

I-Caption



by Sound Associates, Inc.

Automated Wireless Captioning System



I-Caption

the individual captioning system

APPLICATIONS

- Theatrical Productions
- Corporate Events
- Multilingual Events

BENEFITS

- The Hearing Impaired
- The Sight Impaired
- Foreign Audience Members
- Content Rich Performances

FEATURES

- Fully Automated (No Technician Needed)
- Multiple Languages
- Custom Graphics
- Excellent Video Quality
- Highly Reliable
- Easy Setup / Installation

The I-Caption system is a state-of-the-art wireless visual aid that provides verbatim real-time closed captions for theatrical performances or public events. By displaying dialogue, lyrics and sound effects on a handheld device, hearing impaired patrons can better understand a production or event. The I-Caption System can also be expanded to incorporate subtitles, showing the text in multiple languages and playing audio segments. ***The largest advantage of The I-Caption System over existing captioning systems is the ability to caption every live performance without requiring a full-time technician.***



The I-Caption system consists of a computer base station (CS-2), a wireless network, and one or more personal computers (PDAs). The CS-2 synchronizes the text to a live performance and broadcasts the automated captions to the PDAs. The CS-2 can broadcast up to three differently timed presentations and three stereo channels of audio simultaneously.

The I-Caption System uses "slides", which include lyrics and dialogue that are designed in a PowerPoint presentation. The slides and audio segments are stored on a removable memory card in the PDA and fired through a program in the CS-2 that times the slides to the performance. Each slide appears for a period of time preset in the PDAs, then moves to the next slide or audio piece automatically.

Patrons have no restrictions with regard to seating and can attend any performance since the system is automated and handheld.

The I-Caption System is portable and does not require permanent installation in a venue. It can travel with a performance and be used in any facility.

THE I-CAPTION SYSTEM ENCOMPASSES THREE FULLY AUTOMATED SERVICES:

I-CAPTION

I-Caption is an individual captioning product for the hard of hearing and provides subtitles for foreign speaking audiences. The CS-2 base station synchronizes verbatim text to a live performance through midi data streams and broadcasts cue fires to any number of personal handheld devices. Since the slides are stored in the PDAs, an unlimited number of languages can be used at one time. The device also supports color graphics and looping cues for sponsorship and advertisements. For presentations or super title applications, these captions can be projected by a video projector via a standard composite video output.

D-SCRIPTIVE

D-Scriptive is an audio description system for the sight impaired. Pre-recorded audio segments describing the visual aspects of a performance create a visual picture for the blind or sight impaired patron. Using the same midi inputs as I-Caption, audio files stored on the memory card in the handheld computer are played at specified points in the performance. A separately timed cue file will play the segments when needed.

SHOWTRANS

ShowTrans is audio commentary for foreign speaking patrons. Pre-recorded audio in multiple languages is played at specific times in the performance allowing foreign speaking patrons to better enjoy the production. The commentaries are stored in the CS-2 and are broadcast via an FM transmitter to personal receivers. Up to 6 languages can be stored on the CS-2.

FEATURES

The I-Caption System is built around a sophisticated software program and a streamlined computer system. The CS-2 has four midi inputs to synchronize text and audio to a live performance. The midi inputs that are connected to a variety of devices (lighting boards, sound consoles, keyboards, scene controllers) supply the timing for the captioned slides and audio segments. For each show, the midi devices that best keep pace with the live performance are chosen. An I-Caption System rehearsal is run and pre-typed slides are timed to the performance. When the I-Caption System rehearsal is complete, the CS-2 runs a complex algorithm to automatically find the closest midi fire for each slide. This keeps the text in perfect time with the live performance show after show.

Once the CS-2 computes the proper timing, the cue file is automatically stored and updated to run at the next performance. The cue file can be updated with the Cue Editor program to delete inaccurate midi fires or change the timing of the slides.

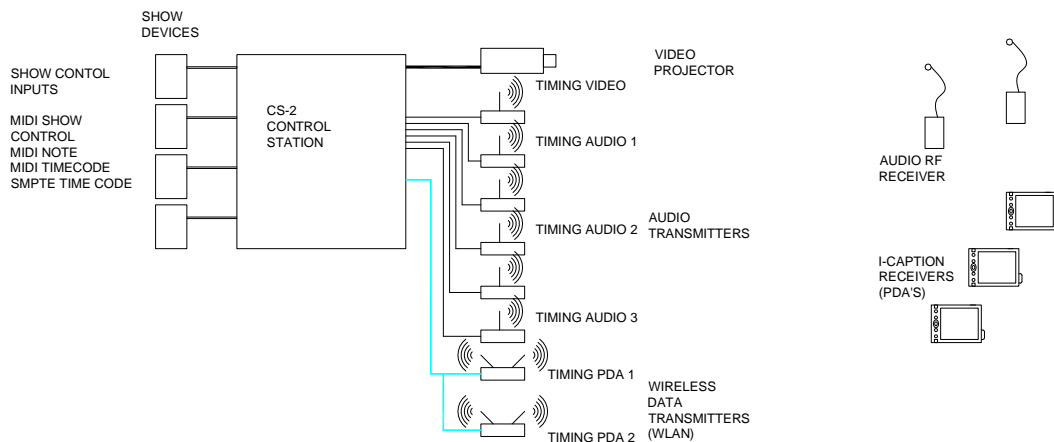
HARDWARE

The I-Caption System consists of three major components:

