

 **BOSS**



BOSS **PRODUCTS CATALOG**

VOL.5

DD-2 Digital Delay

The DD-2 digital delay is extremely compact, yet provides the superb sound quality and versatility of an advanced digital delay unit. The delay time can be adjusted anywhere between 12.5 and 800 ms. The frequency response ranges from 40Hz to 7kHz.

The Mode select switch can be used to choose three different delay ranges. The S range is from 12.5 to 50 ms, the M Range is from 50 to 200 ms, and the L range is from 200 to 800 ms. Delay time of each range is controlled by the **D. Time** control. The balance between the direct sound and the delay sound can be set by the **E. Level** control and the number of repeats can be adjusted by the **F. Back** control. There are two separate output jacks which make it possible to produce stereo effects. A hold function allows the hold time can be adjusted between 200 ms and 800 ms by the **D. Time** control when the Mode select switch is set to the Hold mode. The effect pedal can be used to turn the hold function on and off.

Like other similar BOSS products, the DD-2 features FET silent switching, and an LED on/off and battery condition indicator.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 55mA (the D.Time control at center)
Type of A/D/A converter	12-bit logarithm compression
Delay time	12.5mS (min) to 800mS (max)
Residual noise	-96dBm (IHF-A)
Input impedance	1M Ω (FET input)
Output load impedance	Over 10K Ω
Dimensions	2.8(W) x 2.2(H) x 4.9(D) in.
Weight	0.99 lbs.

HM-2 Heavy Metal

The HM-2 "Heavy Metal" distortion unit is a new product which surpasses all other distortion units in quality. It incorporates a newly developed circuitry to produce full-bodied distortion sound that projects well at all volumes and setting. The circuitry features surprisingly wide dynamic range and low noise.

The HM-2 has four major controls. The Distortion control commands all variations of distortion, from subtle modifications to distortion that "screams". The Level control determines the output level to match or contrast it with straight signals. And, unlike conventional distortion units, the HM-2 features two separate tone controls, "Color Mix L" for low frequencies and "Color Mix H" for high. These controls allow the creation of a full and varied range of distortion.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 10mA
Input impedance	1M Ω
Output load impedance	Over 10K Ω
Dimensions	2.8(W) x 2.2(H) x 4.9(D) in.
Weight	0.88 lbs.

CE-3 Chorus

Combining the Chorus effect, compact size, improved signal-to-noise ratio, dual powering options and F.E.T. switching of the highly popular CE-2 with the stereo split capability of the original BOSS CE-1, plus some brand new features, the new CE-3 is truly an original.

The CE-3 can accept a mono signal input and create a stereo effect through its two outputs, A and B. Controls on the CE-3 are for Delay Rate, Depth, and a switch for adjusting the Stereo Mode of operation.

In Mode I, both the A and B output jacks have an effect + direct signal, but there is a difference. In this mode, the A output is direct with the effect signal in positive phase (direct + effect), while the B output adds the effect signal in reverse polarity (direct - effect). The two output jacks allow either single output of the total effect to one amp, or, with the use of two amps, true Wide Stage Stereo Chorus, the lush swirling, deep effect.

In Mode II, the effect signal is assigned to the A output only, and the B output remains unmodified. This Mode II configuration appeared on the original CE-1, and also on Roland's well known Jazz Chorus Amplifiers.

Specifications

Power	9V Battery AC Adapter
Current draw	DC 9V, 13mA
S/N ratio	Over 90dB (IHF-A)
Maximum input level	0dBm (100Hz), -10dBm (1KHz)
Input impedance	1M Ω
Output load impedance	Over 10K Ω
Dimensions	2.8(W) x 2.2(H) x 4.9(D) in.
Weight	0.88 lbs.

CE-2 Chorus



The CE-2 is a compact version of the famous CE-1 Chorus Ensemble (featured later in this catalog). Like the CE-1, the CE-2 Chorus features the well known BOSS Chorus effect which imparts a doubling, thickening effect which can enhance and enrich the sound of guitars, keyboards, wind and brass instruments, even vocals without imposing itself or detracting from the sound of the instrument.

The CE-2 provides controls over both Depth of the Chorus effect, and the Rate of its sweep, for precise creative control. The CE-2 Chorus also features one of the finest signal to noise ratios of all compact effects, rated at over 90dB, which makes it ideal for recording applications. Like other BOSS Compact effects, the CE-2 features FET silent switching, LED on/off and battery condition indicator, rugged and reliable packaging, and an AC adapter jack.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 9mA
S/N ratio	Over 90dB
Maximum input level	0dBm (100Hz), -10 dBm (1KHz)
Input impedance	470K Ω
Output load impedance	Over 10K Ω
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.88 lbs.

BF-2 Flanger



The BOSS BF-2 Flanger provides quiet, clean performance and full function flexibility while offering all of the advantages of the BOSS Compact format. The BF-2 features a special BBD (Bucket Brigade Device) circuit which greatly reduces the noise which is inherent in most electronic flangers.

The BF-2 includes Manual, Depth, Rate and Resonance control functions. The Manual control determines the delay time of the sound, and is variable from 1mS (millisecond) to 13mS. By setting the Manual control fully counterclockwise, the BF-2 gives the effect of a non-sweep filter providing variable equalization and ambience tonalities.

The Depth control sets the sweep range when the Manual control is in a central position. The speed of the sweep is variable from between 100mS to 16 Sec. using the Rate control. The Resonance control is provided to intensify the flanging effect by regenerating the signal.

The 470K ohm input impedance of the BF-2 makes it ideal for guitar, bass, keyboards, live mix and studio mix situations. This combines with the uncompromised quality and flexibility to make the BF-2 one of the most universally applicable effects devices available.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 15mA
LFO (rate) speed	100mS-16 Sec.
Residual noise	-95dBm (IHF-A)
Input impedance	470K Ω
Output load impedance	More than 10K Ω
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.88 lbs.

CS-2 Compression Sustainer



It is the policy at BOSS Products Company, to constantly evaluate its product line, making improvements wherever possible, so that each product represents the best performance possible. The CS-2 Compression Sustainer is just such a product, as it is a revised and improved version of the well-known BOSS CS-1.

Like the CS-1, the CS-2 is designed to provide clear, undistorted punch and sustain to any electric musical instrument. The CS-2 uses a VCA (voltage controlled amplifier) to create a faster response, and eliminate volume reduction during the initial attack of each note played.

The VCA can be contoured by an Attack Time control which provides the musician with increased control over the time it takes individual notes played to reach their full volume. With this capability, attack time can be carefully tailored to specific instruments and musical technique, for personalized performance.

The CS-2 also features controls for Level and Sustain. The Level control compensates for level differences between the normal and effect settings. The Sustain control provides adjustment of the compression range. When set at the full clockwise position the sustain is the longest. When this control is turned counterclockwise, the compression increases, allowing the unit to limit the output level.

Specifications

Power	9V Battery AC Adapter
Current draw	DC 9V, 4mA
Equivalent input noise	-110dBm
Maximum input	-10dBm (1KHz)
Maximum output	-10dBm
Compression range	38dB
Input impedance	1M Ω
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.88 lbs.

DM-2 Delay



The DM-2 is an analog echo delay that combines a 20 to 300mS delay time and self-contained noise reduction circuitry with excellent sound reproduction and flexibility while maintaining all of the advantages of the famous BOSS compact format.

An exceptionally wide range of effects is available within the 20 to 300mS delay range set by the Repeat Rate control. An Intensity control sets the number of repeats, from single slap back echo through to self oscillation. The Echo volume control sets the precise balance between the direct signal and the delayed Echo signal. The delay effect may be introduced or cancelled using the silent FET footswitch.

The DM-2 Analog Delay features excellent reproduction across the entire delay range, and its self-contained noise reduction circuitry virtually eliminates noise, with a residual noise of -100dBm (IHF-A). There is virtually no change in the sound of the direct signal whether the delay effect is switched On or Off. The DM-2 operates off a single 9 volt battery or an optional AC adapter.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 11mA
Delay time	20mS to 300mS
Residual noise	-100dBm (IHF-A)
Input impedance	470K Ω
Output load impedance	Over 10K Ω
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.99 lbs.

OC-2 Octaver



The BOSS OC-2 is a clever re-think of an effect that first appeared five or six years ago—the octave divider. The OC-2 Octaver features a superior tracking system that flawlessly tracks any single musical line without annoying "glitches."

The second major innovation on the OC-2 is the sound quality of the note produced. The Octaver produces two tones, one that is one octave down, and a second tone that is two octaves down from the note played. The sound of these sub-octaves is deep, bassy and round-sounding, much different from the nasally square-wave sound of previous octave dividers from other companies. The three controls on the OC-2 are Level controls for mixing the Direct Signal, Octave 1 and Octave 2.

The unique OC-2 will be widely used by guitarists to add a bass line to a lead line, but the high quality tracking also makes it usable by the keyboardist (to add an additional voice to a synthesizer or piano), or the wind or brass player to turn a single part into an ensemble.

Specifications

Power	9V Battery AC Adapter
Current draw	DC 9V, 4mA
Maximum input level	-5dBm
Maximum output level	0dBm
Input impedance	1M Ω
Output load impedance	Over 10K Ω
Minimum operating input level	-60dBm (at 250Hz)
Equivalent input noise	-100dBm (IHF-A)
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.88 lbs.

