V·Studio

24 TR / 96 kHz / 24-bit
DIGITAL STUDIO WORKSTATION
VS-2400 CD

Roland ®

Professional Digital Recording

■ 24 Tracks of Recording Heaven

Frustrated with the limited capabilities of a 16-track digital recorder? Then it's time to step up to full 24-track recording. Think about it. With 24 tracks, you'll have room for individually miked drums and plenty of vocals. And with 384 Virtual Tracks, there's always room to try new ideas.

■ Pristine 24-bit/96kHz Sound Quality

How does the VS-2400CD sound? In a word, phenomenal—thanks to its true 24-bit A/D converters. These top-quality converters capture all the warmth of your inputs and provide better headroom for recording. And if you want the absolute finest sound quality, the VS-2400CD even supports recording at 96kHz*.

*At sampling rates of 96kHz, maximum 8-track recording is possible.

■ Internal CD-RW and 40GB Hard Drive

Easy CD Burning:

With a low-profile CD burner built-in, the VS-2400CD has everything needed to take your song from idea to completion. Just mix down to an open pair of tracks and burn a CD!

.WAV/AIFF Compatibility:

The VS-2400CD's internal CD-RW drive can also be used to import .WAV and AIFF files directly from CD. You can even export audio in .WAV format and burn it to disc.

Maximum Number of Tracks for Simultaneous Recording/Playback

Recording Mode	Sample Rate	
	48/44.1/32kHz	96/88.2/64kHz
M24,M16,CDR	16-tr recording 16-tr playback	8-tr recording 8-tr playback
MTP,MT1,MT2,LIV,LV2	16-tr recording 24-tr playback	8-tr recording 12-tr playback

Recording Modes

M24 (Mastering 24-bit)	For recording and playback in 24-bit linear format.
MTP (Multitrack Pro)	For high-quality recording which compares well to the results from professional-grade digital devices such as mixers and effect processors.
M16 (Mastering 16-bit)	For recording and playback in 16-bit linear format.
CDR (CD Writing)	Ideal for mastering, this mode enables you to record in Audio CD Image format for quick, repeatable CD burning.
MT1 (Multitrack 1)	Recording time is approximately two times longer than M16 while preserving sound quality. Suitable when doing many track bounces.
MT2 (Multitrack 2)	Provides more recording time than MT1 while preserving sound quality.
LIV (Live 1)	Provides more recording time than MT2. Suitable when there is little disk space left or for lengthy recording applications such as live performances.
LIV (Live 2)	Enables the longest recording time.

■ WITH VGA DISPLAY

◀ **Channel View**

Here you can access individual channel parameters— including EQ curves, compressor settings, effects and more —with point-and-click ease.

Solid Mixing Capabilities

■ A Full-Featured Digital Mixer

Impressive 48-Channel/20-Bus Design:

More than just a recorder, the VS-2400CD is a full-blown 48-channel digital mixer. These channels consist of the 16-channel Input mixer, 24-channel Track mixer and eight effect returns. A variety of busses, including eight direct paths, eight aux busses, and stereo main and monitor busses, let you route signal anywhere.

Expandable I/O via R-BUS:

Thanks to its R-BUS interface, the VS-2400CD can be expanded with up to eight channels of analog or digital I/O. Use R-BUS to connect an additional VS-2400CD, VS-2480CD or even Roland's SI-24 Studio Interface–adding another eight analog input channels.

Premium Analog Components:

A digital mixer can only sound as good as its analog components. That's why Roland used the same premium circuits found on the flagship VS-2480CD. These carefully selected components have been praised for their warm sound, so you get nothing but the best.

■ Automated Mixing at Your Fingertips

13 Motorized Faders:
If you've ever had to work on multiple projects at once, you know the importance of motorized faders. Imagine being able to press a button and watch as your entire mix is instantly recalled! These faders also come in handy when moving between the VS-2400CD's Input mixer, Track mixer and effect returns.

Create and Store Multiple Automixes:
Professional engineers will tell you that automation is key to good mixing. Fortunately, the VS-2400CD lets you create multiple automixes for controlling important mixing parameters like track level, panning, effects sends and more.

