Clarion

DTX480E

8-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. ( )

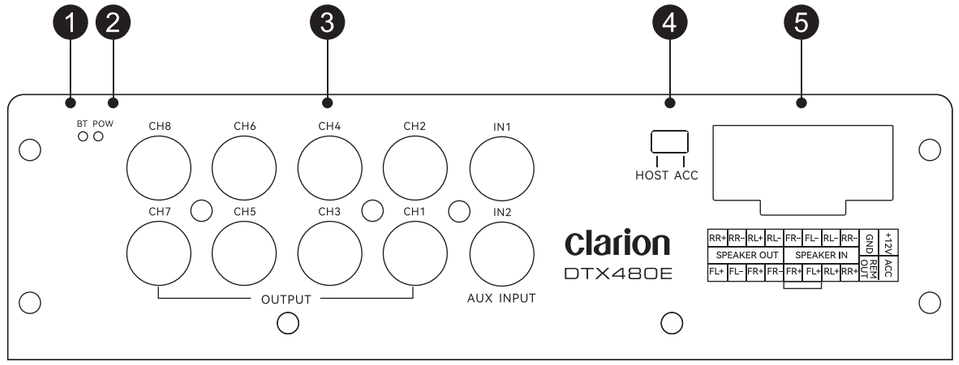
Free Repair Terms (Please Read Carefully)

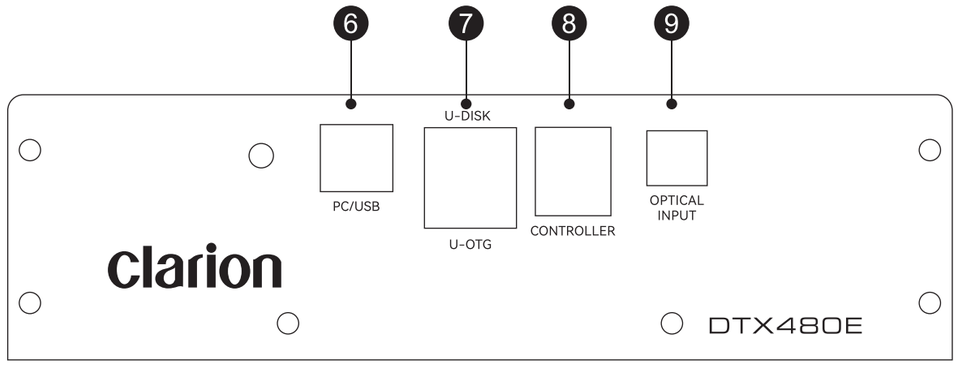
1. If the product malfunctions under normal operation in compliance with all instructions specified in the Owner's Manual and warning labels affixed to the unit, free repair service shall be provided within the warranty period at the store of purchase or our authorized service network.
2. To apply for 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