VB-2 Vibrato



The VB-2 is a unique and new application of the well-known vibrato effect in a self-contained package. The VB-2 allows the musician to add vibrato selectively, gradually, and automatically. Unlike many devices that claim to be vibrato (but actually produce a tremolo effect), the VB-2 is a true vibrato, because it actually varies the pitch sharp and flat to attain the effect.

A unique feature on the VB-2 is a Mode switch that allows the silent FET footswitch to react differently depending on how it is set. In one position, the footswitch reacts as a normal on/off switch, turning the effect on with one motion and off with another. In another position the footswitch reacts as a momentary switch, turning the effect on only when the footswitch is held down.

Controls on the VB-2 include Vibrato Rate and Depth, and a third control called Rise Time. The Rise Time allows the vibrato effect to come in gradually, over a period of time variable by the control (from 150mS to 5Sec).

Specifications

Power	9V Battery AC Adapter
Current draw	DC 9V, 8.5mA
Maximum input level	-5dBm (at 1KHz) +2dBm (at 100Hz)
Input impedance	1M Ω
Output load impedance	Over 10K Ω
Frequency response	40Hz to 17KHz (vibrato)
Delay time	4mS (Depth 0)
LFO Speed	2Hz to 15Hz
Rise time	150mS to 5Sec
Equivalent input noise	-92dB (IHF-A)
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.99 lbs.

GE-7 Graphic Equalizer



The GE-7 Graphic Equalizer is a compact, full function equalizer designed for extensive tonal control of any musical signal. Uses of the GE-7 range from creative tone color control to compensating for deficiencies in room acoustics and/or equipment. The GE-7 is an update of the popular BOSS GE-6 and goes beyond the GE-6 to include seven octave bands with a $\pm 15\text{dB}$ maximum boost or cut per band and an overall effect Level control.

The extended frequency range of the GE-7 is ample to cover the fundamental and harmonics of electric bass and guitar, keyboards and vocals. The $\pm 15\text{dB}$ maximum cut or boost per octave band is sufficient for special effect applications and made even more effective by the $\pm 15\text{dB}$ Level control which is used to set any desired balance between direct and effected signals.

The GE-7 is exceptionally quiet and includes all of the standard BOSS compact pedal features with FET silent switching, LED On/Off indicator and battery level check, non-skid pads, and easy access to the special battery compartment. The GE-7 also includes low draw 9 volt battery or optional AC adapter operation.

Specifications

Power	9V Battery AC Adapter
Current draw	DC 9V, 7mA
Frequency centers	100Hz, 200Hz, 400Hz, 800Hz, 1.6kHz, 3.2kHz, 6.4kHz.
Control range	$\pm 15\text{dB}$
Residual noise	-100dBm (IHF-A)
Input impedance	220K Ω
Output impedance	Over 600 Ω
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.99 lbs.

OD-1 Over Drive



The BOSS Over Drive has been designed to exactly replicate the sound of an overdriven tube amplifier when used in any amplification set-up. Unlike conventional distortion devices, the OD-1 is highly touch-sensitive and will respond to the guitarist's most delicate playing techniques.

The controls on the Over Drive are for Level and Over Drive. The Level control is designed to compensate for level differences between the normal and effect signals. The Over Drive control operates the amount of the Over Drive effect from a very soft, subtle effect to one that is extremely hard.

A distinct advantage of the OD-1 is its ability to adapt to any guitar, producing the Over Drive effect without fundamentally altering the tonal characteristics of the guitar itself.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 3.5mA
S/N ratio	80dB
Input impedance	220K Ω
Output load impedance	Over 600 Ω
Maximum gain	37dB
Dimensions	2.8(W) x 2.2(H) x 4.9(D) in.
Weight	1.1 lbs.

SD-1 SUPER Over Drive



The SD-1, like its predecessor, the OD-1 has been designed to duplicate the sound of an over-driven tube amplifier regardless of what amplifier it is used with. Unlike conventional distortion devices, the SD-1 is highly touch sensitive, and will respond to the guitarist's most delicate playing techniques.

Like the OD-1, the SD-1 features controls for Level and Overdrive, with the addition of a Tone control. The Level control is designed to compensate for level differences between the normal and effect signals. The Overdrive control operates the amount of the Overdrive effect from a very soft, subtle effect to one that is extremely hard.

The Tone control on the SD-1 is active and wide-ranging which allows the instrument to achieve many diverse effects. By changing the Tone control from its center position the SD-1 varies from not changing the guitar's tonality to radical alteration in either bass or treble direction.

Like all BOSS effects, the SD-1 features silent switching, LED on/off indicators, AC adapters, low noise operation with long-range reliability.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 3.5mA
S/N ratio	80dB
Input impedance	470K Ω
Output impedance	10K Ω
Maximum gain	37dB
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	1.1 lbs.

PH-1R Phaser



The PH-1R is an expanded version of the popular PH-1, combining all of the features of the clean, low noise PH-1 with a Resonance control for added depth of phase.

The basic controls of the PH-1R are Rate and Depth. The Rate Control provides variable sweep speeds ranging from 100mS all the way to 16 seconds for more sweep speed variance than is found on any other phase shifter. The Depth control provides for notch depth adjustment for precise creative application in any situation, adjusting the phasing intensity and tailoring the PH-1R to whatever instrument is in use.

The Resonance control adds the ability to achieve a deeper sounding phase by regenerating the already phased signal back through the circuit. The Resonance control is variable over a wide range for maximum creative control.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 11mA
Phase Shift	4 Stages 720°
LFO speed	100mS to 16 Sec.
S/N ratio	Over 90dB
Maximum input	-5dB
Gain	Unity
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	1.1 lbs.

DS-1 Distortion



The DS-1 is an effects device designed to produce variable distortion and sustain effects. The units wide range of distortion effects allow the effect to be varied from very soft to very hard.

A level control determines the DS-1's output level so that it can match or contrast with the straight signal. The Distortion control varies the distortion effect over its full range. The third control on the DS-1 is the Tone control which varies the effect from crisp highs to soft lows.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 4mA
Input impedance	470KΩ
Output load impedance	Over 10KΩ
Maximum gain	47dB
Dimensions	2.8(W) x 2.2(H) x 4.9(D) in.
Weight	0.88 lbs.

NF-1 Noise Gate



The NF-1 is a product designed to remove unwanted hum or noise from a performance by gating off the signal after a note has been played. Unlike other noise gates on the market, the NF-1 has been designed to perform at optimum efficiency in noise reduction without adding any unwanted coloration.

The controls on the NF-1 are for Sensitivity and Decay. The Sensitivity control adjusts the gating threshold of the device (the level at which the gate cuts in). The other control on the Noise Gate is the Decay control. The Decay control allows you to set how long of a decay each note will have before the gate cuts in. The addition of this control solves the problem of the Noise Gate cutting into the decaying signal causing an abrupt or percussive ending. Proper adjustment of the Decay control allows you to match any instrument's envelope and provide a natural sounding decay.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 3.9mA
Max. output voltage	+9dBm
Gain	Unity
Input impedance	220KΩ
Output load impedance	Over 10KΩ
Attack time	1mS
Release time	100mS—1.6 sec. (variable)
Gating threshold	-65 to -35dBm (variable)
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.88 lbs.

TW-1 T Wah



The Touch Wah is an envelope controlled filter designed to produce a "wah" effect that is completely touch responsive. The wide tonal response of the Touch Wah enables it to be used with any number of different musical instruments. Guitars, bass guitars, electric piano, wind and brass instruments, even string synthesizers can be greatly enhanced by the Touch Wah effect.

The Touch Wah controls provide for unequalled versatility in performance. The Peak control sets the frequency range over which the Touch Wah operates. The lower this is set, the lower the frequency threshold; and therefore, the effect becomes more subtle. The Sensitivity control, as its name implies, effects the responsiveness or attack sensitivity of the effect. This allows the unit to be adjusted to various playing styles, and also is used for other special effects. The lower this control is set the harder you must play to produce the wah effect. As this is rotated clockwise, the unit responds to a much lighter touch.

A completely unique feature on the Touch Wah is the Drive switch. Whereas most conventional envelope filters have the wah effect fixed in one direction (either bass to treble or treble to bass) the Touch Wah's Drive switch allows the effect to move either up or down at the flick of a switch. This combined with the standard BOSS features of low noise and reliability make the Touch Wah a dramatic addition to any instrument set-up.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 6mA
S/N ratio	Over 80dB
Input impedance	220K Ω
Output load impedance	Over 10K Ω
Dimensions	2.8(W) x 2.2(H) x 4.9(D) in.
Weight	0.88 lbs.

