

HD-SDI STANDARD CONVERTER

SC-7033
User's Manual

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Version 1.0

ASTRODESIGN, Inc.



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Preface

Congratulations on the purchase of your new SC-7033 Professional Scan Converter from ASTRODESIGN! This manual provides information on precautions, functions, and operation that you must know to operate SC-7033. Be sure to read this manual before you get started on using SC-7033. Improper use of the product could lead to an accident.

After reading this manual, keep it safe and handy so that you can refer to it whenever you need to.

Safety Precautions

WARNING

On the power cable

- When you unplug the power cable, be sure to hold the plug when you pull it out. Do not pull the cord itself.
- Do not bend the power cable forcibly or bind it when it is used. To do so could cause a fire.
- Do not place any heavy objects on the power cable. To do so could damage the cable and cause a fire or electric shock.

On handling

- Do not spill liquid or drop flammable or metal substances into the machine. If you continue to use the machine while liquid, flammable, or metal substances are inside, this could cause a fire, electric shock, or malfunction.

CAUTION

On the power supply and ground

Be sure to plug this machine into a 100-Vac or 120-Vac wall outlet. This machine is grounded through a 3-pin power cable with a ground line. For safe operation, be sure to connect the power cable to an AC outlet with a ground terminal for protection.

On the power fuse

Be sure to use a fuse with the right specification (3.15A slow blow 250V) for this machine. Before you replace a fuse, turn off the power switch and unplug the power cable from the wall outlet.

On the installation site and use

Install the machine in a normal room environment. Do not install and use the machine in the following places. To do so could cause a trouble or accident.

- A place where the ambient temperature goes above or below the range: 5 to 40 .
- A place where the ambient humidity goes above or below the range: 30 to 80%RH.
- A place near air conditioners, or place exposed to rapid temperature changes or condensation.
- A place exposed to corrosive gases or excessive dust.
- A place exposed to direct sunlight.
- A place where liquids such as water, oil, and chemicals can be sprayed or spilled on the machine.
- A place where the floor vibrates.
- An unstable place.
- The ventilation grilles on the side of the machine prevent internal temperature buildup. Never block these ventilation grilles. To do so could cause a machine trouble.

On impact

- This machine contains precision devices. Do not subject the machine to a strong impact or shock. To do so could cause a machine trouble. When you transport the machine, protect it from any vibration or impact.

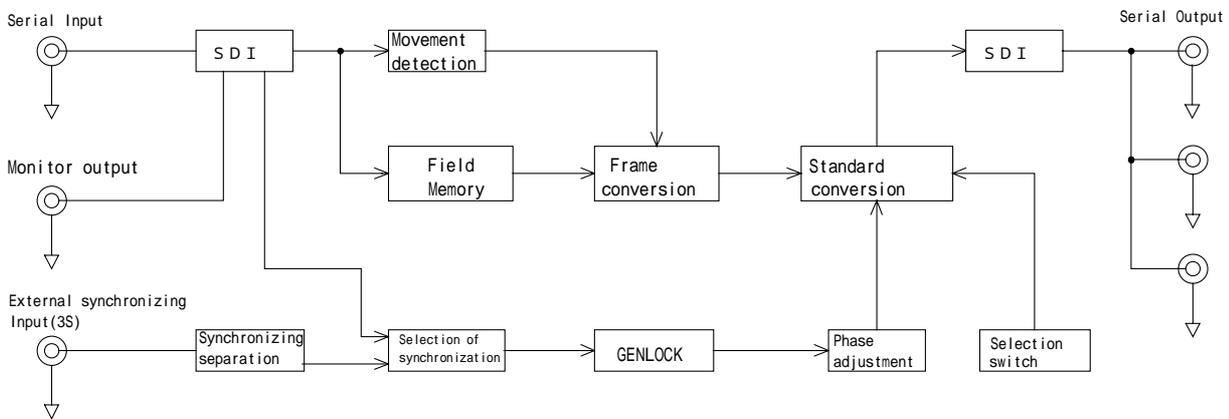
In case of an abnormality or defect

- If you detect any abnormality or defect, turn off the power switch and unplug the power cable. Then, contact your place of purchase or a person in charge of sales at ASTRODESIGN.

1. Overview

The SC-7033 Professional Scan Converter inputs any one of the serial video signals 1035I, 1080I, or 720P at 59.94/60Hz and outputs these signals after converting them into either of the above serial video signals as desired. SC-7033 can perform phase adjustment of input signals or external synchronizing signals for synchronization. SC-7033 can also use external synchronizing signals to perform frame conversion (between 59.94Hz and 60Hz).

