

Maine Distance Learning Project

User Guide

Maine Distance Learning Project

Project Mission

The Maine Distance Learning Project and ATM technology allows students access to educational opportunities that they might not otherwise have. These examples reflect the mission of the Maine Distance Learning Project which describes being able "to provide all Maine students equity of access to a high quality learning environment that is unaffected by geographical limitations."

Maine's Distance Learning Classrooms use Asynchronous Transfer Mode, a broadband fiber-optic networking system, that provides the necessary bandwidth capacity to carry real-time interactive voice, video, and data over telephone networks with ample room for growth and the flexibility to adapt to standards and technologies yet to be developed.

The College of Education and Human Development ATM facility at the University of Maine is part of the "Maine Distance Learning Project." The Maine Distance Learning Project has created a network of schools that are connected via ATM - this network is ever-evolving, and as of October, 2002 it consists of 57 current sites, with another 30 sites at various stages of deployment. These sites are geographically spread throughout the state, and allow educators and students an opportunity to share ideas, thoughts and experiences that distance might otherwise prohibit.

For example, the University of Maine College of Education and Human Development can offer graduate classes, under-graduate classes and/or professional development opportunities where, instead of making a weekly trek to the Orono campus, students can instead go to a Maine Distance Learning Project site located in their own community. For example, in the Fall semester of 2002, Professor Gail Garthwait used this technology to teach "EDU 590 - Cooperative Learning and Computers" to students in Orono, Farmington, Waldoboro and Maranacook. Students were involved in a fully interactive, real-time conference that allowed them to experience thoughts and ideas not just from the teacher in Orono, but also from all of the students at the other ATM sites... without having to travel to the UMaine Orono campus every week.

Another example of the Maine Distance Learning Project being used effectively in the Fall of 2002 involved Nyoto Kobayashi, faculty member at Hall Dale HS, teaching Japanese I not only to his own students at Hall Dale, but also to students at Ellsworth HS, Gardiner HS and Poland HS. Using the available project technology, Mr. Kobayashi provided the students in each of these schools with an educational opportunity (Japanese I) that they might not otherwise have had.

User Guide

This document is designed to be a guide to using the various features of the AMX Room Control interface that the Maine Distance Learning Project operates on.

Home Page

- ... navigating from the Home Page

Instructor Camera

- ... panning the camera right and left
- ... tilting the camera up and down
- ... zooming the camera in and out
- ... setting presets for the instructor camera
- ... using the tracking device and lavalier microphone

Student Camera

- ... panning the camera right and left
- ... tilting the camera up and down
- ... zooming the camera in and out
- ... setting presets for the student camera
- ... using the backlight feature

Document Camera

- ... zooming the camera in and out
- ... setting presets for the document camera
- ... using various image adjustment features that the document camera offers

Play VCR

- ... playing a VHS tape

Record VCR

- ... recording part or all of a class/session

Scan Converter

- ... using a computer or laptop during your class/presentation

User Guide (cont'd)

Auxiliary

... using the auxiliary feature

Telephone Interface

... using the telephone interface to bring a phone conversation into a session

Help

... reaching the MSLN HelpDesk

Default Settings

... re-setting the settings at a site to their default

LCD Projector

... using the LCD Projector

Preview

... using the Preview feature to prepare your next shot

Scheduling

... what to do if you hit this button by mistake

Routing Matrix

... using the Routing Matrix to send available Sources to various Destinations

Other useful stuff...

Adjusting the volume

Using the IP Phone

Using the Master Room Privacy feature

Muting the video only

Muting the audio only

Muting the speakers only

Ending a session early

Troubleshooting

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AMX Control Touch Screen

The touch screen will “go to sleep” after a period of time. The screen will be black with a red, green and blue bar across it with the message “No Video Input” on it. To wake the screen, simply touch it with your finger. It will take you to the last screen that it was at before it went to sleep e.g. instructor camera, student camera or document camera.



Home Page

The AMX Room Control interface has a “home page” from which you can navigate to various areas. To use the AMX interface, you simply “touch” the screen with your finger to operate the equipment and features. The screen is heat sensitive, so you will not be able to touch the screen with a pen or pointer and have it operate correctly. Right is an image of the home page with five buttons to choose from.

Source Control

By touching this button you will be directed to the room control screen for the last source that was used e.g. instructor camera. Once at this page, you can then not only operate that particular source, but you can also switch between sources by selecting an alternate source from the top window of sources.