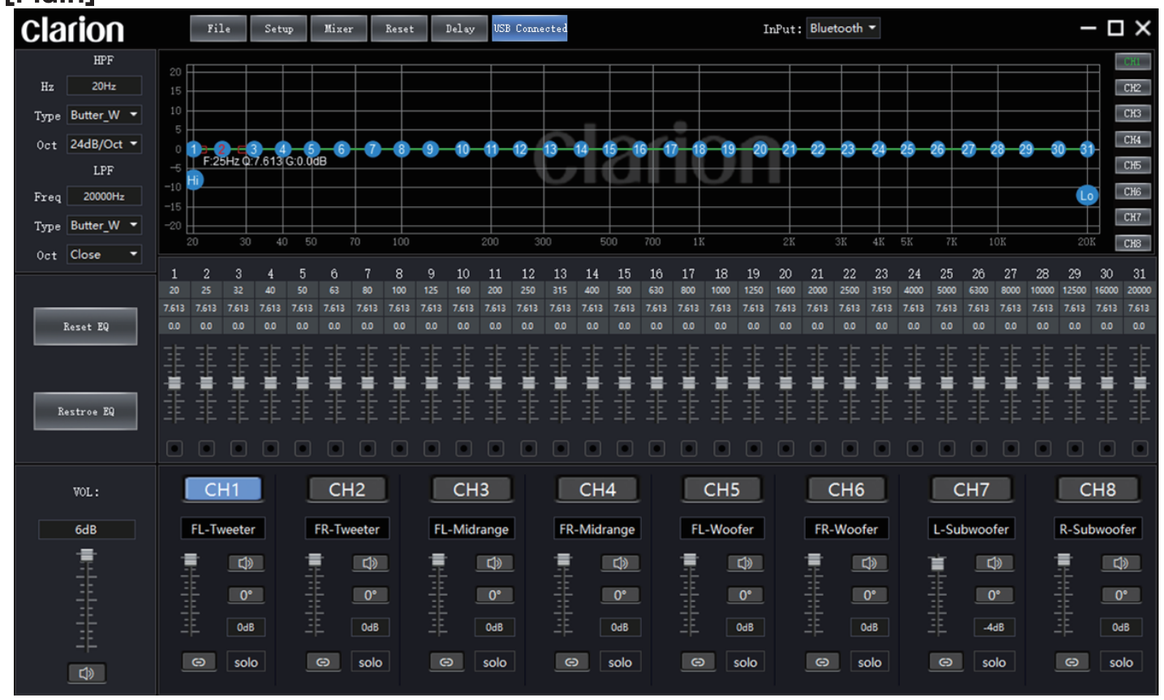
1. Bluetooth indicator
2. Power indicator
3. RCA output connector
4. Machine start mode switch
5. High-level input /output and power connector

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+		

6. PC/USB External device connector
7. OTG functional connector
8. Controller connector
9. Optical input connector

Screen Configuration

[Main]