New RSS surround Panning:
The VS-2400CD is the first V-Studio to feature RSS surround Panning. Using this function, you can position a sound anywhere in a 360 degree field simply by turning a knob. The result is a surround sound mix using conventional 2-way speakers (5.1 mixing is also available).

■ WITH VGA DISPLAY

◀ **Spectrum Analyzer**

Use the Spectrum Analyzer to tune your mix to room acoustics, or to instantly view the frequency content.

24TR / 96kHz / 24-bit
DIGITAL STUDIO WORKSTATION
VS-2400CD

V-LINK   COSM   R-BUS

A Fluid and Intuitive OS

■ Superb Editing Functions

For editing, the VS-2400CD offers several non-destructive commands like copy, cut, paste and move. These functions give you the power, for example, to create the ultimate vocal or to even copy a drum loop. Helpful markers and locators let you move around quickly, while multiple Undo commands make accidents a thing of the past.

■ Mouse-Based Editing on the LCD

The VS-2400CD's large LCD screen makes navigation simple with helpful icons and graphics. Using the supplied mouse, you can copy or move phrases using familiar "drag-and-drop" commands—just like software. An optional ASCII keyboard can also be connected for simplified data entry.

■ Go Direct To Your PC

By installing an optional RPC-1 R-BUS card in your Mac or PC, you can transfer up to eight channels of 2-way audio between the computer and your VS-2400CD—all in pristine 24-bit digital quality. Now the V-Studio is more expandable than ever!

VGA Output for Software-Style Control

Get the big picture by connecting an optional VGA monitor. Combined with the mouse and optional keyboard, this system makes working with the VS-2400CD feel just like software (see screenshots for details).

▲ Track Mixer

With the Track Mixer screen, you can use the mouse to edit track levels, panning and more for all 24 tracks simultaneously.

▲ Playlist

This screen provides a global view of your arrangement, plus drag-and-drop editing of audio regions using the mouse.

▲ Waveform Editing

This screen provides the ability to edit waveforms graphically with the mouse just like software.

▲ EZ Routing

Take the mystery out of routing signal! Simply drag a virtual audio cable from source to destination in this helpful screen.

Pro-Quality Effects and V-LINK

■ A Powerhouse of Expandable Effects

2 Stereo Effects Standard:

The VS-2400CD includes one of Roland's highly acclaimed VS8F-2 Effects Expansion Boards right out of the box. This powerful card provides up to two stereo or four mono effects.

VS8F-2

COSM

36 Killer Algorithms:

With 36 algorithms from the Roland and BOSS archives, the VS-2400CD can handle just about every type of processing you need—from smooth reverb and chorus to delay, flanger and Lo-Fi. There's even a 19-band vocoder and COSM® Amp Modeling.

Mic Modeling Optimized for AKG C3000B:

Roland's COSM Mic Modeling has earned accolades for its ability to model the characteristics of several vintage and high-end microphones. Now you can take advantage of this technology using one of the most popular mics around—the AKG C3000B.

AKG C3000B

Onboard Mastering Tools:

Finish your mix with the VS-2400CD's unique Mastering Tool Kit. This special effect combines algorithms like multi-band compression, a limiter, enhancer and more to give your mixes that "radio-ready" sound.

