## Overview

The SP2060 offers top-quality speaker processing for a wide range of
 applications, with AES/EBU digital inputs and outputs, 2 analog inputs, and 6 analog outputs.


Rear Panel

## Features

- All of the functionality required for most speaker processing applications in a compact 1 U unit.
- An impressive array of built-in functions: gain, delay, PEQ, comp, crossover, and limiter.
- All-Pass Filter precisely controls phase without affecting gain.
- Two analog inputs, six analog outputs, and two AES/EBU digital inputs.
- Original audio processing LSI provides full $24-$ bit, $96-\mathrm{kHz}$ processing capability for outstanding sound quality with a dynamic range in excess of 110 dB .
- Detailed programming can be accomplished using the DME Designer application software running on a personal computer.
- Ethernet port and comprehensive panel interface.
- Optimized for Yamaha Installation Series Speakers.


## Specifications

## General Specifications

| 1/0 | Line Inputs | 2 |
| :---: | :---: | :---: |
|  | AD Converter | 24-bit; 64-time over sampling |
|  | Line Outputs | 6 |
|  | DA Converter | 24bit; 64-time (@96kHz) / 128-time (@48kHz) over sampling |
|  | Digital I/0 | 1x AES/EBU (2-in/2-out) |
| Memory Bank |  | 99 (PRESET: 12, USER: 87) |
| Internal Processing |  | 32bit |
| Sampling Frequency Rate | Internal | 96kHz |
|  | External | Normal rate: $44.1 \mathrm{kHz}, 48 \mathrm{kHz}( \pm 0.1 \%)$ <br> Double rate: $88.2 \mathrm{kHz}, 96 \mathrm{kHz}( \pm 0.1 \%)$ |
| Signal Delay |  | Less than 761 micro sec |
| Total Harmonic Distortion |  | Less than 0.05\% (20Hz-40kHz) |
| Frequency Response |  | 0, +0.5, -1.0dB 20Hz-40kHz |
| Dynamic Range |  | DA: 110dB; AD+DA: 106dB |
| Hum \& Noise Level | Residual Output Noise | -86 dBu (Digital input), -82dBu (Analog input) |
| Crosstalk |  | -80 dB |
| Power Requirements |  | Depend on area of purchase; AC100V, 120V or 220-240V; 50/60Hz |
| Power Consumption |  | 30W |
| Dimensions (W x H x D ) |  | $480 \mathrm{~mm} \times 44 \mathrm{~mm} \times 361 \mathrm{~mm}$ (18.9" $\left.\times 1.7^{\prime \prime} \times 14.2^{\prime \prime}\right)$ |
| Net Weight |  | 9.3 kg (20.51bs) |
| Accessories |  | Owner's manual, AC power cord, 4x Rubber foot |

## Analog Input and Output Characteristics

| Terminal | Actual Load Impedance | For Use with Nominal | Level |  | Connector |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Nominal | Max. before Clip |  |
| Input A, B | 10k ohms | 600ohm Lines | $+4 \mathrm{dBu}$ | +24dBu | XLR-3-31 type (Balanced) |
| Output 1-6 | 750hms | 600ohms Lines | $+4 \mathrm{dBu}$ | +24dBu | XLR-3-32 type (Balanced) |

## Digital Input Characteristics

| Terminal | Format | Data length | Level | Connector |
| :--- | :--- | :--- | :--- | :--- |
| Digital Input AES/EBU | AES/EBU | 24 -bit | RS422 | XLR-3-31 type <br> (Balanced) |

## Dimensions



Software

- DME Designer


## Architectural and Engineering Specifications

The Yamaha SP2060 Speaker Processor shall provide two analog inputs on XLR3-31 connectors and six analog outputs on XLR3-32 connectors. All analog inputs and outputs shall have $24-$ bit, internal $96-\mathrm{kHz}$, external $44.1-\mathrm{kHz} / 48-\mathrm{kHz}$ (normal rate) and $88.2 / 96-\mathrm{kHz}$ (double rate) AD/DA converters and all internal processing shall be digital. The SP2060 shall provide a digital input via AES/EBU audio on an XLR3-31 connector. It shall have an Ethernet port to allow remote control. Software shall be provided for system configuration within each hardware unit. Available system configurations shall include $3 \times 2$ way, $3 \times 2$ way Link, $2 \times(2$ way + Sub), $2 \times(2$ way + Sub) Link, $2 \times 2$ way $+2 \times$ Aux, $2 \times 2$ way $+2 \times$ Aux Link, $2 \times 3$ way, $2 \times 3$ way Link, 4 way $+2 \times$ Aux, 5 way+Aux, 6 way and Multi Zone. Ethernet communication shall be utilized for software control and configuration. Software shall be operated on a computer with a network card installed, running Windows XP or above [Windows Vista/7/8/8.1/10 are supported]. Dimensions shall be $480(\mathrm{~W}) \times 44(\mathrm{H}) \times 361 \mathrm{~mm}(\mathrm{D})$. Weight shall be 4.2 kg . The product shall conform to the latest EU RoHS hazardous substances and WEEE directives.

