

# STW-C140GI

Captioning Glasses with Audio Assist

# STWA-C101

Data Transmitter

**SONY**  
make.believe



Sony Digital Cinema™  
**4K**

# Sony's Entertainment Access Glasses Utilizing Unique Holographic Technology

The movie industry's transformation to digital technology has created an opportunity to efficiently deliver closed caption data to movie patrons. This coincides with large demand from people with hearing difficulties to watch movies more easily and enjoyably. Sony has therefore developed entertainment access glasses utilizing its unique holographic technology: the STW-C140GI Captioning Glasses with Audio Assist and, as part of this solution, the STWA-C101 Data Transmitter. When wearing this stylish and lightweight see-through eyewear, users can see closed caption text seemingly superimposed onto the movie picture that they're watching on screen - it's a natural subtitle-movie experience. In addition, as the captioning glasses' receiver box is equipped with an audio assist function, this solution is useful not only for people with hearing difficulties but also for people with visual impairments - both can enjoy movies far more than ever before.

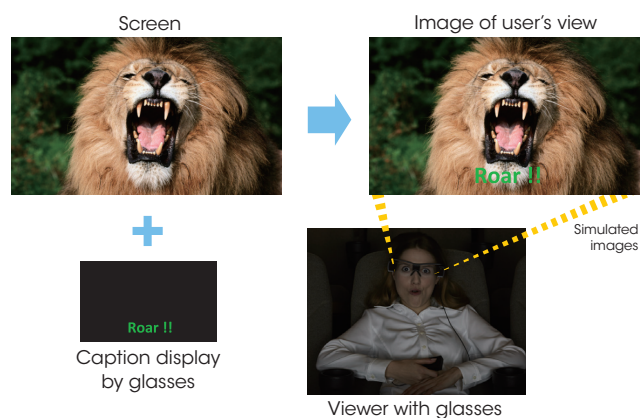
With Sony's entertainment access glasses, a broader range of the movie-going public can now enjoy exciting movie experiences, and exhibitors can achieve valuable service differentiation while also increasing customer traffic.



## Main Features

### Holographic Closed Caption

With Sony's unique holographic technology, closed caption text seemingly floats in the air, at a comfortable distance from a viewer wearing the see-through STW-C140GI Captioning Glasses, and overlaid on the cinema screen picture. This solution allows patrons to enjoy each movie as if they were watching it with a burn-in subtitle, making Sony's entertainment access glasses ideal for people with hearing impairments.



### Audio Assist

This solution includes an audio assist function which allows connection of third-party headphones to the captioning glasses' receiver box. This achieves a cinema audio assist system that helps people with hearing difficulties and with visual impairments. Both HI and VI-N audio\* are supported.

\* HI audio provides assistive audio for the hearing impaired.  
VI-N audio provides audio description for the visually impaired.

### Comfortable Viewing Experience

Sony's entertainment access glasses offer a great movie experience without eye fatigue, enabling patrons to enjoy a movie comfortably for longer than two hours. Movies can be viewed with clear and crisp subtitles, even when viewers change their posture (sitting back or sitting forward in their chair) and no matter where they are seated in the auditorium.

- Stylish and lightweight, see-through eyewear
  - the glasses weigh approx. 84 g (3 oz); the receiver weighs approx. 89 g (3.1 oz)
- Clear and bright glasses
  - see-through transmittance of more than 90%
- Easy-to-use adjustment function for overlay of closed caption text onto the cinema screen picture
- User-friendly adjustment function, so the eyewear fits each viewer's face very well

### Multi-lingual Capabilities for Caption Data

Viewers can choose from one of six languages\* according to their preference, simply by manipulating the captioning glasses' receiver box.

\* The number of selectable languages depends on the movie content created in DCP (Digital Cinema Package) format. Languages using two-byte font are not supported.

### Interoperability with Third-party Digital Cinema Servers

Sony's entertainment access glasses can support digital cinema servers\* from other manufacturers such as Doremi Labs Inc. and Dolby Laboratories Inc., in addition to Sony's LMT-200 and LMT-300 Media Blocks.

\* For information on supported digital cinema servers, please contact your nearest Sony office.

