

For details please contact:

## Specifications

|                               |                        |  |
|-------------------------------|------------------------|--|
| <b>Tone Generator Section</b> | Tone Generator         | AWM2 (complying with the Modular Synthesis Plug-in System)   |
|                               | Maximum polyphony      | 128 notes + the polyphony of the Plug-in Board (if installed)  |
|                               | Wave Memory            | 175MB (when converted to 16-bit linear format), 1,859 waveforms  |
| <b>Voices</b>                 | Voice Selection        | Preset: 768 Normal Voices + 64 drum Kits<br>GM: 128 Normal Voices + 1 drum kit<br>User: 384 Normal Voices + 32 drum kits   |
|                               | Plug-in Voice          | Preset for the PLG150-AN/DX/PF/AP/DR/PC: 64 Voices<br>Preset for the PLG-150VL: 192 Voices<br>User: 64 Voices for each Plug-in connector   |
| <b>Performance</b>            | Performance            | User: 128 Performances   |
| <b>Multi</b>                  | Multi                  | User: 128 Multis   |
| <b>Effects</b>                | Reverb                 | 20 types   |
|                               | Chorus                 | 49 types   |
|                               | Insertion 1            | 116 types (up to 8 blocks available in the Multi mode)   |
|                               | Insertion 2            | 116 types (up to 8 blocks available in the Multi mode)   |
|                               | Master Effect          | 8 types  |
|                               | Master Equalizer       | 5 bands (High, High Mid, Mid, Low Mid, Low)  |
|                               | Part Equalizer         | 3 bands (High, Mid, Low)   |
| <b>Arpeggio</b>               |                        | 1,787 types<br>* MIDI Sync, MIDI transmit/receive channel, Velocity Limit, and Note Limit can be set.  |
| <b>Controls</b>               |                        | STANDBY/ON switch, VOLUME knob, data dial, cursor buttons, EXIT button, PAGE buttons, MUTE/SEL/ENTER button, Part/Element buttons, BANK buttons, SHIFT button, CATEGORY button, Mode buttons |
| <b>Jacks and Terminals</b>    | Front Panel            | PHONES   |
|                               | Rear Panel             | Controls DC IN, USB, MIDI IN/OUT/THRU/ DIGITAL OUTPUT, OPTICAL OUTPUT, ASSIGNABLE OUTPUT 1-4, OUTPUT L/MONO, R   |
|                               | Top panel              | PGL1, PLG2   |
| <b>Other</b>                  | Display                | 160- x 64-dot graphic backlit LCD  |
|                               | Supplied Accessories   | Power adaptor, Owner's Manual set, CD-ROM  |
|                               | Power Consumption      | 17W (maximum; 22W when two Plug-in Boards are installed)   |
|                               | Optical/Digital Output | 44.1kHz, 24bit   |
|                               | Dimensions             | 480 (w) x 372.4 (D) x 44 (H) mm  |
|                               | Weight                 | 4.1kg  |

\* Specifications and appearance subject to change without notice.  
\* All trademarks and registered trademarks are property of their respective owners.



 **YAMAHA**

**TONE GENERATOR**

# MOTIF-RACK ES

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## Instant Inspiration!

Get inspired. The MOTIF-RACK ES has all you need to jump-start your creativity,

give powerful form to your ideas—and make some truly inspired music.

Featuring a comprehensive selection of Voices, full effect processing, a convenient library of

