

ECLIPSE



Music Driving On

Audio

The new CD Receiver line delivers outstanding audio performance across the board for each model. By adhering to ECLIPSE's time-proven audio philosophy and incorporating advancements where possible by combining the best of digital and analog, the new CD Receivers provide significantly better audio quality that greatly enhances the enjoyment of music.

Circle Surround II



This technology enhances in-car listening enjoyment with a powerful combination of three functions. **Circle Surround** generates surround sound from any audio source such as CDs, MP3 files and radio broadcasts with just four speakers. **Focus** raises the stereo soundfield, making the sound appear to be coming from directly in front at ear level.

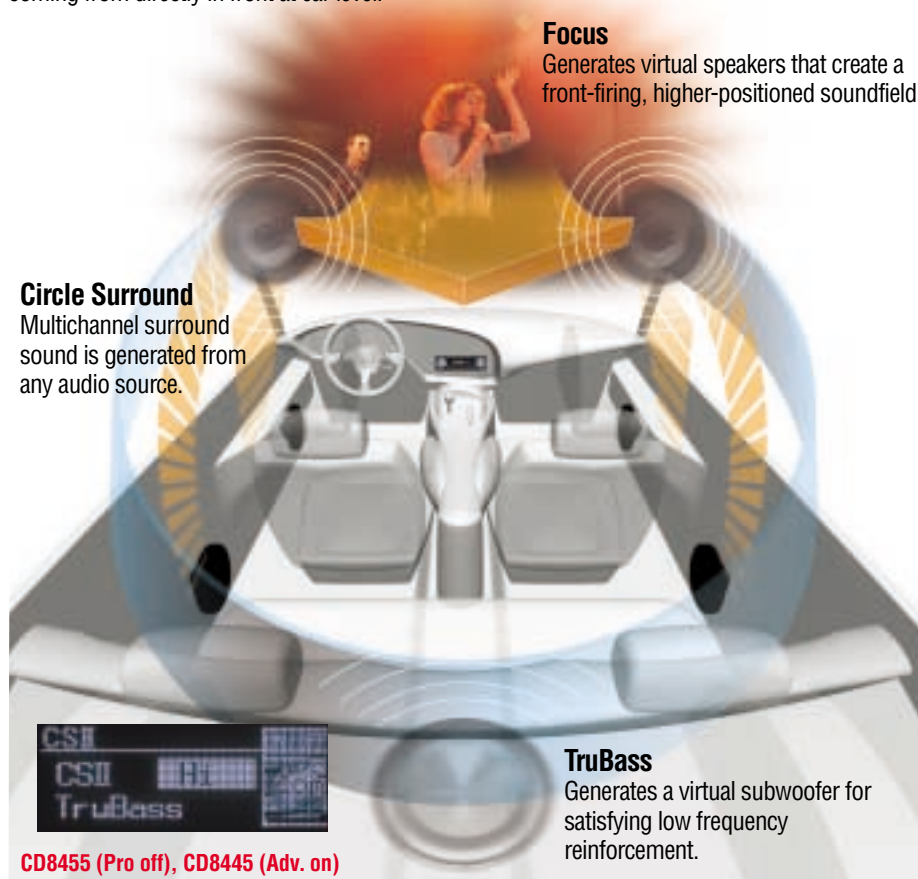
Its use complements surround sound to create a rich, enveloping soundfield. **TruBass** is technology based on psychoacoustics and scientific knowledge of the human hearing system to generate bass sounds extending lower than a small speaker's response so that a subwoofer is not required.

Focus

Generates virtual speakers that create a front-firing, higher-positioned soundfield.

Circle Surround

Multichannel surround sound is generated from any audio source.



