

Introductory guide to the Comberton Village Hall audio-visual system

(Version 7: October 2022)

This Guide is written to give a basic background to the features of the above system and is not intended as an expert manual. User manuals are available for most of the equipment and these give more detailed information for expert users.

The Guide is for use by trainers and willing users and is intended to be accurate, reliable, helpful and as easily understandable as a guide like this can be.

Although it is recommended that the new user is first taken through the system operation by an experienced user, it is the intention of this Guide that it should enable a new user to master basic use of the system from scratch.

Please leave any comments on the back page of the guide as to how future versions might be improved.

Brian Burton April 2019
Modified Brian McCabe October 2022

SWITCHING AUDIO ON AND OFF

To switch ON

- See the power supply box (UPS) on the shelf to your right at head height
- Note the button on the front of the UPS
- Press this button for 1 second so that a green light comes on
- This switches the audio system **ON**

To switch OFF

- Press the button on the UPS for 1 second to switch off the green light
- This switches the audio system **OFF**

DO NOT SWITCH OFF INDIVIDUAL UNITS

Introductory guide to the Comberton Village Hall audio-visual system

The system has many features which can be used in different ways. This guide lists in the following table what system components are required for different usages and, in the following sections, how the individual components are operated.

User component combinations

Component	1	2	3&4	5	6	7	8	9	10
	Electric screen	Wired microphone	Radio microphones	Hearing Loop	Audio system	Video projector	Computer video input to projector	DVD player	Computer sound input to audio system
Page number in this document	3	3	4	5	6	9	16	17	18
Usage									
Use screen with slide projector	X								
Use wired microphone		X		X	X				
Use radio-microphone			X	X	X				
Show DVD from DVD player	X			X	X	X		X	
Play CD from DVD player				X	X			X	
Show DVD from computer	X			X	X	X	X		
Play CD from computer				X	X				X
Show presentation from computer without sound	X					X	X		
Show presentation from computer with sound	X			X	X	X	X		X

A brief description of the UPS is provided at the end of the guide (section 11 p.19).

A summary of battery requirements for the various controllers is given in section 12 p. 20.

Operation of components

Basic instructions are given under “**Basic Operation**” for all the equipment. This is followed by **Notes** and **Trouble shooting** tips where appropriate. More extensive information is provided on the projector remote control and on screen menus because of the high level of functionality. More information is given in the equipment manuals provided by the manufacturers and held by the Trustees on file.

For the following, it is assumed that the power supply to the screen is **OFF**, power to the audio system has been switched **ON** at the UPS, and the power supply to the projector is **ON**.

The audio system is mounted in the flight box which is secured by means of a chain padlocked to left hand box handle.

Cables and microphones are stored separately on shelves in the audio cupboard to minimise damage which could be caused by tangling the cables up with each other.

1. Electric screen

Basic Operation

- Switch on power supply located just inside the folding doors to the hall store (left side from inside hall).
- Using the hand-held controller, press **V** to lower the screen, **O** to stop it, or **Λ** to raise it. The screen can be inched up or down using the **Λ** or **V** buttons.
- After use, please switch off the power supply.

2. Use of wired microphone

Basic Operation

- Set all the input sliders on the mixer desk to the ∞ setting except the Main Mix Slider which should be set at about 0 (see Figures 2 & 3).
- Plug the microphone lead into the desired wall socket (see Figure 1). That on the left hand side of the store is **input 2** into the audio system, on the right hand side of the store **input 3**, and at the rear left hand side of the hall **input 4**.
- Switch the microphone **ON**
- Set the slider on the mixer desk to the desired volume for **input 2, 3 or 4** as appropriate (see Figure 2).