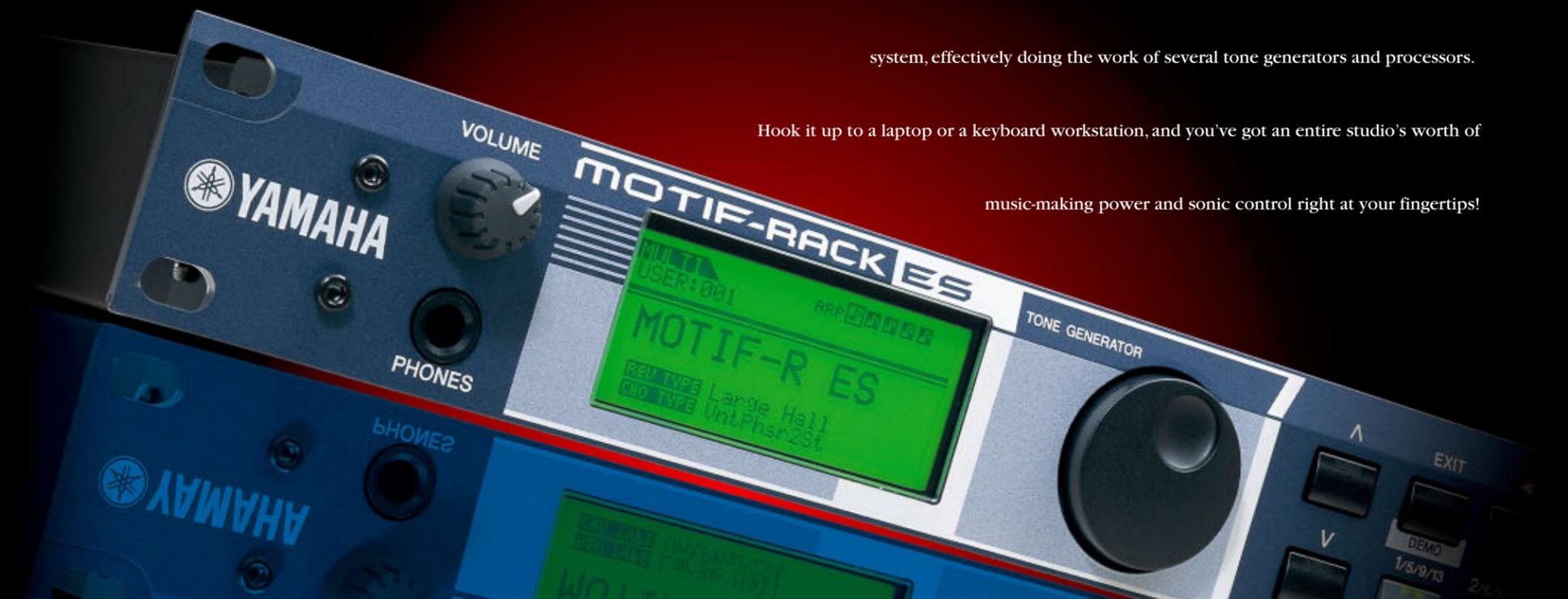
Multi-part presets, a wealth of automatic Arpeggios, and seamless software integration,

the MOTIF-RACK ES is the perfect centerpiece of a project studio or live performance

system, effectively doing the work of several tone generators and processors.

Hook it up to a laptop or a keyboard workstation, and you've got an entire studio's worth of

music-making power and sonic control right at your fingertips!



## Enormous selection of Voices

The heart of the MOTIF-RACK ES is in its remarkable Voices. With all the dynamic, authentic sounds at your command—1,152 Voices and 65 drum kits—this tone generator fills absolutely any and every music production need. From its rich acoustic pianos and realistic orchestra sounds to cutting-edge synth sounds and ultra-hip drum/percussion kits—the MOTIF-RACK ES gives you an amazingly broad and powerful sonic palette. Having the same sound capabilities as the famed Yamaha MOTIF ES, the enhanced AWM2 synthesis engine utilizes a full 175 MB of Wave ROM, and features over 1,800 different waveforms for use as building blocks in creating the Voices. And for greater realism in your music productions, this unit also contains our latest MegaVoice technology—letting you effectively recreate all the subtle performance nuances in guitar and bass sounds.

## Comprehensive effect processing

With its eight Insertion effects, two System effects and Master effects, the compact single-rack size MOTIF-RACK ES is a comprehensive studio-in-a-box—giving you more sonic processing power than any other rack module available. The eight Insertion effects—many of them dual effects—let you enhance or transform individual instruments as needed. For example, you can apply a rotary speaker effect to the organ, overdrive and delay to the rhythm guitar, distortion to the lead guitar, lo-fi noise to the drums, compression to the bass, and still have Insertion effects left over.

The advanced mixing capabilities extend to the System effects, with reverb (featuring a newly designed algorithm) and chorus, with individual sends, letting you add just the right amount of sweetening to each Part. The Part-based 3-band EQ lets you tweak the tonal

quality of each instrument in the mix. Finally, the Master effect section, with eight different types of effects (including multi-band compression) and the 5-band Master EQ lets you apply the final touches to your mix, and get professional sounding results.