TruBass

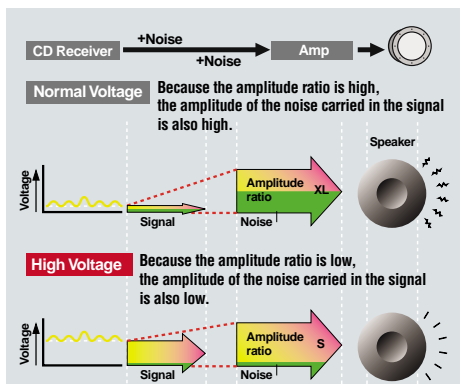
Generates a virtual subwoofer for satisfying low frequency reinforcement.

CD8455 (Pro off), CD8445 (Adv. on)

High voltage and low impedance output

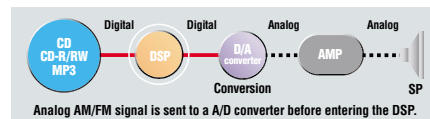
Highend audio products usually are engineered to have preamp outputs that have high voltages along with low impedances. These characteristics are desirable from an audio electronics point of view as they enable driving downstream amplifiers optimally to reap other benefits such as a higher signal-to-noise ratio and increased dynamics. Each CD receiver ensures any connected external amplifier will deliver optimal performance.

CD8455/8445: 8V at 55Ω
CD5435/5425/5415/5405: 5V at 55Ω



High-performance 24-bit $\Delta\Sigma$ D/A converter

Digital circuits benefit from signals staying in the digital domain as long as possible, helping to minimize distortion and noise. All signal processing in the CD Receivers remains entirely in the digital domain until the last stage prior to power amplification. The final level of audio performance also relies on high-performance digital to analog conversion. As this process greatly influences final sound quality, a proprietary DAC is utilized so distortion is minimized and S/N ratio stays high.



CD8455/8445

High-performance DSP

Featured in the CD8455 and CD8445, this single sophisticated chip contains the Parametric EQ, Multi-Harmonizer, Time Alignment and Crossover functions as well as level.



CD8455/8445

Parametric EQ

This sophisticated equalization method is the best for achieving a smooth, well-balanced in-car system frequency response that overcomes the frequency peaks and dips often encountered in automobile environments due to the combination of hard, reflective surfaces and soft, absorbing surfaces. Parametric EQ allows selecting a frequency band as well as bandwidth for an even system response.

CD8455/8445 (Adv. on)

3-band Graphic EQ

An additional EQ method to adjust the tonal characteristics of program material to suit user preferences.



CD5435/5425/5415/5405

E-iSERV



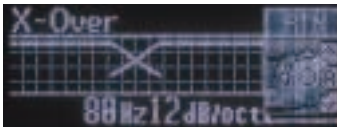
www.eclipse-web.com
This is where E-iSERV starts!

Time Alignment

Electronic delay lines make sure the sounds from all the speaker units arrive at the listener's ears simultaneously for a much more natural sound with improved imaging. **CD8455/8445 (Adv. on)**

Crossover

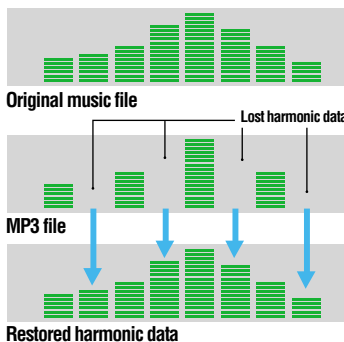
To create a smoother, system response in a multi speaker unit system the frequency point and slope can be tweaked for optimal crossover settings .



CD8455/8445/5435/5425

Multi-Harmonizer

Digital music files in formats such as MP3, WMA and ATRAC3 lose harmonic data during the encoding process because of the compression that is applied. Multi-Harmonizer restores the lost harmonic data, allowing files to sound much better.



CD8455/8445

MOSFET 50W × 4 power amplification

MOSFET devices are used for power amplification due to their desirable characteristics — drawing less current and requiring less power — as well as providing a more natural sound.