Figure 1: Wall microphone socket

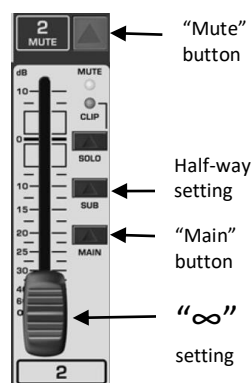


Figure 2: Slider for Input 2

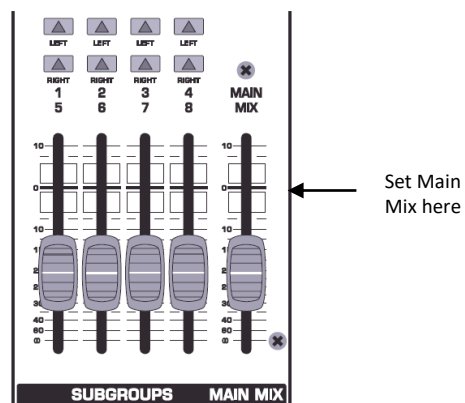


Figure 3: Main Mix Slider

Trouble shooting

If there is no sound:-

- Check that the correct input has been chosen, the **MUTE** button for that input slider **has not** been depressed, the **MAIN** button for that input **has** been depressed, and the slider is set about half way (see Figure 2).
- Check that the **Main Mix** slider (see Figure 3) on the front right hand side of the mixer desk has been set to 0.

3. Use of lapel radio microphone

Basic Operation

- Set all the input sliders on the mixer desk to ∞ except the Main Mix Slider which should be set at about 0 (see Figures 2 & 3).
- Switch on the portable transmitter pack of the radio microphone using the small switch at the base of the pack. The radio microphone is stored in the audio cupboard.
- Set the slider on the mixer desk for input 1 to the desired volume (see Figure 2).
- After use, switch off the switch on the portable transmitter pack and replace the radio microphone in the audio cupboard.

Trouble shooting

If there is no sound:-

- Carry out the trouble shooting checks as for the wired microphone above
- Check that the radio microphone receiver, *audio-technica* ATW-R160, which is housed below the DVD player, is switched **ON**.



audio-technica ATW-R160 receiver

4. Use of hand-held radio microphones (Orange and Blue)

- Set all the sliders on the mixer desk to ∞ except the Main Mix Slider which should be set at about 0 (see Figures 2 & 3).
- Switch the ON/OFF/STANDBY radio microphone switch to ON.
- Set the slider on the mixer desk to the desired volume for the appropriate input (input 8 for Orange and input 9/10 for Blue)

Notes

- The microphones have about 1 hour of useful operation when the **low battery indicator** light is lit. Ideally replace batteries as soon as the light is lit.
- Use AA alkaline batteries. They have a life of about 20 hours.

- Switch the microphones to STANDBY when temporarily not in use and to OFF when use is finished, to conserve battery life.

Trouble shooting

If there is no sound:-

- Carry out the trouble shooting checks as for the wired microphone above.
- Check that the radio microphone receiver placed on the shelf above the audio system is switched on: a light on the front fascia should be illuminated.

5. Hearing loop

The hearing loop will be automatically powered up when the audio system is switched on at the wall switch. It is provided to broadcast sound from any sound equipment plugged into the audio system to wearers of hearing aids in the hall. Wearers should switch their aids to the "T" setting.

