

CS-715

CD RECEIVER SYSTEM

ONKYO
IMAGINATIVE SIGHT & SOUND



VL DIGITAL VECTOR LINEAR SHAPING CIRCUITRY **192^{bit}/24** MP3 RDS A-OMF MONOCOQUE RI

Combining Noise-Removing Conversion Technology with Ample Power

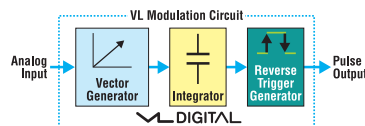
First impressions are strong. The CS-715 CD receiver system oozes class with its slightly concave, titanium front panel and robust build. What lies beneath is also admirable. You're looking at a switching amplifier design that uses Onkyo's Vector Line (VL) Digital technology to remove spike noise during Pulse Width Modulation (PWM) with a high-instantaneous current capability that helps to negate speaker impedance fluctuations and maintain audio quality throughout the frequency range. On the CD drive side, the inclusion of Vector Linear Shaping Circuitry (VLSC) eliminates noise and maintains the purity of the audio signal, a particularly useful benefit if you make use of digital music files. Quite unlike any compact CD receiver system that Onkyo has released before, the CS-715 shows a new direction for compact CD receiver systems.

Vector Linear (VL) Digital Technology Combined with High-Instantaneous Current Capability

For the realization of powerful and detailed hi-fi sound quality housed in a compact chassis, the CS-715 is based around Onkyo's VL Digital Technology—Onkyo's own digital-to-analog conversion technology for digital amplifiers. VL Digital was developed as the fundamental conversion process for Onkyo's series of Pure Audio digital amplifiers and represents a key Onkyo technology for the future. This technology was adopted to counter the inherent problem of spike noise when amplifying signals with Pulse Width Modulation (PWM) in digital (switching) amplifiers. Spike noise introduces errors into the inversion timing making accurate conversion into pulse widths difficult. VL Digital uses a modulation circuit that balances out the spikes (pulse noise) in the analog input signal.

Without the need for large transformers, audio components based on switching amplification can be significantly smaller in size. Onkyo takes a different approach

by focusing on the power supply. To ensure a high current that is capable of reproducing frequencies throughout the entire range, the CS-715 houses a relatively large transformer (compared to other compact audio systems) and a high-capacity 4700 µF capacitor. This emphasis on a high-instantaneous current capability suppresses speaker impedance fluctuations enabling the CS-715 to reproduce music consistently. The CS-715 also has a copper bus plate for the ground lines to achieve low impedance and suppress fluctuations in the ground potential.



Exclusive Onkyo Circuitry to Maintain Clean Audio Signals

With Onkyo's Vector Linear Shaping Circuitry (VLSC), digital data from CDs and MP3s is converted between sampling points and then joined with analog vectors in real-time to produce a smooth output wave form. The end result is a noiseless, smooth analog output signal based on the digital source. That's just the kind of purity you'll want to bring the best out of compressed digital audio files. Also, cost-cutting manufacturers will use just one circuit at the output stage. With multiple transistors crammed onto a single circuit, excess heat is generated and the audio signal is compromised. The CS-715 is different. It uses discrete amplifier technology similar to that found on Onkyo's bigger amplifiers and

receivers. Keeping the transistors separate at the output stage enhances cooling, so the CS-715's longevity is extended and interference to the audio signal is reduced. Finally, Optimum Gain Volume Circuitry minimizes the possibility of noise when increasing volume.

Remote Interactive (RI) System Capability and iPod Playback

With Onkyo's RI system capabilities, you can add other Onkyo components to the CS-715—like a CD recorder or cassette deck—and operate them through one single remote control. RI capability also gives you the opportunity to integrate virtually any iPod model (including the diminutive iPod nano) with your CD receiver system through an Onkyo Remote Interactive Dock. Simply connect the dock to the CS-715, then place your iPod in the dock for a "heftier and more detailed" sound than can be experienced with an RCA stereo cable.

Matching Speakers Featuring a Raft of Onkyo Speaker Developments

The D-N10BX speakers provide a range of Onkyo speaker developments designed to match the CR-715 musically. A prime example is A-OMF Monocoque—the latest in a series of diaphragm fibers designed to support the piston motion range of the woofer. It also has a twill (cotton weave) that is 30% stronger to prevent break-up. To deliver high frequency sounds with finesse, the speakers include a ring-drive tweeter that has proven to be effective in negating the effects of low-frequency interference emanating from inside the cabinet. Finally, a duct—called the Aero Acoustic Drive—is included to mitigate interference between high and low frequencies. The speaker base and cabinet are separated to further the effectiveness of the duct.

Attention to Build Quality Bringing Longevity and Reliability

The CR-715's titanium-colored, aluminum front panel creates an impression of robustness. Without a doubt, this reputation is rightly deserved. It also includes gold-plated audio inputs and outputs to minimize any loss. Furthermore, the quality of speaker binding posts should not be overlooked. Poor binding posts not only degrade the sound, they also break easily. In many cases, mini audio systems are equipped with inferior connections. The D-N10BX speakers feature banana plug-compatible speaker posts and the CR-715 CD receiver has a corresponding connection. These posts enable a firm connection as well as ensure that wires are not exposed.