All units

AUX Input

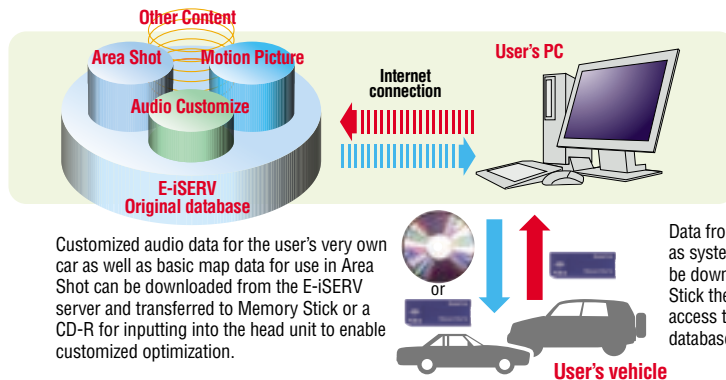
When connecting external sources, the AUX input has adjustable sensitivity for perfect matching to cut extraneous noise and improve S/N ratios.

CD8455/8445/5435, CD5425 (optional)

New E-iSERV advances

ECLIPSE's E-iSERV has raised user customization to a new level that many thought could not be done. By using the internet and a personal computer, the user can access

functions and features that can optimize in-car system response and provide map guidance, along with customizing displays and enhanced control abilities.



Area Shot

Adding value to CD Receivers with map viewing and route assistance, this feature allows searching for a destination and downloading the

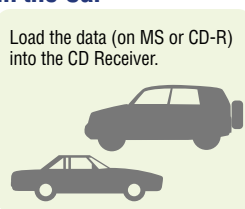
route to get there. Once the data has been input into the CD Receiver, it can be viewed to confirm the route.

At home



Access E-iSERV from a personal computer.

In the Car



Load the data (on MS or CD-R) into the CD Receiver.



Can set up to 3 "on-the-way" stopping locations.



Input start point and destination information — street address, city, state, and zip code.



View the map(s) and confirm the route.



Download the completed route data onto:
Memory Stick: CD8455, CD8445
CD-R: CD8455, CD8445
CD5435, CD5425



Start Area Shot to display first map.



As the first mapped area (Area Shot) is approached, an indication in the display will activate.



After the required number of Area Shots, the destination will be reached.

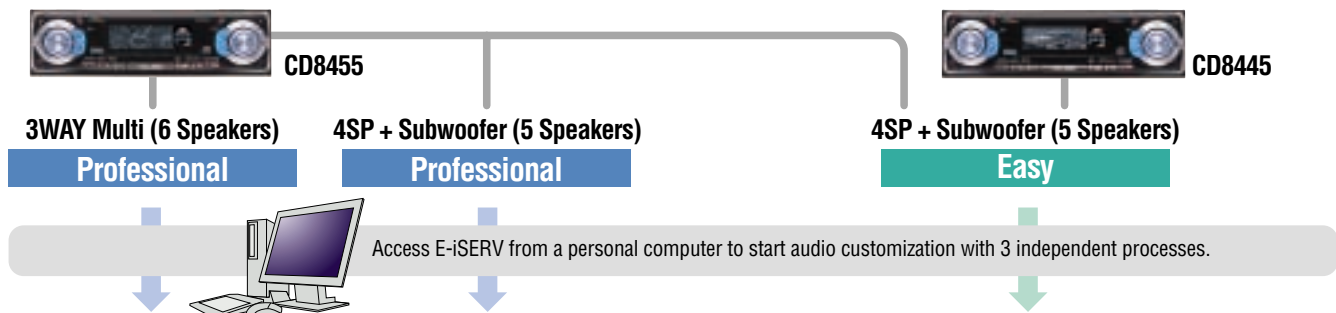
Notes : Areas Shot is convenient for reviewing the route. However, the car must not be in motion when using Area Shot. GPS option for CD8455 and CD8445 allows current position to be displayed.

Motion Picture

Customization for the display panel in the CD8455 and CD8445 is possible. The proprietary "cutting board" application can be downloaded and up to 100 favorite images can be put together to create an up to 10 sec. animated sequence.