■ A Powerhouse of Expandable Effects

Roland's V-LINK gives musicians an easy way to integrate video and music. Simply connect an Edirol DV-7PR Digital Video Workstation (sold separately), and you can trigger video clips by creating MIDI events in the VS-2400CD's Automix function, or even use the V-Fader function to control video parameters like color balance and brightness.
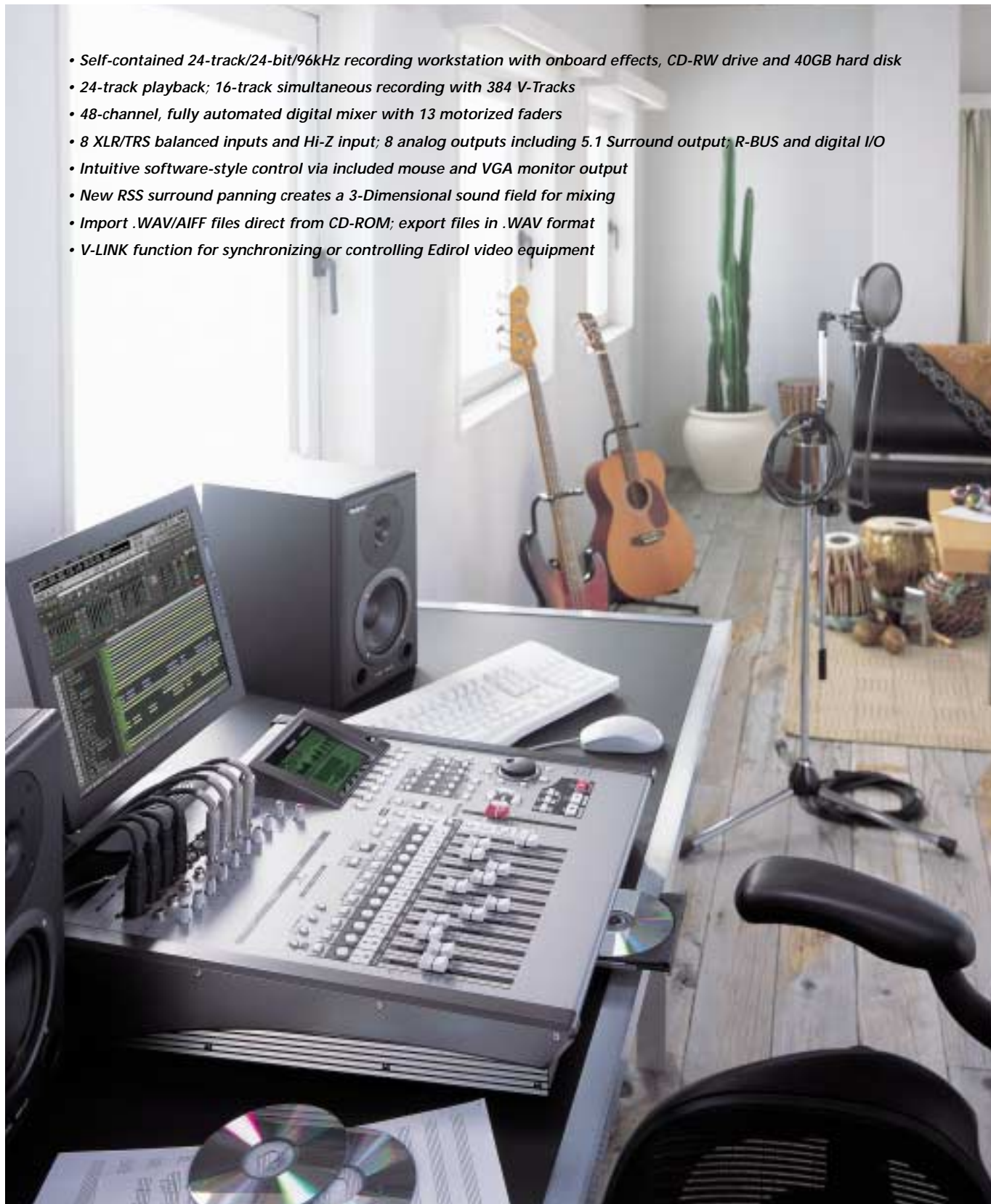
EDIROL

VIDEO Canvas

DV-7PR

V-LINK

Put 24 Tracks to Work for You

V·Studio

The VS-2400CD Digital Studio Workstation brings professional 24-track recording and CD burning to a new low price, while adding impressive new features like RSS® surround panning and V-LINK video control.

- *Self-contained 24-track/24-bit/96kHz recording workstation with onboard effects, CD-RW drive and 40GB hard disk*
- *24-track playback; 16-track simultaneous recording with 384 V-Tracks*
- *48-channel, fully automated digital mixer with 13 motorized faders*
- *8 XLR/TRS balanced inputs and Hi-Z input; 8 analog outputs including 5.1 Surround output; R-BUS and digital I/O*
- *Intuitive software-style control via included mouse and VGA monitor output*
- *New RSS surround panning creates a 3-Dimensional sound field for mixing*
- *Import .WAV/AIFF files direct from CD-ROM; export files in .WAV format*
- *V-LINK function for synchronizing or controlling Edirol video equipment*