Preview

By touching this button you will be directed to the room control screen for the last source that was used e.g.. student camera. With student camera as your chosen source, you can select “preview” and then select a different source such as VCR Play, Document Camera, Scan Convertor or Instructor Camera and “set up” the shot that you want to next project. This is all done while your original choice of source (student camera) continues to be transmitted.



Scheduler

By touching this button you will be directed to the online scheduler.

Default Settings

By touching this button you will be directed to a screen asking if you really want to “default” the equipment settings.

Master Room Privacy

By touching this button you will be directed to a screen asking if you really want to “turn on” the master room privacy mode for your site. Turning this feature on will temporarily (until you “un-do” this feature) mute all incoming and outgoing video and audio for your site.

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Instructor Camera

The instructor camera at most sites is located above the instructor monitor, and is pointing toward the teacher desk - it is labeled "Cameraman."



AMX Control - Instructor Camera

The AMX control interface allows you to:

- ... pan the camera right and left
- ... tilt the camera up and down
- ... zoom the camera in and out
- ... set presets

To operate the instructor camera, first make sure you have selected it as your source window by touching that button. You will know that you have selected the instructor camera because the button will then be colored blue with yellow words.

Presets are a valuable way of saving time and also making your presentation flow more smoothly. Presets allow you to "pre-program" frequently used shots so that you don't waste time during the session panning, tilting and zooming the camera searching for your camera shot.

With the instructor camera you can set up to six presets. To set a preset: use the pan, tilt and zoom buttons to achieve the shot that you want to store. Then touch the "set" button, and then number "1" from the six presets. To set a second preset and so on, move the camera to get the next shot you want to store, then press "set" followed by "2" from the six preset buttons. Continue setting presets until you have all that you need.



Use the up, down, right and left button controls to pan and tilt the camera around the room.

Use the zoom out buttons to get a wider shot of the room.

Use the zoom out buttons to get a tighter shot of the room.

Using the tracking device and lavalier microphone

The tracking device and lavalier microphone allows the presenter to move around the room and have the instructor camera follow them. The lavalier microphone compliments existing microphones to ensure a high level of audio signal is transmitted.

(see next page)

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Instructor Camera (cont'd)

Using the tracking device and lavalier microphone

The tracking device and lavalier microphone allow the presenter to move around the room and have the instructor camera follow them. The lavalier microphone compliments existing microphones in the room to ensure a high level of audio signal is transmitted.

Make sure that in the sources window you have selected "instructor camera"

From the AMX room control interface for instructor camera, choose "auto tracking"



Locate the tracking device and lavalier microphone - in Shibles Room 11 it is stored behind the instructor monitor. Clip the device to your belt and place the tracking ring around your neck BEFORE turning the device on. This will avoid creating distracting and unwanted noise if the device is dragged across clothing etc.. Make sure that in the sources window you have selected "instructor camera." From the AMX room control interface for instructor camera, choose "auto tracking"

On the actual device itself, turn both the "power" switch and the "audio" switch to on. Move to a position where the instructor camera can "see" the tracking device. Make sure that the tracking device sensors you are wearing aren't hidden by a collar or hair. When you have finished using the tracking device, return it to its storage place and plug in the charging unit. Deselect the "auto tracking" button in the AMX room control interface.

On the actual device itself, turn both the "power" switch and the "audio" switch to on

When you have finished using the tracking device, return it to its storage place and plug in the charging unit



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Student Camera

The student camera at most sites is located either above, between/beside either the TV monitors or the LCD Projector screen.



AMX Control - Student Camera

The AMX control interface allows you to:

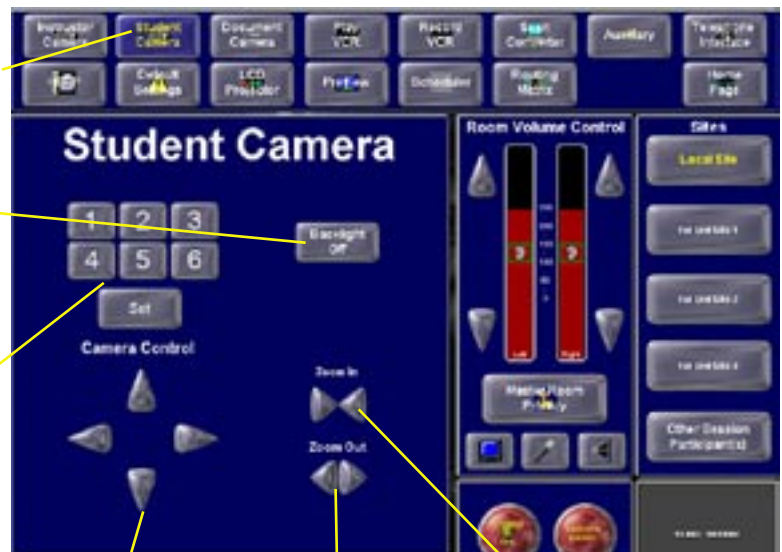
- ... pan the camera right and left
- ... tilt the camera up and down
- ... zoom the camera in and out
- ... set presets
- ... turn "backlighting" on

To operate the student camera, first make sure you have selected it as your source from the sources window by touching that button. You will know that you have selected the student camera because the button will then be colored blue with yellow words.

By selecting the "backlight" feature at a particular site, you can brighten the image that you are looking at. To turn this feature off, simply touch it again.

Presets are a valuable way of saving time and also making your presentation flow more smoothly. Presets allow you to "pre-program" frequently used shots so that you don't waste time during the session panning, tilting and zooming the camera searching for your camera shot.

With the student camera you can set up to six presets. To set a preset: use the pan, tilt and zoom buttons to achieve the shot that you want to store. Then touch the "set" button, and then number "1" from the six preset buttons. To set a second preset and so on, move the camera to get the next shot you want to store, then press "set" followed by "2" from the six preset buttons. Continue setting presets until you have all that you need.



Use the up, down, right and left button controls to pan and tilt the camera around the room.*

Use the zoom out buttons to get a wider shot of the room.

Use the zoom out buttons to get a tighter shot of the room.

*If the student camera "moves too fast" when using the AMX touch screen camera controls, try using the remote for that piece of equipment... it will allow for more precise positioning of the camera.

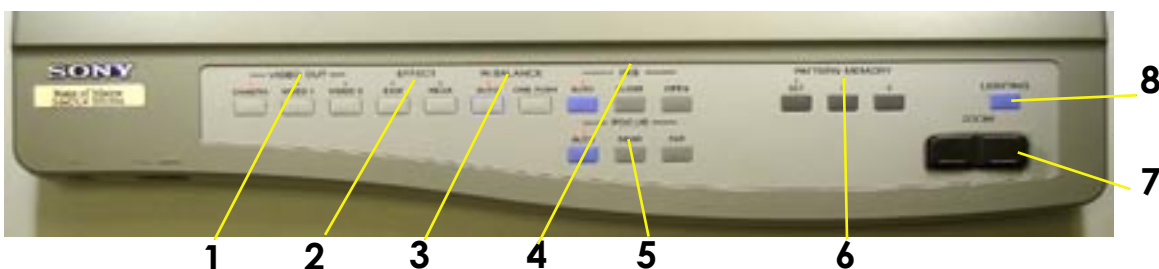
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Document Camera

The document camera is located on the teacher station desk, and apart from actually selecting it as a source from the source control window of the AMX interface, all of its functions are performed from the actual document camera itself. The power on/off button is located on the top right hand corner of the unit.



- 1 **Video Out** - There are three possible selections under video out... camera, video 1 and video 2. For operating the document under traditional methods, "camera" should be selected. Video 1 or Video 2 would be selected if you had an additional device such as a digital video camera attached to the document camera via the Video 1 or Video 2 receptors on the back of the unit.
- 2 **Effect** - there are two options under effect: Black and white... this projects a black and white image and Neg... this projects a color film negative as a color image.
- 3 **White balance** - there are two options under white balance... auto and one push. Selecting auto will suit most needs.
- 4 **Iris** - there are three options under Iris... auto, close and open. Choosing open or close will allow more or less light into the image. Selecting auto will suit most needs.
- 5 **Focus** - there are three options under Focus... auto, near and far. Choosing near or far will adjust the camera's focus point. Selecting auto will suit most needs.
- 6 **Pattern memory** - This allows you to save two "preset" document settings. For example: To display a 35mm color slide you choose your lighting option and the amount of zoom you need and then press "Set" and then "1". To display a black and white image color you choose your lighting option, the black and white effect and the amount of zoom you need and then press "Set" and then "2". Pattern memory "1" and "2" are now stored to save you time in re-adjusting settings.
- 7 **Zoom** - use these buttons to zoom in and out on an image.
- 8 **Lighting** - there are three lighting option to cycle through... ambient/natural light, lighting from below and lighting from above. Touch the lighting button once to cycle from one option to the next.



