Stereo 192 Sample Rate Converter

User Manual

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Content

Introduction

The Mytek Stereo 192 Sample Rate Converter is a hardware SRC that is capable of synchronous and asynchronous operation. It can convert between any frequency between 32,000 Hz and 192,000 Hz with 1 Hz accuracy.

The Stereo 192 SRC accepts AES/EBU, S/PDIF, and Toslink input, and has AES/EBU and S/PDIF (coax only) output. There are also Wordclock In and Out connections.

Quick Start

1. **Connect Digital Input and Output**
   Connect the output of your digital device to an input on the SRC. Select this input on the front panel with the "**IN**" button. A solid LED will tell you that the source is valid. Connect the digital output of the SRC to the digital receiving device.

2. **Operation**
   You can choose to display either the input frequency or the output frequency by pressing the "**F-DISP**" button. The unit will convert the signal once a valid input and frequency is selected.

3. **Configuration**
   Using the "**SEL**" and "**UP**" buttons will allow you to cycle through and select the various frequency options. Holding down the "**SEL**" button until the first digit on the display flashes will let you define a custom frequency with the "**UP**" button to change the value and the "**SEL**" button to select the next digit. Push "**SEL**" after the last digit to confirm your value.

   The "**MODE**" button cycles between Synchronous (SNC), Asynchronous – Internal Crystal (ASNC-XTL), and Asynchronous – External Wordclock (ASNC-WCK).

   The "**OUTPUT WORD LENGTH**" button will select between 24, 20, or 16 bits output format. TPDF dithering is applied to 20 and 16 bits.

For user defined frequencies less than 100,000 the left most digit will be blank but it is still cycled through with the "SEL" button. The value set won't be confirmed until you push the "SEL" button after the last digit.

Front Panel
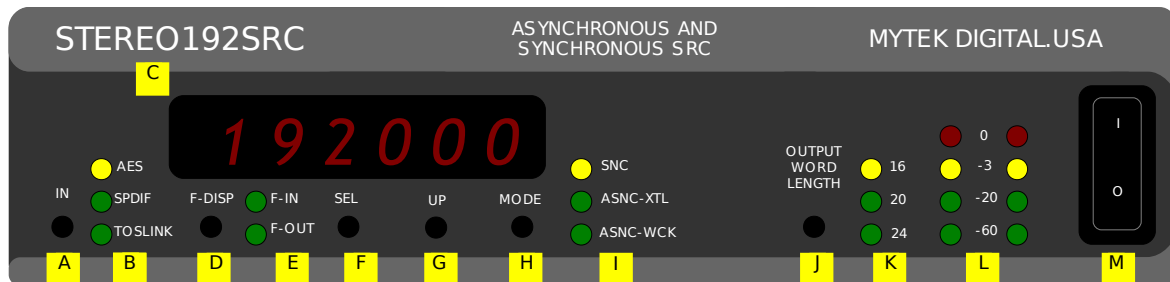
A – Input selector button

B – Input status LED

C – LED Display

D – Frequency display selector button

E – Frequency display status LED

F – Select button

G – Up button

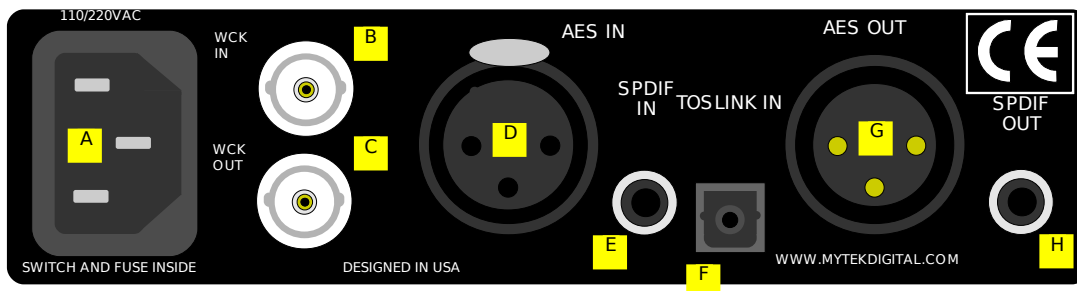H – Mode selector button

I – Mode status LED

J – Output word length selector button

K – Output word length status LED

L – L/R signal meter

M – On/Off switch

Back Panel

A – IEC Power socket

B – Wordclock BNC Input

C – Wordclock BNC Output

D – AES/EBU XLR Input

E – S/PDIF Coax Input

F – S/PDIF Optical Input (Toslink)

G – AES/EBU XLR Output

H – S/PDIF Coax Output

Functions

IN – You can select the active input by pressing this button. The status LED will have a solid glow when there is a valid incoming signal and it's frequency will be displayed when you have F-IN selected as the F-DISP. If no signal is present the LED will be blinking and "no In" will be displayed.

