



[Press Release]

April 17, 2009

## **First ever high performance compact SHV down converter**

- A great progress in “One Multi-use Resource” SHV program production -

NHK is continuing R&D on next-generation Super Hi-Vision (SHV), which provides even greater realism over current Hi-Vision (HDTV) broadcasts. We are now the first to develop a high performance compact SHV down converter<sup>\*1</sup> that can convert 24Gbps<sup>\*2</sup> SHV footage to 1.5Gbps Hi-Vision footage in real time.

This down converter has three features; 1. Standard conversion of entire SHV screen footage into Hi-Vision quality, 2. Conversion of a part of the SHV screen footage into Hi-Vision quality, and 3. Conversion into 4k quality for multi-use functions.

Especially, thanks to the new feature 2. above, with the remote control connected to the down converter you can pan and tilt<sup>\*3</sup> on-site anywhere, then clip part of the SHV footage you would like to use and produce Hi-Vision content, just like you would film with a Hi-Vision camera. This is effective for a SHV panoramic sports feed or other content you filmed. The SHV footage content, with its 33 million pixel ultra high definition, enables the new “One Multi-use Resource” program creation and production.

The new SHV down converter is also eco-friendly, with energy saving and other features installed. And it is compact and lightweight for practical on-site use.

We will debut this down converter for the first time at the National Association of Broadcasters (NAB) show in Las Vegas (US), April 20 - 23.

\*1) Developed in conjunction with Astrodesign Inc.

\*2) Gigabits per second. 1Gbps means the transfer of one billion bits of data per second.

\*3) Pan: Movement of the camera horizontally, Tilt: Movement of the camera vertically