Tracks	Tracks: 24 V.Tracks: 384 (16-V.Tracks per each Track)	**Projects**	200 projects in each partition		PS/2: 6-pin miniDIN MIDI: 5-pin DIN R-BUS: 25-pin D-sub
Sample Rate	96.0/88.2/64.0/48.0/44.1/32.0 kHz	**Marker**	1000 per project		
	* Adjustable range with vari-pitch function	**Locator**	100 (10 x 10 banks) per project	**Hard Disk Drive**	IDE type 3.5 inches 40 G bytes
	16.00 kHz — 98.00 kHz (at 96 kHz)	**Scene**	100 (10 x 10 banks) per project	**CD-RW Drive**	Reading Speed: 24x (max.)
	16.00 kHz — 50.00 kHz (at 48 kHz)	**Undo/Redo**	999 Undo / 1 Redo		Recording Speed: Record (CD-R) 4x correspond Re-Write (CD-RW) 4x correspond
Recording Mode	Mastering 24-bit (M24) Multitrack Pro (MTP) CD Writing (CDR) Mastering 16-bit (M16) Multitrack 1 (MT1) Multitrack 2 (MT2) Live 1 (LIV) Live 2 (LV2)	**Nominal Input Level** (variable)	Input 1—8: -50 — +14 dBu (maximum +26dBu: balanced, maximum +20dBu: unbalanced) Guitar (Hi-Z): -50 — +14 dBu (maximum +20 dBu)	**Connectors**	MIDI Connectors (5-pin DIN) Input Jack 1—8 (XLR type [balanced, phantom power]) Input Jack 1—8 (1/4inch phone type [TRS balanced]) Guitar (Hi-Z) Jack (1/4inch phone type) Digital In Connectors (Coaxial type, Optical type) Digital Out Connectors (Coaxial type, Optical type) Foot Switch Jack (1/4inch phone type)
		Input Impedance	Input 1—8: 10 k ‰ (balanced) Guitar (Hi-Z): 1 M ‰		PS/2 Mouse Connector (6-pin miniDIN) PS/2 Keyboard Connector (6-pin miniDIN) VGA Out Connector (15-pin miniD-sub) R-BUS Connector (25-pin D-sub)
Maximum Simultaneous **Recording / play back** **Tracks**	¥ Sample Rate 48/44.1/32 kHz 16-tr. Rec / 16-tr. Play (M24, M16, CDR) 16-tr. Rec / 24-tr. Play (MTP, MT1/2, LIV, LV2) ¥ Sample Rate 96/88.2/64 kHz 8-tr. Rec / 8-tr. Play (M24, M16, CDR) 8-tr. Rec / 12-tr. Play (MTP, MT1/2, LIV, LV2)	**Nominal Output Level**	Master Out: +4 dBu (balanced) AUX A (L, R): +4 dBu (balanced) AUX B (L, R): +4 dBu (balanced) Monitor Out: +4 dBu (balanced)		Master Out Jack L/R (1/4inch phone type, TRS balanced) Monitor Out Jack L/R (1/4inch phone type, TRS balanced) AUX A Send Jack L/R (1/4inch phone type, TRS balanced) AUX B Send Jack L/R (1/4inch phone type, TRS balanced) Headphones Jack (Stereo 1/4inch phone type)
	* Depending on the organization of the song data etc., the number of tracks which can be simultaneously recorded or played back may be limited.	**Output Impedance**	Master Out: 600 ‰ AUX A (L, R): 600 ‰ AUX B (L, R): 600 ‰ Monitor Out: 600 ‰ Phones: 22 ‰	**Power Supply**	AC117 V, AC230 V or AC240 V
				Power Consumption	60 W
Maximum Useful Capacity	40 G bytes: 10 G bytes (Capacity) x 4 (Partition)	**Recommended Load** **Impedance**	Master Out: 10 k ‰ or greater AUX A (L, R): 10 k ‰ or greater AUX B (L, R): 10 k ‰ or greater Monitor Out: 10 k ‰ or greater Phones: 8 — 600 ‰	**Dimensions**	480 (W) x 481 (D) x 136 (H) mm 18-15/16 (W) x 18-15/16 (D) x 5-3/8 (H) inches
				Weight	10.5 kg 23 lbs 3 oz

Recording Time
(at 10GB Partition,
conversion in 1 track,
unit: minutes)