6. Audio system

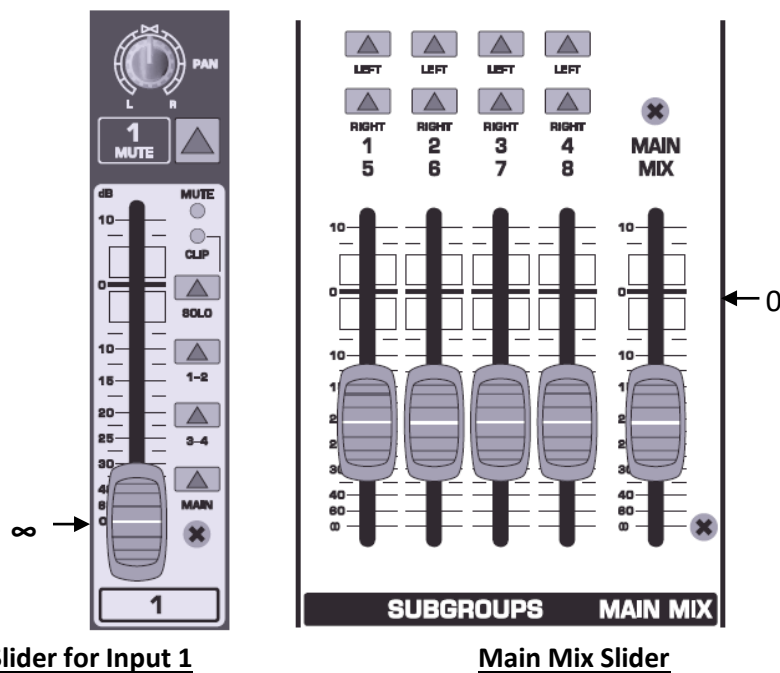
i. Behringer Mixer Desk

Basic operation

- If the sub-woofer is required (see **ii** below), place it in position in the hall, plug it into the mains power and plug the flying lead coiled in the base of the audio box into the input socket of the sub-woofer
- Set all input sliders to ∞ and the Main Mix slider to 0.
- Select desired input and set slider at about half way.
- Do not adjust any of the other settings on the mixer desk.
- Switch on the sound source and adjust the mixer slider setting to give the desired sound volume (see notes on sub-woofer p.7 and on noise limiter p.8) .

Notes

- Channel 1 – radio microphone
- Channel 2 and 3 - hand held microphone sockets in main hall either side of the store
- Channel 4 - hand held microphone socket in main hall, rear left.
- Channel 5 – computer sound input from the wall plate
- Channel 8 – hand held radio microphone (orange)
- Channel 9/10 – hand held radio microphone (blue)
- Channel 13/14 – DVD player



Trouble shooting

If there is no sound and the sound source itself appears to be functioning satisfactorily

- Check that the correct input channel has been chosen, the **MUTE** button for that input slider (see above) **has not** been depressed, the **MAIN** button for that input **has** been depressed, and the slider is set about half way.
- Check that the **Main Mix** slider (see above) on the front right hand side of the mixer desk has been set to 0



Behringer Mixer Desk

ii. Electro-Voice Sub-woofer

The sub-woofer is available to give cinema sound when DVDs are played.

The sub-woofer should be powered up and plugged into the mixer/amplifier before power to the mixer/amplifier is switched on.

The **LEVEL** control should be set at a value between 0dB and +6dB to achieve the required volume level without distortion (see note on the noise limiter below).



Electro-Voice Sub-woofer

The sub-woofer input cable is plugged into the CD/TAPE output of the mixer desk. Its output volume is controlled by the control on the back of the sub-woofer. If there is no sound coming from the sub-woofer, press the button "CD/TAPE TO MAIN" to release it. The button is located on the light grey panel to the right hand side of the mixer desk. The button should NOT be depressed for the sub-woofer to work..

iii. Behringer Peak Limiter

This is pre-set and should not be adjusted.



iv. Crown XLS 202 amplifier

This is pre-set and should not be adjusted.



v. Noise Limiter

The hall is fitted with a noise limiter which will shut down power to the projector when a pre-set noise level is exceeded. This is a condition of our planning consent. The equipment in the AV cupboard is not affected because it is powered from an uninterruptible power supply (UPS, see p.18).

The display above the caretaker's cupboard in the main hall displays the status of the sound level in the hall:

a green light signifies satisfactory sound levels;

an amber light signifies that the sound level is approaching the trip value; and

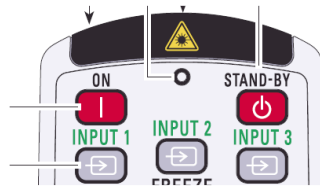
a red light means that power has been shut off.

If power is shut off, it will be restored once the sound level has dropped below the trip value.

It is recommended that before playing a CD or DVD or playing music from another source, a sound check is carried out to confirm that the wall mounted speakers and the sub-woofer are not producing excessive levels of sound.