## System Configuration

Closed caption data is transmitted from a digital cinema server by the STWA-C101 Data Transmitter, and received by the captioning glasses' receiver box\* via a

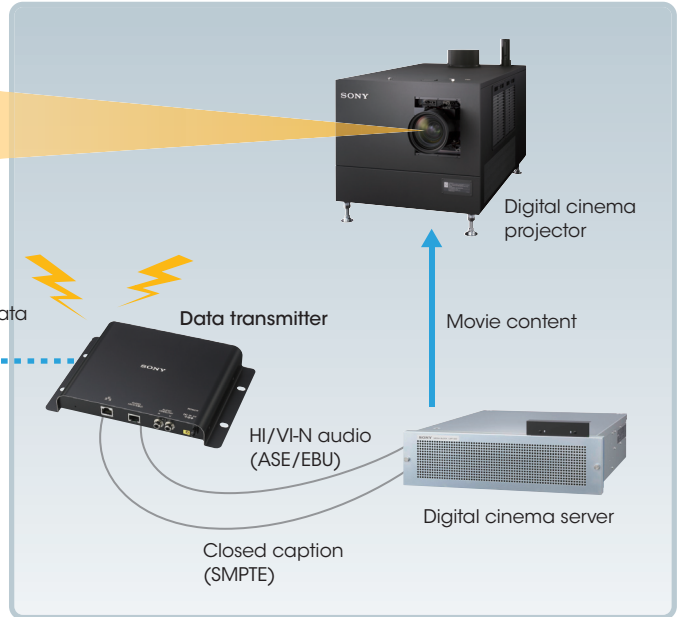
radio frequency. Likewise, audio data is transmitted wirelessly for listening through third-party headphones.

\*The receiver box outputs to only one device at a time; either the captioning glasses or the headphones.

### Auditorium

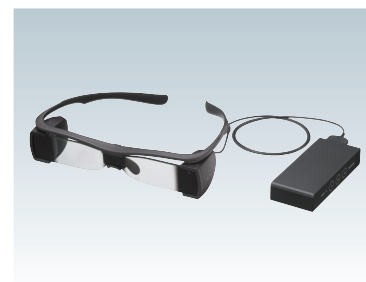


### Projection Room



## STW-C140GI Captioning Glasses with Audio Assist Specifications

Captioning Glasses	
Displayable characters	31 characters x 3 lines
Field of view	19° (H) x 3.7° (V)
Brightness	3 cd/m <sup>2</sup> to 50 cd/m <sup>2</sup>
Text color	Green
Dimensions (W x H x D)	Approx. 190 mm x 43 mm x 190 mm (7 1/2 inches x 1 3/4 inches x 7 1/2 inches)
Mass	Approx. 84 g (3.0 oz) (excluding cable)
Receiver Box	
Numbers of wireless channels	7 channels for closed captions, 7 channels for audio
Audio selection	HI audio/VI-N audio
Adjustments/Settings	Nose piece height (high, mid, low)
	Vertical position of closed captions
	Perceived distance of closed captions (7 m, 12 m, 18 m (23 feet, 39 feet, 59 feet))
	Language (max. 6 languages, depending on a DCP, except for languages using 2-byte font )
	Brightness (5 levels)
	Volume (50 levels)
Battery life	Approx. 6 hours (after approx. 300 charge/discharge cycles, capacity drops below 6 hours)
Dimensions (W x H x D)	Approx. 108 mm x 45 mm x 20 mm (4 3/8 inches x 1 13/16 inches x 13/16 inches)
Mass	Approx. 89 g (3.1 oz)



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## STWA-C101 Data Transmitter Specifications

Data Transmitter	
Digital audio input	RJ-45, AES/EBU: balanced (2ch: HI audio and VI-N audio)
Analog audio input	Phono x 2, HI audio and VI-N audio, Audio level: -20 dBV = 0.1 Vrms (Max: 0 dBV = 1.0 Vrms)
Closed caption input	RJ-45 (Ethernet), SMPTE format
Wireless frequency	2.4 GHz band (15 wireless channels from 2,405 MHz to 2,475 MHz with 5 MHz step. Each channel has 2 MHz bandwidth.)
Numbers of wireless channels	7 channels for closed caption, 7 channels for audio
Coverage area	Approx. 40 m (131 feet) radius
Power supply	AC adaptor (DC 5 V)
Dimensions (W x H x D)	Approx. 231 mm x 31 mm x 165 mm (9 1/8 inches x 1 1/4 inches x 6 1/2 inches)
Mass	Approx. 640g (1 lb 8.7 oz)



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## STW-C140GI and STWA-C101 Specifications

Operating Conditions	
Temperature	10 °C to 35 °C (50 °F to 95 °F)
Humidity	10% to 85% (no condensation)
Storage Conditions	
Temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Humidity	0% to 90% (no condensation)

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The STW-C140GI and STWA-C101 are produced  
 at Sony EMCS Corporation Kosai Tec, which  
 has received ISO14001, the Environmental  
 Management System certification.