The CS-2 control station

Wireless Network Router

Wireless PDAs

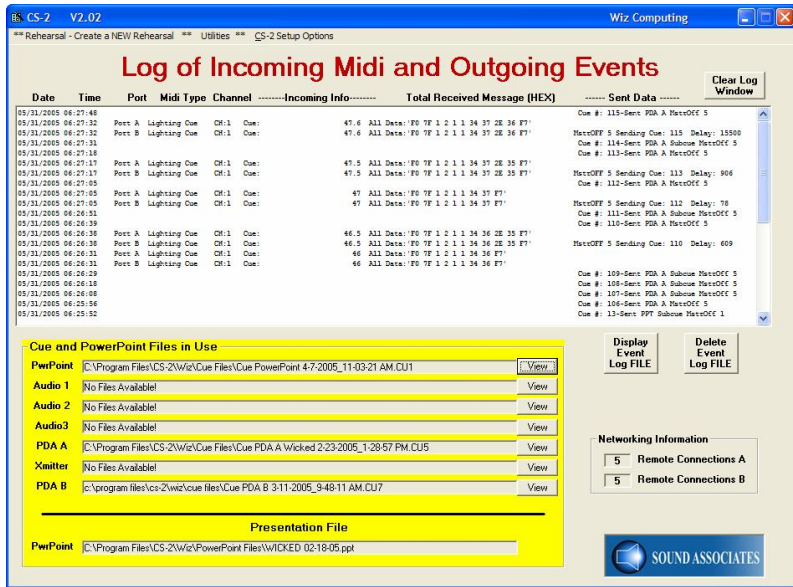


The CS-2 is the Control Station for the I-Caption System. It synchronizes prerecorded translation commentary, audio description, and personal captions to live theatrical productions. The CS-2 stores up to 20 hours of audio and scripts on a high quality hard drive system. The controller advances cues either by midi show-control, midi note, or midi time code. The software is easy to use and maintain. The unit is also equipped with an internal modem allowing remote access for software updates, uploading cue changes, and downloading log files.

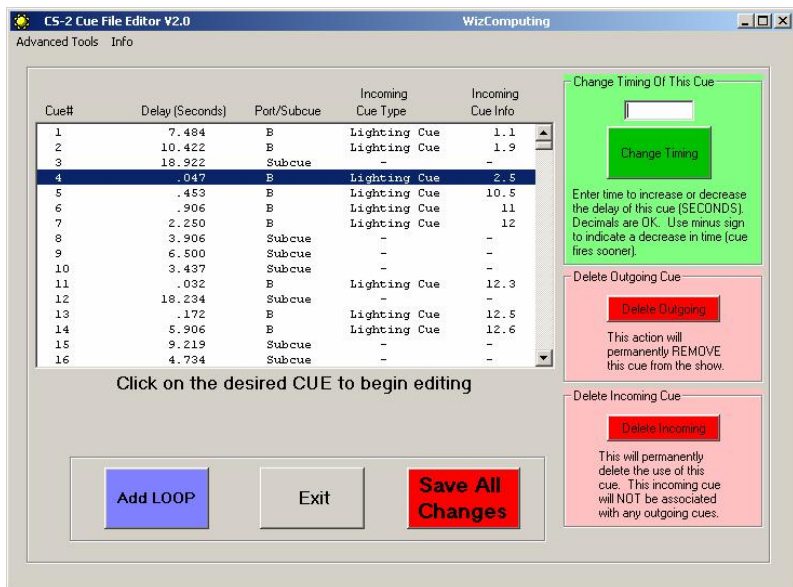
The CS-2 sends cue advances for slides via a standard Wireless LAN connected through CAT 5E cable. The CS-2 sends out cue numbers for each PDA via the local area network and the slides are stored in the PDA on flash RAM cards. The composite video output utilizes a standard RCA (phono) connection, while the prerecorded audio outputs via three unbalanced stereo 3.5 mm jacks.

SOFTWARE

The system synchronizes the captions and prerecorded audio commentary with the program via a complex software package that reads a variety of midi information from show equipment. A rehearsal is run during a performance that synchronizes the slides or audio segments with the appropriate midi fires. This rehearsal can be performed locally through the CS-2 keyboard or remotely through a wireless Pocket PC. The CS-2's software runs a complex algorithm to automatically find the closest midi fire for each slide or audio piece. This keeps the text and audio in perfect time with the live performance.