HC-2 Hand Clapper



The compact HC-2 produces all kinds of hand clapping when its touch-sensitive strike pad is tapped. A Sens control is provided to adjust the strike pad's sensitivity. A Dry control adjusts the clapping tone and a Hall control allows the level of reverberation to be adjusted for the size of the concert hall. In other words, clapping in either large or small hall can be produced with the proper level of reverberation. An external trigger input jack allows other devices to control the HC-2, such as guitar or sequencer. And when the HC-2 is connected with a Roland DG's CMU-800 Compu Music, the CMU-800 can be used to output and accentuate timing data which in turn controls the HC-2. The HC-2 also accepts either AC or DC power.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 11mA
Input level	Over 150mA
Output level	1Vp-p
Output load impedance	Over 10K Ω
Dimensions	3.7(W) x 2.5(H) x 5.4(D) in.
Weight	1.01 lbs.

PC-2 Percussion Synthesizer



The PC-2 produces a tremendous variety of impressive percussion sounds, including synthesizer drums, triangle, and castanets. These realistic, lifelike sounds are created using the PC-2's attack-generating circuit and six separate controls (Sensitive, Decay, Pitch Sweep, Rate, and Depth). A sliding switch allows either a \square or \wedge LFO waveform to be selected. And an external trigger input jack makes it possible for other devices to control the PC-2, such as a guitar, sequencer, or computer. Once the PC-2 is connected with the Roland DG's CMU-800 Compu Music, the CMU-800 can be used to output and accentuate timing data which in turn controls the PC-2. The PC-2 also accepts AC or DC power.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 9mA
VCO range	85Hz to 3KHz
LFO range	2Hz to 400Hz
Decay time	30mS to 5Sec
Output level	0.5Vp-p (at 1KHz)
Output impedance	10K Ω
Residual noise	-80dB or less (IHF-A)
Dimensions	3.7(W) x 2.5(H) x 5.4(D) in.
Weight	1.03 lbs.

DE-200 DIGITAL DELAY

NEW



The easily affordable DE-200 digital delay incorporates a 12-bit logarithm compression A/D/A converter to provide a wide dynamic range and crystal clear delay sound. The DE-200 can be used effectively with a great variety of music equipment, including keyboards, microphones, guitars, PA systems, and recording equipment. The delay time can be set from 1.25 to 1,280 ms. Three different controls can be used to set the delay time. The 9-step Range switch allows the delay time to be set at 2.5, 5, 10, 20, 40, 80, 160, 320, or 640 ms. The Fine control can then be used to adjust the time by 50 to 100 percent. The Mode switch, when set at Mode 2, can be used to instantly double the delay time. The DE-200 also features two operating modes. Mode 1 has frequency-response priority with a delay time of up to 640 ms and a frequency response of 10 kHz. Mode 2 has delay-time priority, with a delay time of up to 1,280 ms and a frequency response of 4.5 kHz. Modulation is controlled by independent Rate and Depth controls while feedback is controlled by a Phase select switch and a Level control.

The newly developed Rhythm Sync function makes it possible to use the trigger signal of a rhythm machine, such as the BOSS's DR-110 or Roland's TR-606 to control delay time. Thus, delay time can be completely synchronized with rhythm. It's also possible to automatically control delay time when the DE-200 is connected with a programmable rhythm machine. The Hold function enables the DE-200 to hold any instrument or microphone sound for up to 1.2 seconds. Such sounds can then be recalled using a foot switch or external trigger. When the Hold function and Rhythm Sync function are used together, the held sound can be precisely synchronized with a rhythm machine.

Three outputs are provided—Direct, Mix (Direct with Effect), and Inverted Mix (Direct with Inverted Effect). These outputs can be used independently to produce two entirely different stereo effects. A Bypass switch is also provided and can be operated by a foot switch. Despite this tremendous combination of so many advanced features, the DE-200 weighs only 3.5 kg and can be easily mounted on a standard 19-inch EIA-1U rack.

Specifications

Delay time	Mode 1	1.25mS to 640mS
	Mode 2	2.5mS to 1,280mS
Frequency response	Direct	10Hz to 100KHz ± 3 dB
	Mode 1	10Hz to 10KHz ± 3 dB
	Mode 2	10Hz to 4.5KHz ± 3 dB
Dynamic range	Direct	110dB
	Delay	80dB
THD	Direct	0.08%
	Delay	0.25%
Input level/impedance		-20dBm/1M Ω
Maximum input level		+12dBm
Output level/impedance		-12dBm/over 10K Ω
Dimensions		19.0(W) x 1.7(H) x 9.5(D) in.
Weight		7.7 lbs.
Accessory		Power cord

DM-300 Delay Machine



For the ultimate in maintenance-free analog echo delay, BOSS has created the 4096-stage DM-300 Delay Machine. This, like the DM-100, produces the delay effect by means of a noise-reduced BBD circuit while the Roland Frequency Controlled Filter creates natural reverberation decays. The DM-300 can also be switched to create the Chorus effect, that has its own set of controls independent of the echo section, to make switching easy in performance.

There are two inputs on the DM-300, each with their own Input Volume control. One input is intended for either Mic/Instrument, while the other is strictly for Mic. The input level is further attenuated by a three-position Level selector.

The effect is switched between either Chorus or Echo by a central switch, which can also be switched off, to completely bypass the unit. Chorus Intensity is adjusted by a single control. The Echo section allows for adjustment of Echo Volume, Repeat Rate (speed), Intensity (for multiple decaying echoes), and Tone, to create the exact echo sound desired.

Two outputs are provided for either mixed effect/direct signal, or effect only. Output Level can also be varied by a Level switch to optimize use with recording/pa equipment. Like many BOSS products, care has been given to performance control of certain features. Jacks are provided for on/off footswitch control, as well as echo speed control by a remote volume-type pedal such as the BOSS FV-100.

Specifications

Input sensitivity/Impedance	
Mic	-50dB/4.7K Ω
Mic/Instrument	-50dB/4.7K Ω
	-35dB/470 Ω
	-20dB/470 Ω
Output level/Impedance	-20dB, -35dB/less than 600 Ω
Delay time	
Chorus	22mS to 44mS
Echo	40mS to 600mS
Power consumption	6 watts
Dimensions	15.2 (W) x 4.9 (H) x 8.1 (D) in.
Weight	8.2 lbs.

DM-100 Delay Machine



The BOSS DM-100 is an analog echo and chorus device which incorporates recent advancements made in BBD (Bucket Brigade) technology, with the unique use of the Roland FCF (Frequency Controlled Filter) to create lifelike and versatile echo delay effects.

The DM-100 uses a custom delay I.C. (integrated circuit) made exclusively for use by Roland which features excellent signal reproduction and low noise with high reliability. The low noise aspect of the DM-100 is enhanced by a compander (compressor/expander) noise reduction circuit, and the Frequency Controlled Filter which gradually rolls off higher frequencies as the delay time increases, producing natural reverberation effects while removing the undesired clock noise found in other BBD echo delays.

The delay controls on the DM-100 are Repeat Rate, which determines the delay time, Intensity which regenerates the delay signal for multiple decaying echoes, and Echo Volume, which determines the Echo Volume in relation to the direct signal. The DM-100 also features a Chorus effect which can be selected in lieu of the echo effect by the Mode Selector. The intensity of the Chorus is controlled by a single knob on the back panel of the DM-100.

The input on the DM-100 is activated by a three position level switch and an Input Volume control. An LED indicator displays peak input levels. Output are provided for direct and effect signal, or for effect signal only. The entire effect can be switched in and out by means of a remote Roland FS-1 footswitch.

Specifications

Input level/Impedance	-50dB (3.16mV) 4.7K Ω
	-35dB (17.8mV) 470K Ω
	-20dB (100mV) 470K Ω
Output level/Impedance	-20dB (100mV) over 200 Ω
S/N ratio	More than 60dB
Delay time	20mS to 400mS
Power consumption	3.5 Watts
Dimensions	13.8 (W) x 3.7 (H) x 6.5 (D) in.
Weight	5.7 lbs.

RX-100 Reverb Box



The RX-100 Reverb box is an efficient reverb unit which can be added to virtually any amplification or PA system to provide added dimensional enhancement. The RX-100's second available channel and stereo simulation capabilities gives any musician or sound mixer reverberation effects that are flexible and creative, yet also quite economical.

The RX-100 features Channel A Input and Output on the front panel (1/4" phone jack) and two Channel B Inputs and Outputs on the rear panel (RCA type jacks). Channel A can be attenuated at the input stage to suit a variety of input signals by a three position Input Level switch and by the Channel A volume control. An LED indicator has been supplied to indicate peak input level to warn of potentially distortion causing levels.

The second channel on the RX-100 features two inputs and two outputs all of which are located on the back panel. The input level is controlled by the Channel B Volume control which is also used to turn on the Reverb effect. The RX-100 can also create a stereo field effect by passing a signal from the Channel A input to the two Channel B outputs. The stereo effect is created by the Mode Selector which inverts the phase of one of the outputs so it is 180° out of phase with the other. Mode 2 supplies normal reverb signal with no phase cancellation.

The Reverb Volume control is used to intensify the amount of reverb in relation to the direct signal. The Panpot balances the two channel B outputs. The RX-100 is also remote foot-switchable by using an optional Roland FS-1 footswitch

Specifications

Input level/Impedance	
Channel A	-50dB (3.16mV) 4.7K Ω
	-35dB (17.8mV) 470K Ω
	-20dB (100mV) 470K Ω
Channel B	-50dB (3.16mV) 4.7K Ω
Output level/Impedance	
Channel A	-20dB (100mV) less than 600 Ω
Channel B	-35dB (17.8mV) less than 600 Ω
Delay time	20mS to 400mS
Power consumption	3.5 Watts
Dimensions	13.4 (W) x 3.17 (H) x 11.5 (D) in.
Weight	5.7 lbs.