7. Video projector

i. Basic Operation



Switching on the projector

- Connect the video source: either switch on the DVD player or plug a computer into the wall plate (see **Sections 9 and 8** respectively).
- Switch on projector by pressing the **ON** button on the remote control provided.
- Wait for the projector to warm up. The LAMP indicator on the underside of the projector lights red and the cooling fans start to operate. When the projector has warmed up the projector will shine a blue light on the screen. If the projector sees no input source after 30 seconds the projector will display on the screen “**No signal**” and will time out after 5 minutes after which time the projector will shut down.
- If the screen is blank, select **MENU** on the projector controller and then the on-screen **INPUT 1**.
Select the setting for DVD player (**RGB (AV HDCP)**) and set the DVD player to **PLAY** or select the setting for computer (**RGB (PC analog)**) ensuring that the computer is on-line. See **Input Selection** section below.
- If the DVD player is switched on but not playing a DVD, you may see a number of icons on the screen. Using the DVD controller, select **DVD VIDEO** and play the DVD.

Switching off the projector

- Press the **STAND-BY** button on the remote control to display “Power off?” on the screen.
- Press the **STAND-BY** button on the remote control again to turn off the projector: the cooling fans will operate for 90 seconds. During this time, the POWER indicator on the underside of the projector blinks green and the projector cannot be switched on again.
- Once the projector has been cooled down sufficiently, it can be turned on again.
- **DO NOT SWITCH OFF THE POWER SUPPLY AT THE WALL SWITCH.**

Notes

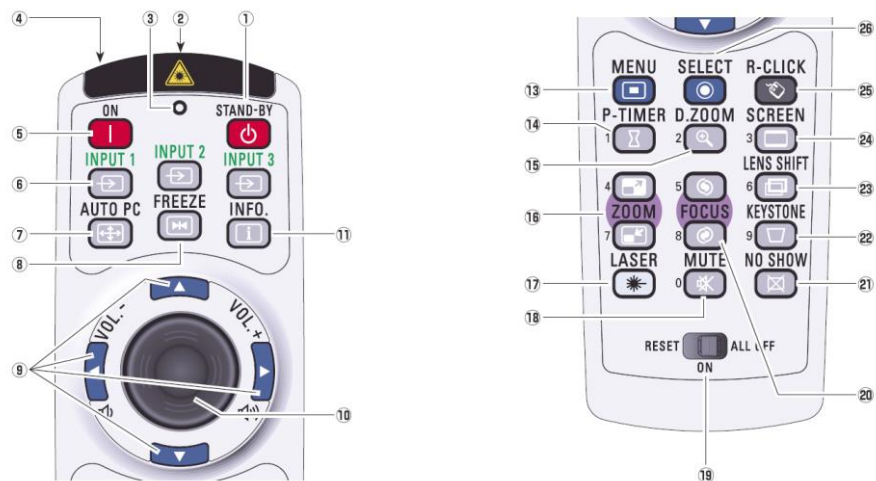
- The wall power switch is permanently left **ON** and therefore the projector is permanently on **STAND-BY**.
- Do not turn the projector off until it has run for at least 5 minutes.
- The running speed of the fans varies according to the projector temperature.
- To reduce power consumption and maintain lamp life, the projector turns off automatically if there is no input to the projector. If the input is absent and it is more than 30 seconds since a button on the remote control has been pressed, a timer display with “No signal” appears on the screen. After 5 minutes, the display times out and the projector shuts down. The projector fan will continue to run however and the POWER indicator on the underside of the projector will blink green: the projector **must be fully shut down** by switching it **ON** again and then **OFF** after 5 minutes as above.

Trouble shooting

- No image
Re-select **INPUT 1** as input source.
Check computer or DVD player is switched **ON**.
Check the connection between the computer or DVD player and the projector (see **Sections 8 and 9**).
For a computer, check the computer is correctly set up for an external screen output. Press whichever function key (**F1** etc) is labelled with text or a graphic representing a screen (holding down the computer function key (**Fn**) first if necessary).
- Check projector has not timed out (see above).
- Image is poor
Check “Brightness” or “Contrast” is correctly set using the On Screen Image Adjust Menu (see below).
Check colour balance on the On Screen Image Adjust Menu (see below).
Check correct image mode selected on the On Screen Image Menu (see below).
- Remote control does not work
Check that the **RESET/ON/ALL-OFF** switch on the remote control is switched to **ON**.
Check remote control is within detection range of the projector (see below) and that the security cage is not obstructing the remote control signal.
Check batteries

ii. Remote Control

- Point the remote control towards the front or the back of the projector, within about 16 feet and an angle of 30° of it.
- **Functions of Remote Control**



STAND-BY (1) switches the projector OFF (see below)

LASER LIGHT WINDOW (4)

AUTO PC (7) automatically adjusts the screen image from a computer to its optimum setting.

