

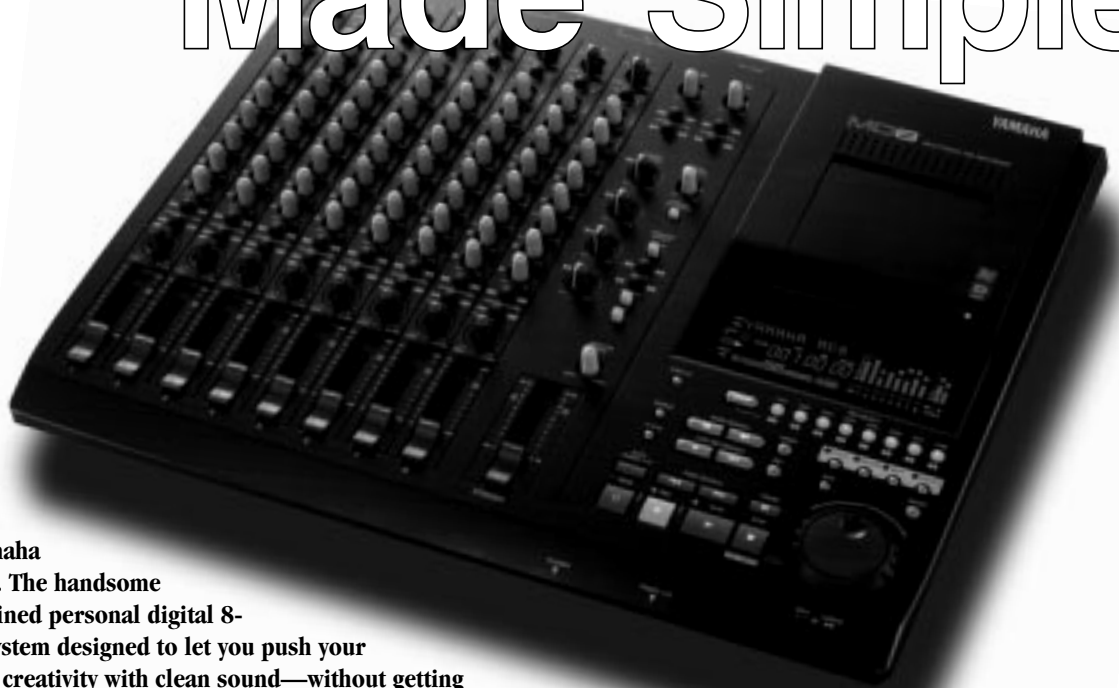
YAMAHA

MULTITRACK  
MD  
RECORDER

MDS



# 8-Track Digital Multitrack Recording Made Simple



At last, quality and style meet convenience and affordability with the Yamaha MD8 Multitrack MD Recorder. The handsome and sleek MD8 is a self-contained personal digital 8-track recording and mixing system designed to let you push your music to ever higher levels of creativity with clean sound—without getting lost in layers of complicated technology, or adding unwanted noise as you do your thing.

The MD8 will literally have you multitracking in minutes. Simply connect it to an amp and speakers, hook up one or two of your favorite effects processors, plug in some microphones, synthesizers, samplers and guitars—then *go for it!* Record it. Mix it down. It really is that easy. And the sound quality is truly stunning.

And since it's digital, there's a host of handy track and song copy, move, combine and other editing functions simply not possible with tape-based recording systems. Certainly not for this price. Also, it's easy and practical to record and archive all of your important song data on small, durable MD DATA Mini Discs. Key MD8 features include...

