

CINEMA

Crown Cinema Sound Product Line



DSi Series



DSi-8M



CTs 2-Channel



CTs Multi-Channel

SOUND



CINEMA SOUND

DSi Series: 2/4/8 Ohm
DSi 1000, DSi 2000, DSi 4000, DSi 6000



ONE-TOUCH PERFORMANCE

► FEATURES

- Intuitive front-panel LCD screen, automatic presets for popular JBL cinema speaker systems for quick, easy configuration
- Onboard digital signal processing includes crossovers, EQ filters, delay, and output limiting
- Computer connectivity via USB allows fast setup and configuration with HiQnet™ System Architect® software
- Rear-panel HD-15 connector provides easy input/output connectivity between DSi amplifiers and new DSi-8M System Monitor
- Barrier strip outputs, removable Phoenix-style input
- All models are THX®-approved

POWER OUTPUT

Models	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm Bridge	8-ohm Bridge
DSi 1000	700W*†	475W	275W	1,400W*†	950W
DSi 2000	1,000W*	800W	475W	2,000W*	1,600W
DSi 4000	1,450W*	1,200W	650W	3,000W*	2,400W
DSi 6000	3,000W*	2,100W	1,200W	6,000W*	4,200W

Maximum average power in watts at 1 kHz at 0.5% THD. *With 1% THD. †Not rated for 100V versions.

► SPECIFICATIONS

Performance

Voltage Gain at 1kHz:

DSi 1000: 30.5 dB
DSi 2000: 32.9 dB
DSi 4000: 34.2 dB
DSi 6000: 37.1 dB

Frequency Response: +0/-1 dB from 20 Hz to 20 kHz at 1 watt into 4 ohms.

Load Impedance: Safe with all types of loads. Rated for 2 to 8 ohms in Stereo mode, 4 to 16 ohms in Bridge-Mono mode. DSi 1000 A1 (100V version) is rated for 4 to 8 ohms in Stereo mode, 8 to 16 ohms in Bridge-Mono mode.

Sensitivity:

At 8 ohm rated output:
DSi 1000: 1.4V
DSi 2000: 1.4V
DSi 4000: 1.4V
DSi 6000: 1.4V

At 4 ohm rated output:
DSi 1000: 1.3V
DSi 2000: 1.2V
DSi 4000: 1.3V
DSi 6000: 1.3V

At 2 ohm rated output:
DSi 1000: 1.1V
DSi 2000: 1.0V
DSi 4000: 1.0V
DSi 6000: 1.1V

Signal to Noise Ratio (below rated 8-ohm power at 1 kHz):

100 dB (A weighted).

Damping Factor: Better than 500 from 20 Hz to 400 Hz.

Crosstalk: > 70 dB below rated power, 20 Hz to 1 kHz, A-weighted.

Input Stage: Input is electronically balanced and employs precision 1% resistors.

Input Impedance (nominal): 20 k ohms, balanced; 10 k ohms, unbalanced.

AC Line Voltage and Frequency Configurations Available: 100V, 120V, 220-240V, 50/60 Hz.

AC Line Current:

DSi 1000: 6.8A
DSi 2000: 8.3A
DSi 4000: 10.5A
At Idle: Draws no more than 38 watts.

DSi 6000: 15.3A
At Idle: Draws no more than 180 watts.

Operating Temperature: 0° C to 40° C at 95% relative humidity (non-condensing).

DSP Section

Input EQ: 6 parametric filters per channel with adjustable Q, ±15 dB boost/cut. Also adjustable high and low shelving filters. This 8-filter EQ section can be bypassed.

Crossover Filters: Highpass and lowpass per channel. Butterworth 6/12/18/24 dB per octave, Linkwitz-Riley 24/48 dB per octave. Also includes ±15 dB bandpass gain and polarity control.

Output EQ: 8 parametric filters per channel with adjustable Q, ±15 dB boost/cut. This 8-filter EQ section can NOT be bypassed. Filters are enabled individually.

Output Limiter: Prevents clipping and protects loudspeakers. Choice of -3, -6, or -12 dB threshold per channel.

Delay: Up to 50 msec total delay per channel.

Presets: 20 presets. One is "DSP OFF." Fifteen are factory-set for JBL Cinema systems. Four are user-definable.

Front Panel Controls and Indicators

Level: Detented rotary level control, one per channel.

Power Switch: On/off switch applies AC power to the amplifier.

Sel/Prev/Next Buttons: Three buttons near the LCD screen are used to access menu items and front panel lockout.

LCD Screen: Backlit liquid crystal display shows speaker presets and signal processing.

Signal Indicator: Green LED, one per channel, illuminates when a very low-level signal is present at input.

-10 Indicator: Green LED flashes when output signal exceeds -10 dB below clip.

-20 Indicator: Green LED flashes when output signal level exceeds -20 dB below clip.

Ready Indicator: Green LED, one per channel, illuminates when the amplifier is ready to produce audio.