ROCKER EFFECTS

PV-1 Rocker Volume



The PV-1 Rocker Volume pedal is a professional, totally reliable volume pedal with a Maximum Level control that is variable between Unity gain and a +20dB boost.

Unlike other Volume pedals the PV-1 does not use the conventional pedal methods such as potentiometers, photo-electric cells or any device which could eventually wear out or cause excessive noise. Instead, the PV-1 Rocker Volume employs the Hall Effect which is a variable, electro-magnetic field, which does not contain any moving parts and virtually eliminates the scratchiness which is so common to many Volume pedals. The BOSS PV-1 Rocker Volume also features a Maximum Level Control, which, when set at its full clockwise position, will provide a boost in gain of +20dB or set at its minimum position the control will achieve unity (1:1).

As with the other BOSS Rocker pedals (and all BOSS products) the PV-1 Rocker Volume offers a very high Input Impedance which will accept the loads from a variety of instruments. Also featured are the standard BOSS innovations such as FET Silent Switching, LED for On/Off indication and Battery Level Check, Non-Skid Pads, easy access to the Battery Compartment, and AC adaptability with an optional ACA Series Battery Eliminator.

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 5mA
Input impedance	470K Ω
Output load impedance	Over 10K Ω
Maximum attenuation	Over 80dB
Dimensions	4.3 (W) x 2.6 (H) x 12.6 (D) in.
Weight	2.86 lbs.
Accessory	Vinyl Bag

PD-1 Rocker Distortion



The Rocker Distortion is a unique application of the Distortion effect into a Rocker-controlled pedal. The distortion effect can be varied from non-existent to extremely hard by the sweep of the Rocker pedal.

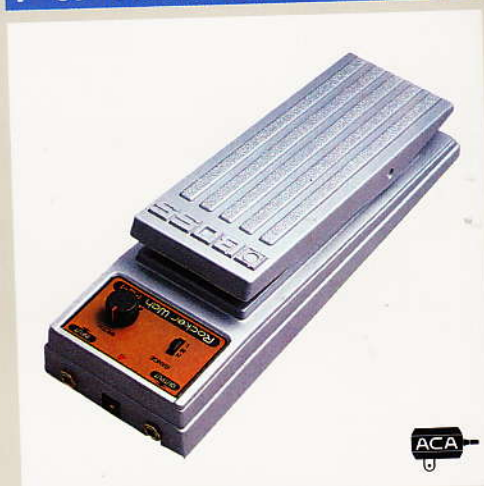
The Level control adjusts the output level of the device. A Tone control allows the effect to achieve various colorations or merely accommodate the individual sound of the guitar. The Minimum Distortion Level control sets the amount of distortion when the pedal is first activated, the maximum distortion amount is controlled by the Rocker itself.

On/off is accomplished by means of a silent switch under the back of the Rocker pedal. A slight pressure downward with your heel is all that is needed to engage the effect. As the Rocker pedal moves forward the Distortion increases, and at its full forward position there is another surprise—another silent switch for a Warp effect which sends the normal 43dB gain up to an incredible 62dB gain producing high harmonic feedback effects.

Specifications

Power	DC 3V (UM-2 x 2) AC Adapter
Current draw	DC3V, 40mA
Input impedance	470K Ω
Output load impedance	Over 10K Ω
Maximum Gain	43dB (62dB warp switch activated)
Dimensions	4.3(W) x 2.6(H) x 12.6(D) in.
Weight	3.3 lbs.
Accessory	Vinyl Bag

PW-1 Rocker Wah



The effect they said was "a passing fad" in 1966 has indeed proven its long range acceptance, and the BOSS Rocker Wah's emergence will assure the wah effect's acceptance in the future. The Rocker Wah produces the classic Wah effect with clarity and intensity and also offers some new flexibility as well.

A three position Range switch selects the center frequency at which the Wah effect occurs. At the Mid setting, the classic Wah effect occurs with primary emphasis on the mid frequencies. At the Hi setting the upper frequencies have emphasis and, likewise, at the Lo position the lower bass frequencies are most effected. A variable Width control allows you to select how wide a range the throw of the Rocker pedal sweeps over.

Like all BOSS effects, the Rocker Wah is activated by a silent switch located under the toe of the Rocker. A slight pressure on the front of the pedal is enough to turn the unit on, and an L.E.D. indicates the status.

Specifications

Power	DC 3V (UM-2 x 2) AC Adapter
Current draw	DC3V, 50mA
Input impedance	470K Ω
Output load impedance	Over 10K Ω
Dimensions	4.3(W) x 2.6(H) x 12.6(D) in.
Weight	2.86 lbs.
Accessory	Vinyl Bag

FV-200 Keyboard Volume



The BOSS FV-200 Volume Pedal has been specifically designed for application with electronic keyboards. The FV-200 can be used to control volume or other remote pedal applications such as VCF control on a synthesizer. The 200k ohm input impedance has been chosen to minimize hum and other noise that may be picked up from complex keyboard system wiring.

Two discretely separate stereo channels are controlled at once for use with stereo instruments or separate control functions of instruments. A Minimum Volume control permits precise, personalized application and increased pedal throw effectiveness, and a Center Point Setting Spring can be used to set a normal volume level during performance with 6-8dB extra gain available.

This rugged pedal is cast in black anodized metal to the same specifications as the Rocker Pedals, with recessing for its single control knob to ensure maximum durability.

Specifications

Dimensions	4.3 (W) x 2.6 (H) x 12.8 (D) in.
Weight	2.2 lbs.

FV-100 Guitar Volume



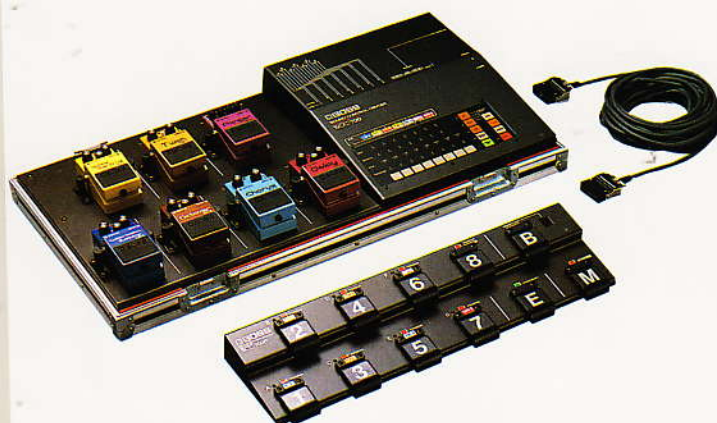
The BOSS-100 Guitar Volume Pedal is a passive type volume pedal designed specifically for use with guitar. This mono pedal includes a Minimum Volume control for precise, personalized application and increased pedal throw effectiveness. Its 100k ohm input impedance has been specifically chosen to avoid the common problem of high frequency guitar signal losses present in most passive volume pedals.

This rugged pedal is cast in black anodized metal to the same specifications as the Rocker pedals, with recessing for its single control knob for maximum durability.

Specifications

Dimensions	4.3 (W) x 2.6 (H) x 12.8 (D) in.
Weight	2.2 lbs.

SCC-700 set



SCC-700C Central Unit



Representing the most remarkable single achievement since the creation of the effects pedal, BOSS is proud to introduce the SCC-700 Sound Control Center. The SCC-700 is a computer-controlled effects programmer, designed to program up to seven different effects in as many as thirty-two patch combinations.

The SCC-700 can control any kind of effects, from any manufacturer: rack-mount effects, pedal effects, rocker effects, can all be programmed to turn on and off in any combination you can think of. Each of the thirty-two possible patches can be programmed for the on/off status, the order of the effect chain, the output level of each patch, and a sub-output for routing to a separate amp or PA. All of this at the same time!

There are three parts to the SCC-700 Sound Control Center, which can be purchased separately, or together, depending on your own needs. The first part is the SCC-700C Controller itself, which contains all that is needed to program the effects. The SCC-700F is a remote Foot Controller which connects to the main unit by a multi-core connecting cord. The third part is the SCC-700B which is a case designed to house up to seven compact effects, supply them with power, and connect them to the SCC-700C.

Programming effects can be accomplished simply by touching the switches on the SCC-700C in the order you want the effects to play. Each switch (A-G) corresponds to an effect. For example, if you wanted one patch that went from the CS-1 to the CE-2 to the DM-2, you would touch "A," then "E," then "F." It couldn't be simpler. This operation can be executed live on stage from the remote foot-switch controller SCC-700F. The other effect parameters (for setting output level and sub-outputs), are also selected in the same way.

There are four modes of operation for the SCC-700: Write—where patch programs are written into computer memory, Play—where patch programs are played by choosing the bank number (A, B, C, D) and the patch number (1-8), Monitor—where you can reference a patch combination to see what it is before you switch it in, and Manual—where you can disengage the programmer and use the seven switches (on the SCC-700C or SCC-700F) to choose effects manually, one at a time.