- Up to 8 tracks simultaneous recording and playback, with zero wow and flutter and zero pitch fluctuation, and an uncompromising 20 Hz to 20kHz frequency response.
- 8-track, 4-track, 2-track and monaural "MD DATA" record and play modes, plus 2-track and monaural standard "Mini Disc" record and play modes.
- Ability to ping-pong all eight tracks down to one or more tracks to free up space for more parts, without signal degradation from multiple ping-ponging or repeated play.
- Fast and accurate search and locate, precise Auto Punch In/Out with up to 99 takes, disc and song titling for easy music identification, programmable song order, multiple mark points for easy song editing and cue-list assembly, plus repeat playback and pitch control ( $\pm 12\%$ ).
- Jog/Shuttle dial for quick and easy song location and edit function access, multiple recorder controls including direct/group track assign buttons, plus large display with individual track and stereo level indicators, song time indicator in minutes/seconds/frames or measure/beat, plus more.
- High-quality 8-channel analog mixer with variable gain and 3-band EQ with mid sweep on each channel, 2 Aux Sends (with stereo returns), pan and fader on all input channels, in-line recording capability, stereo and cue monitoring, and more.
- Balanced XLR inputs (with phantom power), phone-type jacks and insert I/O jacks on channels 1/2, unbalanced phone-type input jacks on channels 3-8, plus direct track outs, stereo outs, monitor outs, 2-track inputs, and more.
- MIDI In, Out and Thru terminals, MIDI clock output, MIDI Time Code (MTC) transmit, MIDI Machine Control (MMC) receive, and more.
- Part Copy, Track Copy, Song Copy, Song Renumbering, Tempo Map (with 26 Meter and 26 Tempo change events per song) and other handy editing functions.



# The MD Recording System

## Superior Audio Fidelity

With the MD8, tape hiss is a thing of the past. Crystal clean, dynamic sound quality—on par with compact discs—is where it's at. That's because the MD8 records digitally to a small but durable MD DATA disc with a sampling frequency of 44.1kHz, delivering flat frequency response from 20 Hz to 20kHz with inaudible 0.02% total harmonic distortion (at 1kHz), at a signal-to-noise ratio of 96dB.

What's more, unlike cassette or other tape-based systems, the MD8 shines through with zero wow and flutter and zero pitch fluctuation, and ensures that sound quality will never degrade over time or through repeated recording and playback.

The MD DATA disc format permits 18-minutes of 8-track recording, 37-minutes of 4-track recording, 74-minutes of stereo recording, and 148-minutes of mono recording—all with the same superior, dynamic audio quality. The MD8 also lets you record and play in stereo or monaural using a standard Mini Disc. Convenient disc and song naming functions help you keep track of your expanding music archives.

## Simultaneous 8-track Recording & All-track Ping-ponging

With the MD8, up to eight tracks can be recorded simultaneously, which means you have the option of laying your band's live performance down as is, as well as

overdubbing additional parts to your heart's content.

If eight tracks are simply not enough to handle your creative powers, you can "ping-pong" it all down to two or more tracks and keep on building up layer upon layer of sound from there. Because it operates in the digital domain, the MD8 offers far more flexible ping-ponging than analog-based multitrack recorders, including no signal degradation from multiple ping-ponging, plus the unique ability to play back all eight tracks and mix them down to two tracks—rather than mixing six tracks to two.

## Precise Punch In/Out With 99 Takes

The MD8 features various track punch-in/punch-out recording options which let you re-record a specific segment of a track to spot-fix a mistake or brush-up a key passage in an otherwise perfect take. You can punch the MD8 in and out manually using the panel controls or a footswitch, or set specific record start and stop points for automatic punch-in and -out recording. A Rehearsal mode lets you practice the take as many times as you want before actually recording.

You can even set the pre-roll and post-roll, or how many seconds the song plays before recording starts and after recording stops, so you can "fall in" naturally with the dynamics of the music to achieve the smoothest possible take. What's more, you can record up to 99 takes and then choose the best one.

## Multiple Controls & Large Fluorescent Display

A full complement of panel controls give you direct and immediate access to record, playback and editing functions intuitively—with only one hand. Included are familiar transport functions like Record, Play and Stop, plus convenient Direct/Group track assign buttons for each track, and a pitch function which lets you adjust the pitch for playback and recording by  $\pm 12\%$ .

A handy Jog/Shuttle dial lets you fast-forward at HALF speed, or fast-forward/rewind through a song at 2x, 4x, 8x, 16x or 32x speeds, as well as locate a specific beat or frame. The Jog/Shuttle dial also works in conjunction with Edit, Utility and other menus to quickly call up specific functions—with the simple twist of the dial.

The large fluorescent display provides ample feedback of current operating status, including selected tracks for recording, current operating mode, disc and song titles, and level meters (with clipping indicator) for each track as well as the stereo output. A song time indicator gives you the option of displaying song location in minutes, seconds and frames—either as Elapsed time, Total time, or Remaining time, or by measure/beat.

