

Room 442 A/V Instructions

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General Information

The A/V system in Room 442 is located inside the lectern. The main equipment is housed in the two cabinets to the speaker's left behind the four locked cabinet doors. The document camera (also known as a video presenter) is located in the cabinet to the speaker's far right. Your office key will unlock the cabinet doors. **(PLEASE remember to relock the doors when you are finished using the A/V system!)** Figure 1 on the next page shows an exploded view of the first and second lectern cabinets containing the A/V equipment and all the principal components of the A/V system. The lectern is wired with 120 Vac power and network connections. The A/V system drives the two ceiling mounted Sanyo LCD projectors which are aimed at the front screens.

The user is able to operate the A/V system entirely from the small touch-screen LCD control panel housed inside the second cabinet in the lectern. The operating functions include

- lowering and raising the screens,
- turning the LCD projector on and off,
- using the built-in PC for presentations,
- using an externally connected laptop for a presentation,
- using the VCR to show a video,
- using the VCR to show a CATV channel,
- using the document camera to project a page or transparency,
- projecting other directly connected video sources provided by the speaker.

All functions are controlled through the touch-sensitive LCD control panel that is stored inside the second cabinet on the top shelf next to the computer. It can be set on the lectern for easy access during operation of the A/V system. The lectern is also wired into the GTNet system, and you will find a yellow ethernet cable in the second cabinet that can be used to connect a laptop or other external system (*please do not disconnect the network connection to the built-in PC*).

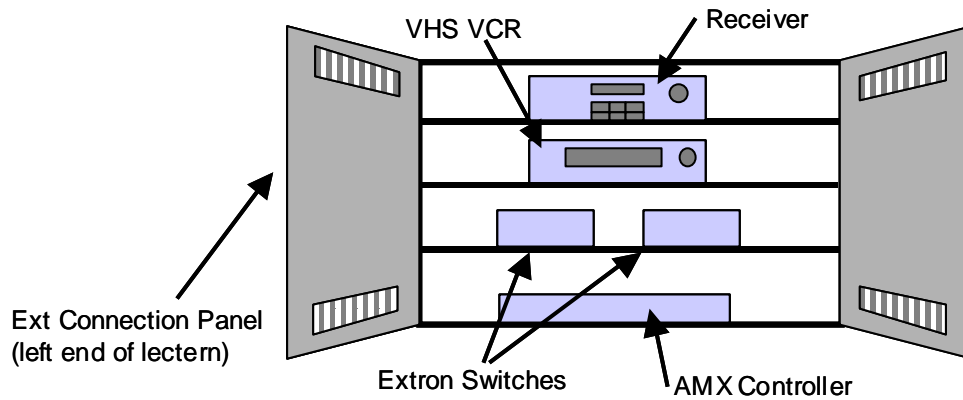
External laptops (or other video sources) can also be used, and they are connected to the interface plate at the speaker's left end of the lectern. Use the video cable located inside the first cabinet if you do not have one with your laptop. Note: several older model laptops (Toshiba Satellite Pro 430cdt and 410cdt, PowerBook 1400c and 5300) are available for short-term checkout and use. All these laptops have network connections so files can easily be downloaded from other systems (e.g., the users own workstation).

Access to the A/V System

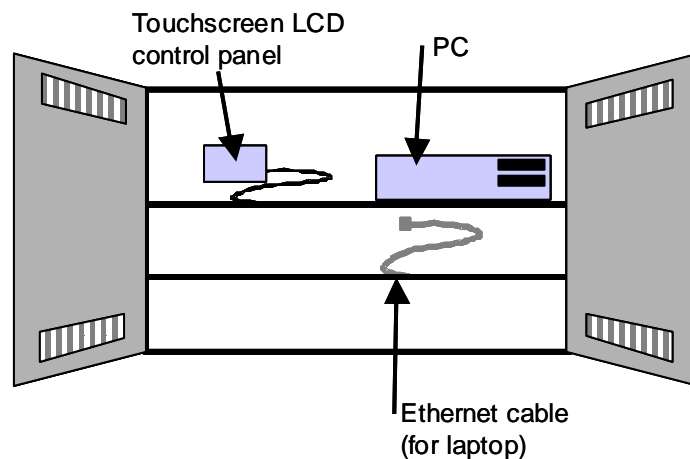
It is assumed that you have prepared whatever A/V media you will be using and that it is available in the most suitable format. For videos, this means a VHS tape. For computer-based presentations, this usually means a PowerPoint file on a PC or laptop. Other computer simulations or analyses may also be used. You may also bring in special A/V equipment like different laptop computers or workstations, additional VCR's, DVD players, LaserDisk players, a document camera, etc.