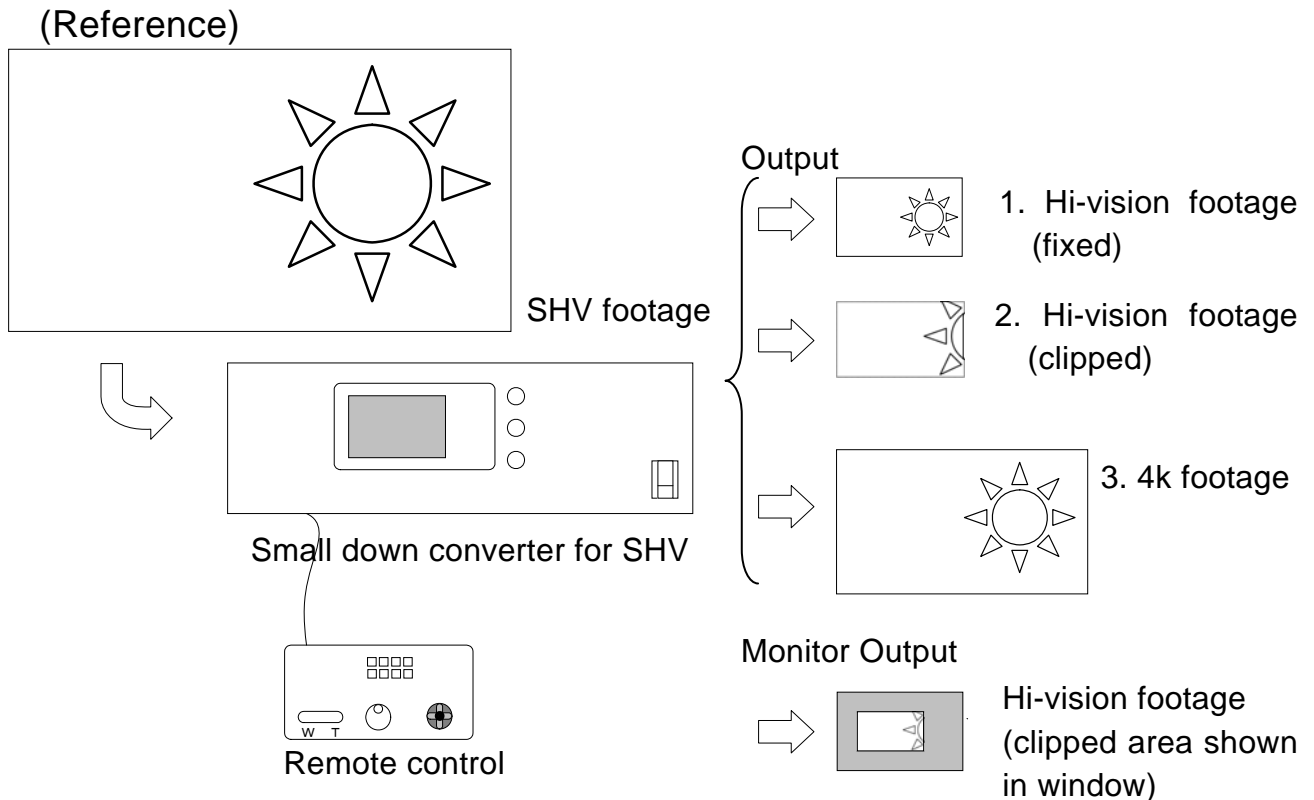


Fig. 1 SHV Compact Down Converter and Footage Conversion Overview

The Compact SHV Down Converter has the following three outputs.

1. Hi-Vision footage (fixed): The entire SHV screen is converted into Hi-Vision definition footage.
2. Hi-Vision footage (clipped): Footage clipped from part of SHV footage and converted (enlarged or shrunk) into Hi-Vision definition footage.
3. 4k footage: SHV footage is converted into 4k definition footage.

Other monitor output includes “Hi-Vision Footage (clipped area displayed in window)”, where the monitor displays the entire SHV footage in Hi-Vision definition, and the size and position of the footage clipped from the SHV footage can be set. The clipped footage is imposed over the screen as a window. You can use the remote control connected to the down converter to process “2. Hi-Vision footage (clipped)” output above while watching the monitor output.

When producing “2. Hi-Vision footage (clipped)”, there is a shot memory function allowing you to set the position of the clipped Hi-Vision footage from SHV one in addition to manual operation. You can also adjust color, a necessary feature in footage editing.



Fig. 2 Unit and Remote Control

## (Specifications)

Item		Specifications	Notes
Input Signal	SHV Input	<ul style="list-style-type: none"> <li>● Resolution: 7680 x 4320</li> <li>● Scanning: Progressive</li> <li>● Frame Rate: 59.94/60(P)</li> <li>● SDI Link: 16ch SHV format</li> </ul>	
Output Signal	1. Hi-Vision Fixed Output	<ul style="list-style-type: none"> <li>● Resolution: 1920 x 1080</li> <li>● Scanning: Interlace</li> <li>● Frame Rate: 59.94</li> <li>● HD-SDI (1)</li> </ul>	Shrink fixed output
	2. Hi-Vision Clipped Output	<ul style="list-style-type: none"> <li>● Resolution: 1920 x 1080</li> <li>● Scanning: Interlace</li> <li>● Frame Rate: 59.94</li> <li>● HD-SDI (2)</li> </ul>	Clipped output
	3. 4k Output	<ul style="list-style-type: none"> <li>● Resolution: 3840 x 2160</li> <li>● Scanning: Progressive</li> <li>● Frame Rate: 59.94</li> <li>● SDI Link: 8ch HD-SDI (1)</li> </ul>	Select shrink output or area selection output
Monitor Output Signal	Hi-Vision Monitor Output	<ul style="list-style-type: none"> <li>● Resolution: 1920 x 1080</li> <li>● Scanning: Interlace</li> <li>● Frame Rate: 59.94</li> <li>● HD-SDI (1)</li> </ul>	Part position window output
Color Adjustment	Hi-Vision Clipped Output	Black level, white level, chroma level, detail, gamma	Individual settings
Power Supply	Voltage	AC100V – 240V	
	Power Consumption	450W	Energy savings mode: 212W (For “1. Hi-Vision fixed output” only)
Outer Dimensions		430(w) x 133(h) x 530(d) mm	Not including protruding areas