FREEZE (8) freezes the picture on the screen.

▲▼◀▶ (9) selects an item on the On Screen menu (see below).

PRESENTATION POINTER (10) moves an on screen pointer when selected (see below).

MENU (13) brings up the On Screen menu (see below).

ZOOM (16) to zoom in and out the image

LASER (17) see below

SELECT allows selection of an option from the On Screen menu (see below).

RESET/ON/ALL-OFF (19) Set to **ON** to use the remote control. Set to **ALL OFF** for power saving when not in use. **RESET** to initialise the remote control or to switch the Spotlight and Pointer to Laser pointer function (see below).

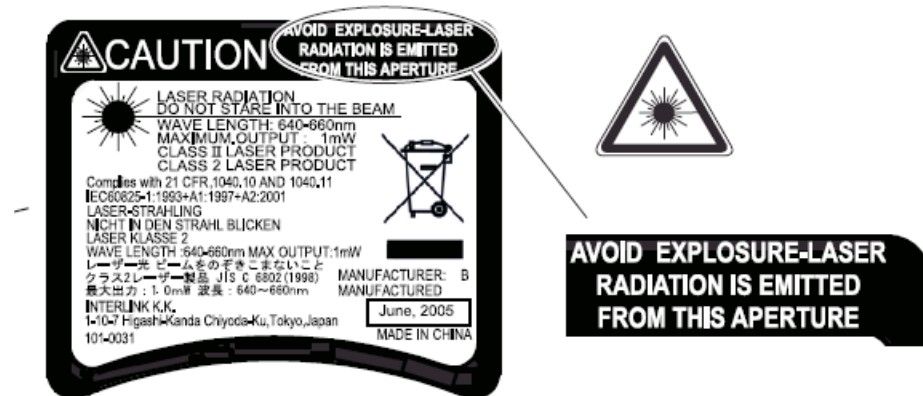
FOCUS (20) adjusts the focus of the image on the screen.

NO SHOW (21) temporarily turns off the image to the screen.

▲SCREEN (24) selects the screen size.

SHIFT (23) moves the image up and down the screen. Press **23** once, then **9▲** to lower or **9▼** to raise (projector is installed upside down!). This can only be done when the DVD player is in “play” not “pause” mode.

- **Laser Pointer Function**



The remote control emits a laser beam from the laser light window when the **LASER** button (17) is pressed. If the button is pressed for more than one minute or if the button is released, the laser light goes off.

CAUTION – NEVER LOOK DIRECTLY INTO THE LASER LIGHT WINDOW (4), OTHERWISE EYE DAMAGE MAY RESULT. NEVER POINT THE LASER AT YOURSELF OR ANY OTHER PEOPLE.

- **Pointer/Spotlight function**

Press the **MENU** and **NO SHOW** buttons for more than 10 seconds to activate the Pointer/Spotlight function. When the **LASER** button is pressed, a laser beam is no longer emitted but a Spotlight/Pointer is displayed on the screen.

Pointing the remote control towards the projector, press the **LASER** button to display the Spotlight/Pointer or to switch it off. Use the **PRESENTATION POINTER** button (10) to move it.

To choose between Pointer and Spotlight and the size of the Spotlight or the pattern of the Pointer, use the On Screen Menu (see below)





iii. On Screen Menus

- **Image Menu**

Press MENU button to display the On Screen Menu and use the ◀▶ buttons to move the red frame pointer □ to the Image Menu icon:



Use the ▼▲ buttons to move the red frame pointer □ to the desired image level (below) and then press the **SELECT** button:

-  **Dynamic** for displaying pictures in a bright room;
-  **Standard** for the projector preset picture;
-  **Real** for improved halftones for graphics (when computer connected)
-  **Cinema** for fine tone (when DVD player connected)

Press **MENU** to exit the On Screen Menu.