[Time Alignment] Sub-window 1



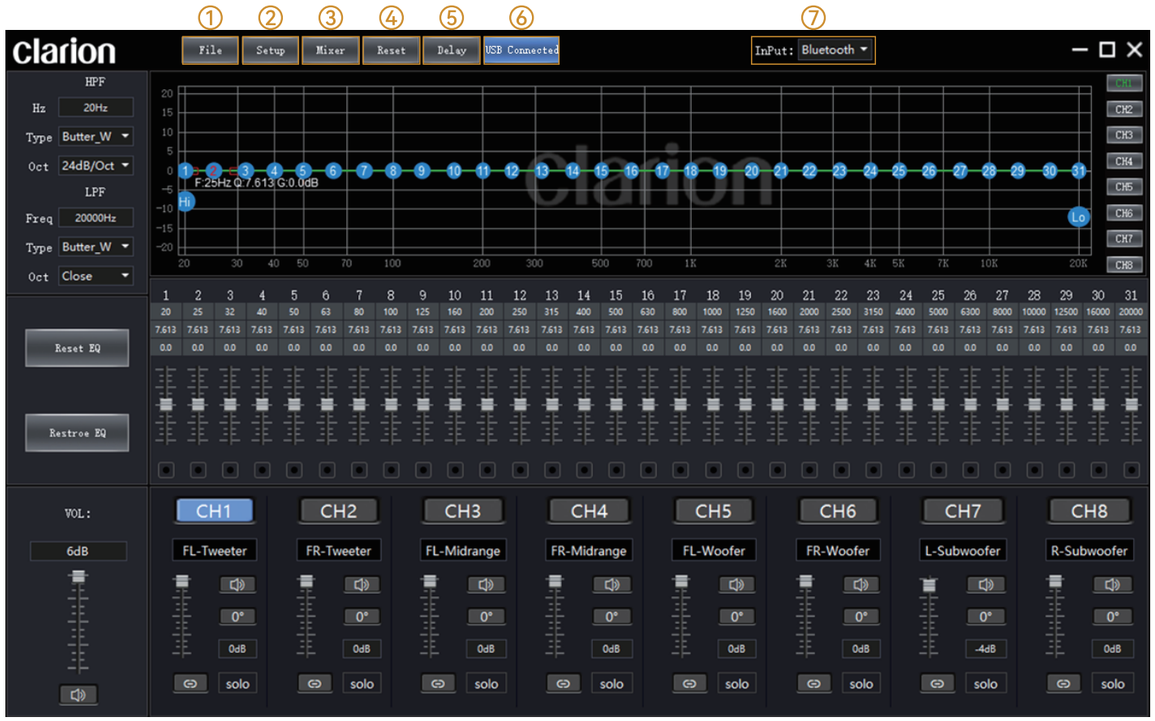
[Mixer Setting] Sub-window 2



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

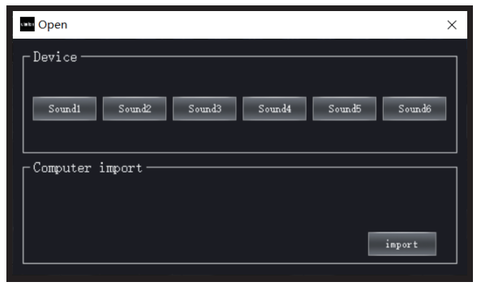
Handle with Care

- 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 Preset Memory Function Area

For saving, loading full-unit tuning parameters and duplicating memory presets



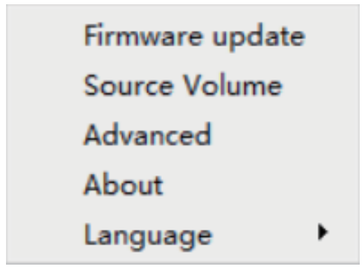
Import sound profiles from device preset slots or import tuning files from PC



Save sound profiles to any device preset slot
Export single or multiple device presets to the computer

② Settings Button

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



- Firmware update ⟵ Firmware Upgrade
- Source Volume ⟵ Source Volume Settings
- Advanced ⟵ Advanced Settings (Noise Gate Level)
- About ⟵ View Current Version Number
- Language ⟵ Interface Language Switch, Chinese or English

③ Mixer Setting

Click to enter the mixer parameter configuration page.

④ Reset Settings

Click to open custom settings and restore factory default parameters.

⑤ Time Alignment Setting

Click to enter the sound field time alignment configuration page.

⑥ Connection Status

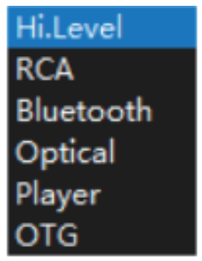


When the indicator light is grey (Not connected), no device is connected.