The individual components of the SCC-700 are described in more detail on the subsequent pages.

This is the central programmer unit, and can be used by itself without any other components to program up to seven different effects in up to thirty-two patch combinations. The inputs and outputs for each effect plug directly into the rear of the SCC-700C, and the effect is run in the "effect on" condition at all times. The programmer of the SCC-700C actually decides whether or not the effect is placed in the signal path.

Eight touch pads are used to write the programs, and then used later to retrieve them for playing. Programs number 1-8 and arranged in four Banks: A, B, C, and D, for a total of thirty-two. Bank selection and program selection are indicated by LEDs. Also indicated for each program are the effect units in the patch (Unit), the Sub-Output status, (which can send an effects signal to a secondary output for stereo and other effects), and the Output Level (which is selectable in 3dB increments from -18dB to +6dB). Other touch pads on the SCC-700C select the four modes of operation: Write, Play, Monitor, and Manual.

The SCC-700C allows all the effects to be kept together in a clean, organized fashion, and can be easily interfaced with either the SCC-700B Case, or the BCB-6 Carrying Box. For the keyboard player with multiple effects, the SCC-700C and a carrying case may be all that is needed, as effect combinations can easily be selected by hand by the touch pads. The guitarist, will probably prefer the addition of the SCC-700F Footswitch which leaves his hands free by controlling all operations by foot.

Studio Applications of the SCC-700C are equally diverse. The fact that the SCC-700C can engage or dis-engage any type of audio signal allows it to be used to control a large rack of signal processors quickly and easily, making commonly used patches much more easily accessible than complex patch bays. Keyboard players will also use the SCC-700C to turn on and off keyboards in a multi-keyboard set-up.

Specifications

Input and Output jacks	Input, Buffer Out, Main Out, Sub Out, Remote (to SCC-700F), Send (A-G), Return (A-G), 9V DC Out.
Program memory	32 programs (8 programs x 4 banks)
Battery back-up	UM-3 x 3 (4.5V)
Input impedance	1M Ω
Output load impedance	
Buffer out	More than 1K Ω
Main out	More than 1K Ω
Sub out	More than 1K Ω
Output level control	+6dB to -18dB (in 8 steps)
Dimensions	13.5 (W) x 4 (H) x 9.5 (D) in.
Weight	9.2 lbs.
Accessories	DC-DC Cords x 7, AC Power Cord x 1 Effector identification stickers x 3

SCC-700F Foot Controller



The SCC-700F is a remote footswitch-type controller for the SCC-700 system. With the SCC-700F it is possible to perform all the selection and writing functions of the SCC-700 simply by pushing footswitches. The addition of this option to the SCC-700 is a powerful asset to the guitarist or bassist, who does not have his hands free to select programs on the main unit.

There are eight footswitches on the SCC-700F (1-8) and a Bank selector (B). A numeric LED readout displays the Bank selected (A-D), while indicator lights above the eight footswitches display the program number selected. In addition, each footswitch corresponds to one of the effects controlled so that a second LED beside each footswitch displays the effects in the program, just like on the main unit.

Another footswitch (M) allows switching to the Manual mode of operation. In this mode, each footswitch corresponds to an individual effect, so that they can be manually switched, one at a time, for normal performance, should you desire. The E footswitch returns to the effects programming mode of operation.

The SCC-700F comes with its own multi-core connecting cable, which connects directly to the SCC-700, simplifying wiring, and keeping the effects off the floor, where their controls can be more easily changed.

Specifications

Footswitches	Program (1-8), Effect-off, Manual, Bank
Display	Program (1-8), Effect Unit (A-G), Effect-off, Manual
Connection	24 Pin (to SCC-700C)
Dimensions	23 (W) x 2.75 (H) x 7 (D) in.
Weight	8.1 lbs.
Accessory	C-24F Connection Cord x 1

SCC-700B Carrying Case



The SCC-700B is a case specifically designed to house the SCC-700 and up to seven effects units. The case is intended for BOSS effects, but will also hold units from other manufacturers.

The units are held in place, displaying their unit number (A-G), by which they are programmed. A built-in regulated power supply powers each of the units with 9V DC, while self-contained connection cords send and return each unit to the SCC-700 for processing. The rear connection of these cords to the SCC-700 is covered up by a cover, which is easily removed for access.

This all gives the effects a clean, organized presentation which allows the SCC-700B to be placed on a tabletop, keeping the controls of the effects in easy reach, and keeping them firmly in place so that they can be easily adjusted.

The exterior of the SCC-700B is a rugged flight case, built to take years of abuse, while protecting the units inside. The SCC-700B comes complete with the power supply, parallel DC cords, and all connection cords necessary for the SCC-700.

Specifications

Dimensions	32 (W) x 8 (H) x 16.75 (D) in.
Weight	3.3 lbs.
Accessories	LI Cords x 16 DC-DC Cords x 8

C-24F Connection Cord



The C-24F is a 30 foot multi-core connecting cord supplied with the SCC-700F Footswitch, and is used to connect it directly to the SCC-700 Sound Control Center. The cord is extremely durable, and should last the lifetime of the unit, but should it become damaged due to accident, it can be ordered separately as a replacement.

BCB-6 CARRYING BOX



As the BOSS line of products has expanded, adding ever more popular effects, BOSS has received many requests for a carrying case that holds multiple BOSS effects, as well as other similarly-sized effects. The BOSS design engineers have responded in another brilliantly creative application of form and function in the design of the BOSS Carrying Box System that solves many of the musician's problems in dealing with repeated set-up of effects.

The BCB-6 is a case, capable of holding, for transportation and performance, six effect pedals, or five pedals and the PSM-5 Power Supply. Designed to hold effects made by other manufacturers as well as BOSS, the BCB-6 transforms from a carrying case into an effects board simply by removing the lid.

Not only does the BCB-6 hold pedals for performance, it also cleans up the wiring tangle often associated with effect boards. The BCB-6 comes complete with five short cords to connect the effects in series. When used with the PSM-5, virtually all the connection cords are hidden, for a clean, organized system.

When the PSM-5 is inserted in the furthest position on the right, all the DC power cords are hidden under the removable name plate. Also included with the BCB-6 is a long cord to complete the loop from the last effect in the chain, back to the PSM-5.

Furnished in a handsome grey color, the impact-resistant BCB-6 case is rugged enough to take any shock from transport. Also contained on the BCB-6 are two storage compartments. Rubber non-skid pads on the bottom of the unit keep it from sliding on stage.

Specifications

Effect accommodation	6 units
Dimensions	24.9 (W) x 3.9 (H) x 11.0 (D) in.
Weight	3.5 lbs.
Accessories	Connection cords

PSM-5 Power Supply & Master Switch



The PSM-5 is a regulated power supply, capable of powering up to five 9V BOSS effects, (or other effects of a similar design). The PSM-5 operates on AC power, and comes with a PSA Series Adapter, which plugs into any conventional AC outlet, to give continuous operation without worry of battery run-down.

A parallel DC cord with five outlets comes with the PSM-5. This connects to the rear of the PSM-5, and to the AC Adapter jack on the rear of each BOSS compact effect.

But the PSM-5 is really much more than a conventional power supply, as it's also an effect loop selector at the same time. The Send jack on the left side of the PSM-5 connects to the input of the first effect in the chain. Then connect the output of the first effect to the input of the second effect, and so on. The last effect in the chain connects back to the Return jack on the right side of the PSM-5.

The guitar (or other instrument) connects to the Guitar jack on the PSM-5, and the Amp connects to the Amp jack. These connections yield two distinct loops, one running through the effects, and one going from guitar directly to the amp, bypassing the effects completely. A simple push of the footswitch selects one of the two loops. An LED indicator lights up when the effect loop is in operation.

The amazing PSM-5 powers your effects, and controls them—all in one box.

Specifications

Power	AC Adapter
Input impedance	
Guitar	1M Ω
Return	1M Ω
Output load impedance	
Amp	Over 10K Ω
Send	Over 10K Ω
Gain	Unity
Dimensions	2.8 (W) x 2.2 (H) x 4.9 (D) in.
Weight	0.75 lbs.

TU-12 CHROMATIC TUNER



Ease of operation in instrument tuning reaches its ultimate potential in the new TU-12. The TU-12 is an instrument tuner that is designed so that you don't even have to touch it to tune up. With the TU-12, all you have to do is play your instrument, and the TU-12 tells you: 1. what note you're playing, 2. whether you're on-pitch, sharp or flat, and 3. how many cents sharp or flat you are.

A miniature computer-on-a-chip is the core of the TU-12's Digital Processing of instrument tuning. Visually, the TU-12 is just as sophisticated. To illustrate tuning, the TU-12 combines two triangular (and very visible) LEDs that light up when your in perfect pitch, with a sweep meter that indicates (in cents) how close you are to the perfect pitch.

Two modes of operation can be used in the TU-12. Guitar mode, lets you select individual guitar or bass strings, by means of the two buttons—Down and Up. Chromatic tuning mode can be used for any instrument (including guitar), and in this mode, the TU-12 seeks the pitch you play automatically, with no adjustment of any kind.