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Play VCR

The Play VCR allows you to play a VHS tape. Using the AMX control interface, you can play, stop, pause, forward, and rewind your tape right from the touch screen.

When you select Play VCR as your source, you will be transmitting a "blue screen" until you hit play. After you have finished playing your tape and have used the AMX controls to "stop" it, you will again be transmitting a "blue screen" until you select a different source.

If you touch "pause" the tape will obviously be paused, but if you leave it paused it will eventually start playing again when you are perhaps not expecting it to do so. You will not see the video, but you will hear the audio from it.

To operate the Play VCR, first make sure you have selected it as your source from the sources window by touching that button. You will know that you have selected the Play VCR because the button will then be colored blue with yellow words.

By selecting the "Play" button in Play VCR, you simply start playing the VHS tape at the point it is at.

By selecting the "Rewind" button in Play VCR, you simply start rewinding the VHS tape from the point it is at.

By selecting the "Stop" button in Play VCR, you simply stop playing the VHS tape at the point it is at. You will be transmitting a blue screen at this point, so remember to then select a different source.

By selecting the "Pause" button in Play VCR, you simply pause the VHS tape at the point it is at. Remember... if you leave the VCR Play on "Pause" it will eventually begin to play again perhaps unexpectedly. If you do not want this to happen, make sure to choose "Stop" from the control interface.



By selecting the "Fast Forward" button in Play VCR, you simply start forwarding the VHS tape from the point it is at.

The "Toggle Power" button.

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Record VCR

The Record VCR allows you to record a session on a VHS tape. Using the AMX control interface, you can record either the full quad or any of the individual site screens right from the touch screen.

Place a VHS tape in the Record VCR, choose "Record VCR" from the AMX room control interface and then select what it is you want to record. Options include:

- the local view (your own site)
- the quad (all sites in a session)
- remote 1
- remote 2
- remote 3

By selecting the "Fast Forward" button in Record VCR, you simply start forwarding the VHS tape from the point it is at.

By selecting the "Play" button in Record VCR, you simply start playing the VHS tape at the point it is at.

By selecting the "Stop" button in Record VCR, you simply stop recording the VHS tape at the point it is at.

By selecting the "Rewind" button in Record VCR, you simply start rewinding the VHS tape from the point it is at.

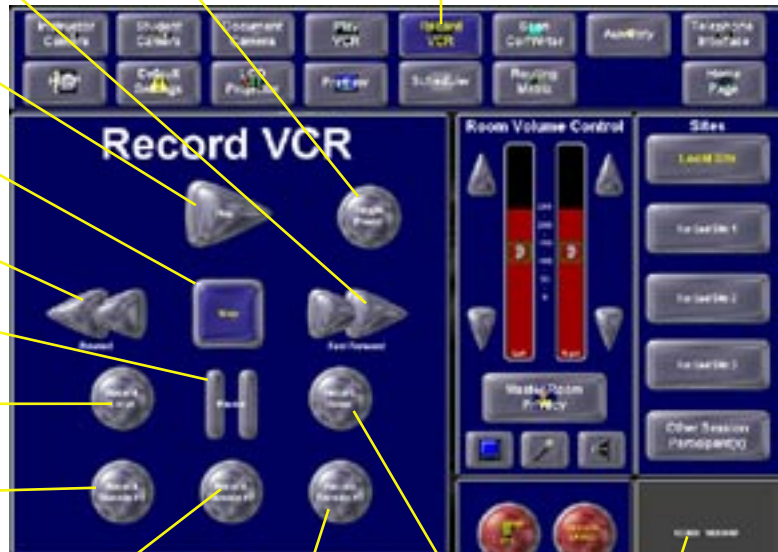
By selecting the "Pause" button in Record VCR, you simply pause the VHS tape at the point it is at.

Selecting "Record Local" allows you to record the signal that is being sent from your own room.

Selecting "Record Remote 1" allows you to record the signal that is being received on remote #1.

The "Toggle Power" button toggles power.

To operate the Record VCR, first make sure you have selected it as your source from the sources window by touching that button. You will know that you have selected the Record VCR because the button will then be colored blue with yellow words.



