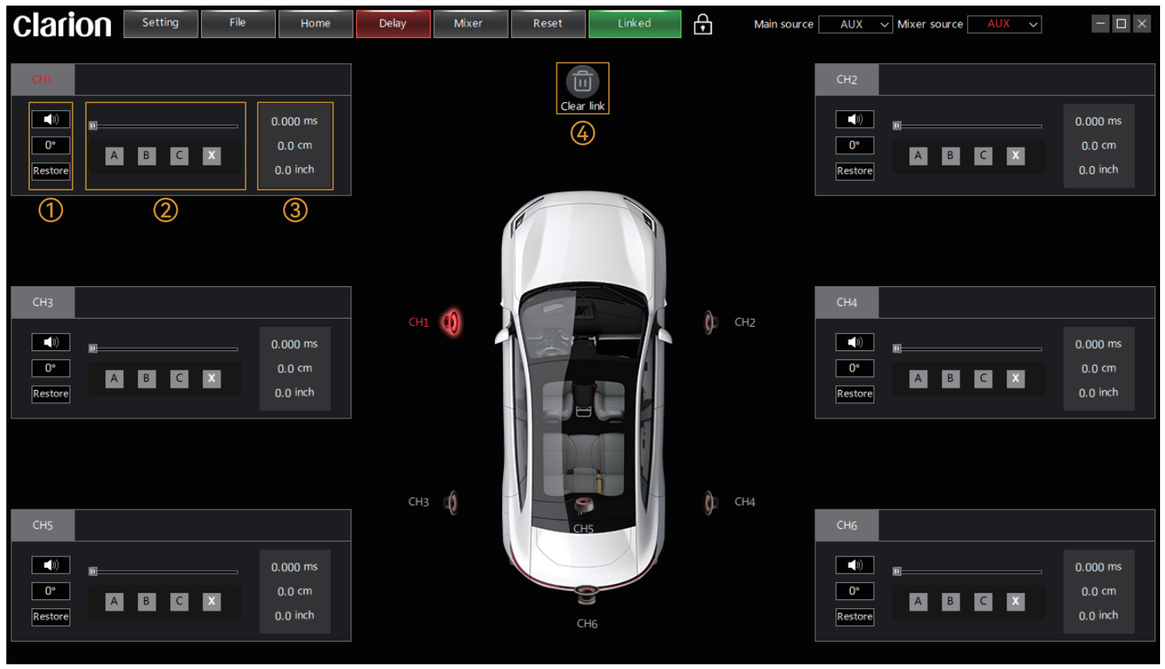
Parameter synchronization enabled

⑩ Delay Unit

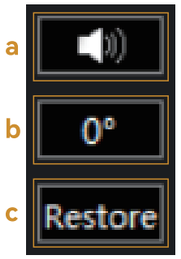
Select measurement unit for time alignment values:

Centimeter (cm), Inch, Millisecond (msec)

Time Alignment



① Channel / Phase Buttons



a: Output Channel Switch

Enable or mute the output of this channel.

b: Phase Polarity Toggle

Switch the phase status of the channel

0° Normal Phase

180° 180° Reverse Phase

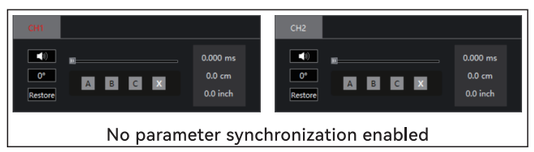
c: Restore

Reset and recover time alignment data; click to reset all delay parameters.

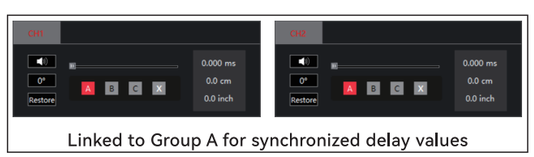
② Time Alignment Group Link

Synchronously copy delay parameters from other output channels.
After enabling linkage, delay values of channels in the same group will be synchronized automatically.

Available groups: A / B / C
Delay value is used for sound field time compensation adjustment.
Adjustment range:
0~254.4cm / 0~100.3inch / 0~7.354ms



No parameter synchronization enabled



Linked to Group A for synchronized delay values

③ Delay Unit

Measurement unit for delay values:
Centimeter (cm), Inch, Millisecond (msec)

④ Reset Time Alignment Settings

One-click reset of all previously configured delay parameters.

*** Calculation Rule for Delay Value**

Measure the distance from each speaker to the listening position, and take the farthest speaker distance as the reference value.

Delay value of each speaker = Reference distance − Actual distance from the speaker to listening position.