## MIDI Control Options

The MD8 comes equipped with MIDI In, Out and Thru terminals, plus various MIDI control options such as MIDI Time Code (MTC) transmit which permits the MD8 to control play of an MTC-compatible music sequencer or desktop music system, plus MIDI Machine Control (MMC) receive which permits an external MIDI sequencer to control play of the MD8.

A Tempo Map function lets you determine up to 26 Meter change and 26 Tempo change events per song, thus giving you flexible options for precise control of playback timing.



# The 8-channel Mixer Section

## Channel Inputs & Inserts

The MD8's high-quality 8-channel mixer section is designed not only for great sound but flexibility in the field. Provided on channels 1 and 2 are balanced XLR inputs (with phantom power) and phone-type jacks, plus insert I/O jacks for direct in/out connection to an external EQ, compressor or other effect of your choice. Channels 3-8 sport unbalanced phone-type jacks.

Each channel features a continuously variable Gain control from microphone to line level, thus permitting accurate level matching with the widest possible range of input sources. Simply plug in your microphones, synths, samplers and guitars, set the optimum input gain, and start recording.

## 3-band EQ With Mid Sweep

Each channel features a 3-band EQ section which gives you considerable control over the sound of your tracks—during recording and during mixdown. EQ lets you optimize the sound of each track by boosting certain frequencies and cutting others—to do things like bring a guitar forward in the mix. Or fatten up a thin bass. Or create unusual effects on a vocal. And much, much more.

The MD8's equalization controls feature high and low shelving type bands and a peaking type mid band with 250 Hz to 5kHz sweep that permits fine control over the

critical midrange frequencies where vocals and other lead-type instruments are centered.

## Flexible Signal Routing

The MD8's signal buss circuit design makes signal routing to recorder tracks as simple as the flick of a switch and twist of a knob. Each mixer input channel has two GROUP ASSIGN switches and a pan pot which work in conjunction with the recorder's Direct/Group assign buttons and the GROUP MASTER level controls to let you assign the channel signal to any track, or to any stereo pair (1/2, 3/4, 5/6, 7/8), with continuous stereo pan control.

A CUE section lets you adjust level and panning of each channel for a monitor mix sent to a separate monitor system, or a cue mix sent to a performer's headphones. During mixdown the pan pots are used to position each track in the stereo mix.

## Two Aux Sends With Stereo Returns

You can connect up to two external effects devices to the MD8 to greatly expand your on-board sound processing capabilities by adding specific amounts of reverb, delay, chorus, pitch change or other effects to each track.

Each channel features two Aux Send controls for

designating the level of the input channel signals sent to the AUX SEND 1 and 2 outputs. Stereo effect signals can be "returned" from the external processors to the MD8 via the stereo channel 9/10 and 11/12 input jacks, respectively, and added to the mix via the 9/10 and 11/12 Level controls.

GROUP ASSIGN switches let you route the returned stereo signals to the recorder tracks at will. (You can also use the 9/10 or 11/12 jacks to input stereo signals from an external sound source such as a sampler or submixer.)

## Monitoring Features & Direct Outputs

The MD8's flexible monitoring capabilities are designed to help simplify recording and mixing operations by letting you hear exactly what you want at all times.

You can monitor the MD8 with a pair of stereo headphones plugged into the front-panel PHONES jack, as well as with an external amplifier and speaker system connected to the stereo MONITOR OUT jacks—overall output volume is controlled by the MONITOR LEVEL control.

The MONITOR SELECT switches let you hear Group signals, stereo signals received at the 2-TRACK IN jacks (such as a 2-track recorder, external submixer or sampler), the stereo output buss, or the cue signal from the recorder tracks.

By using the CUE LEVEL controls for each recorder track you can set up a separate monitor mix, thus leaving all eight mixer input channels open for connecting additional audio sources such as external MIDI instruments.

Direct outputs for each recorder track let you bypass the on-board mixer entirely, by connecting them to an external mixer capable of additional sound processing

## Top Panel



## Back Panel





# The Editing And Programming Options

## Search & Locate

The MD8 boasts fast and accurate search and locate features which greatly speed up the recording and mixing processes. There are a variety of controls to help you jump directly to any song location you want.

Song Search buttons let you cue instantly to the beginning of each song. Last Record Search buttons let you go directly to the point at which recording was last started or ended. Mark Search buttons let you locate "markers", or up to 12 specific points within each song which are freely assignable.