The TU-12 can hear the pitch through its own internal microphone (rear-mounted, and very sensitive) or it can be run in-line with electric/electronic instruments and amplifiers without affecting the signal in any way. Also, the Pitch button allows the TU-12 to be set at different concert pitches from 440 to 445.

Specifications

Power	9V Battery AC Adapter
Current draw	7mA (LED off), 20mA max.
Tuning range	C1-B5
Accuracy	±1 cent
Oscillator	Quartz (3.579545MHz)
Built-in microphone	Electret condenser microphone
Dimensions	5.8(W) × 1.5(H) × 2.1(D) in.
Weight	0.37 lbs.

TU-12H CHROMATIC TUNER

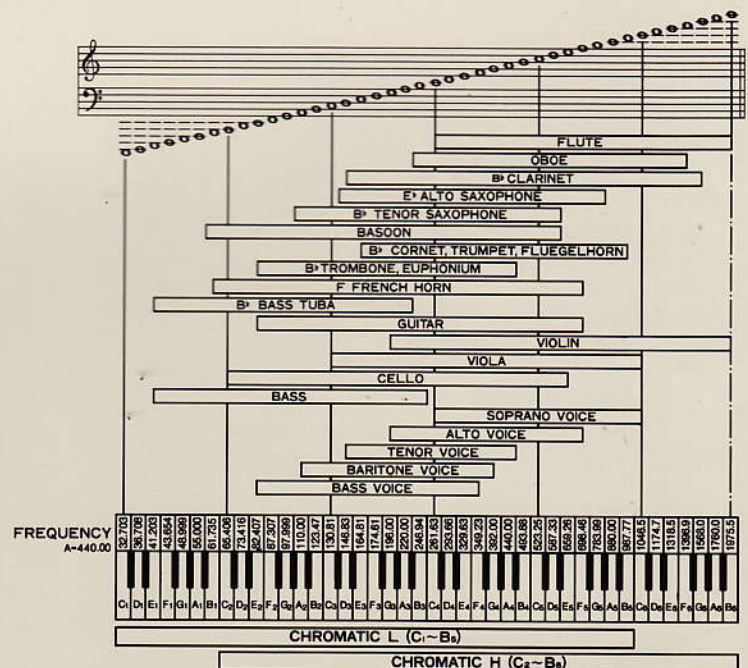


This improved version of the TU-12 has all the fine features of the former model plus two special tuning modes which allow instruments of all frequencies to be accurately tuned. In the L mode, instruments with a frequency range between C₁ and B₅ can be tuned (guitar, keyboard, cello, and trumpet, for example). In the H mode, instruments with a frequency range of C₂ to B₆ can be tuned (violin, clarinet, oboe, and flute, for example).

Specifications

Power	9V Battery AC Adapter
Current draw	DC9V, 7mA (LED off) to 20mA (max)
Tuning range	C ₁ to B ₆
Pitch accuracy	±1 cent
Standard oscillator	Quartz (3.579545MHz)
Concert Pitch	440Hz to 445Hz, 1Hz step
Dimensions	5.8(W) × 1.5(H) × 2.1(D) in.
Weight	0.37 lbs.

FREQUENCY RANGE CHART OF INSTRUMENTS AND THE TU-12H



BX-600 6 CHANNEL STEREO MIXER

NEW


The BX-600 is a 6-channel stereo mixer that can be used for any mixing application, from PA to multi-track recording. All controls are color-coded and located on a tilted control panel for easy view and operation. Peak indicators allow the user to easily set levels with low distortion and noise.

Each channel has its own gain control in order to accept all level signals including those of microphone, keyboard, and line level device. Effects Send and Return jacks are also provided. The effects Send level can be adjusted using the individual Effects control of each channel. Right and left effects Return levels are individually set. A Panpot is also provided for each channel.

Specifications

Input sensitivity	-51dB
Input impedance	1.5K Ω to 200K Ω
Output level	
Rated	+4dBm
Maximum	+21dBm (9V RMS)
Output load impedance	Over 10K Ω
Effect send level	
Rated	+4dBm
Maximum	+21dBm
Effect send load impedance	Over 10K Ω
Effect return sensitivity	-30dB
Effect return impedance	47K Ω to 300K Ω
Equivalent input noise	-113dB JIS-A
Frequency range	10Hz to 60KHz (Gain control at minimum)
Crosstalk	
Between channels	Over 75dB
Between right and left	Over 55dB
Controls	Gain \times 6, Effect volume \times 6, Panpot \times 6, Channel volume \times 6
Main controls	Return volumes (right \times 1, left \times 1), Master volumes (right \times 1, left \times 1), Power switch \times 1
Jacks	Input \times 6, Effect send \times 1, Effect return \times 2 (right, left), Output \times 2 (right, left)
Indicators	Peak \times 2 (right, left), Power \times 1
Dimensions	11.0(W) \times 2.4(H) \times 6.1(D) in.
Weight	2.64 lbs.

BX-400 4 CHANNEL MIXER

NEW


The BX-400 is an extremely light and compact 4-channel mixer that's ideal for keyboard set-up, drum mixing, or sub-mixing for an amp or another mixer. Its peak indicator makes it easy to set all levels with low distortion and noise. And its tilted control panel is especially easy to see and operate.

Each channel has its own Level select switch (MIC/INST./LINE) to accurately set the level of the device connected to the BX-400—microphone, guitar, keyboard, or other instrument. There's even a Master control to adjust the overall output level.

Specifications

Input level/Impedance	
MIC	-50dB/1.8K Ω
INST.	-35dB/15K Ω
LINE	-20dB/68K Ω
Output level	
Rated	+4dBm
Maximum	+21dBm (9V RMS)
Output load impedance	Over 10K Ω
Equivalent input noise	-115dB (at MIC) JIS-A
Frequency response	10Hz to 42KHz (at LINE)
Crosstalk	Over 80dB (between channels)
Controls	Input level select switch \times 4, Channel volume \times 4, Master volume \times 1, Power switch \times 1
Jacks	Input \times 4, Output \times 1
Indicators	Peak \times 1, Power \times 1
Dimensions	7.5(W) \times 2.2(H) \times 5.3(D) in.
Weight	1.76 lbs.

KM-60 Mixer



The KM-60 is a stereo mixer designed to provide all of the functions and flexibility needed for quality reproduction in a wide variety of mixing situations. Each of the six input channels includes an individual Input Level Attenuator, Treble and Bass equalization, Effect Send Level, Stereo Panning and Channel Level.

Each channel of the KM-60 has its own effects Send and Return loop to facilitate the lowest noise application of most effect devices. These Sends may be used alone for applications such as individual channel monitoring without interfering with the mix. The KM-60 also includes a Master Effects Send with a mono or stereo return and separate Left and Right effect return level control. These Returns and associated level controls may be used as additional signal inputs if desired.

A self-contained Low-Cut Filter may be switched on to prevent low range noise through microphones, such as proximity effects, wind noise or other low frequency disturbances. The KM-60 features an amplified stereo monitoring output for standard stereo headphone or foldback amplification.

Individual VU meters are provided for the master output channels. Stacking jacks are included to connect two KM-60s to form a versatile 12 channel mixer. The unique design of the KM-60 allows it to be either rack mounted, or flat mounted in an inclined position, simply by changing screw positions.

Specifications

Power consumption	7W
S/N ratio	over 70dB
Input jack	6
Input level	(-50/-35/-20dB)
Input impedance	H (33K Ω), L (3.9K Ω)
Individual channel controls	Level, Treble, Bass Effect Level, Pan, Input Attenuator
Master controls	Level (2-Left, right Effect 2-left, right)
Channel effect	Send (6) 300 Ω (0dB) Return (6) 10K Ω (-26dB)
Master effect	Send (1) 300 Ω (0dB) Return (2) 20K Ω (-26dB)
Stereo monitor out	8 Ω
Dimensions	19 (W) x 3.7 (H) x 10.8 (D) in.
Weight	10.4 lbs.

KM-04 micro Mixer



The KM-04 is a new micro mixer whose small size makes it ideal for many specialized mixing applications. The KM-04 contains four input channels and one output channel. Each input is varied by an individual Channel Volume control, and the overall volume is varied by the Master Volume control. Also contained on the KM-04 is an LED peak level meter which warns of potentially distortion causing conditions.

The high input and output impedance make the KM-04 ideal for line mixing applications, multi-keyboard mixing, drum miking, and various other uses. Its small size, weight, and battery operation make it able to be used literally anywhere.

The external design of the KM-04 contains a support bar underneath the unit so that in use, it will not tip backwards due to the weight of the four input plugs. The low cost and high performance of the KM-04 make it a must for any musician's arsenal.

Specifications

Power consumption	1mA
Input sensitivity	190mV (RMS)
Output level	2.1V (RMS)
Input impedance	Over 22K Ω
Output load impedance	Over 10K Ω
Dimensions	5.7 (W) x 1.9 (H) x 3.4 (D) in.
Weight	0.77 lbs.

MA-15A Micro Monitor



The BOSS MA-15A Micro Monitor is a powered monitor with extensive controls and connection options. It may be used for stage monitoring, or as a compact amp for back-stage, practice or studio use.