CS-715

CD RECEIVER SYSTEM

CR-715 [CD Receiver]

Amplifier Features

- 50 watts per channel minimum into 4 Ω , 1 kHz, IEC
- Exclusive Vector Linear (VL) Digital technology
- High-current, low-impedance drive
- High-instantaneous current capability
- Discrete output stage circuitry
- Optimum Gain Volume Circuitry
- Direct mode
- 4 audio inputs (1 front panel) and 2 outputs
- Gold-plated rear panel terminals
- Subwoofer pre out

CD Player Features

- Plays audio CDs and MP3s burnt to CD-Rs and CD-RWs*
- Vector Linear Shaping Circuitry (VLSC)
- Wolfson® 192 kHz/24-bit DAC
- 4 play modes (Normal/Memory/Random/1 Folder)
- Navigation/All Folder modes for selecting and playing MP3 files
- MP3 settings for personal preferences
- Memory playback (25-track programming)
- 2 repeat modes (Track/Full)

*Discs that have not been properly finalized may only be partially playable or not playable at all.

Tuner & Other Features

- Tone control (bass/treble)
- Super Bass function
- 4-mode timer (Play or Rec/Once or Every)
- Sleep timer
- Accuclock
- RDS (PS/RT)
- Auto preset function with 40 FM selections
- Preset naming (up to 8 characters)
- Manual and automatic FM tuning
- FM auto preset
- Battery-free memory backup
- Aluminum front panel
- FM indoor antenna supplied
- Headphone jack
- Screw-type banana plug-compatible speaker posts
- Compatible with Remote Interactive Dock for the iPod
- RI (Remote Interactive) remote control

D-N10BX [2-Way, Bass Reflex Loudspeakers]

- 13 cm A-OMF Monocoque diaphragm woofer
- 3 cm ring-drive tweeter
- Aero Acoustic Drive for powerful and natural sound
- V-Line Edge to counteract unwanted diaphragm vibration
- Magnetically shielded
- Banana plug-compatible binding posts
- Impedance: 4 Ω
- Max. input power: 70 W
- Frequency response: 45 Hz-100 kHz

*Speaker cable and cork spacers included.

SPECIFICATIONS

CR-715

AMPLIFIER SECTION

Power Output	50 W + 50 W (4 Ω , 1 kHz, IEC)
Dynamic Power	120 W + 120 W (4 Ω)
Total Harmonic Distortion	0.5 % (Rated Power)
Damping Factor	50 (Front, 1 kHz, 8 Ω)
Input Sensitivity and Impedance	150 mV/50 k Ω (Tape)
Line	150 mV/50 k Ω (Tape)
Output Level and Impedance	150 mV/2.2 Ω
Rec out	150 mV/2.2 Ω
Frequency Response	10 Hz-60 kHz \pm 3 dB (Line)
Tone Control	\pm 6 dB, 80 Hz (BASS) \pm 8 dB, 10 kHz (TREBLE) \pm 7 dB, 80 Hz (SUPER BASS)
Signal-to-Noise Ratio	100 dB (Line, IHF-A)
Speaker Impedance	4 Ω -16 Ω

TUNER SECTION

[FM]

Tuning Frequency Range	87.5 MHz-108 MHz
Usable Sensitivity	22.2 dBf, 2 μ V (75 Ω , IHF)/15.2 dBf, 1 μ V (75 Ω , IHF)
Signal-to-Noise Ratio	67 dB (IHF-A)/73 dB (IHF-A)
Stereo/Mono	67 dB (IHF-A)/73 dB (IHF-A)
Total Harmonic Distortion	0.5 % (1 kHz)/0.3 % (1 kHz)
Stereo/Mono	0.5 % (1 kHz)/0.3 % (1 kHz)
Stereo Separation	40 dB at 1 kHz

CD PLAYER SECTION

Frequency Response	4 Hz-20 kHz
Audio Dynamic Range	96 dB
Total Harmonic Distortion	0.005 % (1 kHz)
Wow and Flutter	Beyond threshold of measurability
Audio Output/Impedance	1.3 V/1 k Ω

GENERAL

Power Supply	AC 230 V, 50 Hz
Power Consumption	42 W
Standby Power Consumption	0.38 W
Dimensions (W x H x D)	205 x 116 x 335 mm
Weight	4.6 kg

D-N10BX

Speaker Type	2-Way, Bass Reflex
Drivers	
Woofer	13 cm A-OMF Monocoque diaphragm
Tweeter	3 cm Ring-Drive
Frequency Response	45 Hz-100 kHz
Crossover Frequency	6 kHz
Output Sound Pressure Level	84 dB/W/m
Max. Input Power	70 W
Nominal Impedance	4 Ω
Dimensions (W x H x D)	167 x 298 x 247 mm
Weight	4.2 kg

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