Audio Customize



Time Alignment

Optimizes system response by manipulating the arrival times of sounds from various speakers positioned in different locations to arrive at a listener's ears simultaneously, creating better imaging. Initial adjustment starts with selecting a mode.



In the Time Alignment Pro mode window, follow the directions and input values to set time delay and speaker level for each of the system's speakers one by one. Each speaker is highlighted in the display so adjustment is simple and all data is input into the E-iSERV server.



In the Time Alignment Easy mode window, the process is simpler, with vehicle type such as sedan, compact, SUV etc., tweeter and rear speaker positions to select.

Crossover

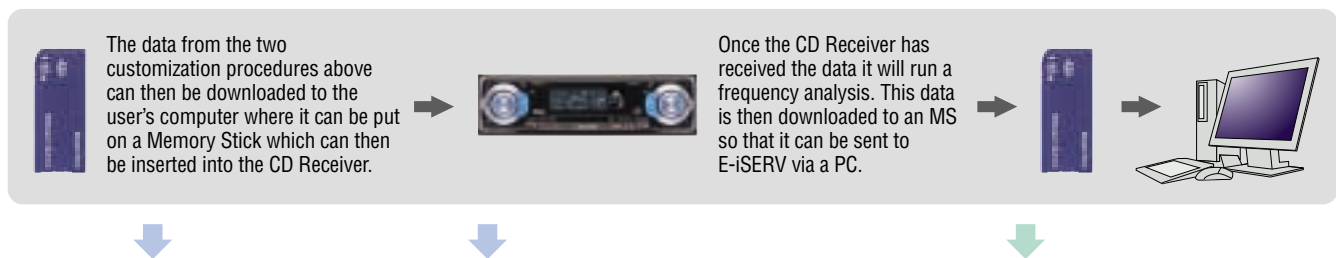
Allows selecting the frequency points where one speaker component's response crosses over to another driver. The goal is to achieve a smooth, natural response across the entire frequency spectrum, without speaker discontinuities.



In the Crossover Pro mode window, speaker cutoff frequencies and slope settings can be selected for a system comprising full 3-way multi component speakers as well as a 4-speaker plus subwoofer system.



Allows selecting the subwoofer and the frequency at which it comes into operation.



Parametric EQ

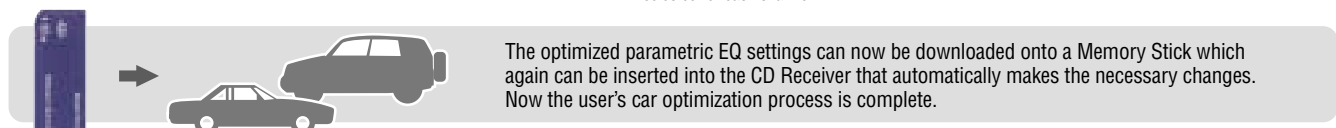
Defeats a car's interior acoustic anomalies that cause significant peaks and dips in the overall frequency response with precise equalization control that can pinpoint problem frequencies.



In the Parametric EQ Pro mode window, the amplitude, center frequency and bandwidth for each of ten frequency bands can be adjusted: 5 bands each for the front and rear speakers and 5 bands each for the low and high frequencies can be selected for each channel.



In the Parametric EQ Easy mode window, 7 frequency bands across the entire frequency spectrum for each channel can be adjusted.



CD Receivers

Catering to dedicated audio-only requirements, ECLIPSE's CD Receivers have been redesigned to offer a significantly higher level of performance along with new and upgraded features.

The CD8455 and CD8445 have all the features and performance to satisfy the most discerning music lover. Able to extract the best performance from CD, CD-R/RW, WMA and MP3 music files, both units demonstrate exceptional audio quality and user convenience. ECLIPSE's innovative interactive E-iSERV can be accessed to achieve results that previously required trained technicians with test equipment.