The Record VCR feature is designed to allow you to record all or part of your session, choosing between any of the individual sites, or all of the sites via the quad - all on the fly. To select a particular video signal to record, simply choose the corresponding button from the options listed above.

Selecting "Record Remote 2" allows you to record the signal that is being received on remote #2.

Selecting "Record Remote 3" allows you to record the signal that is being received on remote #3.

Selecting "Record Quad" allows you to record the quad.

The preview window allows you to see the source that you are sending and/or previewing. Touching it will make it full screen, and touching it again will minimize the screen.

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Scan Converter

The scan converter is located on the teacher station desk, and apart from actually selecting it as a source from the source control window of the AMX interface, all of its functions are performed from the actual scan converter itself. The scan converter will allow you to display your computer screen as a source within your own room, and also to the other participating sites.



- 1 **Power** - the power button is located in the middle of the front of the scan converter. Make sure that it is "on" in order for the scan converter to work. You know that it is on by seeing a green light under "on."
- 2 **Overscan** - the overscan button allows you to have the screen image "fit" the size of monitor more appropriately.
- 3 **Zoom** - by pressing "zoom" you will be able to obtain a tighter (larger) view of what the scan converter is projecting.
- 4 **Directional arrows** - the directional arrows allow you to "travel" around the image that you are projecting to focus on a particular area. You can move up, down, right and left. This is especially useful if you have "zoomed" in with the scan converter. The directional arrows will "circle" around, so that if you go too far to the right, it will "circle" around to the other side of the image again.
- 5 **Freeze** - the "freeze" light
- 6 **On** - shows that the power is on.
- 7 **Ready** - the "ready" light



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Auxiliary

The Auxiliary feature allows you to attach another device to the equipment such as an additional DV camera. All control from the Auxiliary faceplate will come from the devices attached to the video or audio. Audio is controlled by the room control audio sliders, and video is controlled through the routing matrix room control page.



Telephone Interface

The telephone interface requires an analog phone line to be connected to the equipment. With an analog line, you can then "dial" or receive any phone number; the conversation will be delivered via the microphones and speakers in the room. All other sites participating in a session will also be able to hear and talk as part of the conversation.

The analog phone line can also be used as a fax line... sending test materials and/or any other kind of communication then becomes possible.



Using the touch screen, dial the number you want to reach then select the "dial" button.

To end a call, simply touch the "hang up" button.

If the phone rings, touch the "answer" button to respond.

If you dial incorrectly, use the "backspace" button to erase digits and then dial again.

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Help Desk

If you select the "Help" option from the sources window you will be directed to a black screen that instructs you to call 1.888.367.6756 or 207.581.3561 for assistance. To return to the AMX room control screen, touch the "close" button in the bottom right hand corner of the screen.

Using the IP Phone, you can also dial the pre-programmed number for the helpdesk by touching the third button down on the right of the phone.

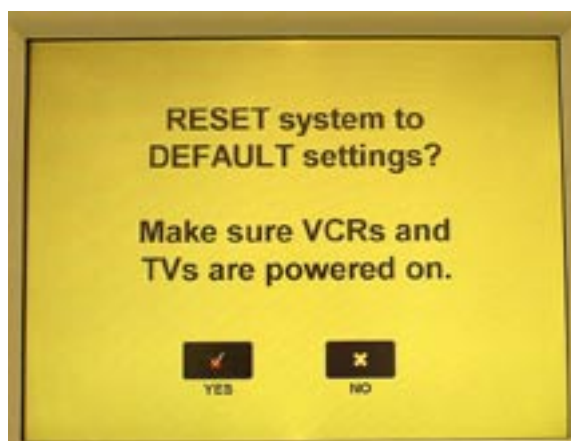
When you call the help desk with a problem, be prepared to provide the following information:

- the name of your site
- the name(s) of other sites involved in your session
- the type of session (i.e.. point-to-point between 2 sites, full mesh between 3 or 4, broadcast etc.)
- the name of the teacher (originating) site
- if you have it, the reservation number



Default Settings

The default settings allows you to default the equipment... cameras, routing matrix etc.. to their default settings for a particular site. To do this, first select a site from the sites window, and then choose "default settings" from the sources window. You will then be prompted by a yellow screen asking if you really want to "RESET system to DEFAULT settings?" Select "Yes" or "No" from your options.