2. Block Diagram



3. Functions

Mutual conversion between the 1035I, 1080I, and 720P signals

External synchronizing input

Synchronizing phase adjustment

Frame conversion

4. Specifications

(1) Input

Serial digital input (1035I, 1080I, 720P)

Analog synchronizing signal (Three-value synchronization of 1035I, 1080I, and 720P)

Remote box connection terminal (Dsub-25 pin)

(2) Output

Serial digital output (Three systems of 1035I, 1080I, and 720P)

Serial input monitor output (One system of 1035I, 1080I, or 720P)

(3) Outside dimensions (W × H × D)

430 × 44 × 430mm

(4) Weight

Approximately 5kg

(5) Operating conditions

Operating temperature: +10 to +40

Operating humidity: 30% to 70%

Installation site: Indoors

(6) Electrical specifications

Voltage: AC 100V to 120V

Frequency: 50Hz/60Hz ± 10%

Power consumption: Approximately 50W/70VA (AC 100V)

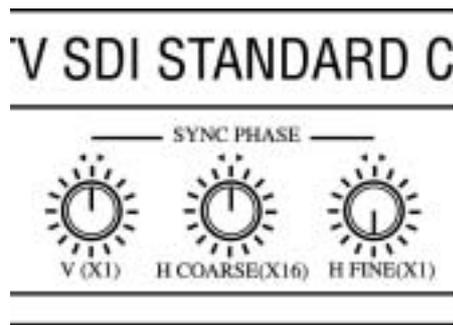
5. Accessories

Power cable (2.5m)	1
Fuse	1
EIA 1U rack mount bracket	1 set
User's Manual (This manual)	1

6. Front Panel



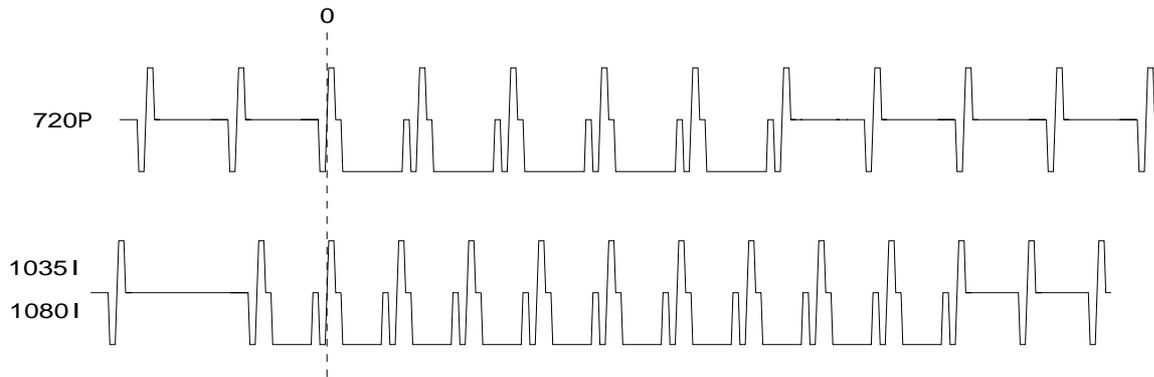
POWER switch	Switches the machine ON (1) and OFF (0).
POWER LED	When the POWER LED is ON, SC-7033 is powered on.
SYNC LED	The SYNC LED is ON during GENLOCK to an external synchronizing signal (analog synchronization).
GENLOCK LED	The GENLOCK LED is ON during GENLOCK to an input signal (SDI input).
SYNC PHASE V × 1 control	Used for phase adjustment of vertical synchronization. The step position "8" (top) is "0", thus you can adjust the range between -7H and +8H in steps of 1H.
SYNC PHASE H × 16 control	Used for phase adjustment of horizontal synchronization. The step position "8" (top) is "0", thus you can adjust the range between -1.5uS and +1.7uS in steps of 215nS.
SYNC PHASE H × 1 control	Used for phase adjustment of horizontal synchronization. The step position of "8" is "0", thus you can adjust the range between -94nS and +107nS in steps of 13.5nS.
INPUT control	Used to select input standards (1035I, 1080I, 720P).
OUTPUT control	Used to select output standards (1035I, 1080I, 720P).



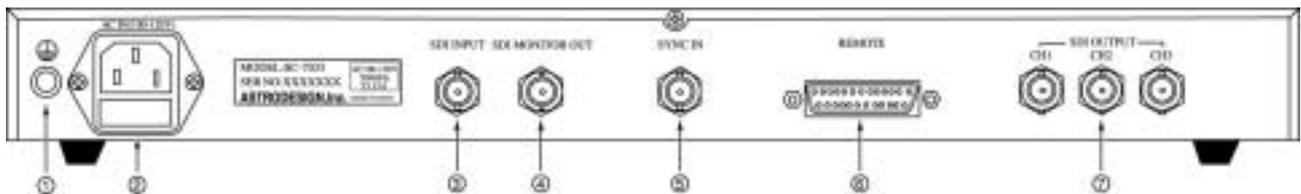
Factory-shipped SYNC PHASE settings: The machine should be normally used with these settings.

Notes:

1. When an external synchronization is input, switching to external synchronization is performed. When there is no external synchronization input, switching is performed to internal synchronization (input signal).
2. An external synchronizing signal can be any one of the 1035I, 1080I, or 720P signal. The phase relationship is given in the figure below.



7. Rear Panel



FG terminal

AC inlet with fuse

INPUT jack

MONITOR jack

SYNC IN jack

REMOTE connector

OUTPUT jacks

Frame ground.

Plug in the power cable here.

Serial input signal (1035I, 1080I, 720P)

Serial input signal monitor output

External synchronizing input (Analog 1035I, 1080I, 720P)

Remote box connection terminal (Dsub-25 pin)

Serial output signal (1035I, 1080I, 720P)

Note: When you connect the REMOTE connector, the remote box is enabled and the front panel switches are disabled.

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