ESN WMA MP3 COMPACT disc HD Radio SIRIUS

NEW CD8455 MOSFET 50W × 4 (max.)

ESN E8 High-Power "Pro Customize" CD/MS Receiver with MP3/WMA Decoder and Remote

- CD, CD-R/RW, WMA and MP3 compatibility
- Circle Surround II (pro mode off)
- E-iSERV connectivity
- Area Shot (basic map, arrow and text)
- GPS unit-ready
- Motion Picture
- Advanced 2-mode Sound Control DSP:
 - Parametric EQ
 - 10 band (pro mode on)
 - 7 band (pro mode off)
 - Multi-Harmonizer
 - Time Alignment
 - Crossover
 - Listening Position Selector
- Source Volume Control
- Memory Stick-ready for recording/playback (ATRAC3)
- All digital circuitry with advanced 24-bit $\Delta\Sigma$ D/A converter
- High 8V preamp output with low 55 Ω impedance
- HD Radio-ready
- SIRIUS Satellite Radio-ready
- FM/AM tuner
- MOSFET power amplification
- 8-step full dot VF display
- 5-pattern illumination
- MS and CD ESN security
- Digital input
- 3 prs. pre outputs
- Aux input
- Remote control



ESN WMA MP3 COMPACT disc HD Radio SIRIUS

NEW CD8445 MOSFET 50W × 4 (max.)

ESN E8 High-Power "Customize" CD/MS Receiver with MP3/WMA Decoder and Remote

- CD, CD-R/RW, WMA and MP3 compatibility
- Circle Surround II (advanced mode on)
- E-iSERV connectivity
- Area Shot (basic map, arrow and text)
- GPS unit-ready
- Motion Picture
- Advanced 2-mode Sound Control DSP:
 - 7-band Parametric EQ (advanced mode on)
 - Multi-Harmonizer
 - Time Alignment
 - Crossover
 - Listening Position Selector
- Source Volume Control
- Memory Stick-ready for recording/playback (ATRAC 3)
- All digital circuitry with advanced 24-bit $\Delta\Sigma$ D/A converter
- High 8V preamp output with low 55 Ω impedance
- HD Radio-ready
- SIRIUS Satellite Radio-ready
- FM/AM tuner
- MOSFET power amplification
- 8-step full dot VF display
- 5-pattern illumination
- MS and CD ESN security
- 3 prs. pre outputs
- Aux input
- Remote control

Others

5-pattern illumination

ECLIPSE has added the ability to change a CD Receiver's illuminated colors, allowing the user to select a color combination that complements the car interior or just to vary the color as desired. Illumination can be instantly switched between Blue+Red, Blue+Amber, Blue+Green, All Green and All Red.

CD8455/8445/5435



Blue+Red



Blue+Amber



Blue+Green



All Green



All Red



Vary the CD Receiver's illumination color to enhance the car's interior appearance.

The difficult task of providing the most in-demand features of a head unit in terms of performance and convenience has been met in a spectacular manner with the CD5435 and CD5425 units. Well ahead of any other head units in their class, the CD5435 and CD5425 offer superior performance for handling just about any form of audio optical disc. The CD5435 will also accommodate WMA files.

5V_{PRE-OUT} 



ESN WMA MP3  HD Radio[®] SIRIUS[™] READY READY

NEW

CD5435 MOSFET 50W × 4 (max.)

ESN E5 High-Power "Full-Face" CD Receiver with MP3/WMA Decoder and Remote

- CD, CD-R/RW, WMA and MP3 compatibility
- E-iSERV connectivity
- Area Shot (arrow and text)
- 1-bit DAC
- 3-band Graphic EQ
- Crossover
- Source Volume Control
- 5V preamp output with low 55Ω impedance
- Bright and clear LCD display
- 5-pattern illumination
- HD Radio-ready
- SIRIUS Satellite Radio-ready
- FM/AM tuner
- MOSFET power amplification
- ESN security
- 3 prs. pre outputs
- Aux input
- Remote control

5V_{PRE-OUT} 



ESN MP3  HD Radio[®] SIRIUS[™] READY READY

NEW

CD5425 MOSFET 50W × 4 (max.)

