NUSIC SYNTHESIZER Woodar Furthees Physics S90 ES

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The S90 ES delivers a lot of impressive features and sound on its own, but if you want to expand its capabilities its Modular Plugin System lets you add the sounds you need with easy to install expansion boards. Add the legendary sounds of the DX7 or the warm punch of an analog synth. Each expansion board has its own dedicated tone generator and polyphony so it's almost like adding another synthesizer to your system without loosing any of the S90 ES's onboard voices.



Expand the capabilities of your S90 with Modular Synthesis Plug-in Boards

Piano Plug-in Board PLG150-AP 🚟 NEW The Ultimate Yamaha Piano. Acoustic Piano voice expansion board.

Drums Plug-in Board PLG150-DR

Analog Physical Modeling Plug-in Board PLG 150-AN Torx Warm and punchy analog modeling synthesizer

XG Plug-in Board PLG100-XG XC High-quality XG voices with 16 multitimbral parts

Percussion Plug-in Board PLG150-PC 译派 An oasis of world-class Latin percussion

Advanced DX/TX Plug-in Board PLG150-DX Prext Get the classic sounds of the DX-7 synthesizer

Virtual Acoustic Plug-in Board PLG150-VL Acoustic modeling synthesizer with expressive realtime control

Vocal Harmony Plug-in Board PLG100-VH plement your singing with three-part harmony!

## Specifications

yboard	
ne Generator	Tone Gener
ock	Maximum p
	Multi Timbra

		88 keys, Balanced Hammer Effect Keyboard (Initial Touch/Aftertouch)	Sequencer	Sequence	Play SMF Format 0 (playback only)
<b>r</b> Tor	ne Generator	AWM2 (complying with the Modular Synthesis Plug-in System)	Section	BPM (Tempo)	1 - 300
Ма	ximum polyphony	128 notes + the polyphony of the Plug-in Board (if installed)		Number of Chain Steps	100
Mu	Iti Timbral Capacity	16 Internal Parts + 3 Plug-in Boards + Audio Input Part(s) (A/D, mLAN*)		Arpeggio	Preset x 1,787 types
		* 4 stereo parts			User x 256 types (when loading the User Arpeggio data of MOTIF ES).
Wa	ave	228MB (when converted to 16-bit linear format), 1,935 waveforms			* MIDI Sync, MIDI transmit/receive channel, Velocity Limit, and Note Limit can be
Voice	ice	Preset: 512 normal voices + 64 drum kits	Other	Master	User: 128
		GM: 128 normal voices + 1 drum kits			* 4 Zones (Master keyboard settings), Assignable Slider settings, Program Chang
		User: 128 x 2 (Bank 1: Original, Bank 2: copied from Preset bank)		Sequence Software	For Windows®: Cubase SX 3, SQ01 V2, SONAR 4, S90 ES/MOTIF ES/MOTIF-RA
		Normal Voice + 32 drum kits		compatible with the Remote Control function	ES/MOTIF-RACK Multi Part Editors.
Plug-in Void	ıg-in Voice	Preset for the PLG150-AN/DX/PF/DR/PC: 64			For Macintosh®: Cubase SX 3, Logic Pro 7, Digital Performer 4.52, S90 ES/MOTI
		Preset for the PLG-150VL: 192			MOTIF-RACK ES/MOTIF-RACK Multi Part Editors
		User: 64 for each Plug-in slot			* Functions to be controlled by the S90 ES differ depending on the software you u
Per	rformance	User: 128 (up to 4 Parts)		Controllers	Pitch Bend wheel, Modulation wheel, Assignable Control sliders (4), Data dial
Mu	lti	User: 64		Display	240 x 64 dot graphic backlit LCD
Filt	er	18 types		Jack and Terminals	OUTPUT L/MONO, R (standard phone jack), ASSIGNABLE OUTPUT L, R (stand
Effe	ects	Reverb x 20 types, Chorus x 49 types, Insertion (A, B) x 117 types x 8 blocks, Master			phone jack), A/D INPUT L, R (standard phone jack), PHONES (standard stereo p
		Effect x 8 types, Master Equalizer (5 bands), Part EQ (3 bands, stereo), Plug-in			jack), FOOT CONTROLLER 1, 2, FOOT SWITCH x 2 (SUSTAIN, ASSIGNABLE),
		Insertion (available when the PLG100-VH has been installed to slot 1)			BREATH, MIDI IN/OUT/THRU, USB (TO HOST, TO DEVICE), AC INLET
Exp	pendability	3 Slots for Modular Synthesis Plug-in Boards		Power Consumption	33W
				Dimensions, Weight	1,472 (W) x 385 (D) x 163 (H) mm, 22.5 kg
				Accessories	AC Power cord, Owner's Manual (this book), Data List, sticker label for optional m





For details please contact:



\* Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

> Foot Controller FC-7

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Studio Connections offer this flexibility in an open and easy to nplement way, software plug-ins coexist with software control surfaces talking to hardware in your DAW applications like Cubase SX and Nuendo, and when you save a project, you can guarantee that all of your Studio Connections compatible devices will have their settings saved too. This makes for a better creative workflow, and ensures no wasted time setting up your studio when you return.