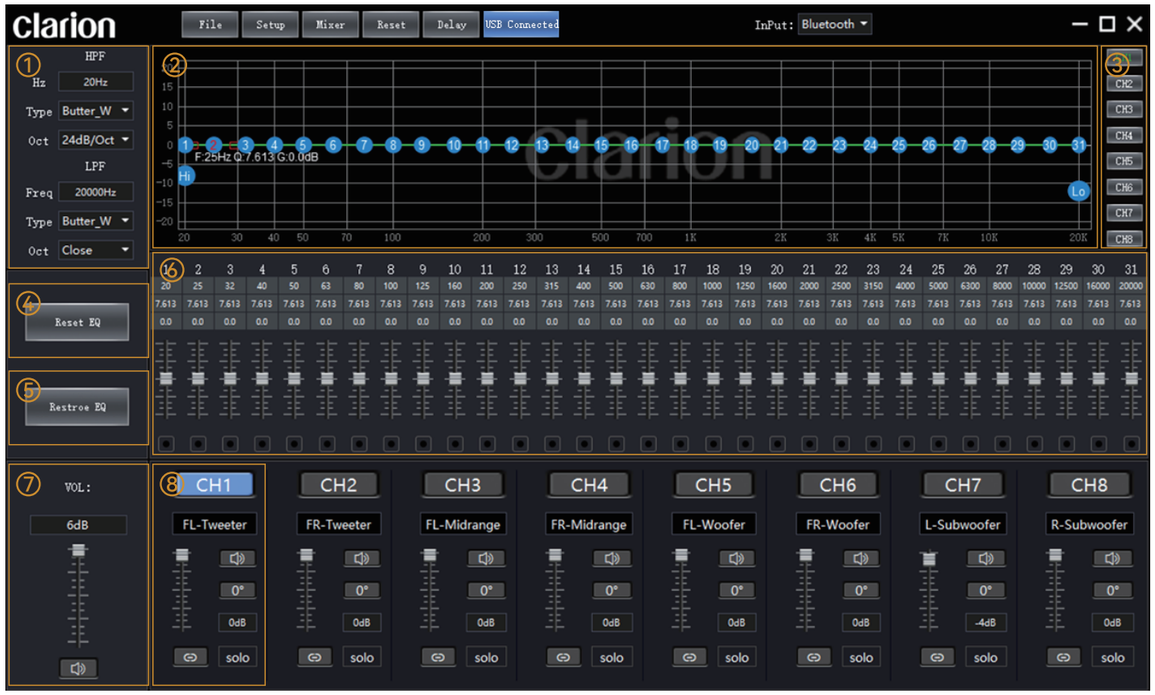
When the indicator light is blue (USB Connected), the device is successfully connected.

⑦ Main Audio Source Switch Area

Click to enter audio source switching page



- Hi.Level ⟵ Factory Head Unit Audio Source
- RCA ⟵ External RCA Audio Source
- Bluetooth ⟵ Bluetooth Audio Source
- Optical ⟵ Optical Audio Source
- Player ⟵ Player Audio Source
- OTG ⟵ OTG Audio Source



① Crossover Filter

View current configuration parameters of crossover filters



Hz: High-Pass Crossover Cutoff Frequency

Adjustment range: 20Hz–20kHz

Oct: 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 optional filter algorithms: Butterworth, Bessel, Linkwitz-Riley

Freq: Crossover Cutoff Frequency

Adjustment range: 20Hz–20kHz

② EQ Curve Viewer

Displays the equalization tuning curves of all output channels.

③ EQ Curve Preview Window

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

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 Parametric EQ Band Table

Adjust equalization parameters for each independent frequency band.

⑦ DSP Volume – External Source Volume Control

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

⑧ 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

f: Single Channel Solo Monitoring

Adjustment buttons for fine increasing or decreasing output gain

Time Alignment



① Delay Value Adjustment

Acoustic time alignment compensation adjustment
Adjustment range:
0~692cm / 0~272inch / 0~20ms

② Output Channel Switch

Enable or disable output for this channel

③ Delay Unit

Measurement unit for delay values
cm (centimeter) / inch / msec (millisecond)

④ Delay Group Linkage

Synchronize and duplicate delay parameters with other output channels;
When linkage is activated, delay values within the same group will be copied synchronously;
Available groups: 1 / 2 / 3



No Linkage



Group 1 Linkage

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 Mixing Level Adjustment

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

Specifications

DSP Chip:	AK7738VQ 269MHz
Amplifier Type:	Class AB
Input:	4-channel high-level, AUX, optical & coaxial input, built-in Bluetooth input, USB flash drive playback supported
Output:	8-channel low-level RCA, 4-channel high-level
Amplifier:	4×50W
EQ Quantity:	31-band
Max Time Alignment:	7.354ms
Sampling Rate:	192kHz/24Bit
Signal Conversion:	AD: AK7738VQ DA: MS4434
Frequency Response:	20Hz~20kHz
Product Specifications:	167mm x 131mm x 49mm

Function Parameter Table

Input	4-channel high-level, AUX, optical input, built-in Bluetooth input, USB flash drive playback supported
Output	8-channel low-level, 4-channel high-level
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 ~ 20ms, equivalent to 0 ~ 692cm (0 ~ 272 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–CH8) 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.