Clip Indicator: Red LED, one per channel, turns on at the threshold of audible distortion.

Temp Indicator: Red LED, one per channel, illuminates under excessive temperature conditions.

Power Indicator: Blue LED illuminates when the amplifier has been turned on and has power.

Rear Panel Controls and Connectors

AC Line Connector:

DSi 1K, 2K, 4K: NEMA 5-15P (15A).
DSi 6000: NEMA 6-10P (20A)
IEC C20 (20A).

Input Connector: Two 3-pin removable Phoenix-type connectors each accept a balanced line-level input signal.

Output Connectors: 4-position barrier strip with connectors for dual loudspeakers or bridge-mono loudspeaker.

HiQnet USB Connector: Type B, connects to a HiQnet network.

HD-15 Connector: For cinema I/O compatibility with DSi-8M System Monitor. See Figure 1.

Protection

DSi-Series amplifiers are protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature; chain destruction phenomena; excessive output current, and input overload damage. They also protect loudspeakers from input/output DC, large or dangerous DC offsets and turn-on/turn-off transients

Construction

Chassis: Steel.

Cooling: Proportional speed fan with front-to-rear airflow.

Dimensions: EIA Standard 19-in. rack mount width (EIA RS-310-B), 3.5 in. (8.9 cm) high and 12.25 in. (31.11 cm) deep behind mounting surface. DSi 6000 is 16.2 in. (41.15 cm) deep.

Net Weight:

DSi 1K, 2K, 4K: 19 lb (8.6 kg).
DSi 6K: 24 lb (10.9 kg).

Shipping Weight:

DSi 1K, 2K, 4K: 22 lb (10.0 kg).
DSi 6K: 30 lb (13.6 kg).

Regulatory Certifications



Note: All measurements apply to all models of DSi Series amplifiers in stereo mode with 8-ohm loads and an input sensitivity of 26 dB gain, 1 kHz at rated power unless otherwise specified. Specifications for units supplied outside the U.S.A. may vary slightly at different AC voltages and frequencies.

The Crown® DSi Series of power amplifiers provides onboard digital signal processing including crossovers, EQ filters, delay and output limiting. A rear panel HD-15 connector provides easy input/output connectivity between DSi amplifiers and the new DSi-8M System Monitor. The intuitive front panel LCD screen guides installers through a setup process—featuring presets for the industry-standard JBL cinema loudspeaker systems—to make configuration quick and easy. At the touch of a button, Crown's DSi cinema amplifiers deliver perfectly matched performance with each award-winning JBL ScreenArray® system, making this the ultimate cinema solution.

2012

CINEMA SOUND

DSi-8M: Convenient Monitoring
DSi-8M



PERFORMANCE MONITOR

► FEATURES

- Compact 2-rack unit
- 8 channels for monitoring processor or amplifier inputs
- All inputs and outputs are balanced to interface with new cinema processors
- No level jumps when switching between processor and amplifiers
- 25-pin D-sub connectors, plus removable terminal blocks and HD-15 for quick, hassle-free connections
- Designed to work with bi-amplified sound systems to monitor the high- and low-frequency outputs from the left, center and right channels

► SPECIFICATIONS

Performance

Input Impedance (processor inputs): 10 kilohms.

Input Impedance (Processor Inputs): 10 k ohms.

Input Impedance (Power Amplifiers Inputs): > 50 k ohms.

Power Requirements: 100-240V , 50-60 Hz, 32 watts.

Front Panel Controls and Indicators

Channel Select Buttons and LEDs: Eight pushbutton switches, one for each input channel. Pressing a button monitors the signal from that channel, and lights the corresponding LED. Any combination of eight channels can be selected.

Volume Control: Rotary potentiometer with knob controls the volume of the internal or external speaker. Has no effect on the VU Bargraph Meter display.

Processor/Amplifier Selector Switch and LEDs: Pushbutton switch with corresponding LEDs selects inputs from cinema processor or power amplifiers for monitoring.

VU Bargraph Meter: 12-segment meter displays input level of selected channels from -40 VU to +3 VU. May be calibrated by the rear-panel trim adjustment. Operates independently of the Volume Control.

Test Jack: 1/4" phone jack lets the user monitor the audio output of the DSi-8M. Inserting a mono or stereo 1/4" phone plug here disables the internal speaker and routes the audio output to the Test Jack.

Internal Speaker: For convenient monitoring at the monitor panel.

Power Switch and Power LED: Rocker switch turns power on or off. LED illuminates when power is on.

Rear Panel Controls and Connectors

IEC AC Power Receptacle: Connects to an IEC AC power cord.

Input Connector 1: 10-pin Phoenix terminal block connects to the power amplifier speaker outputs for the Left Surround, Right Surround, Back Surround Left, Back Surround Right and Subwoofer channels. This connector lets you monitor the output of amplifiers that do not include HD-15 connector options.