- **Image Adjust Menu**

Press MENU button to display the On Screen Menu and use the ◀▶ buttons to move the red frame pointer □ to the Image Adjust Menu icon (see below):

Use the ▼▲ buttons to move the red frame pointer □ to the desired image adjustment (below) and then press the SELECT button. Use the ◀▶ buttons to adjust the setting value.

 **Contrast**

Press the Point ◀ button to decrease the contrast; press the Point ▶ button to increase the contrast (from 0 to 63).

 **Brightness**

Press the Point ◀ button to decrease the brightness; press the Point ▶ button to increase the brightness (from 0 to 63).

 **Color**


Press the Point ◀ button decrease the intensity of the color; press the Point ▶ button increase the intensity of the color (from 0 to 63).

 **Tint**

Press the Point ◀▶ buttons to adjust the tint value to get a proper color balance (from 0 to 63).

 **Color temp.**


Use the Point ◀▶ buttons to select the desired Color temp. level (High, Mid, Low, or XLow).

 **White balance (Red)**

Press the Point ◀ button to lighten red tone; press the Point ▶ button to deepen red tone (from 0 to 63).

 **White balance (Green)**

Press the Point ◀ button to lighten green tone; press the Point ▶ button to deepen green tone (from 0 to 63).

 **White balance (Blue)**

Press the Point ◀ button to lighten blue tone; press the Point ▶ button to deepen blue tone (from 0 to 63).

 **Sharpness**

Press the Point ◀ button to decrease the sharpness of the image; press the Point ▶ button to increase the sharpness of the image (from 0 to 15).

 **Gamma**

Use the Point ◀▶ buttons to adjust the gamma value to obtain a better balance of contrast (from 0 to 15).

 **Noise reduction**

Noise interference on the screen can be reduced. Select one of the following options to get smoother images.

- Off Disabled.
- L1 Lower reduction
- L2 Higher reduction

 **Quit**

Exit the Image Adjust Menu.

Image Adjust Menu



Image Adjust Menu icon

Move the red frame pointer to the desired item and then press the SELECT button.



Use the Point ◀▶ buttons to adjust the setting value.

Press the SELECT button at this item to display other items.



Press the SELECT button here to display the previous items.

- **Screen Size Adjustment Menu (Computer input)**

Press MENU button to display the On Screen Menu and use the ◀▶ buttons to move the red frame pointer □ to the Screen Menu icon:



Use the ▼▲ buttons to move the red frame pointer □ to the desired screen size (below) and then press the **SELECT** button:

 **Normal**


Provide the image to fit the screen size.

 **True**

Provide the image in its original size. When the original image size is larger than the screen size (1024 x 768), the projector enters to the panning mode automatically. Use the Point ▲▼◀▶ buttons to pan the image. When adjusted, the arrows will turn red. When reached to the correction limits, the arrows will disappear.

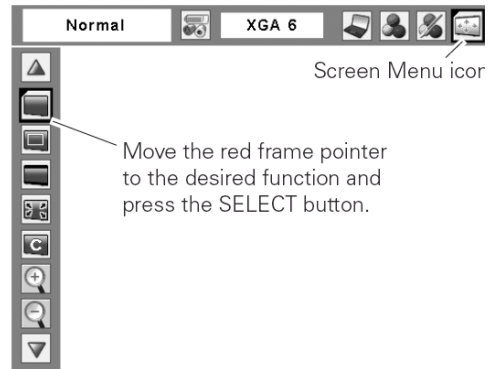
 **Wide**

Provide the image to fit the wide video aspect ratio (16:9) by expanding the image width uniformly. This function can be used for providing a squeezed video signal at 16:9.

 **Full screen**

Provide the full screen image.

Screen Menu



Screen Size Adjustment Menu (DVD player input)

Select screen size as above. Options are :

 **Normal**

Provide the image at the 4:3 normal video aspect ratio.

 **Wide**

Provide the image at the 16:9 wide screen ratio.

- **Input selection**

From experience whenever the projector is switched on for either computer (PC) input or DVD (video) input, the user is invariably offered the wrong setting. It is most important therefore that the user can select the desired input.