Access to the lectern cabinet containing the A/V equipment is by means of your office key. All the cabinet doors are locked separately. **Please remember to relock the doors at the end of**

your use of the equipment. This is the only security we have for this valuable equipment! For convenience, you should first remove the touch-screen LCD control panel from the top shelf and place it on top of the lectern. Touch the screen anywhere to wake it up.



(a) First Cabinet From Speaker's Left



(b) Second Cabinet From Speaker's Left

Figure 1. Design Lab Lectern Cabinet Layout

Equipment Settings

All equipment should always be powered on and operational. However, it may turn out that the power has been disrupted. If so, you may need to turn on some or all equipment by pressing the power switches on the fronts of most of the units. Here is a list of critical settings:

Receiver:	Speakers: A (IN-ON), B (OUT-OFF) Mode: VIDEO
VCR	Input can be switched to AU or 1 (1 will show the tuned cable channel when not playing a tape)

Under no circumstance should you need to remove any of the units or get to any connections or switches on the rear. Please contact either Chuck Albert or Prof. Craig if you encounter problems beyond the scope of these instructions!

General Operation

LCD Touch-Screen Control Panel

All operations of the A/V system are controlled from the LCD touch-screen Control Panel located in the second cabinet (to speaker's left of the monitor). The unit has a small white AMX logo on the front. The screen is activated by pressing on it anywhere. The panel dims itself after a few minutes and can be reactivated simply by touching the screen again.

The LCD Control Panel is simple to operate and is similar to the ones used in Conference Room 317 and classrooms 244 and 246. This should simplify user familiarity with the controls. There are a total of 4 different screens that may be activated, and all of them are cross-linked so you can go from one to the other directly. Each of these screens contains up to 4 rows of buttons with the lower 2 rows being the same for all 3 screens. When first activated, the LCD Control Panel may be in any one of the 4 screens.

Splash Screen

The screen shown below is the “splash screen” and will appear whenever you touch the Georgia Tech logo on any of the other screens. You may also see a special maintenance screen which has only a “setup” and a “return” button. DO NOT press the “setup” button. Press the “return” button to return to the “splash screen.”



Figure 2. Splash Screen

SYSTEM Menu

Normally, the first screen to be used displays the SYSTEM menu which can be activated by pressing the Georgia Tech logo on the splash screen or the SYSTEM button which appears on all other screens on the second row from the bottom at the far right end. Figure 3 below shows the layout of the SYSTEM menu. The two buttons in the top row are used to turn the LCD projectors on or off. Projector #1 is on the speaker's left (same orientation as the buttons when looking towards the audience). **Note: a 1 minute warmup is normal for these projectors and when turned off the fan will cycle for another minute or more.** The next row of buttons controls the operation of the two screens above the board. You can also operate the screens

manually from the push buttons located on the front wall at either side of the boards. The third row of buttons appear on all screens and are used to access the the other menus. The lower area contains the controls for the audio volume and mute function.

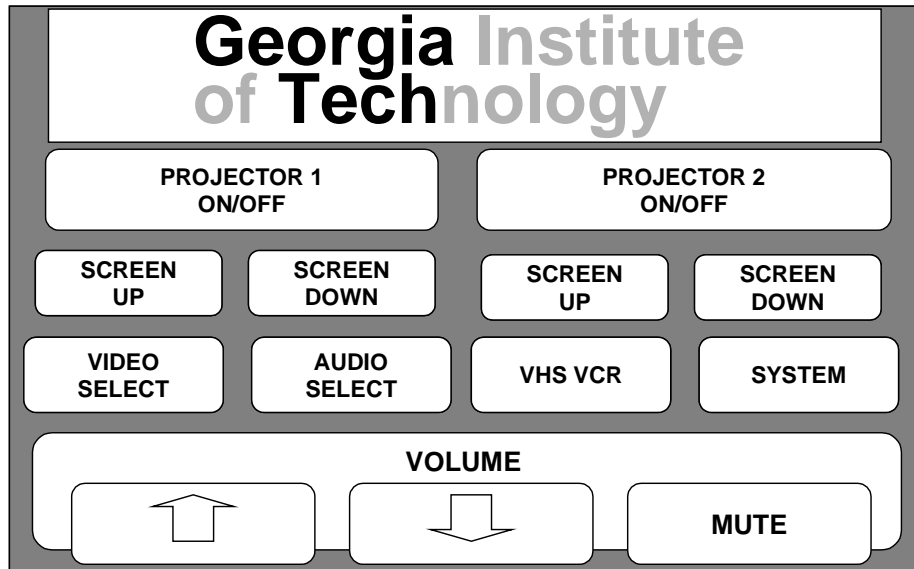


Figure 3. Projector Menu Screen

Typically, once the LCD projector is started and the screen lowered, you will switch to the VIDEO SELECT or AUDIO SELECT menus to select and control the source of the video supplied to the projector(s) and monitor.