Recording	Sample Rate (kHz)					
	96	88.2	64	48	44.1	32
M24	658	716	987	1,316	1,433	1,975
MTP	1,977	2,152	2,966	3,954	4,305	5,932
M16	988	1,076	1,483	1,977	2,152	2,966
CDR	988	1,076	1,483	1,977	2,152	2,966
MT1	1,977	2,152	2,966	3,954	4,304	5,932
MT2	2,635	2,866	3,953	5,271	5,732	7,907
LIV	3,163	3,442	4,744	6,326	6,885	9,489
LV2	3,954	4,304	5,932	7,909	8,609	11,864

* The above-listed recording times are approximate. Times may vary slightly depending on the specifications of the disk drive and on the number of songs that were created.
* In CDR recording mode, two tracks are always used in a pair (channel link is on), so recording time is half the above-listed.
* Maximum recording time of VS-2400CD is approximately four times of above recording time. (10 GB x 4 Partitions)

EQ	4-band (2 shelving + 2 peaking) * Useful simultaneously at up to 32ch in both Input Mixer and Track Mixer. (at 48kHz or less.) * Useful simultaneously at up to 16ch in both Input Mixer and Track Mixer. (at 64kHz or above.)		**Accessories**	Owner's Manual English Appendices R-BUS Equipment Connection and Setting Guide 2 Block diagram Demo CD CD-R disc PS/2 Mouse Short Cut Seal AC Cord
Dynamics Processor	Compressor, Expander * Useful simultaneously at up to 32ch in both Input Mixer and Track Mixer. (at 48kHz or less.) * Useful simultaneously at up to 16ch in both Input Mixer and Track Mixer. (at 64kHz or above.)			
Effects	Maximum 4 stereo (One pre-installed + One more optional VS8F-2)			(0dBu=0.775Vrms)
Display	320 x 240 dots Graphic LCD (with backlight)			
Interface	Digital I/O: Coaxial, Optical (conforms to IEC60958) VGA Out: 15-pin miniD-sub			* In the interest of product development, the specifications for this product are subject to change without prior notice.

Frequency Response
96.0 kHz: 20 Hz — 40 kHz (+0 dB/-2 dB)
88.2 kHz: 20 Hz — 40 kHz (+0 dB/-2 dB)
48.0 kHz: 20 Hz — 22 kHz (+0 dB/-2 dB)
44.1 kHz: 20 Hz — 20 kHz (+0 dB/-2 dB)
32.0 kHz: 20 Hz — 14 kHz (+0 dB/-2 dB)