The MA-15A includes an amplifier with 15 watts RMS output, and a full range 5 inch speaker which is capable of producing a full, clear sound. High and Low gain inputs are both provided to match a wide variety of instruments properly, with Volume and Tone controls for the selected input. A separate Auxiliary input is provided, with its own Volume pot to allow a controlled mix between two instruments.

Two output connections are provided. A stereo jack output allows amplified monitoring through a standard pair of stereo Headphones. A Line Out is provided for recording or further amplification.

The MA-15A is enclosed in a molded high-impact plastic shell designed to sit on any flat surface such as a keyboard instrument, or to mount on a microphone stand with the adapter included. The inclined front panel provides ideal positioning of the monitor speaker and access to the various controls. The entire package measures only 12(W) x 6.7(H) x 6.5(D) inches.

Specifications

Power	AC Powered
Output	15 watts r.m.s.
Power consumption	23 watts
Speaker	5 inch full range
Dimensions	12(W) x 6.7(H) x 6.5(D) in.
Weight	7.5 lbs.
Accessory	Metal adapter for Microphone stand

MA-5 Micro Monitor



The use of compact amplifiers for backstage, practice or studio use has grown in popularity over the years. However, the flexibility of the compact amps previously available has been limited by their low cost. To better deal with the musician's needs in a flexible low cost compact amp, BOSS introduces the MA-5 Micro Monitor.

The MA-5 features a self contained 5 watt amplifier which reproduces with surprising clarity and volume, yet can be overdriven to produce warm distortion effects rich in harmonics. The pre-amp stage of the MA-5 has both High and Low Gain Inputs which can accept signals from a variety of different instruments. Controls are provided for both Volume and Tone. An Auxiliary Input jack (attenuated by its own Volume control) allows another signal to be amplified simultaneously.

A Line Out jack allows the MA-5 to be used as a pre amplifier, and can send the signal to a recording or mixing console. A headphone jack is provided for private monitoring or practicing.

The inclined position of the speaker in the MA-5 makes it ideal for table top use, and is also perfect for use on top of a keyboard instrument. With its full range of features and its incredibly low cost, the MA-5 is virtually essential for any touring or performing musician.

Specifications

Power	AC Powered
Output	5 watts r.m.s.
Speaker	4 in.
Dimensions	9.7(W) x 6.5(H) x 6.8(D) in.
Weight	4.5 lbs.

MS-100A Monitor Speaker



The compact MS-100A Monitor Speaker combines a high 100 watt handling capacity with exceptional quality and flexibility to make it the best choice for performing musicians. It fully meets musicians' needs by faithfully reproducing signals ranging from 100Hz to 17kHz. Input and Output jacks are both provided, allowing the parallel connection of multiple units on the same line. Maximum flexibility is achieved through a six position switch which allows the MS-100A to operate at 16 ohms at full volume (0dB) or attenuated to either -6, -12 or -18dB, to operate two units in parallel at 4 ohms without a drop in volume, or to switch that particular Monitor 'Off' entirely when it is not in use.

The MS-100A's dual five inch full range speakers are housed in a sealed enclosure for maximum sound power and quality. The shell is molded from high-impact plastic with recessed metal mesh speaker grills to provide maximum protection and durability. The unit is designed to stand on any flat surface or to be mounted on a microphone stand with the adapter provided. Dimensions are 12(W) x 6.7(H) x 6.5(D) inches, weighing only 7.7 pounds.

Specifications

Frequency response	100Hz-17kHz
Power handling capacity	100 Watts
Selector switch	4Ω /Off/16Ω 0dB/16Ω -6dB/16Ω -12dB/16Ω -18dB
Impedance	4Ω/16Ω
Speakers	2 x five inch full range
Jacks	Parallel Input and Output
Dimensions	12(W) x 6.7(H) x 6.5(D) in.
Weight	7.7 lbs.
Accessory	Metal adapter for Microphone stand



Using the MSA-100 arm holder, the MS-100A or MA-15A can be mounted on a microphone stand or on a wall as shown in the photos.

FA-1 FET Amplifier



The FA-1 is extremely compact as well as lightweight, and features as standard equipment belt clip that fastens to a belt or pocket for ease in use.

The BOSS FA-1 is a pocket-sized pre-amplifier that has been designed using FET circuitry. The FA-1 can boost the level of any electric or acoustic guitar to eliminate the problems of amplifier loading. Use of the FA-1 will also solve the signal loss problems created by using long cords or multiple effects devices on stage.

The FA-1 features a High Input Impedance (3.3MΩ) to preserve the natural tone of the electric guitar and bass guitar, and Tone controls for control of both Treble and Bass frequencies. A Low Cut Filter has been incorporated to eliminate howling that can sometime be caused by acoustic guitar pick-ups. Designed in keeping with the BOSS philosophy of low noise operation, the FA-1 will perform exceptionally quietly, even when using long output cords.

The FA-1 FET Amplifier is designed in a compact and lightweight package that can be worn on a belt or pocket by means of a clip affixed to its back panel. The fact that the FA-1 can be worn is of particular interest to the acoustic guitarist, who can now change the tone color of his instrument at fingertip reach.

Specifications

Power	9V Battery
Current draw	2.5mA
Low cut filter	Cutoff Freq.: 200Hz Roll Off: -6dB/Octave
Maximum gain	26 dB
Input impedance	3.3MΩ
Output impedance	Over 600Ω
Dimensions	2.6(W) x 4.7(H) x 1.7(D) in.
Weight	0.59 lbs.

HA-5 Play Bus HEADPHONE AMP



NEW



The HA-5 is a completely new and compact headphone amplifier featuring three remarkable sound effects—stereo chorus, overdrive, and stereo short delay. Rate and Depth controls can be used to tailor the stereo chorus effect. The overdrive effect is made possible by BOSS's unique asymmetrical overdrive circuit. And the short delay of 35 ms allows the HA-5 to create doubler effects.

Two HA-5 units can be connected using only one cord due to the built-in Bilateral BUS Line (patent pending). Three or more HA-5 units can be connected using the optional J-5 multiple jacks. This allows numerous musicians to jam together without bothering neighbors. The precise tone color desired can be created by adjusting the Bass and Treble controls. Even a cassette tape recorder can be connected to the HA-5. This means that musicians can play along with their favorite recorded music or copy the phrases of their favorite artists. A microphone can also be connected with the HA-5 and controlled by the Mic Volume control. The user can thus sing while playing as well as sing along with recorded music. The BUS Mute switch allows the user to instantly mute the sound in order to communicate with others without having to remove the headphones.

The HA-5 comes with a handy belt clip so that the HA-5 can be worn around the waist. And because the HA-5 can be powered by either batteries or AC adapter, it can be used anytime anywhere.

Specifications

Power	DC9V (UM-3 × 6) AC Adapter
Input impedance	
Input	470KΩ
MIC	2.2KΩ
Cassette	47KΩ
Phones	13KΩ or less
Bus in/out impedance	10KΩ
Dimensions	3.5(W) × 4.7(H) × 1.7(D) in.
Weight	0.77 lbs.

RH-11M STEREO HEADPHONES WITH MICROPHONE



NEW

The RH-11M is an ultra-lightweight headphones with microphone designed for use with the HA-5 headphone amplifier. The RH-11M is so light and comfortable that it can be worn for hours without causing fatigue. In fact, the wearer hardly knows he has it on. The RH-11M is designed for use with musical instruments and ensures accurate, full-bodied reproduction of your playing. The microswitch located in the boom holder turns off automatically when the boom is in the upper or lower position. This prevents the RH-11M from picking up any undesired sounds.

Specifications

Headphones	
Type	Dynamic open air
Speaker	Dynamic 12μ polyester-film
Impedance	50Ω
Sensitivity	101dB/mW
Power handling capacity	100mW (for one unit)
Frequency response	18Hz to 22KHz
Microphone	
Type	Dynamic
Directivity	Differential, Di-directional
Frequency response	50Hz to 20KHz (at close range)
Impedance	160Ω
Assembly	
Weight	2.4 oz. without cord
Total weight	3.2 oz. with cord and 2 plugs

DR-110 Dr. Rhythm GRAPHIC



NEW



The DR-110 is an advanced preset, programmable rhythm machine. Two complete songs, each up to 128 measures in length, can be programmed by combining the DR-110's 32 rhythm patterns (16 preset rhythm patterns and 16 programmable rhythm patterns). An easy-to-read Liquid Crystal Display allows a rhythm pattern to be visually confirmed at a glance. Mode, rhythm number, and a variety of other data are also displayed for rapid and precise writing and recall. The DR-110 features two rhythm pattern writing modes—a real-time writing mode and a step-writing mode. Four-time or three-time signature rhythms can be selected by selecting step number 16 or 12. The sound sources include Bass Drum, Snare Drum, Open Hi-hat, Closed Hi-hat, Cymbal, and—for the first time in this price class—Hand Clap. Their extraordinary sound quality is comparable to that offered only by much more expensive rhythm machines.

The output level is adjusted using the Volume control and the Accent control is used to determine the strength of the accent. Turning the Balance control counter-clockwise enhances drum sounds while turning it clockwise enhances cymbal sounds. The tempo can be adjusted from 40 to 300 beats per minute using the Tempo control.