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LCD Projector

Some rooms in the Maine Distance Learning Project have four television monitors for viewing, and some have an LCD Projector. To allow participants to view other sites at those with an LCD Projector, select that particular site and then choose "LCD Projector" from the sources window.

LCD Projectors do NOT automatically turn on and off at the start and end of a session. They must be manually turned on and off for each session. To turn the LCD Projector on, touch the "toggle power" button once. It will turn red to signify that its warm-up process has been started, and it will then flash for approximately 45 seconds. During this time you will not be able to use the toggle power function. This is designed to stop you from inadvertently touching it again and turning it off accidentally.

By selecting the "Menu" button, you will bring up a variety of menu options for the LCD display. You will be able to use the directional arrows to navigate settings for features such as brightness, contrast, sharpness, hue and color. To remove the menu options from the screen, simply touch the "menu" button again.

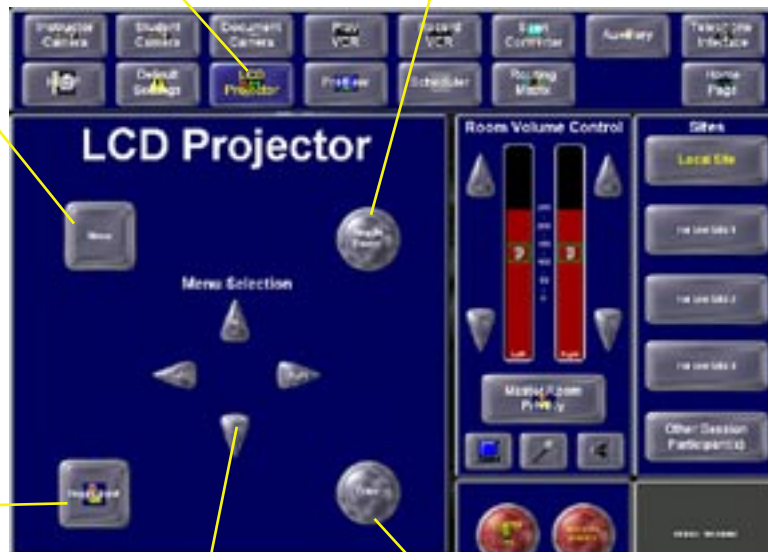
The "Toggle Input" button allows you to toggle between several input options for the LCD Projector. These include:

- video
- S-video
- input A
- input B

* if a site is not getting any video on their LCD Projector, first make sure that the LCD Projector at that site is in fact turned on. If it is, then touch the "Toggle Input" button once and ask them what they see in the upper right hand corner of the screen. They should be able to read one of the options listed above. Toggle through the options until you reach "video" as your input selection. This should restore the video or picture to the LCD screen.

Choose the "LCD Projector" from the sources window.

To turn the LCD Projector on, touch the "toggle power" button once. It will turn red to signify that its warm-up process has been started, and it will then flash for approximately 45 seconds. During this time you will not be able to use the toggle power function. This is designed to stop you from inadvertently touching it again and turning it off accidentally.



Use the directional arrows to navigate through the menu options.

Use the "Enter" button to confirm menu adjustments to settings.

Do not forget to turn the LCD Projector at both Teacher (originating) and Student (receiving) sites off at the conclusion of your session.

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Preview

Selecting the “preview” button from the sources window allows you to “prepare” the next image you want to display. For example, if you have selected the student camera as your source during a student discussion, and you know that when the discussion ends you will want the next shot to be from the instructor camera. You can select “Preview” and while still transmitting the student camera video, use the preview window located in the bottom right hand corner of your screen to view and then manipulate the instructor camera to get the next “shot” that you are interested in. When the discussion ends and you want to display the shot you have previewed with the instructor camera, simply touch the “Preview” button again and the source will automatically switch to the instructor camera.

If you start “previewing” your next shot but change your mind about using it, just switch the sources in the sources window while still in preview to preserve the shot you already have.

Scheduler

To reach the TC Reliance online scheduler, select the “Scheduler” button from the sources window.

If you accidentally touch the “Scheduler” button, you will see the screen shot shown to the right, and the AMX Room Control screen will no longer be visible. To return to the AMX Room Control screen, simply touch the screen anywhere with your finger and it will be restored.