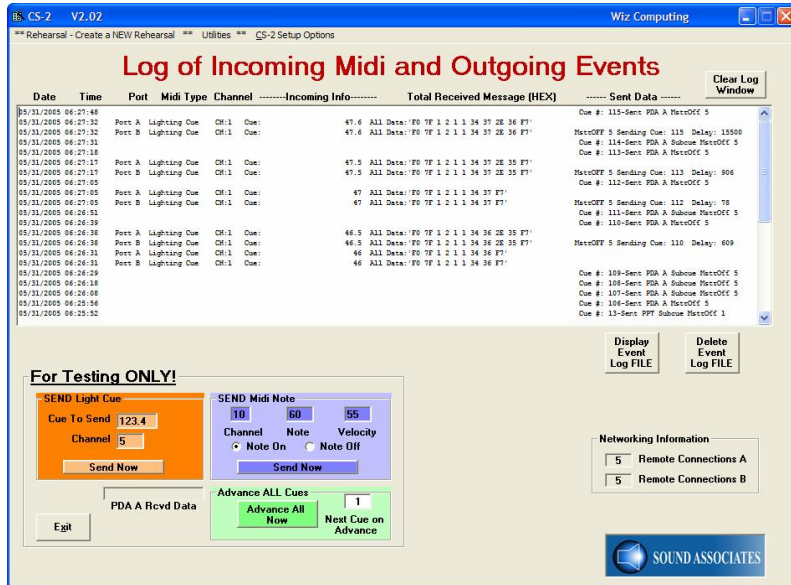


Since the rehearsal may include some errors that need corrections, a Cue Editor program is included with the I-Caption System. The Cue Editor program allows the operator to edit the rehearsal after its completion, to delete inaccurate midi fires or change the timing of the slides or audio segments. It can also add looping cues in any part of the program such as sponsorship or advertising before the performance or event. The Cue Editor also allows an unlimited number of sub cues for each main cue. The sub cues allow multiple commentary segments if there is a long break between show cues.



The remote access software allows the operator to monitor the system in real time, advance cues, change system settings, and download logs. The log report displays all the incoming and outgoing cues

so problems with the system can be diagnosed quickly. Also, internal self tests are included in the CS-2 program so incoming midi fires and outgoing slide cues can be simulated for testing purposes.



The I-Caption System is easy to use and delivers a clear audio segment or visual slide on time every time. The cue files, rehearsal files, log reports, audio files and PowerPoint presentations can be added or retrieved via a USB memory stick or portable hard drive. The I-Caption system is designed to supply years of quality performance at a reasonable cost.

CHARGING AND DISTRIBUTION

The individual hand-held units are stored and charged in ten-position, fast-charging cradles. The base will charge up to ten units at once. It utilizes “smart charger” technology that will charge the battery in four hours. When fully charged, the units will display a green indicator light.

The units can be distributed easily by one person to many patrons. The distributor simply turns on the unit, inserts it into an individual carrying case, and hands it to the user. The user is simply instructed on how to illuminate the back light when needed.

TECHNICAL SPECIFICATIONS CS-2

DEVICES

Hard Disk Storage	80 GB Hard Drive System
CD-ROM Drive	Tray loaded 32x speed drive (front panel)

INPUTS

Midi In	5 pin 180° female DIN
Number of Midi Connections	4
Midi Format	Midi Show Control, Midi Note, Midi Time Code
External Computer Link	2 USB
Modem	56 k Modem RJ 42 connector

AUDIO OUTPUT

Number of Outputs	3
Audio Output	Unbalanced 600 ohm
Sample Rates	5kHz to 44.1 kHz internally adjusted
Signal to Noise	> 85 dB
THD	> 0.005% (A Weighted)
Connector	3.5 stereo connector

MISCELLANEOUS CONNECTORS

VGA	15 Pin Sub D Connector
Key board and mouse	PS-2 connectors
Data Out	Ethernet RJ45 Connector

POWER

Power	120 / 240 ACV selectable
Power consumption	< 400 W

MECHANICAL

Mechanical Dimensions	19" x 7" x 18.25" deep (4 rack spaces)
Weight	Approx. 12 lb.
Finish / material	Black powder coat aluminum

TECHNICAL SPECIFICATIONS - WIRELESS NETWORK ROUTER

Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.11g, IEEE 802.11b
Channels	11
Connectors	4- 10/100 RJ45
Cable Type	CAT 5
Buttons	Power, Reset
Dimensions	7.32 x 1.89 x 7.87"
Weight	17 oz.
Power	12 VDC @ 1 Amp
Certifications	FCC, IC-03, CE

TECHNICAL SPECIFICATIONS – HANDHELD PERSONAL COMPUTER

Processor	≥ 312 MHz
Operating System	Microsoft Windows Mobile 2003
Memory Internal	64 MB SDRAM
Flash Card Memory	≥ 125 MB (Depends on content)
Display	TFT Color 16-Bit Touch Sensitive 240 x 320 resolution at 65,536 colors (QVGA)
Dimensions	Approximately 4.8" x 3.0" x .59" thick
Weight	Approximately 5.0 oz.
Battery	1800 mAh Lithium-Ion Rechargeable
Wireless	Integrated 802.11b

Specification subject to change without notice.