The MD8 also has a Time Entry Search function which lets you locate a specific point within a song by entering the exact time position in minutes, seconds and frames (or by measure and beat), as well as quickly find your location aurally using the Jog/Shuttle dial.

## Song & Track Editing Features

The MD8's song and track editing features give you the flexibility to fine-tune the details of your creation as well as experiment with different arrangement ideas without fear of losing any important takes.

Song Copy lets you make a safety backup copy of a song—including title, marks and tempo map—before track ping-ponging, so if you're not happy with the result, you can always go back to the duplicate version and try again. You can determine track mode for 4- or 8-track recording. Song Divide lets you divide a song into several independent songs, which can then be arranged as a program for playback. Song Combine lets you combine adjacent songs that were divided using the Song Divide function. Song Move lets you move a song to a specified blank area on the disc, and Song Renumber lets you

reorganize the songs so that each song number matches its actual order on the disc.

Other edit functions include Part Copy, which lets you copy a part of a track between the last record in and out points to another track, and Track Copy, which lets you copy an entire track to another track. A Rehearse mode lets you perform a dry run before activating the actual recording operation.

## Song Repeat, Cue List & Program Play

The MD8's nonlinear approach to song and marker location and playback gives you unique listening and even arranging options. The Repeat function lets you designate either a single song to play repeatedly, or all songs to repeatedly play one after another, in a loop. An A-B Repeat function lets you play a specific section of a song repeatedly, looping between designated A and B points.

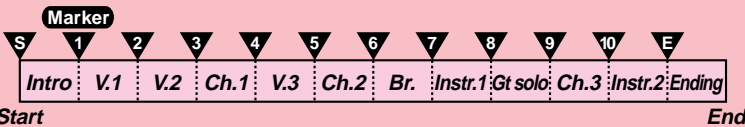
The Cue List Playback function lets you create a completely different version of a song by compiling a Cue List of up to 26 steps (i.e., a sequence of cues for playback) using markers. You can specify the start marker and end marker for each step, plus the number of times you want the step to repeat.

The Program Playback function works in a similar way, letting you compile a "Program" of songs to play in a specific order, by assigning a song number to each step in a Program list containing up to 36 steps.

## Setting Up A Cue List

The Cue List Playback function lets you compile markers into a list of steps, or "cues", for playback in a sequence. Since each cue can be set and executed with a precision of approximately 1/100 of a second, the MD8 provides instant, seamless playback of each consecutive step in the sequence, thus letting you create a completely different arrangement of a song.

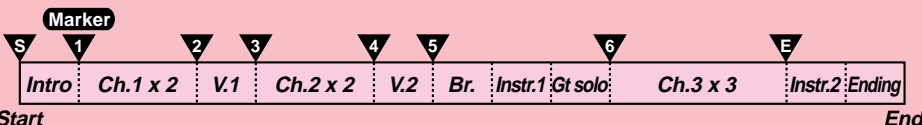
### Original Version



### Cue List

Step	Start-End Marker	Playback	Description
A	▼3 ~ ▼4	2	Plays Chorus 1 twice
B	▼1 ~ ▼2	1	Plays Verse 1
C	▼5 ~ ▼6	2	Plays Chorus 2 twice
D	▼2 ~ ▼3	1	Plays Verse 2
E	▼6 ~ ▼9	1	Plays Bridge, Instrument 1 and Guitar solo
F	▼9 ~ ▼10	3	Plays Chorus 3 three times
G	▼10 ~ ▼E	1	Plays Instrument 2 and Ending

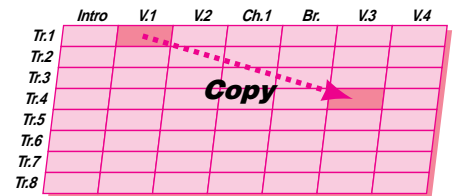
### New Version



Setting up a Cue List is easy. First you assign markers to specific points in the song. Next you designate start and end marker numbers for each step, along with how many times each step should repeat. Then you're ready to hear your new arrangement!