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Routing Matrix

The "Routing Matrix" basically allows you to select from a variety of sources, and then send your choice of source to various destinations. For example, you might be involved in a point-to-point session with one other site and you want to display the other site on two of the monitors at your site. To do this you would first choose your site from the sites window, and then choose "Routing Matrix" from the sources window. Then choose Remote Site #1 from the "Sources" in the routing matrix, and send it to Remote Monitor #2 in "Destinations" in the routing matrix - then touch the "Accept/Take" button.

Another example might involve being in a full mesh session with three other sites, and you wanting to have your students at a Student (receiving) site see a VHS video tape you are playing for them full screen on their LCD Projector. To do this, select the site you want to work with from the sites window, select "Routing Matrix" from the sources window, select "Remote Site #1" from the sources, and then choose LCD Projector" from the destinations - then touch the "Accept/Take" button. If when you are finished you want to return them to seeing the "quad" with all four sites - select "Quad Output" from the sources, and send it to "LCD Projector"- then touch the "Accept/Take" button.

Options from the "Sources" in the routing matrix include:

- instructor camera
- student camera
- document camera
- play VCR
- record VCR
- scan convertor
- auxiliary input
- remote site 1
- remote site 2
- remote site 3
- quad output
- blank output

Options from "Destinations" in the routing matrix include:

- to remote sites
- local monitor
- remote monitor 1
- remote monitor 2
- remote monitor 3
- record VCR
- preview window
- instructor monitor
- quad 1
- quad 2
- quad 3
- quad 4
- LCD projector

Select "Routing Matrix" from the sources window.



After making your choice from the routing matrix sources and then destinations, touch the "Accept/Take" button to confirm the action.

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Adjusting Volume

To adjust the volume at a site, choose that site from the sites window, and use the volume control slider to raise or lower the volume. You can adjust both right and left speakers individually by touching the up and down arrows above or below the ear icons, or you can adjust both speakers simultaneously by touching in the column between the two red volume bars. The default setting for volume is set at 175 on a scale of 0-255 - at the beginning of each session the volume at every site will therefore be set at 175.



Master Room Privacy

By selecting the "Master Room Privacy" option, you can block all incoming and outgoing audio and video to that site. If you touch the "Master Room Privacy" button you will be prompted by a red screen asking if you really want to employ the master room privacy feature. When selected, the "Master Room Privacy" button will flash red indicating it has been selected. To deselect it, simply touch it again. The master room privacy feature can only be employed at that particular site... a teacher at one site cannot turn on master room privacy at another.

Mute Video

By selecting the "mute video" option (the little TV icon) at a particular site, you have the ability to mute all outgoing video from that site. When a site's video has been muted, the TV icon will have the words "muted" across it in yellow. To "un-mute" their video, simply touch it again.

Mute Audio

By selecting the "mute audio" option (the little microphone icon) at a particular site, you have the ability to mute all outgoing audio from that site. When a site's audio has been muted, the microphone icon will have the words "muted" across it in yellow. To "un-mute" their audio, simply touch it again.

Mute Speakers

By selecting the "mute speakers" option (the little speaker icon) at a particular site, you have the ability to mute all incoming audio to that site. When a site's speakers have been muted, the speaker icon will have the words "muted" across it in yellow. To "un-mute" their incoming audio, simply touch it again.



Maine Distance Learning Project

IP Phone

The IP Phone is a means to communicate with other sites on the Maine Distance Learning Project and also with UNET, the project's support provider.

Every site has its own distinctive five digit IP Phone number. The IP Phone provides a directory of all IP Phone numbers on the network, and it allows each site to configure certain aspects of its performance to suit their own preferences.



Sites Window

The sites window is where a list of the participants in a session are displayed. Your own site icon will be at the top of this window, followed by icons for whichever sites you are currently in session with. If there are more than four sites in the session, there will also be an icon termed "other session participants" which you can touch to display all other sites involved in that particular session.



Ending a session

There are two ways to schedule a session: regularly via the long version of the scheduler with an assigned start and stop time on a particular date, or ad-hoc where a session is created without using the long version of the scheduler. An ad-hoc session can be pulled up quickly and its duration set to anything from 15 minutes to open-ended.



If you are involved in a regularly scheduled, or an ad-hoc session, it will end at its scheduled time - you cannot extend a session beyond the time it was scheduled for. If you want to end a session before it is scheduled to end, simply touch the end session button. You will be prompted to respond to whether or not you really want to end the session - choose yes or no.