VIDEO SELECT Menu

This menu contains buttons that control the source of the signal fed to the LCD projector. The screen layout is shown in Figure 4.

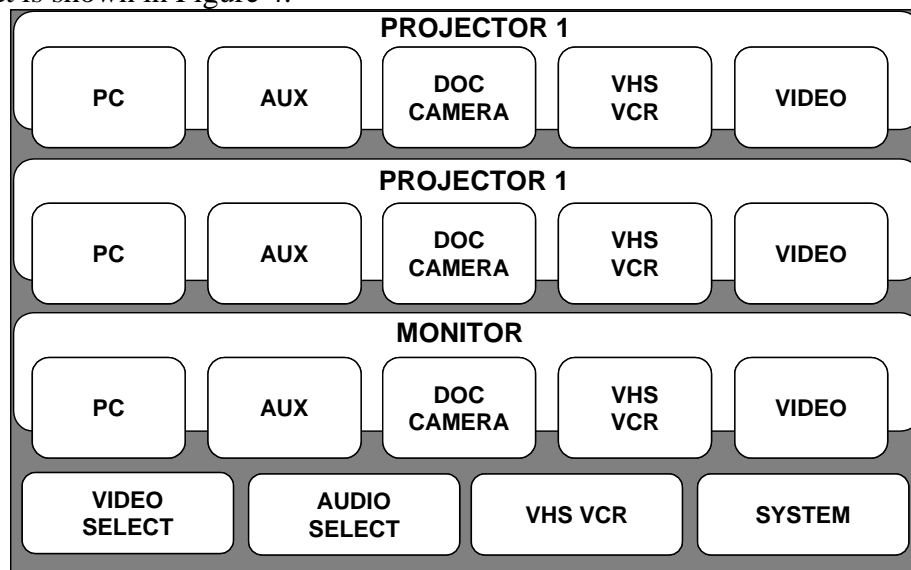


Figure 4. VIDEO SELECT Menu Screen

The 5 buttons across each of the top 3 rows allow sources from either a PC, the AUX input panel on the end of the lectern, the document camera, the VCR, or an auxiliary video input from the end panel. Pressing the appropriate button will connect that source to the projector. The third row of buttons labelled “Monitor” will connect one of the 5 sources to the monitor located in the lectern. The monitor might be turned off, in which case you only need to press the power button to turn it on. Please turn it off when finished, but do not attempt to change any of the settings. Finally, please note that only the video sources are switched from this menu.

It should be clear that the control system is capable of letting you select different material to project on each screen and the monitor. For example, you might have the internal PC displayed on Screen 1, the document camera on Screen 2 and a video playing to the monitor with audio (see below) from a CD player connected to the AUX input panel on the end of the lectern!

AUDIO Menu

The AUDIO menu is shown below in Figure 5. It operates much like the VIDEO menu to control the selection of different audio sources. Note that some of the sources may or may not have an audio signal enabled for any given configuration. Note also that to connect audio output from a laptop, you will have to run an audio cable from the laptop audio output jack to the audio input jack on the AUX panel located on the speaker’s left end of the lectern (cable must be supplied by users).