ESN E5 High-Power "Full-Face" CD Receiver with MP3 Decoder

- CD, CD-R/RW and MP3 compatibility
- E-iSERV connectivity
- Area Shot (arrow and text)
- 1-bit DAC
- 3-band Graphic EQ
- Crossover
- Source Volume Control
- 5V preamp output with low 55Ω impedance
- Bright and clear LCD display
- HD Radio-ready
- SIRIUS Satellite Radio-ready
- FM/AM tuner
- MOSFET power amplification
- ESN security
- 3 prs. pre outputs
- Aux input-ready
- Remote control-ready

8-step full dot VF display

The top models in the CD Receivers line incorporate full dot vacuum fluorescent displays with highly legible alphanumeric characters. There are also eight levels of adjustment to suit user preferences as well as a Bright & Dimmer control for more adjustment.

CD8455/8445

ESN

ECLIPSE's proven theft-deterrent measure uses a user-designated CD or a Memory Stick depending on the CD receiver model to

control system activation. The selected media can be set to be a key device that the system must "see" before it will activate. Without the key device, the system remains locked and will not operate.

All units

E-LAN data link system

ECLIPSE's E-LAN only requires a single cable that carries control signals as well as transmission signals to connect components of a mobile entertainment system. E-LAN also ensures upstream compatibility with future ECLIPSE products.

CD8455/8445/5435/5425/5415

SVC (Source Volume Control)

The fully digital circuitry featured in the new CD Receivers makes it possible to offer functions such as Source Volume Control that can automatically level the volume settings of all sources, eliminating the annoying differences in volume experienced when switching from radio to CD or DVD.

CD8455/8445/5435/5425

These two CD Receivers overturn preconceived ideas of entry level receivers. Designed to deliver the best from the two most popular sources of music today, CDs and MP3s, the CD5415 will please anyone who enjoys listening to music. The CD5405 is more focused on CDs.

5V_{PRE-OUT}



ESN MP3 COMPACT DISC DIGITAL AUDIO HD Radio READY SIRIUS READY

NEW

CD5415 MOSFET 50W × 4 (max.)

ESN E5 High-Power CD Receiver with MP3 Decoder

- CD, CD-R/RW and MP3 compatibility
- 3-band Graphic EQ
- 1-bit DAC
- 5V preamp output with low 55Ω impedance
- Bright and clear LCD display
- HD Radio-ready
- SIRIUS Satellite Radio-ready
- FM/AM tuner
- MOSFET power amplification
- ESN security
- 3 prs. pre outputs
- Remote control-ready

5V_{PRE-OUT}



ESN COMPACT DISC DIGITAL AUDIO

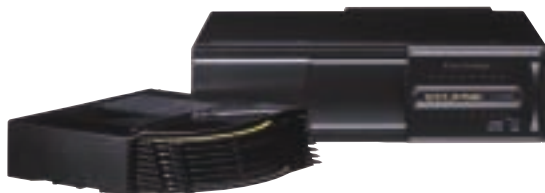
NEW

CD5405 MOSFET 50W × 4 (max.)

ESN E5 High-Power CD Receiver

- CD and CD-R/RW compatibility
- 3-band Graphic EQ
- 1-bit DAC
- 5V preamp output with low 55Ω impedance
- Bright and clear LCD display
- FM/AM tuner
- MOSFET power amplification
- ESN security
- Dual pre outputs (rear/non-fader selectable)
- Remote control-ready

Options



NEW

CH3083

8-Disc CD Changer with Magazine Unit

Functioning as an immense mobile jukebox with storage for 8 CDs, the CH3083 is ideal for increasing music content as it is also compatible with CD-R/RW discs.