## Arpeggios to inspire your performance and creativity

The MOTIF-RACK ES is much more than just a sound module—thanks to the dynamic Arpeggio features, it is a source of instant musical inspiration and a virtually endless wellspring of creative ideas. A wide variety of Arpeggio types, nearly 1,800 in all, provide arpeggiated phrases and patterns for recreating synth/techno sequences as well as realistic chord playing for acoustic instruments—including sophisticated strumming and fingerpicking techniques for guitar. Up to five different Arpeggio types can be selected for each Voice, from the panel or remotely via MIDI, and you can expressively control the level of the Arpeggio by the velocity of your playing.

## Full music production features

With a full 128 notes of polyphony and 16-part multi-timbral operation, this tone generator has all you need to realize complex multi-part musical arrangements with your computer or sequencer. Hold down your piano notes as long as you like, double-track a rhythm guitar part, add long orchestral chords and sustained synth pads, and still have plenty of notes left over.

The MOTIF-RACK ES also has convenient Multi presets—a library of multi-part settings for use in a variety of music genres, such as R&B, hip-hop, jazz, Latin styles, reggae, and many, many more.

These instantly selectable presets feature pre-programmed Voices for up to 16 different instruments, as well as the ideal volume, effect and Part EQ settings—providing super-fast templates you can use to quickly create song demos or full-fledged recordings. Up to 128 of your own original User Multis can be stored, too.

## Expand your system with Plug-in Boards



Need more Voices, or effects, or extra polyphony? The MOTIF-RACK ES is compatible with Yamaha's Modular Synthesis Plug-in System (MSPS), letting you add up to two Plug-in Boards, and bring even more sonic power to your system—expanding your sound set, increasing available polyphony and providing even more effects.

A wide variety of Plug-in Boards give you access to many different pro-quality sounds, effectively putting a second—and third—synthesizer into your MOTIF-RACK ES. With the PLG150-AN, for example, you can reproduce the fat and resonant sounds of vintage analog synthesizers. The PLG150-DX features the same 6-operator, 16-note polyphonic FM tone generation system as the groundbreaking Yamaha DX-7 synthesizer. The Virtual Acoustic PLG150-VL board uses sophisticated physical modeling to create

incredibly expressive, natural-sounding wind, brass and string voices—as well as unique, imaginary "virtual" musical instruments. If you want more drum and percussion options, the PLG150-DR provides ultra-realistic stereo-sampled drum kits, while the PLG150-PC features a wide variety of world percussion instruments. For serious piano players, the PLG150-PF has hundreds of sampled piano and keyboard voices—from concert grands and uprights to electric pianos and harpsichords.

## Performance mode

Live performers and solo entertainers will appreciate the power of the Performance mode. This feature lets you play four different Voices from a connected MIDI keyboard at the same time—either together in a richly textured layer, or in a sophisticated keyboard split, each Voice played from a separate section of the keyboard. A total of 128 preset Performances have been built into the instrument, providing instant instrument combinations for a wide range of styles.

Many of these presets also include Arpeggio playback, with special rhythm "loops" programmed right into the preset. This means that as soon as you play the keyboard, the rhythm starts—and so does your performance! Naturally, all of the Voice settings apply here—pan, filter, pitch bend range, effect parameters, EQ, and more—and you can include optional Plug-in Board Voices with your Performance. What's more, you can freely assign external MIDI controllers (such as the sliders, knobs and foot controllers on your keyboard) to desired Voice and effect parameters, tweaking and controlling the sound as you play. No other rack module gives you this much expressive power and creative inspiration.

## Computer connectivity and editing convenience

One USB cable—that's all you need to fully integrate the MOTIF-RACK ES into your computer-based music production system. The instrument has powerful editing software that gives you complete, intuitive control over various settings. The latest versions of these powerful applications can be downloaded without charge from the Yamaha website (<http://www.yamahasyth.com>). Check back often for updates! The MOTIF-RACK ES Voice Editor program provides control over all Voice and effect settings, and features graphic display of Element parameters such as filter, EQ and envelope settings—letting you tweak the settings by clicking and dragging on the graph with your computer mouse. The MOTIF-RACK ES Multi Part Editor uses a graphical mixer interface for comprehensive, easy-to-understand control over the 16 Parts of each Multi. The convenience in editing is enormous, since the MOTIF-RACK ES effectively becomes an integral part of your computer music system.



MOTIF-RACK ES  
Voice Editor  
for Windows



MOTIF-RACK ES  
Multi Part Editor  
for Windows

## Full connections to your studio

The MOTIF-RACK ES is equipped with a full set of hardware output jacks, both analog and digital. In addition to the main stereo outputs, the analog section has four assignable independent outs, letting you route selected Voices to different channels of your hardware mixer and process them separately with your favorite external effect units. The rear panel also has two digital outputs, optical and coaxial, for direct, noise-free transfer of the audio signal to your computer or other digital recording device.