F-DISP – This selects whether the input or output frequency is shown on the display.

SEL and **UP** – These buttons allow you to cycle through the various menu options, frequencies, and make selections.

MODE – This chooses whether you want the SRC to function synchronously, asynchronously with internal crystal as the clock source or asynchronously with external wordclock as the clock source.

OUTPUT WORD LENGTH – This chooses between 24, 20, and 16 bits as the word length.

Frequency Selections

There are 3 modes of frequency selection:

Quick – pressing the **UP** button will cycle between

- **44100 Hz**
- **48000 Hz**
- **88200 Hz**
- **96000 Hz**
- **176400 Hz**
- **192000 Hz**
- **last user defined entry**

Additional Predefined – pressing **SEL** will bring up the available frequency subgroups. **UP** will cycle between:

- **STD (standard)**
- **P. down (pull down)**
- **P. up (pull up)**

Pressing **SEL** will select the subgroup. Now use **UP** to cycle between the following choices:

- STD
    - **44100 Hz**
    - **48000 Hz**
    - **88200 Hz**
    - **96000 Hz**
    - **176400 Hz**
    - **192000 Hz**
- P. down
    - **42336 Hz**
    - **44056 Hz**
    - **46080 Hz**
    - **47952 Hz**

- P. up
  - **44144 Hz**
  - **45937 Hz**
  - **48048 Hz**
  - **50000 Hz**

Once the desired frequency is selected push **SEL** to confirm.

Custom Value – hold down **SEL** until the first digit starts flashing. Press **UP** to set the desired digit value. Press **SEL** to confirm the value and move on to the next digit. After the most significant digit is set the unit is now ready for operation.

The minimum frequency that can be set is 32000 Hz. The maximum is 192000 Hz.

Upon selection of the frequency the display will adjust to the selected value once the PLL is locked to the frequency.

For user defined frequencies less than 100,000 the left most digit will be blank but it is still cycled through with the "SEL" button. The value set won't be confirmed until you push the "SEL" button after the last digit.

Mode Selections

The Stereo 192 SRC is capable of synchronous or asynchronous operation.

Synchronous operation means that the output clock is locked to and following the input clock, even if it's a different frequency. This mode should be used when the actual length in time of the output sound clip has to be exactly the same (+/- 1 sample) as the original. Generally this mode should be used for any digital to digital transfers such as the output being re-recorded digitally.

Asynchronous operation means that the output clock is independent (not synchronized) from the input clock. This would be used when up-sampling a signal to be converted by a DA converter for example. It can be set to use the ultra-low jitter clock from the internal quartz oscillator or it can use external wordclock.

If the digital source has a jittery clock then using synchronous mode will retain some of that jitter. Asynchronous mode does not carry over jitter.

When synched to external wordclock the frequency is set by the incoming clock signal. You will not be able to change the frequency on the front panel.

Error Messages

no in – This is displayed when a valid input is not present.

no out – This is displayed if you are in ASNC-WCK mode and there is no external clock source present.

Important Safety Instructions

• Read these instructions.
• Keep these instructions.
• Heed all warnings.
• Follow all instructions.
• Do not use this apparatus near water.
• Clean only with dry cloth.
• Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
• Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
• Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
• Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
• Only use attachments/accessories specified by the manufacturer.
• When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
• Unplug this apparatus during lightning storms or when unused for long periods of time.
• Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

Excessive sound pressure from speakers and headphones can cause hearing loss. In order to use this product safely, avoid prolonged listening at excessive sound pressure levels.

For the customers in the U.S.A.
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.
All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product with the CE marking complies with the EMC Directive issued by the Commission of the European Community. Compliance with this directive implies conformity to the following European standards:
• EN55103-1 : Electromagnetic Interference (Emission)
• EN55103-2 : Electromagnetic Susceptibility (Immunity)
This product is intended for use in the following Electromagnetic Environments: E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors), E4 (controlled EMC environment, ex. TV studio).