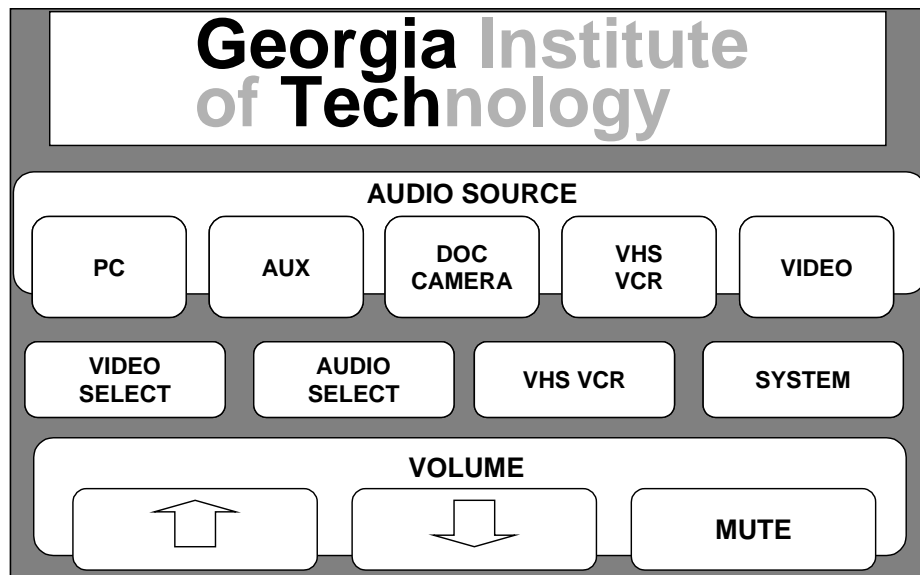


Figure 5. AUDIO SELECT Menu Screen

VCR Menu

The VCR MENU contains graphical buttons that allow control of the playback functions of the VCR. The VCR screen layout is shown in Figure 6. These are standard button logos and should be familiar to everyone from home VCR’s. Normally, these are used in conjunction with the volume buttons. REMEMBER to connect the audio signal from the VCR using the AUDIO menu described above!

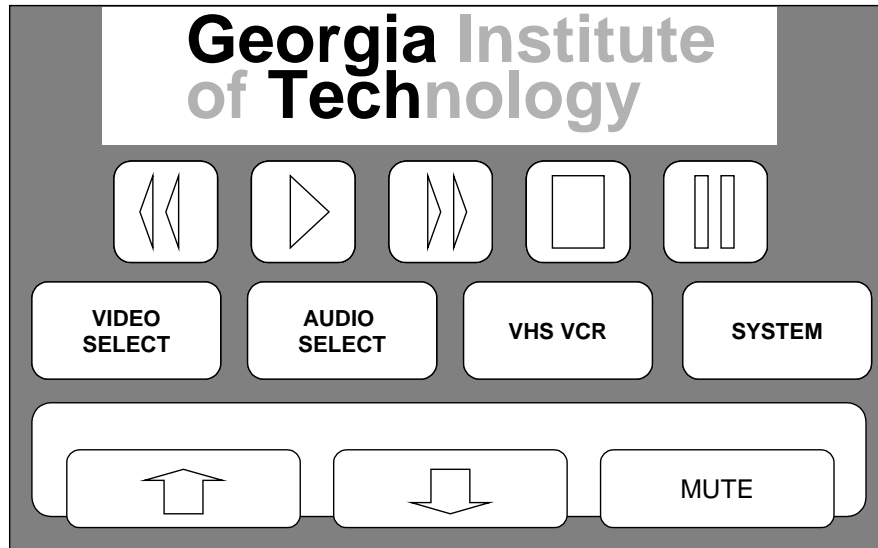


Figure 6. VCR Menu Screen

Computer Operation

Built-in PC

A PC is located inside the second cabinet in the lectern. The PC runs WinNT and is connected into the AE domain. Therefore, you should be able to log onto the PC using your regular AE domain account. (If your office PC is in the AE domain, this will be the same logon name and password use for that system.) Any AE domain account can be used. Once logged on, you will have full access to the AE domain.

The most convenient way to use this PC is to connect the PC signal to the Monitor using the VIDEO SELECT menu screen described above. You can simultaneously display the output on either or both of the projectors. It is often convenient to first connect the PC to the Monitor and leave the projectors connected to any other source while they warm up (you should see a blue screen). Go ahead and log on, using the Monitor as you would with your office system. When you're got everything set up properly, THEN switch the PC output to the projector(s). This will avoid boring the audience with your keyboard and mouse skills...