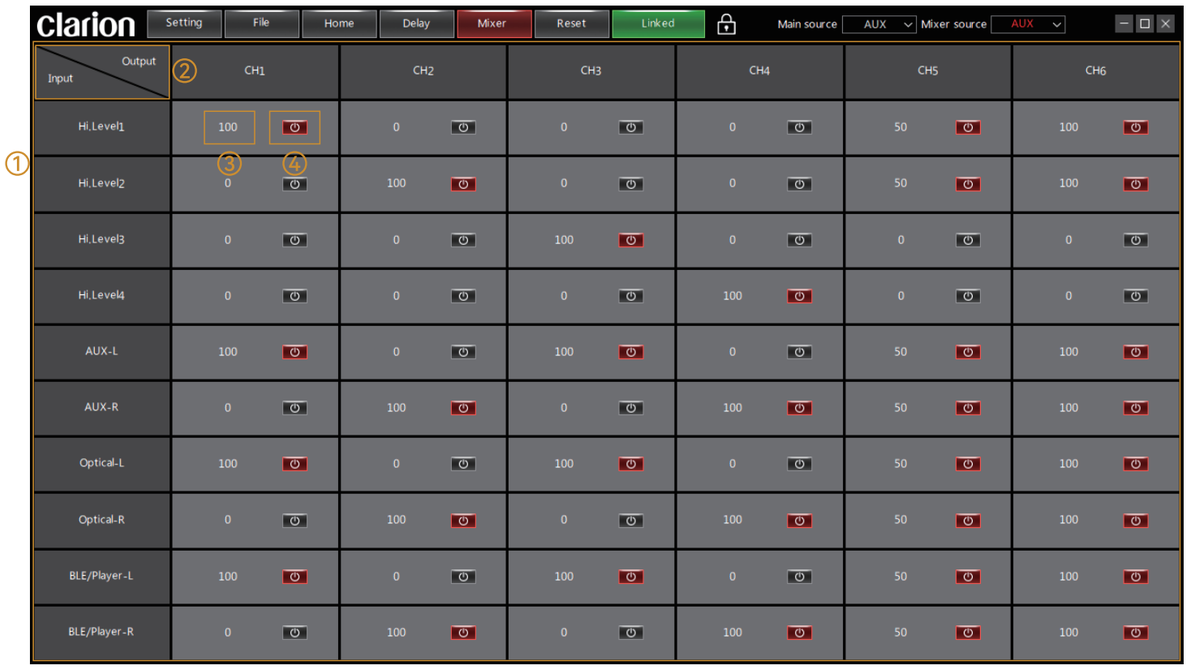
Example:

CH1=100cm, CH2=50cm, CH3=110cm, CH4=40cm, CH5=180cm

CH5 is 180cm away, the farthest distance among all speakers, so it is set as the reference value.

Delay value to be filled in for CH1: 180cm − 100cm = 80cm

Mixer Setting



① Main Mixer Ratio Interface

Assign corresponding input audio source channels to each output channel, including factory head unit audio, DSP external audio source, optical fiber and Bluetooth.

② All Audio Source Input Signal Allocation

Input: Various audio source inputs (factory head unit / external audio / optical fiber / Bluetooth)
Output: Mixing adjustment for signals from corresponding input sources

③ Mixing Level Adjustment

Adjust the volume ratio of the output channel for the matched input source; adjustable range: 0–100

④ Input Signal Toggle

Enable or disable the signal of the assigned input channel

Specifications

DSP Chip:	AK7735EQ 148MHz
Amplifier Class:	Class AB
Input:	4-channel high-level input, built-in Bluetooth, USB media playback support
Output:	6-channel low-level RCA output, 4-channel high-level speaker output
Amplifier Power:	4×50W
EQ Bands:	31 bands per channel
Max Time Alignment Delay:	7.354ms
Sampling Rate:	192kHz/24Bit
Signal Conversion Chip:	ADC: AK7735EQ / DAC: MS4434
Frequency Response:	20Hz~20kHz
Product Dimensions:	185mm × 121mm × 43mm

Function Parameter Table

Input	4-channel high-level input, external Bluetooth input, 2-channel low-level input
Output	6-channel low-level output, 4-channel high-level output
Output Gain	Gain range: Mute, -60dB ~ +6dB
Output Equalizer (EQ)	Each channel is equipped with independent multi-order high-pass and low-pass filters. 1. Filter types: Link-Riley, Butterworth, Bessel 2. Crossover frequency range: 20Hz ~ 20kHz, adjustment step: 1Hz 3. Crossover slope: Off, 6dB/Oct ~ 48dB/Oct
Output Crossover Filter	Each channel is equipped with independent multi-order high-pass and low-pass filters. Filter types: Link-Riley, Butterworth, Bessel Crossover frequency range: 20Hz ~ 20kHz, adjustment step: 1Hz Crossover slope: Off, 6dB/Oct ~ 48dB/Oct
Output Phase & Time Alignment	Phase and delay adjustable per channel. Phase: 0° / 180° Delay: 0 ~ 7.354ms, equivalent to 0 ~ 254.4cm (0 ~ 100.3 inches)

Troubleshooting

■ APP Fails to Connect Unit

Check if DSP power supply is normal and power indicator light is illuminated
Confirm mobile Bluetooth is enabled and not occupied by other devices
Power cycle DSP and restart mobile Bluetooth, re-pair and reconnect

■ No Sound After Connection

Confirm master volume is not set to 0 or mute state
Verify selected input source matches your actual wiring (switch Bluetooth mode if using wireless playback)
Check if channel gain is set to mute or value 0

■ Delay / Crossover Settings Have No Effect

Confirm correct output channel (CH1–CH6) is selected before adjusting parameters
Check if filter is set to "Off" bypass mode; disable bypass for adjustments to take effect

■ Tuning Parameters Cannot Be Saved

After adjusting parameters, tap the "Preset Save" button to store current configuration
Confirm single channel parameter edit is completed before saving preset file

After-Sales Service

■ The warranty period of this product is 1 year starting from the date of purchase. Within the warranty period, we will provide free repair service if the product malfunctions under normal operating conditions.
In case of any malfunction, please contact your dealer store or the nearest official service support center of our company.

■ For faults occurring after the expiration of the warranty period, please consult your purchasing dealer or the nearest official service support center of our company for relevant solutions.