Press the **MENU** button on the projector controller to display **INPUT** options. Select **Input 1** and then **RGB (PC analog)** for computer VGA input or **RGB (AV HDCP)** for DVD input.

Input Source Selection

Menu Operation

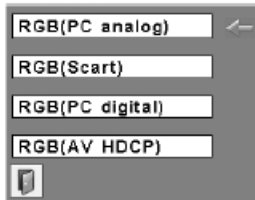
- 1 Press the MENU button to display the On-Screen Menu. Use the Point ◀▶ buttons to move the red frame pointer to the Input Menu icon.
- 2 Use the Point ▲▼ buttons to move the red arrow pointer to the desired input and then press the SELECT button. The signal format menu appears.
- 3 Use the Point ▲▼ buttons to select the desired signal format and then press the SELECT button.

Input Menu



INPUT 1

- RGB (PC analog)** When the RGB PC (analog) signal is connected
- RGB (Scart)** When the RGB PC (scart) signal is connected
- RGB (PC digital)** When the RGB PC (digital) signal is connected.
- RGB (AV HDCP)** When the HDCP video signal is connected.

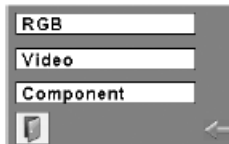


Computer VGA input

DVD input

INPUT 2

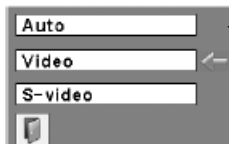
- RGB** When the RGB PC signal is connected.
- Video** When the RGB video signal is connected.
- Component*** When the component signal is connected.



*If the projector cannot reproduce proper video image, select a system manually (see "Video System Selection" on page 36).

INPUT 3

- Auto** When selecting Auto, the projector automatically detects an incoming video signal and adjusts itself to optimize its performance. The projector selects the connection in the following order:
 1. S-video
 2. Video
- Video*** When the video signal is connected.
- S-video*** When the S-video signal is connected.



Computer composite video

*If the projector cannot reproduce a proper video image, select a system manually (see projector manual).

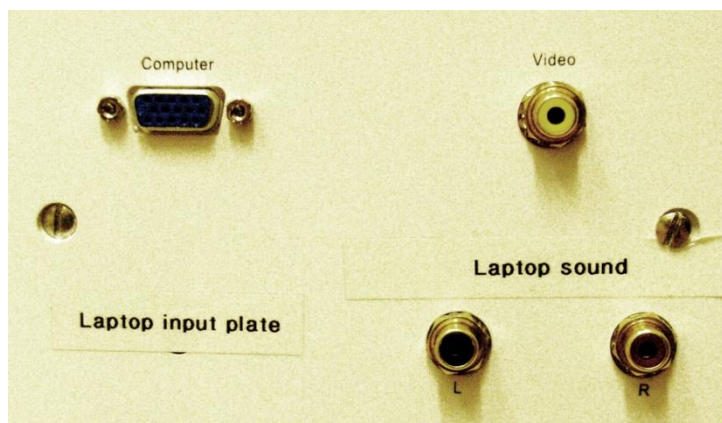
8. Computer video input to projector

Basic Operation

- Switch on computer
- Using the VGA lead provided, connect the VGA output socket of the computer to the “Computer” VGA socket on the wall plate to the right of the main hall store (see below).
- If a composite video input is to be used, then the computer should be connected to the “Video” socket on the wall plate (see below).
- Set the computer up for an external screen output. Press whichever function key (**F1** etc) is labelled with text or a graphic representing a screen (holding down the computer function key (**Fn**) first if necessary).
- Lower the screen (1. above) and switch on the projector (7(i) above).
- Select the desired input (see **Input Selection** above).
- Press the **AUTO PC** button on the remote control to optimise the display (see 7(ii) above).
- If no image is visible on the screen, select **INPUT 1** on the remote control. If there is still no image, recheck the computer.

Notes

- There are two possible inputs from a computer to the projector:



- a. The VGA connection provides the analogue component of **INPUT 1** to the projector and will be the connection normally used for computer video.
- b. The composite “Video” connection on the wall plate will provide **INPUT 3** to the projector.