In a typical situation, you will want to make a presentation using PowerPoint slides you prepared earlier on your office PC. One way to handle this is to connect to a shared disk or folder on your office system and download the file(s) to the lectern PC. However, you must remember to first share the disk or folder before coming to the Design Lab. (Practice this all beforehand!) Another way to handle this is to upload the file(s) to the D: drive of the Design Lab PC before coming to the Lab. To do this, you will have to connect from your office system to the Design Lab PC. Its network name is "Lecture442," and your AE domain account should work OK. You can use either the "Network Neighborhood", the "Map Network Drive" menu (right-click on Network Neighborhood), or the "net use" command from the Command window. If you are not familiar with these procedures, please contact one of the AE computer support staff for assistance. **When done, remember to log off your account!!!**

PC Compatibles (Toshiba, Dell, Gateway, NEC or similar)

PC compatible laptops vary greatly in their configurations for external video. Most, however, are equipped with a standard VGA video connector on their back edges. Use a standard video connector cable to connect the laptop to the AUX input on the panel at the speaker's left end of the lectern. If you don't have such a cable, there should be a cream colored cable located inside the first cabinet door. **PLEASE REMEMBER TO RETURN THIS CABLE TO THE CABINET WHEN FINISHED!!**. Be careful to make a firm and secure connection so that moving the laptop will not dislodge the cable. Audio connections can also be made using an audio cable that you must supply.

PC compatibles have somewhat less flexibility as far as video resolution is concerned. The LCD projector system will display up to 1024x768 (XVGA) so using a higher resolution available on some of the current top-end laptops will provide no real benefit. In fact, the projector will accept 1280x1024 (sXGA) signals, but it resamples down to XVGA and considerable small detail is lost. The best solution is to either use a portable with an SVGA or XVGA screen and output, or else use a portable that had a "dual video controller." Dual video controllers can display one resolution on the laptop screen and send another to the external video connector. You can usually figure this by right clicking on the desktop and selecting "Properties" from the context menu. The rightmost two tabs usually contain the video driver settings. Check both tabs and consult your laptop manual for more information. We have found that most laptops running WinNT or Win2k can handle this but not always. Many of the Win95/98 laptops, including most Dell and Gateway models with XGA screens will, when set to SVGA or VGA resolutions, simply expand the resulting image so that it fills the laptop screen, but they will also continue to send XGA signals to the external video port. This causes considerable distortion in the fine detail. We have found that these same laptops will output the correct video resolution on the external connector ONLY if you disable the local laptop screen. Normally, you can toggle among the dual, laptop and external displays by successively pressing one of the Fn keys (e.g., Fn-F5 or Fn-F6). Check with the AE computer support staff if you have questions.

Macintosh PowerBooks with VGA Connectors

Newer G3 and G4 PowerBooks are equipped with a standard VGA video connector so they operate much like a PC laptop. Follow the instructions above for using a PC laptop.

Macintosh PowerBooks with Apple Video Connector

Older Mac PowerBooks use an Apple video connector. In some cases, making a video connection to a PowerBook like the 1400c or 5300 and many other PowerBooks requires use of a special adaptor cable that normally must be purchased from Apple. In either case, the video signal must be converted into the PC VGA format before it can be fed into the AUX input on the lectern. For this purpose, a special converter box made by Extron has been placed inside the first cabinet on the left side. This converter is a small 6 inch square box with an AC power adaptor connected to it and a thick video cable. You should remove this converter and plug the AC adaptor into the 120 VAC outlet on the front edge of the lectern. Connect the thick video cable from the adaptor your Macintosh PowerBook. Use the cream colored VGA video cable to connect the converter box to the AUX input connector on the speaker's left end of the lectern.

The Mac PowerBook must next be configured. This process will vary depending on the version of the MacOS you are using. For MacOS 7.6, use the Monitors & Sound Control Panel (or the Monitors Control Panel on earlier versions). First you will have to choose the screen resolution. Many new PowerBooks can operate at either VGA (640x480), SVGA (600x800), or XGA (1024x768) resolution and the projector will accept all. You can use “thousands” of colors but you may not be happy with the appearance or the performance. Normally, you will have your choice of using the external or PowerBook screen as the primary screen, or you can superpose both to form a single screen (sometimes called video mirroring). In the first case, you can treat the LCD projector screen like a second Mac screen and place objects on one or both screens. You can place the Mac Desktop Menu on one or the other by dragging it in the control panel view. The screen with the Desktop Menu Bar will be the primary Desktop screen and is usually the one displayed by the LCD projector. The most common configuration is to superpose the screens and this is done by dragging the second screen on top of the other in the control panel view. At this point, you will have a single screen that is mirrored on the PowerBook. Keep in mind that new MacOS versions may do this all differently.

Laptop Network Connections

Connecting the Laptop

You can use your laptop with the GTNet connection located in the lectern. The network connections are located in surface mounted outlet boxes on the inside rear wall (nearly impossible to get to .) A yellow CAT 5 network drop cable should be coiled up in side the second cabinet. It is connected to an active receptacle and the free end can be connected to your laptop (using its ethernet connection).