The DR-110 can be easily connected to the HA-5 headphone amplifier through the Play Bus output jack. An accent trigger jack is also provided to control a synthesizer. A built-in battery pack protects the memory at all times, even when power is interrupted. And because the light, compact DR-110 operates on either batteries (UM-3 × 4) or AC adapter, it can be used anywhere, anytime.

Specifications

Power	DC6V (UM-3 × 4), AC Adapter
Number of memo-rizable rhythms	32 kinds (16 preset rhythms, 16 programmable rhythms)
Number of steps	1 to 16steps/ 1 to 12steps
Songs	128 measures × 2 songs (continuous: max 128 measures)
Sound sources	Bass Drum, Snare Drum, Cymbal, Closed Hi-hat, Open Hi-hat, Hand Clap, Accent
Tempo control range	♩ = 45 to 300
Dimensions	7.5(W) × 1.2(H) × 4.3(D) in.
Weight	1 lbs. with batteries
Accessories	UM-3 dry battery (BR-3) × 4, Original carrying case

DB-33 Dr. Beat



For years musicians have struggled with mechanical-type metronomes which are inclined to be less than accurate and are also prone to mechanical failure. Electric metronomes have provided the accuracy necessary for the understanding of time, yet—until now—no metronome has enabled the musician to work efficiently with more complex time signatures and syncopation.

BOSS has introduced to its line of products the DB-33 Dr. Beat Electronic Metronome. The DB-33 features all four basic rhythm units, quarter note, eighth note, sixteenth note and eighth note triplets, (♩, ♪, ♫, ♫♫) with an individual level control for each to accentuate the rhythm. Beats can be set at 0, 2, 4, 5, and 6 beats per measure and a chime sounds on the first beat of each measure. Two Light Emitting Diodes (LEDs) are provided for visual monitoring. The first LED lights on the first beat of the measure, the second on the remaining beats. When the beat is set at 0 only the first LED operates. The tempo is variable between (♩) = 40 to 208 beats per minute. An output jack is supplied for the use of headphones (great for drum practice) or for easy connection to any amplifier. The DB-33 is also ideal for laying down a click track in the studio. The DB-33 is very portable and operates on one 9 volt battery or can be used with an optional BOSS ACA Series battery eliminator.

Specifications

Power	9V Battery, AC Adapter
Current draw	6.5mA (no signal)
Tempo	mm (♩) = 40 ~ 208 (40–208 beats per minute) freely variable
Beats	0, 2, 3, 4, 5, 6
Rhythm Indicators	Audio beep and dual LED's
Controls	Tempo, Rhythm volume (♩, ♪, ♫, ♫♫), beat switch, start switch, volume
Dimensions	6.6(W) × 3.5(H) × 1.5(D) in.
Weight	0.77 lbs.

GE-10 Graphic Equalizer



The GE-10 features probably the highest specifications of any compact live performance equalizer on the market today. Compact and durable, the GE-10 provides touring musicians complete control over tone coloring for PA, recording, or individual instruments.

The GE-10 provides 10 bands of equalization, each set one octave apart from 31Hz to 16KHz with a control range of ± 12 dB. Sliders are easy to use and provide extremely smooth variation. Center click detents serve to remove any band from the circuit when positioned at the 0dB mark. The overall level of the GE-10 is set by a broad-band level control.

An interesting feature of the GE-10 is the ability to switch the equalizer function in and out of circuit by slider switch, and also by remote footswitch. This feature makes the GE-10 an unusual and interesting special effect by boosting only selected bands and kicking the effect in and out at various times during a performance.

Specifications

Power consumption	3W
Frequency centers	31Hz, 62Hz, 125Hz, 250Hz, 500Hz, 1KHz, 2KHz, 4KHz, 8KHz, 16KHz
Frequency response	20Hz-40KHz ± 1 dB
Control range	± 12 dB
Gain	Unity
S/N ratio	Over 100dB
Input impedance	220K Ω
Output impedance	More than 600 Ω
Maximum output level	+15dBm
Dimensions	8.7(W) x 3.1(H) x 6.1(D) in.
Weight	4.2 lbs.

KM-2 Mixing Amplifier



A usable, versatile device, the KM-2 can be a pre-amp, mixer, line amplifier or all of these functions simultaneously. A compact and reliable package, the KM-2 accepts two input signals and feeds into one output, for use as a mixer. Each of the two inputs has variable gain ranging from unity, to a total gain of 20dB.

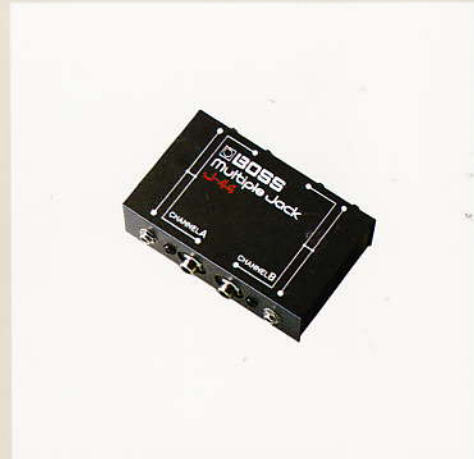
The gain function of the KM-2 makes it ideal for boosting low level signals (such as those produced by transducer microphones), and can also counter the effects of loading on a guitar pick-up. The beauty of the KM-2 is that it can perform both functions simultaneously. You can, for example, boost your transducer pick-up off an acoustic guitar in one channel, while your electric guitar goes into the second channel. Or you may have two guitars that you use during the same performance, the KM-2 allows you to use both, without having to plug and unplug them into your amplifier and at the same time can compensate for level differences between the two guitars so you don't even have to readjust your amplifier.

The versatility of the KM-2 makes it a must for any serious musician.

Specifications

Power	9V Battery
Current draw	DC9V, 0.7mA
Gain	20dB
S/N ratio	80dB
Dimensions	3.9(W) x 2.2(H) x 2.7(D) in.
Weight	0.6 lbs.

J-44 Multiple Jack



The phone plug connection has become the standard means of connection for electric and electronic musical instruments, however, the mini-phone plug has recently come increasingly into use for convenience in size and reduced cost. And, as we know, the RCA-type plug is the standard for home audio equipment. But, what happens when you need to connect different pieces of equipment that have different connecting jacks?

The J-44 Multiple Jack is intended to solve these connecting problems, and simplify the interface between professional musical equipment and home audio equipment, so you can get the most out of the equipment you own.

The J-44 has two channels, each of which contains four jack connections, (2-phone, 1 RCA, and 1 mini-phone), to facilitate almost any kind of connection. With the J-44, a monaural signal source is easily converted into two channels for connection to a stereo cassette deck, or other two channel piece of equipment. All of this makes the J-44 a handy accessory that becomes ever more useful as matching connections becomes more complex.

Specifications

Jacks	Phone jack x 4 RCA jack x 2 Mini-phone jack x 2
Dimensions	3.9 (W) x 2.9 (H) x 1.5 (D) in.
Weight	0.48 lbs.

J-5 Multiple Jack



This novel accessory allows you to connect one input to up to four outputs at one time. The J-5 is great for simplifying a wiring scheme when using multiple amplifiers or line feeds, without the normal jumble of "spaghetti" normally associated with Y cords.

The J-5 is also usable in connecting several sets of speakers to one amplifier output, or in sending gate pulses from a device like a rhythm unit to other voltage controlled devices such as synthesizers or digital sequencers.

Specifications

Dimensions	3.9 (W) x 1.5 (H) x 2.9 (D) in.
Weight	0.5 lbs.

PSA Adapter



The PSA Adapter is supplied as a standard part of the PSM-5 Power Supply & Master Switch, and is designed to supply power to up to five BOSS effects. It is shown here to illustrate that it can also be purchased separately from the PSM-5, should it become lost or damaged.

ACA Adapter



All BOSS Compact and Rocker effects units are designed to operate on a battery, or on AC with an adapter. The BOSS ACA 120 is designed to operate BOSS effects from 117V line current. Optional ACA Adapters also available for 220V and 240V 50/60Hz line currents.

AC Adapter Compatibility Chart

	ACA Adapter	PSA Adapter	PSA with PSM-5
DD-2	×	○	○
HM-2	○	×	○
CE-3	○	×	○
CE-2	○	×	○
BF-2	○	×	○
CS-2	○	×	○
DM-2	○	×	○
OC-2	○	×	○
VB-2	○	×	○
GE-7	○	×	○
OD-1	○	×	○
SD-1	○	×	○
PH-IR	○	×	○
DS-1	○	×	○
NF-1	○	×	○
TW-1	○	×	○
HC-2	×	○	○
PC-2	×	○	○
PSM-5	×	○	
PV-1	○	×	
PD-1	○	×	
PW-1	○	×	
TU-12	×	○	
TU-12H	×	○	
HA-5	×	○	
DR-110	×	○	
DB-33	○	×	

THE WORLD-WIDE NETWORK OF DISTRIBUTION



 **Roland**
WE DESIGN THE FUTURE

Roland Corporation US
7200 Dominion Circle
Los Angeles, CA. 90040-3647
U.S.A.
Tel. (213) 685-5141