No.	Patch Name	No.	Patch Name	No.	Patch Name	No.	Patch Name	No.	Patch Name	No.	Patch Name	No.	Patch Name	No.	Patch Name	No.	Patch Name	No.	Patch Name
Algorithm 36 presets		P024	Vocal Cancel	P048	RV:Room Amb.*	P072	R2:BriteGte2	P093	CH:DetuneCho	P114	MM:57→47*	**Vocal 10 presets**		P161	GA:CleanTwin	P184	VC:Vocal Cnl	P208	PEQ:Narrator	P230	SPM:BB.LowBs*
P000	Reverb*	P025	Vocoder	P049	RV:Cathedral*	P073	R2:Fat Gate2	P094	SPCHO:MODE 1	P115	MM:57→Line*	P139	VO:Vocal Efx	P162	GA:Vin.Tweed	P185	VC:CenterCnl	P209	PEQ:Organ	**Mastering Tool Kit 19 presets**	
P001	Reverb2	P026	Vocoder2 (19)*	P050	RV:Long Cave*	**Gate Reverb 4 presets**		P095	SPCHO:MODE 2	P116	MM:DR20→421*	P140	VO:JazzVocal	P163	GA:BluesDrv.	**Parametric Equalizer 26 presets**		P210	PEQ:St.Piano	P231	MTK:Mixdown*
P002	Gate Reverb*	P027	Lo-Fi Proces	P051	RV:GarageDr.*	P074	RV:BriteGate*	P096	SPCHO:MODE 3	P117	MM:DR20→451*	P141	VO:RockVocal	P164	GA:MatchLead	P186	PEQ:BassDrum	P211	PEQ:SmallCho	P232	MTK:PreMastr*
P003	Delay	P028	3BndIsolator	P052	RV:Rock Kick*	P075	RV:Fat Gate*	P097	PH:Lt Phaser	P118	MM:DR20→87*	P142	VO:Narration	P165	GA:StudioCmb	P187	PEQ:RockBD	**Graphic Equalizer 3 presets**		P233	MTK:LiveMix*
P004	StPS-Delay	P029	DualComp/Lim	P053	RV:RockSnare*	P076	RV:ReverseGt*	**Phaser 3 presets**		P119	MM:10→58*	P143	VO:BigChorus	P166	GA:JMP-Stack	P188	PEQ:RockSD	P212	GEQ:TotalEQ1	P234	MTK:PopMix*
P005	Delay RSS	P030	Parametric EQ	**Reverb2 20 presets**		P077	RV:PanningGt*	P098	PH:DeepPhase	P120	MM:10→87*	P144	VO:Club DJ	P167	GA:SLDN Lead	P189	PEQ:RimShot	P213	GEQ:TotalEQ2	P235	MTK:DanceMix*
P006	TapeEcho201	P031	Graphic EQ	P054	R2:LargeHall	P078	DL:Short Dly	P099	AP:FB-Phaser	P121	MM:Mini→57*	P145	VO:AM-Radio	P168	GA:5150 Lead	P190	PEQ:Toms	P214	GEQ:Space EQ	P236	MTK:JingIMix*
P007	MultiTapDly	P032	Hum Canceler	P055	R2:SmallHall	**Delay 9 presets**		**Flanger 3 presets**		P122	MM:Mini→87*	P146	VO:PlusTwo	**Bass 6 presets**		P191	PEQ:Hi Hat	**Stereo Multi 5 presets**		P237	MTK:HardComp*
P008	StDly-Chorus	P033	Stereo Multi	P056	R2:Strings	P079	DL:MediumDly	P100	FL:LtFlanger	P123	MM:C3KB→57*	P147	VO:Robot Efx	P169	BS:DEedBass	P192	PEQ:Cymbals	P215	CL:Comp	P238	MTK:SoftComp*
P009	Chorus RSS	P034	MastringTool*	P057	R2:PianoHall	P080	DL:LongDelay	P101	FL:Deep Fl	P124	MM:C3KB→58*	P148	VO:Bull Horn	P170	BS:MikedBass	P193	PEQ:Overhead	P216	CL:Limiter	P239	MTK:CInComp*
P010	Space Chorus	P035	MastringTool*	P058	R2:Orch Room	P081	DL:AnalogDly	P102	AF:SBF-325	P125	MM:C3KB→421*	**Guitar 11 presets**		P171	BS:CompBass	P194	PEQ:Bass 1	P217	EQ:Loudness	P240	MTK:DnceComp*
P011	St Phaser	**Reverb 18 presets**		P059	R2:VocalRoom	P082	DL:Tape Echo	**Pitch Shifter 7 presets**		P126	MM:C3KB→451*	P149	GT:Rock Lead	P172	BS:Fat Bass*	P195	PEQ:Bass 2	P218	EQ:Fat Dance	P241	MTK:OrchComp*