## Part Copy

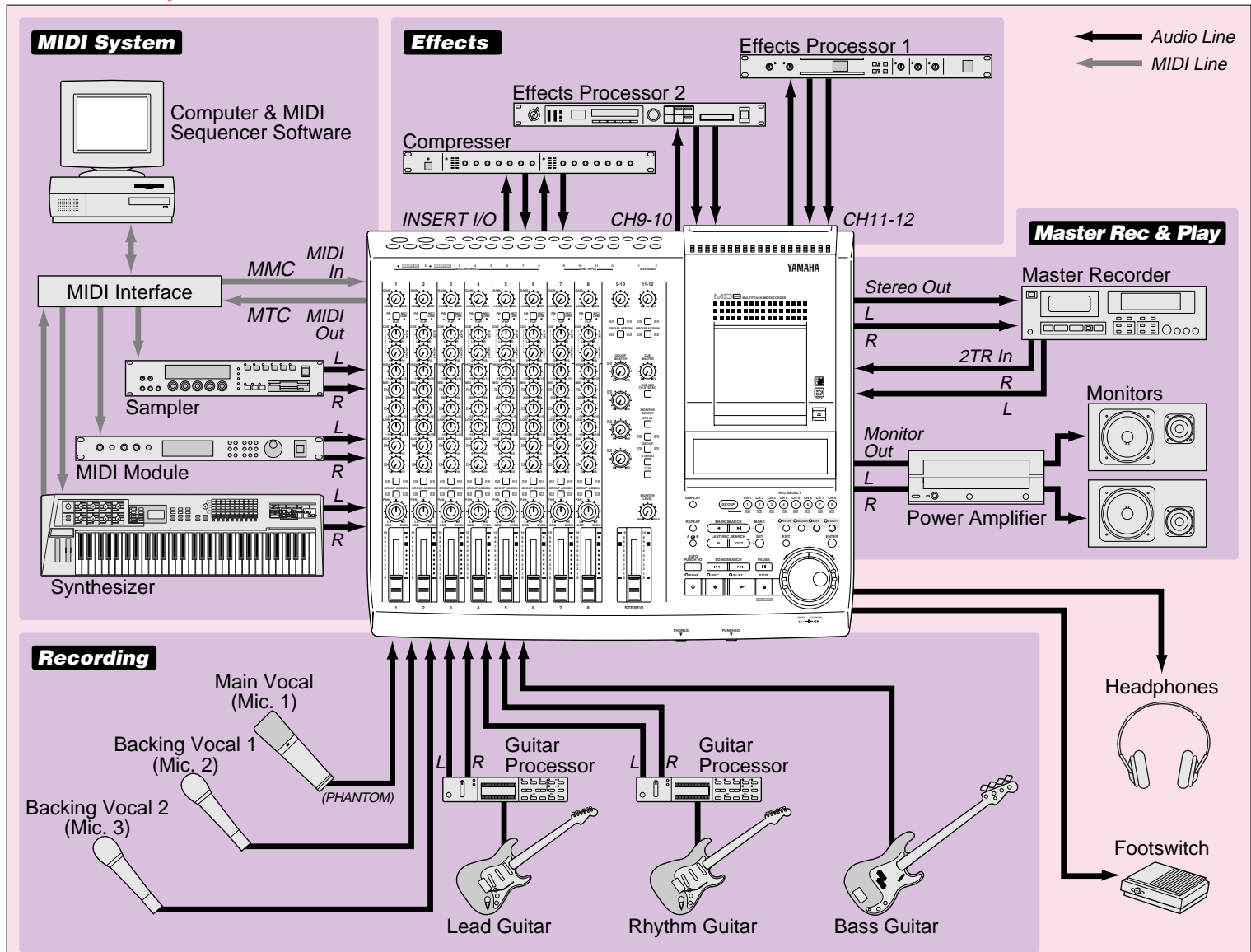
The Part Copy function lets you copy a section from one track to a different section in a different track.



## The MD Data Disc



The Mini Disc is an optical disc-based sound recording and playback format which is extremely durable, highly reliable, virtually unaffected by external magnetic fields, and retains its inherent quality despite repeated recording and playback. The MD8 uses MD DATA discs which permit 18-minutes of 8-track recording, 37-minutes of 4-track recording, 74-minutes of stereo recording, and 148-minutes of mono recording. The MD8 also offers options for stereo and monaural recording and playback of standard Mini Discs, including playback of commercially available pre-recorded Mini Discs and Mini Discs recorded on home consumer-type MD decks. (Note: MD DATA discs cannot be played on consumer-type MD decks.)