Input Connector 2: 10-pin Phoenix terminal block connects to the power amplifier speaker output for the Left High, Left Low, Center High, Center Low, Right High and Right Low channels. This connector lets you monitor the output of amplifiers that do not include HD-15 connector options.

Amplifier Level Control: Trimpot adjusts the level of the input signals from the power amplifiers.

Processor Level: Trimpot adjusts the level of the input signals from the processor.

Outputs to Power Amplifier Inputs: The six HD-15 connectors in this section connect to DSi amplifiers for both input and output signals. The HD-15 connectors have two functions:

1. Connect DSi 8M outputs to DSi amplifier inputs.
2. Connect DSi amplifier outputs to DSi 8M inputs for monitoring.

Using VGA cables, the HD-15 connectors can be connected to Crown DSi power amplifier HD-15 connectors as described below.

HD-15 Connector 1: For cinema I/O compatibility. Connects to Ls/Rs amplifier.

HD-15 Connector 2: Connects to Bsl/Bsr amplifier.

HD-15 Connector 3: Connects to Rl/Rh amplifier.

HD-15 Connector 4: Connects to Sw amplifier.

HD-15 Connector 5: Connects to Ll/Lh amplifier.

HD-15 Connector 6: Connects to Cl/Ch amplifier.

Optional Input Connector: 25-pin D-sub connector connects to the EX output of the processor.

Bargraph Level: Trimpot adjusts the sensitivity of the front-panel VU Bargraph Meter.

Main Input Connector: 25-pin D-sub connector connects to the main outputs of the processor.

"EX" Selector Switch: 8-position DIP switch. Turn on switches 1-4 if system is without EX. Turn on switches 5-8 if system is with EX. This routes the correct Ls/Rs inputs to the DSi-8M circuitry.

Construction

Chassis: Steel.

Dimensions: EIA Standard 19-inch rack mount width (EIA RS-310-B), 3.5 inches (8.9 cm) high and 9.625 inches (24.4 cm) deep behind front mounting surface.

Net Weight: 10 lb 2 oz (4.63 kg).

Shipping Weight: 16 lb (7.26 kg).

Regulatory Certifications



The Crown® DSi-8M is a projection booth monitor designed to work with bi-amplified cinema systems using the Crown DSi Series amplifiers. All controls necessary for daily operation of the DSi-8M are easily accessible on the front panel. 8-channel monitoring allows you to monitor either the processor or the power amplifier's outputs: L, C, R, Ls, Rs, Bsl, Bsr, and Sub in any combination. Input levels from the processor and power amplifier can be adjusted independently. There are no huge level jumps when switching between processor and power amplifiers. The bargraph display can be calibrated to the reference level for your theater. The projectionist can see auditorium levels instantly.

CINEMA SOUND

CTS 2-CHANNEL



► FEATURES

- High power density. All two channel models in a 2U chassis
- New Crown Switching Power Supply for lighter weight
- Selectable "Constant-Voltage" or low-impedance operation per channel
- 100V direct outputs on all models
- Fully PIP2™-compatible

POWER OUTPUT*

Models	2-ohm Dual (per channel)	4-ohm Dual (per channel)	70V Dual (per channel)	4-ohm Bridge
CTs 600	150W	300W	300W	300W
CTs 1200	250W	600W	600W	500W
CTs 2000	1,000W	1,000W	1,000W	2,000W
CTs 3000	1,500W	1,500W	1,500W	3,000W

*Maximum average power in watts at rated THD, 20 Hz - 20 kHz.



CTS MULTI-CHANNEL



► FEATURES

- High power density: Four-channel model in a 2U chassis, eight-channel model in a 3U chassis
- New Crown Switching Power Supply for lighter weight
- Selectable "Constant-Voltage" or low-impedance (4/8 ohm) operation per channel-pair
- 100V direct outputs
- New "FIT" (Fault Isolation Topology) circuitry isolates fault conditions without affecting neighboring channels
- Accept VCA-MC accessory modules

POWER OUTPUT*

Models	All channels driven			All channel pairs driven
	4-ohm Dual	8-ohm Dual	70V Dual	8-ohm Bridge
CTs 4200	260W	180W	220W**	520W
CTs 8200	200W	160W	200W**	400W

*Maximum average power in watts at 1kHz at 0.1% THD.

**Constant Voltage full-bandwidth power ratings support 100 Hz to 20 kHz due to automatic high-pass filters.



Emagine Entertainment Novi Movie Theater. Novi, Michigan, USA.

Crown Cinema Systems employ quality Crown professional amplifiers along with optional amplifier accessories for the best in cinema sound. Crown's Digital B-Chain system, which provides the first all-digital cinema solution, employs Crown's CTs Series amplifiers, Networking amplifier modules, and Crown's DBC® Network Bridge for the first all-digital cinema solution.

Note: For more information about the products featured in this section, please refer to the following Crown sections: CTs 2-Channel, CTs Multi-Channel, XLS Series.

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