Trouble shooting

See the trouble shooting section of **Section 6(i)**.

9. DVD player

This machine will play DVDs, CDs and Blu Ray DVDs.

Basic operation

Power up the DVD player (and sub-woofer if required for a cinema showing) before switching on the projector (if required) (see 6(i) above).

- Switch on the DVD player using the switch at the top left hand side of the fascia
- Set all input sliders of the mixer to ∞ (see 6(i) above).
- Select input channel 13/14 and set the slider at about half way.
- If a DVD or Blu Ray DVD is to be shown, lower the screen (1. above) and switch on the projector (7(i) above).
- Insert the disc into the DVD player and operate using the Sony remote control provided.
- Adjust the mixer slider setting to give the desired sound volume.



Trouble shooting

See Trouble shooting sections of **Sections 6(i) and 7(i)**.

10. Computer sound input to audio system

Basic operation

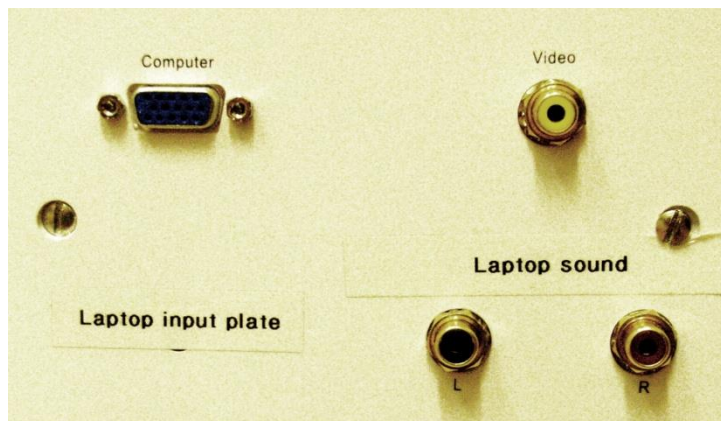
- Set all input sliders of the mixer to ∞ (see 6(i) above).
- Select input channel 5 and set the slider at about half way.
- Switch on the computer and use the lead provided to connect the headphones socket outlet of the computer to the two “Laptop Sound” sockets on the plate mounted on the wall to the left of the store in the main hall (see below). Note that there is a red socket for the right hand input and one blue for the left hand to match the colour of the plugs on the leads.
- If a computer image is to be displayed (8. above), lower the screen (1. above) and switch on the projector (7(i) above).
- Adjust the mixer slider setting to give the desired sound volume.

Trouble shooting

If there is no sound

- Check that the audio lead is connected to the correct computer outlet socket (“headphones”)
- Check that the computer sound output is not muted (remove the lead from the outlet socket - sound should be heard)
- Check Trouble shooting section of **Sections 6(i)**.

If mains hum is heard coming through the speakers in the hall, it might be cured by decreasing the volume control on the mixer slider setting and correspondingly increasing the volume on the computer sound output.



11. UPS (Uninterruptible Power Supply)

The audio system (but not the projector) is powered by a UPS unit*. This unit contains a battery which is on constant charge and which provides power for the audio system which is not interrupted by loss of mains power.

The UPS is switched on by depressing the **On/Off** button for about a second until the green light illuminates. It is switched off by pressing the same button for about a second until the green light goes out. Pressing the button for longer causes the unit to enter Program Mode; if you do this, just wait 5 seconds to exit Program Mode.

When the unit is switched on the green light is illuminated. When the unit is operating from its batteries, it beeps. If a red light comes on, there may be a malfunction. Further information is available in a manual kept by the UPS.

Only data sensitive equipment should be plugged into this unit.

The battery in the UPS is not user-replaceable (see manual for further information).

*Schneider Electric APC Back-UPS BX1400UI

12. Battery Requirements

Screen controller 2xAAA

Projector controller 2xAAA

DVD player controller 2xAA

Hand mikes 2xAA

Lapel mike 2xAA

User comments on the usefulness of this Guide	Name and Organisation