### www.studioconnections.org

www.yamahasynth.com





LCK-050





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Modular Synthesis Plug-in System

## The Perfect Balance of Synthesizer and Piano

Is the S90 ES an 88-note weighted action digital piano with the sonic flexibility of a synth or a synthesizer with the best sounding piano samples ever available? Actually, it's the perfect balance of both. The new multi-velocity stereo samples of Yamaha's hand-built S700 grand piano, the damper reverb effects, and half damper capability all ensure the S90 ES has the most expressive acoustic piano sound Yamaha has ever offered in a synthesizer. The 128-note polyphony tone generator based on the award winning Motif ES (including 8 inserts, 2 system and separate mastering effects) and Studio Connections, mLAN, and PLG expandability give it all the sonic power and control flexibility of our Motif ES workstation lineup. The new S90 ES, the perfect balance of synthesizer and piano.



In designing the S90 ES's new grand piano voice, the focus was in creating a voice that produces naturally sounding long tones even when played at a pianissimo level. To realize this goal, a generous 53MB of memory was dedicated to this voice to use longer samples of a specially selected S700 grand piano—a \$250,000 acoustic grand handcrafted by Yamaha's master artisans. Played at normal tempos and dynamic levels the sound of this voice is truly superb, but it's at the opposite end of the tempo and dynamic range that the results are most stunning. The longer waves give each note a very natural sustain that, when used on ballads and slow, exposed pieces, plays expressively with a full, natural sound. This voice also features stretch tuning and a damper resonance effect. which bring this voice even closer to reality by simulating the inner workings of an acoustic grand piano. Damper resonance simulates the resonance of the strings and soundboard when the damper pedal is pressed—a factor that contributes to the unique sound of a grand piano. Using the sustain pedal on soft, slow pieces it adds a rich resonance to the piano's tone and enhances its natural sustain and decay.



### he Most Expressive Piano Voice Available in a Synth





# Half Damper Capability

Some classic pieces call for a half damper technique, where the damper pedal is pressed half way down raising the felts only partially off the strings. As the sustain function on most synths is a simple on/off operation, such use is normally unavailable. The S90 ES however, is able to respond to small changes in the FC-3 foot controller's pedal position due to its half damper capability. This gives the performer greater control over the muting by the damper, and expressive freedom to create the subtle nuances required by the music



### **Tone Generation Derived** From the Motif ES

Using a powerful new tone generator derived from the Motif ES, the S90 ES produces voices with stunning clarity and great response that ightens the musical experience for both you and your listeners. To meet the needs of today's players its 228MB\* of wave memory holds a enormous library of expressive voices and drum kits, many of which come from the Motif ES, that cover everything from acoustic planos and prchestra to cutting-edge hip-hop and Electronica.

When converted to 16-bit linear format.

### 88 Keys That Put You In Touch With Each Voice

An 88-note weighted action keyboard based on our acoustic piano designs offers players a feel that is natural, smooth, and responsive especially on keyboard voices like the acoustic grands and electric grands. For its non-keyboard instrument like basses, drums and percussion, which require slightly varied playing styles, the action is evenly balanced from top to bottom making these instruments feel and play more responsive. Aftertouch is also included so you can gain more expression from every note.

## New Signal Processing Effects System

The S90 ES takes great advantage of the processing power inherited from the Motif ES to produce effects like damper resonance, reverb and others with stunning clarity. This power also satisfies users of its multitimbral capabilities, allowing liberal application of effects without the restraints experienced in lesser designs. The system is designed with two blocks of insertion effects (117 types) for each voice and two overall system effects that include 20 reverb types and 49 chorus/delay effects. This way you can apply the right type of signal processing where its needed most. Even in song or pattern modes you won't feel confined since voice insertion effects can be applied on up to eight individual parts simultaneously. Further sound tailoring is available with three-band individual part EQ settings, eight types of mastering effects, and a five-band master EQ.



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for download at www.vamahasvnth.com.

Seamless System Integration

environment where total recall of entire hardware/software systems is possible.

mLAN equipped devices and computers through an IEEE1394 Firewire cable.

record or playback, track volumes, panning and more to increase system efficiency.

Download page at yamahasynth.com

Compatibility with Studio Connections lets the S90 ES function as if it were a plugin within compatible

DAW applications like Cubase and Nuendo. Hardware and software systems integrate seamlessly in this

In other DAW systems, the S90 ES's sliders and data dial can be used to control start/stop of

The graphic user interface of the dedicated voice editing application lets you edit and create you

If you want to connect the S90 ES to an mLAN network just install an optional mLAN expansion

board and start sharing MIDI data and multiple channels of 24-bit/96kHz digital audio with other

own voices with point and click convenience. Up-to-date applications and USB drivers are available



Studio Manager



**Voice Editor** 

The S90 ES arpeggiator is a powerful real-time performance tool that can be used n combination with Keyboard Mega Voices to create remarkably realistic instrumental performances. Call up a guitar voice for example, play a chord and it delivers a performance complete with hammer-ons, pull-offs, harmonics, slides, even fret noise.

A library of 1787 phrases offers everything from popular phrases to the latest cutting edge rhythms. With drum kits it generates innovative rhythm patterns while normal voices and its chord recognition capabilities produce pitched phrases. For fuller accompaniments use a split voice to create two part accompaniments—bass phrases from lower keys and chords or melodies from mid and high range keys-that are great for backing vocals or instrument solos.