IP Address Use: CAUTION

In order to use your laptop with an internet connection over GTNet, you MUST have a valid IP address. (You don't need one for AppleShare or SMP file sharing but you do for email or web browsing or ssh or ftp or telnet.) The IP address is dependent on whether you are in the Knight Building or in the Guggenheim Building (they have different subnet addresses). If you accidentally try to use one address in the other location, you may cause havoc on the local subnet! **UNDER NO CIRCUMSTANCES SHOULD YOU TRY TO USE YOUR OFFICE SYSTEM IP ADDRESS!**

In order to minimize the problems, you must contact one of the AE computer support staff to register your laptop's ethernet hardware address so that it can utilize the automatic IP address assignment software called DHCP. You must register the address for network security purposes; addresses will be assigned only to registered systems. This will allow your laptop to automatically secure (“lease”) an IP address while it is connected to the network, regardless of which building it is located in at the time. To implement this you will also have to reconfigure your TCP/IP control settings in your Macintosh or PC. The AE computer support staff can help with this. NOTE: this hardware ethernet address is associated with the ethernet interface electronics so if you are using a PC Card, you should not change cards because the numbers go with the card!

CATV Operation

You can tune CATV channels through the built-in VCR when the VCR is configured with the LCD Control Panel as the program source. The currently available channels are listed in Table 1 below. At the present time, tuning of these channels must be done using the VCR remote control, and it is somewhat tedious. If you are familiar with this kind of operation at home, it will be almost the same. Remember that you must aim the remote control at the VCR with the lectern door open...

You may have to turn the VCR on if it is off. Use the power on button on the remote or on the unit itself. Note: inserting a VHS cartridge will also turn the unit on.

Normally, when you play a tape, it overrides all other sources, and this is the signal the VCR will output. You must use the INPUT SELECT button inside the upper cover of the Remote Control to switch between the different sources when a tape is not playing. There are 3 options: a CATV channel, AV-1 and AV-2. Normally, you will select CATV and then use the up and down arrow buttons on the main control to advance the channel numbers. If you do not want either a CATV signal or a VCR signal, you must switch the INPUT SELECT to either AV-1 or AV-2 to get the standard blue screen. This is typically done when you want to stop the VCR to lecture and don't want the CATV to appear instead. This is a tricky setup so please ask the AE computer support staff for assistance.

Turn off the VCR using the remote control when finished.

Securing the System when Finished

When you are finished with your presentation, remember to log off your account! Then use the touch screen LCD panel to turn off the projector(s). **NOTE: for system security, we strongly recommend that you also use the VIDEO MENU screen to connect anything BUT the PC signal to the Monitor.** This will prevent someone from trying to use the PC from the monitor when the room is not occupied! Finally, turn off the monitor when you are done.

If you used the document camera, remember to turn it off, fold the camera arm and lights flat onto the base and return the unit to the rightmost cabinet, top shelf. Be careful not to snag the video and power cables.

If you used a laptop, remember to disconnect the video cable and the Mac adaptor (if used) and return them to the leftmost cabinet so others will find them easily.

Finally, close the ALL lectern cabinet doors and lock them with your office key. Be careful to fully engage the lock in the mating fixture. Remember, you are responsible for the security of this equipment!

Table 1. Georgia Tech Campus Video System Channel Lineup as of 10-27-97

Channel	Source
2	
3	The Techknow Channel (GTCN)
4	
5	NASA TV (GTCN)
6	The International Channel (GTCN)
7 through 15	
16	WSB Ch.2 (ABC)
17	WAGA 5 (FOX)
18	WGTV 8 (PBS)
19	WXIA 11 (NBC)
20	WTBS 17 (TBS)
21	WATL 36 (WB)
22	WGNX 46 (CBS)
23	WUPA 69 (UPN)
24 through 53	
54	CNN Headline News
55	CNN (News)
56	CNN SI (Sports News)
57	CNBC (Financial News)
58	MSNBC (News)
59	MSNBC Weather
60	Comedy Central
61	Lifetime
62	Discovery
63	The History Channel
64	The SciFi Channel
65	MTV
66	TNT
67	ESPN
68	TNN
69	The Weather Channel
70	A & E
71	USA
72	BET
73	WGN
74	Court TV
75	Classic Arts
76	NASA TV
77	Knowledge TV
78 and up	