

MIRRORS - One™



Mirrors-One can be setup in minutes. You don't have to plug anything inside the computers, and there's no software to load. Locate a small box by each computer and interconnect them all in one or two chains.

"... it is a much better teaching environment than projectors; I highly recommend it"

Michael Scroggins, Calif Institute of the Arts - USC

"Mirrors reduces confusion and gives our trainers more control. Our Mirrors classrooms are constantly in use"

Inform Worldwide, Utilities & Telecom Training Specialists.

"Mirrors has given us an effective training program for our new recruits"

Curt Crandall, Digital Graphics Advantage, Orange CA.



HRT
Since 1984

Hall Research

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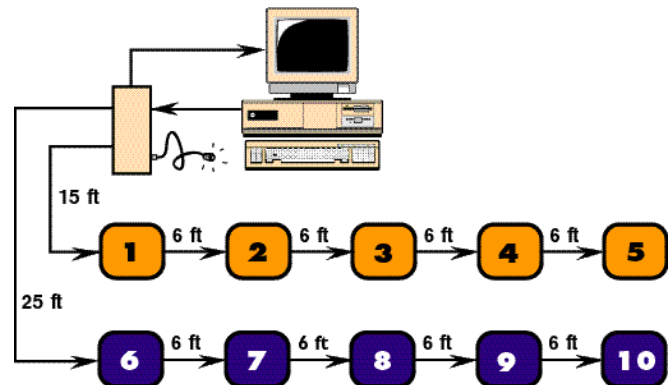
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The REAL-TIME video/audio distribution system for computer labs

Imagine being able to take control of all student monitors at any time by the push of a button. Your computer's screen image is broadcast at full speed and resolution to all student monitors. If you are demonstrating an application with multimedia or sound effects, no problem. The students get the full impact of hi-fi stereo sound distribution too. Wear a microphone and your voice can be mixed in with your computer's sound and broadcast also (your vocal cords will thank you)!

Do you want everyone's attention focused on you in the front of the class, but a couple of students keep playing around on their computers? Double click the button and blank everyone's screens (feel the power!) - of course your voice can still be distributed to all the stations and you get rid of the glare of all the monitors in the room.

Add an optional scan-converter and you'll be able to show video tapes on all monitors too. Mirrors-One makes all this possible with no software at a surprisingly low cost.



Classroom Setup

Mirrors-One can be setup in minutes. You don't have to plug anything inside the computers, and there's no software to load. Locate a small box by each computer and interconnect them all in one or two chains.

- Completely independent of computer's hardware and software
- Works with all software and operating systems
- No cards to plug in; installs in seconds; crash proof by nature
- Illuminated push-button switch cord
- No delays, no loss of resolution, no software
- Blank student monitors, to get their full attention
- Multimedia ready with sound distribution
- Option to broadcast VCR, Cable TV, or SVHS video at full screen 60 frames/second.

Specifications

for the Trainer's Module (Model M1-TM):

Equipment included:

- UL-CSA-CE approved 110 Vac power supply adapter (230 Vac/50Hz also available)
- Model M1-TM unit
- Illuminated p
- 6 ft Stereo audio cable, 3.5mm male-male
- 6 ft Double shielded video cable, HDD15 male-male
- User's Manual

Dimensions:

L x W x H: 4.6 x 2.9 x 1.2 inch

Video Specs:

Resolution: From 640x480 to 1280x1024
Coupling DC
Video Gain 1

Audio Specs:

Connector: 3.5 mm (1/8 inch) mini-stereo jack
Level Line level, up to 1.5 vp-p
Input impedance: >1 meg, loop through to local speakers
Output impedance: 100 Ohms, nominal

Specifications

for the Student's Module (Model M1-SM):

Equipment included:

- UL-CSA-CE approved 110 Vac power supply adapter (230 Vac/50Hz also available)
- Model M1-SM unit
- 4 ft Stereo audio cable, 3.5mm male-male
- 3 ft Double shielded video cable, HDD15 male-male
- User's Manual

Dimensions

L x W x H: 4.2 x 2.6 x 1.0 inch

Video Specs:

Resolution: From 640x480 to 1280x1024
Coupling DC
Video Gain 1

Audio Specs:

Connector: 3.5 mm (1/8 inch) mini-stereo jack
Level Line level, up to 1.5 vp-p
Output impedance: 100 Ohms, nominal
Connects to: Line input of workstation

Ordering Information

Mirror systems are shipped complete with all the required cables and modules. Pricing is either based on the number of student stations in your class, or based on individual components if you prefer.

Basic Part Number:

M1-S-xx Mirrors-One for 2 to 64 student stations.

Questions & Answers

Q: How Does Mirrors-One transfer images

A: Mirrors-One is a dedicated video/audio network external to the pc's. It reproduces at full speed and full resolution whatever is happening on the instructor's monitor.

Q: Can the same thing be done on a LAN?

A: Yes, to a degree, but with major limitations. Since the amount of data that must be continuously transferred is so great, sending full speed/full screen images on a LAN takes up the entire available bandwidth and then some. It would take away a major chunk of your CPU power. LAN based real-time image transfer software can conflict with the program that you want to demonstrate, the transfer is slow, choppy, and often in a small window. LAN-based systems have been known to lock-up cpu's or bring down the entire classroom! Furthermore, since LAN software is operating system dependent, every time you upgrade your software a new patch or version is needed (which may come with new bugs for you to discover). So, I guess I should change the initial Yes to a definite NO!

Our design goal with Mirrors was to make a system transparent to all the computer's hardware and software - the students see and hear the instructor's PC screen just as if they were right next to him.

Q: Can I play a video cassette on a VCR and display it on all student monitors?

A: Yes, we have a couple of options that will enable you to do that. One is a plug-in card, and the other is a NTSC-to-VGA converter box with a remote control. You can also watch TV/cable channels in this way.



Q: What if we are using Macintosh, SUN, or SGI workstations in the class?

A: No Problem, we offer special cables for connection to non-pc systems.

High-resolution Cables

Have you noticed the quality and construction of your monitor's video cable? The quality of your screen image can be compromised if the extension cable is not of the highest quality. In particular, shielding, impedance, and dielectric material used in the cable can significantly affect your video image.

Hall Research offers the highest quality video cables in several standard lengths from 3 feet to 100 feet. Custom cables are also available to 1,000 feet.