- CD and CD-R/RW discs
- 8 disc magazine
- Coaxial digital output
- Multiple unit connectivity (2 units)
- Precision optical pickup
- "No disc contact" transport
- Reinforced high-rigidity chassis

NEW

RMC 105

Wireless Remote

New ergonomic design remote enhances operation. Included with CD8455, CD8445 and CD5435, optional with CD5425, CD5415 and CD5405



NEW

AUX 105

AUX Cord

Optional CD5425-dedicated AUX IN cable



Specifications

* Meets CEA2006 guidelines

14.4V Power Supply		CD8455	CD8445	CD5435	CD5425	CD5415	CD5405
Max. Power Output		50W × 4					
RMS Power Output*		14W × 4 (20Hz ~ 20kHz, 1% THD, 4Ω)					
Lineout Output Level/Impedance		8V(0dB)/55Ω		5V(0dB)/55Ω			
Tone Control	Bass/Mid/Treble	±12dB at 80Hz/±12dB at 630Hz/±12dB at 10kHz					
	Loudness	+10dB at 100Hz/+6.5dB at 10kHz					
FM	Frequency Range	USA: 87.75 ~ 107.9 MHz (0.2MHz step)		Latin America: 87.75 ~ 107.9 MHz (0.1MHz step)			
	Usable Sensitivity	13dBf					
	50dB Quieting Sensitivity	14dBf					
	Frequency Response	30 ~ 15,000Hz ±3dB					
	Stereo Separation	38dB (1kHz)					
AM	Frequency Range	USA: 530 ~ 1,710kHz (10kHz step)		Latin America: 530 ~ 1,710kHz (10kHz step)			
	Usable Sensitivity	20μV					
	Frequency Response	20 Hz ~ 20,000Hz, ±3dB					
CD	S/N Ratio (A-weighted)	100dB		95dB			
	Total Harmonic Distortion	0.008%					
	Stereo Separation	85dB		80dB			
	Frequency Response	20 Hz ~ 20,000Hz, ±3dB		—			
Memory Stick	S/N Ratio (A-weighted)	100dB		—			
	Total Harmonic Distortion	0.008%		—			
	Dimensions (W × H × D)		7" × 2" × 6-1/8" (178 × 50 × 155mm)				

Options

Digital Radio Options



NEW

GPS 105

GPS Unit

Connects to compatible CD Receiver units for use with Area Shot to enhance its features.
Optional for: CD8455, CD8445



NEW

HDR 105

HD Radio Tuner Unit

Optional for: CD8455, CD8445, CD5435, CD5425, CD5415
Dimensions (W × H × D)
6-19/64" × 1-7/16" × 6-29/32"
160 × 36.5 × 175mm



NEW

SIR-ECL 1

ECLIPSE COMPATIBLE SIRIUS SATELLITE RADIO TUNER

Optional for: CD8455, CD8445, CD5435, CD5425, CD5415
Dimensions (W × H × D)
4-9/64" × 1-3/8" × 4-59/64"
105 × 35 × 125mm