P012	AnalogPhaser	P036	RV:LargeHall*	P060	R2:MediumRm	P083	DL:Karaoke	P103	PS:-4thVoice	P127	MM:C3KB→47*	P150	GT:LA Lead	P173	BS:Auto Wah	P196	PEQ:SlapBass	P219	EQ:ThinJingl	P242	MTK:VocalCmp*
P013	St Flanger	P037	RV:SmallHall*	P061	R2:LargeRoom	P084	DL:Multi-Tap	P104	PS:ShimmerUD	P128	MM:C3KB→87*	P151	GT:MetalLead	P174	BS:FX Bass	P197	PEQ:Sax	**Speaker Modeling 11 presets**		P243	MTK:Acoustic*
P014	AnalogFInger	P038	RV:Strings*	P062	R2:CoolPlate	P085	DL:MItTapAmb	P105	VT:M to Fm*	P129	MM:C3KB→Line*	P152	GT:Metal Jet	**Special Effects 11 presets**		P198	PEQ:Bari.Sax	P220	SPM:SuperFlt*	P244	MTK:RockBand*
P015	Rotary	P039	RV:PianoHall*	P063	R2:Short Plt	P086	DL:Ping Pong	P106	VT:Fm to M*	P130	MM:Kick&Snr1*	P153	GT:CleanRthm	P175	LFP:BreakBts	P199	PEQ:ElecGtr	P221	SPM:P.GenBlk*	P245	MTK:Orchestr*
P016	2ch RSS	P040	RV:Orch Room*	P064	R2:Vocal Plt	**Tape Echo 201 4 presets**		P107	VT:Male Duo*	P131	MM:Kick&Snr2*	P154	GT:DIedClean	P176	LFP:1bitDist	P200	PEQ:NylonGtr	P222	SPM:P.E-Bs*	P246	MTK:LoBoost*
P017	MicModeling*	P041	RV:VocalRoom*	P065	R2:Soft Amb.	P087	TE:ShortEcho	P108	VT:FemaleDuo*	P132	MM:H.Hat&Tom*	P155	GT:Delay Rif	P177	LFP:TeknoFlt	P201	PEQ:BluesGtr	P223	SPM:P.Mack*	P247	MTK:Brighten*
P018	GuitarMulti1	P042	RV:MediumRm*	P066	R2:Room Amb.	P088	TE:LongEcho	P109	VT:Robot*	P133	MM:Dr.OvrTop*	P156	GT:Acoustic	P178	LFP:Reso Flt	P202	PEQ:SlideGtr	P224	SPM:SmalCube*	P248	MTK:DJsVoice*
P019	GuitarMulti2	P043	RV:LargeRoom*	P067	R2:Cathedral	P089	TE:OldTape	**Mic Modeling 29 presets**		P134	MM:Dr.OvrAll*	P157	GT:BluesDrv.	P179	LFP:FatBotom	P203	PEQ:LineGtr	P225	SPM:WhiteCon*	P249	MTK:PhoneVox*
P020	GuitarMulti3	P044	RV:CoolPlate*	P068	R2:Long Cave	P090	TE:PanEcho	P110	MM:57→58*	P135	MM:Ac.Guitar*	P158	GT:Liverpool	P180	VOC2:M19Band*	P204	PEQ:Male	P226	SPM:W.C+tiss*		
P021	GuitarAmpMdl	P045	RV:Short Plt*	P069	R2:GarageDr.	**Chorus 6 presets**		P111	MM:57→421*	P136	MM:StudioVcl*	P159	GT:Country	P181	VOC2:S19Band*	P205	PEQ:RockMale	P227	SPM:S.Radio*		
P022	Vocal Multi	P046	RV:Vocal Plt*	P070	R2:Rock Kick	P091	CH:Lt Chorus	P112	MM:57→451*	P137	MM:StereoMic*	**Guitar Amp Modeling 9 presets**		P182	HC:Quiet60Hz	P206	PEQ:Female	P228	SPM:SmallTV*		
P023	Voice Trans*	P047	RV:Soft Amb.*	P071	R2:RockSnare	P092	CH:Deep Cho	P113	MM87*	P138	MM:Ambience*	P160	GA:JazChorus	P183	HC:Quiet50Hz	P207	PEQ:WhiteCon*	P229	SPM:BoomBox*		

* Please use with sample rates of 48kHz or less.

24-BIT DIGITAL REFERENCE MONITOR
DS-90A DS-50A

CHANNEL EDIT CONTROLLER
VE-7000

DYNAMIC MICROPHONE
DR-20

MIC MODELING PREAMP
MMP-2

R-BUS INTERFACE CARD
RPC-1 *R-BUS*

R-BUS CABLE
RBC-1/RBC-3 *R-BUS*

10CH DIGITAL LINE MIXER
M-1000

EFFECT EXPANSION BOARD
VS8F-2 *COSM*

PEDAL SWITCH
DP-2

FOOTSWITCH
FS-5U *BOSS*

24 TR / 24-bit / 96 kHz
DIGITAL STUDIO WORKSTATION
VS-2480 CD

COSM *R-BUS*

The flagship VS-2480CD offers several enhancements for professional users like 16 analog inputs, 17 motorized faders, SMPTE sync and more.

Roland ®
WE DESIGN THE FUTURE