## Easy control, intuitive user interface

The large backlit LCD gives you at-a-glance view of many settings, making it exceptionally easy to set and control the MOTIF-RACK ES—both in the studio and onstage. The large data dial is a huge convenience as well, providing smooth and quick control over parameter values and Voice/Performance selection. Other powerful features include the Category Search function, which lets you first select the type of Voice or Performance you want—such as piano, bass, strings, brass, etc.—then select the desired program from the list. You can create your own categories as well, using the Favorites function, and have a bank of your own custom setups available for instant selection. And once you've selected a Voice, you can use the convenient Audition feature to play the Voice with a stylistically appropriate phrase—without the need of a keyboard.



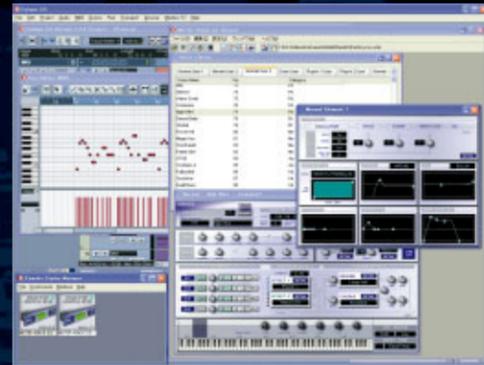


# Studio Connections Recall

—a comprehensive hardware/software solution

The MOTIF-RACK ES Voice Editor and Multi Part Editor (mentioned above) are part of Yamaha's broadbased cooperation with the famed music software developer, Steinberg—makers of Cubase SX and Nuendo. The first result of this joint initiative is Studio Connections Recall, a powerful hardware/software solution that fully integrates the MOTIF-RACK ES with your computer DAW.

The main link with your DAW is Yamaha's new Studio Manager 2. Simply open Studio Manager within Cubase SX 3 or Nuendo, and select the Voice Editor or Multi Part Editor. Then change the settings using the versatile editing functions in the software, and have all your computer edits synchronized with the rack module.



When you save your DAW project, all MOTIF-RACK ES settings are stored along with your song. The next time you re-open the project, all settings—both hardware and software—are automatically recalled, and the MOTIF-RACK ES is reset to the custom settings for the project.

Studio Connections is an open-ended, cross-platform (Windows/Macintosh) system that will grow as your system grows—incorporating ever new and innovative solutions that effectively erase the line between hardware and software, and add even more power and versatility to your computer music system.

*Note: Studio Manager 2.0 is a plug-in software program for DAW applications compatible with Studio Connections, such as Cubase SX 3. However, the program can also be used as a stand-alone application in tandem with other music software.*

[www.studioconnections.org](http://www.studioconnections.org)



# MODULAR SYNTHESIS PLUG-IN SYSTEM

## Powerful Expansion Boards That:

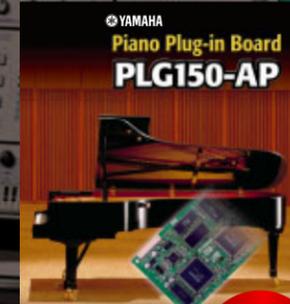
- Expand your sound generation capabilities
- Increase your available polyphony
- Give you more multitimbral parts and effects
- Can be controlled from the host keyboard
- Come bundled with PC software for detailed voice editing



**Drums Plug-in Board**  
**PLG150-DR**



**Advanced DX/TX Plug-in Board**  
**PLG150-DX**



**Piano Plug-in Board**  
**PLG150-AP**

The Ultimate Yamaha Piano. Acoustic Piano voice expansion board.



**Percussion Plug-in Board**  
**PLG150-PC**



**Virtual Acoustic Plug-in Board**  
**PLG150-VL**



**Analog Physical Modeling Plug-in Board**  
**PLG150-AN**



**XG Plug-in Board**  
**PLG100-XG**



**Piano Plug-in Board**  
**PLG150-PF**



**Vocal Harmony Plug-in Board**  
**PLG100-VH**

The entire wave ROM (over 29 MB) is used to realistically capture all the nuances of Yamaha's award-winning CFIIIS concert grand piano.

This new long looped, three layer stereo piano sample offers an extremely wide dynamic range, from elegant pianissimo to a powerful fortissimo.