Feature List

	CD8455		CD8445		CD5435	CD5425	CD5415	CD5405
CONTROL								
Remote Control	●		●		●	Optional	Optional	Optional
CD Changer Control	●		●		●	●	●	—
CD-R/CD-RW	●		●		●	●	●	●
WMA	●		●		●	—	—	—
MP3	●		●		●	●	●	—
Digital Servo System (DSS)	●		●		●	●	●	●
TUNER								
FM / AM	●		●		●	●	●	●
Station Name Input	●		●		—	—	—	—
HD Radio / SIRIUS Satellite Radio-ready	●		●		●	●	●	—
AUDIO								
Output Voltage and Impedance	8V/55Ω		8V/55Ω		5V/55Ω	5V/55Ω	5V/55Ω	5V/55Ω
MOSFET Amplification	●		●		●	●	●	●
All Digital circuitry 24-Bit ΔΣ DAC	●		●		—	—	—	—
Source Volume Control (SVC)	●		●		●	●	—	—
Sound Control Mode	Professional		Advanced		—	—	—	—
	On	Off	On	Off	—	—	—	—
3-band Graphic EQ	—	—	—	—	●	●	●	●
Circle Surround II	—	●	●	—	—	—	—	—
Bass/Mid/Treble Control	●	—	—	●	●	●	●	●
Time Alignment	●	●	●	—	—	—	—	—
Parametric EQ	10-band	7-band	7-band	—	—	—	—	—
Multi-Harmonizer (MP3/WMA/ATRAC3)	●	●	●	●	—	—	—	—
Listening Position Selector	●	●	●	●	—	—	—	—
Crossover	●	●	●	●	●	●	—	—
Non Fader Level / Phase Control	●	●	●	●	●	●	—	—
SFC	—	—	—	●	—	—	—	—
Frequency Response Analysis	●	●	●	—	—	—	—	—
Non Fader PreOut	●		●		●	●	●	Selectable (Rear)
3 Prs. Pre Outputs	●		●		●	●	●	Selectable (Rear)
Digital Input	●		—		—	—	—	—
AUX In	●		●		●	Optional	—	—
GENERAL								
ATRAC3 Decoder/Encoder	●		●		—	—	—	—
E-iSERV Connection	MS or CD-R		MS or CD-R		CD-R	CD-R	—	—
ESN	MS or CD		MS or CD		CD	CD	CD	CD
Display	8-step VF		8-step VF		LCD	LCD	LCD	LCD
Full Face Tilt	●		●		●	●	—	—
E-LAN data link system	●		●		●	●	●	—

Product safety notice

- To ensure safe operation of products, please read the owner's manuals carefully prior to use.
- ECLIPSE is not responsible for accident or damage due to improper connections or products modified in any way.

Warning

- All products are intended for DC 12-Volt operation in negative grounded vehicles only. Never use them in 24-Volt vehicles such as heavy trucks or diesel cars with cold-region specification.
- Do not adjust controls while driving. To adjust the controls, stop the car in a safe location.

Caution

- Installation of products requires experience and knowledge. Ask your ECLIPSE retailer for proper installation.
- E-iSERV graphic examples are from pre-release software and may slightly vary from the finalized version.

General

- Product design and specifications are subject to change without prior notice as ECLIPSE constantly seeks to improve its products.
- Due to characteristics and properties of various photography and printing processes, the color(s) of the actual product may slightly differ from those shown on these pages.
- Some screen images shown are simulated.

Operation notes

- Area Shot operations cannot be accessed during driving.
- Map data created for use with Area Shot based on information provided by Tele Atlas and Geographic Data Technology.
- Use map data while being aware of actual road conditions and obeying traffic rules.
- Copying, publishing and the use of maps in electronic media or form are only possible when express written consent has been obtained prior to usage.

Others

- It may not be possible to install all products in some vehicles. In this event please consult your ECLIPSE retailer.
- Some recent audio discs may resemble conventional music CDs but are technically not Compact Discs (CD Red Book format) because of the copy protection technology employed. ECLIPSE cannot guarantee operation and performance if these discs are used.
- CD-R/RW playback quality may be affected by disc surface condition and disc format initialization process.
- It may be necessary to purchase additional connecting cables for the products.
- Due to the effects of photography and printing processes, the color of the actual product may differ somewhat from that shown here.
- Memory Stick is a registered trademark of Sony Corp.

- Circle Surround II and the SRS logo are trademarks or registered trademarks of SRS Labs, Inc.
- HD Radio is a trademark of iBiquity Digital Corporation.
- SIRIUS SATELLITE RADIO is a trademark of SIRIUS Satellite Radio Inc.
- ATRAC3 is an efficient compression codec for digital music files, allowing files to take up just 1/10 their uncompressed size without degrading audio quality.
- Recording/playback of song data is only possible on Magic Gate-compatible memory stick devices.

FUJITSU TEN LIMITED

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