With its MTC (MIDI Time Code) transmit and MMC (MIDI Machine Control) receive capabilities and highly flexible monitoring and mixing options, the MD8 is ideally suited for seamless integration into a MIDI-based music system to greatly increase your personal composing and music production options. Since the MIDI sequencer stays in perfect sync with MD8 play at all times, there's no need to "print" the MIDI sampler or synthesizer sounds to recorder tracks—thus keeping them open for vocals and live instruments, as well as multiple ping-ponging.

**Recorder Specifications**

<b>Digital/Audio</b>	Sampling Frequency: 44.1kHz, Compression: ATRAC Frequency Response: 20Hz-20kHz THD+N: 0.012% typ. (1kHz) S/N: 96dB typ.
<b>Rec/Play</b>	8-track independent simultaneous record/play (Recording time: 18min) Dubbing with 8-track playback Auto & Manual Punch In/Out (11.6 ms accuracy) Four-track (37min), Stereo (74min), or Mono (148min) record/play Repeat play A-B, Single song, All song Vari-pitch ( $\pm 12\%$ )
<b>Locate</b>	Start and End point of Song, Direct Time Locate 8 Marker locate points for each song, Last Recording In/Out point
<b>Cue &amp; Review</b>	2x, 4x, 8x, 16x, 32x play speed
<b>Disc Editing</b>	Disc Erase
<b>Song Editing</b>	Copy, Move, Divide, Combine, Renumber, Erase, Name
<b>Track Editing</b>	Track Copy, Part Copy, Track Erase, Part Erase
<b>Title Editing</b>	Disc title, Song title
<b>Panel Controls</b>	REC SELECT buttons 1-8, GROUP Transport buttons: PLAY, STOP, PAUSE, REC, REHEARSAL, SONG SEARCH Mode buttons: AUTO PUNCH I/O, EDIT, UTILITY, ADJUST, PITCH, TIME DISPLAY, EXIT, UTILITY CURSOR shuttle/DATA dial Locate buttons: MARK, MARK SEARCH, LAST REC (IN/OUT), SET, REPEAT, A/B
<b>MIDI</b>	MIDI IN, OUT, THRU
<b>Display</b>	FLD (Fluorescent Display)

**Mixer Specifications**

<b>Inputs</b>	MIC/LINE IN (CH 1, 2) Balanced XLR x2 (-10--50dB) MIC/LINE INPUT (CH1-8) Balanced phone jack (-10--50dB) LINE INPUT (CH9-12) Phone jack x4 (-10dB) INSERT IN/OUT (CH 1, 2) TRS phone jack x2 (-10dB) 2TR IN (L, R) x1 Phono (-10dB) TRACK DIRECT OUT x8 Phono (-10dB) STEREO OUT (L, R) Phono (-10dB) MONITOR OUT (L, R) Phono (-10dB) AUX SEND x2 Phone jack (-10dB) PHONES OUT Stereo phone jack (8-40 $\Omega$ )
<b>Outputs</b>	
<b>Frequency Response</b>	20Hz-20kHz +1, -3dB
<b>EQ</b>	3-band, $\pm 12$ dB (LOW: 80 Hz shelving, MID: Peaking (250Hz-5kHz), HIGH: 12 kHz Shelving)
<b>MASTER Channel Features</b>	Stereo Fader (45mm), Group Master Level controls 1-4, CUE Master Level control, Monitor Level control, Monitor Select buttons (2TR IN, 1-3, 2-4, STEREO, CUE) 0 dB is referenced to 0.775 V r.m.s.

**General Specifications**

<b>Power Requirements</b>	USA & Canada: 120V/60Hz, Others: 230V/50Hz
<b>Power Consumption</b>	35W
<b>Dimensions (W x H x D)</b>	484 x 102 x 412.3mm
<b>Weight</b>	6.4kg
<b>Operating Conditions</b>	Temperature 5°C-35°C (41°F-95°F)
<b>Humidity</b>	10%-95%
<b>Optional Accessories</b>	FC5 Footswitch

Specifications subject to change without notice.

**Optional Accessory**



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Yamaha Home Page: <http://www.yamaha.co.jp:80/product/proaudio/homeenglish/index.html>

For details please contact: