

CADMAN TELEVISION STUDIO

INSTRUCTION MANUAL

This manual is for reference after completing the technical instruction.
You must be signed off on SiSo before undertaking work in the studio.

To watch help videos, scan the QR code below.



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IF YOU ARE UNSURE

If you are unsure about how to use any of the equipment in the studio, firstly please rewatch the training videos using the QR code at the front of the booklet or speak to a technician.

POWERING UP THE STUDIO

The next few pages will explain in detail how to set up each piece of equipment separately, firstly though you must power up the studio.

Images follow on the next page for additional information.

Turn on each main orange switch at the top of both rack mounted units located next to the vision gallery door. Then starting from the middle to right you can turn on each individual piece of equipment.

On the middle rack mounted unit work downwards turning the power on for the vision mixer and, each camera unit (1-3).

The Prompting server should always be powered on, so you shouldn't need to power this unit on. If the blue light isn't on the unit, press the power button.

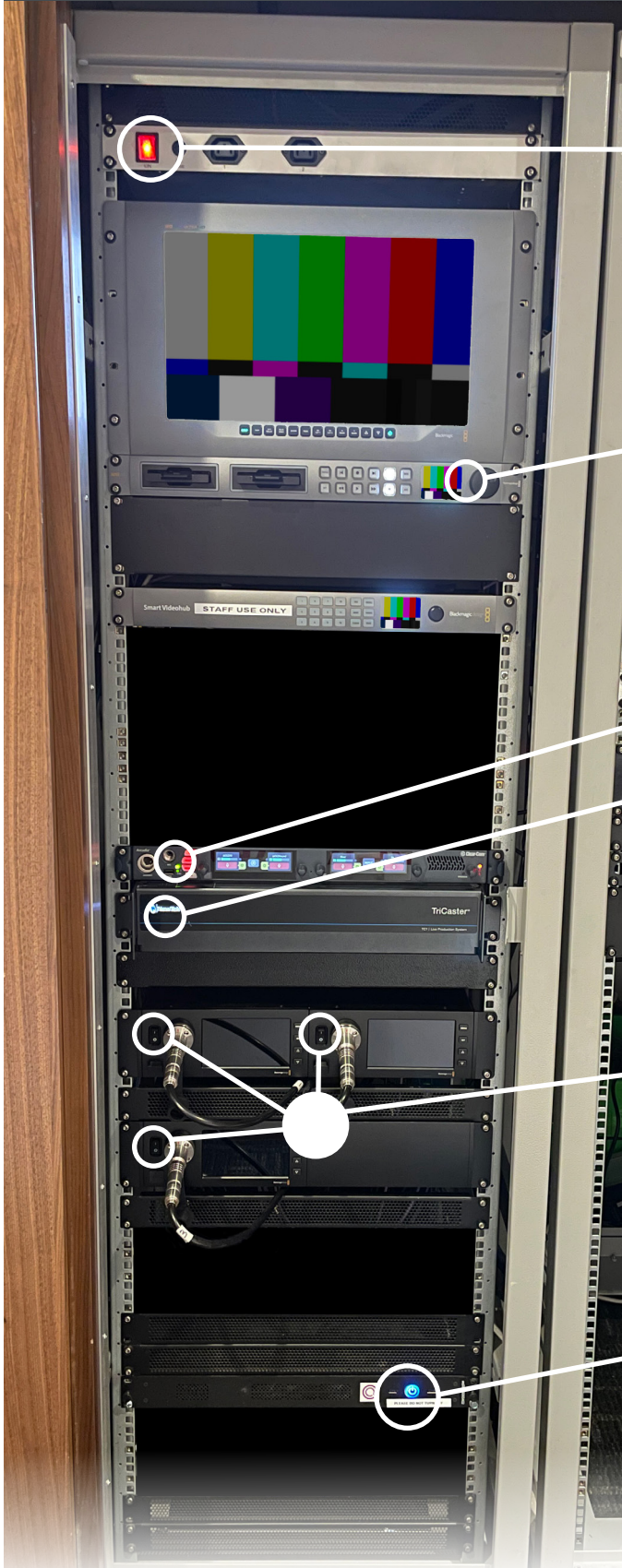
Finally, on the second rack, turn each microphone unit on by pushing the power button in for 3 seconds until each LCD screen lights up. Turn on the power for the talkback system and the receivers for the wireless presenter earpieces.

Now that all of this equipment has power, each room will need to be powered up individually which will be explained on **page 7**.

POWERING UP:

RACK ONE

THE FIRST RACK HAS NETWORK EQUIPMENT INSTALLED AND DOES NOT NEED POWERING ON



1



POWER BUTTON

Orange switch on each rack

RECORDER

This is a backup recorder, it will power on automatically

TALKBACK

This will power up automatically

2

VISION MIXER

Open the front cover of the 'TriCaster' and press the button on the left hand side. Ensure you close the front before closing the rack door.

3

CAMERAS

The power switch to the left of the small screens power on each camera individually.

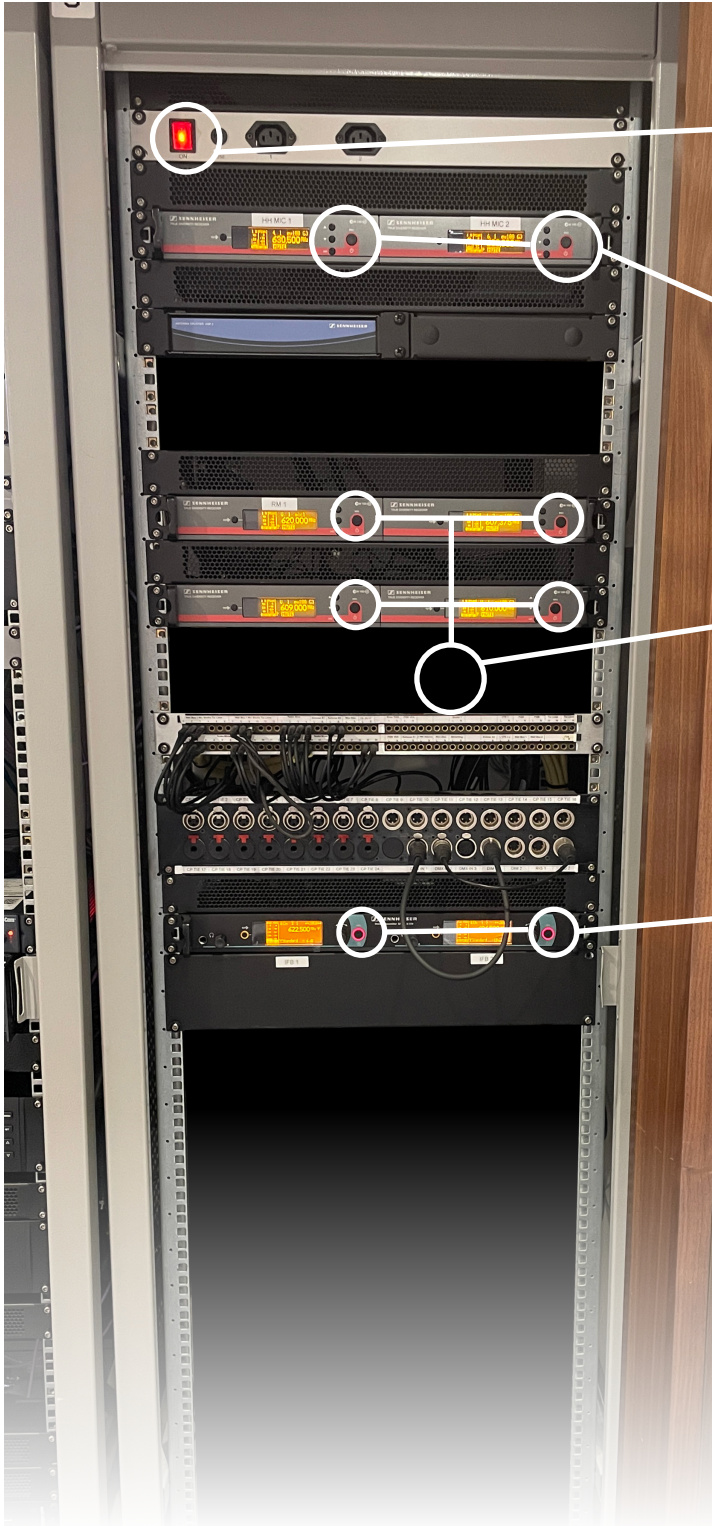
4

PROMPTER

This unit should always be left on, if it isn't, press this power button.

POWERING UP:

RACK TWO



1

POWER BUTTON

Orange switch on each rack

2

MICROPHONES (HANDHELD)

This will power up the two handheld microphones in the Audio Gallery.

3

MICROPHONES (LAVALIER)

If you are using the microphones already in the studio, power on these four receiver boxes.

4

IFB'S (PRESENTER EARPIECES)

Powering on this unit will ensure your presenters can hear the gallery as and when needed via the 'in ears' button on the talkback

POWERING UP: THE VISION GALLERY

The Vision Gallery is made up of a number of different pieces of kit to ensure a programme can be created. This kit includes:

- * Prompter
- * Graphics PC
- * Vision Mixer
- * RCP's (Camera Remote Control Panel)

You can power up the gallery using the Orange switches on the top of the desks.



This will power up the desk and monitors.

The prompting computer will need to be powered up separately underneath the desk if not already on.

Log on to the prompter machine with your standard University username and password.

Log on to the graphics machine with your standard University username and password.

ON AIR LIGHT



Use the switch located next to the vision mixer to power on the light above the door to the studio floor.



POWERING UP:

THE AUDIO / LIGHTING GALLERY

This room is made up of an audio mixing desk, a lighting desk a talkback unit and monitors.

Power on the orange switch to the left hand side of the desk. This will power all the screens, the lighting desk and the audio desk.

If the audio desk does not power on, ensure the power button on the right hand side, at the back of the unit, is pushed in.

There is a piece of kit called the 'Loudness Monitor' to the right of the audio desk hold in the power button for a few seconds and the unit will power up.



After these have been powered up, you are all ready to start making your programme!

WORKING WITH... THE PROMPTER

Once you have logged on to the prompter computer and ensured the system is turned on in the rack, you can launch the **QSeries Client** app. The first thing you should see is the Queue Browser, but if you don't, go to File > Open Queue...

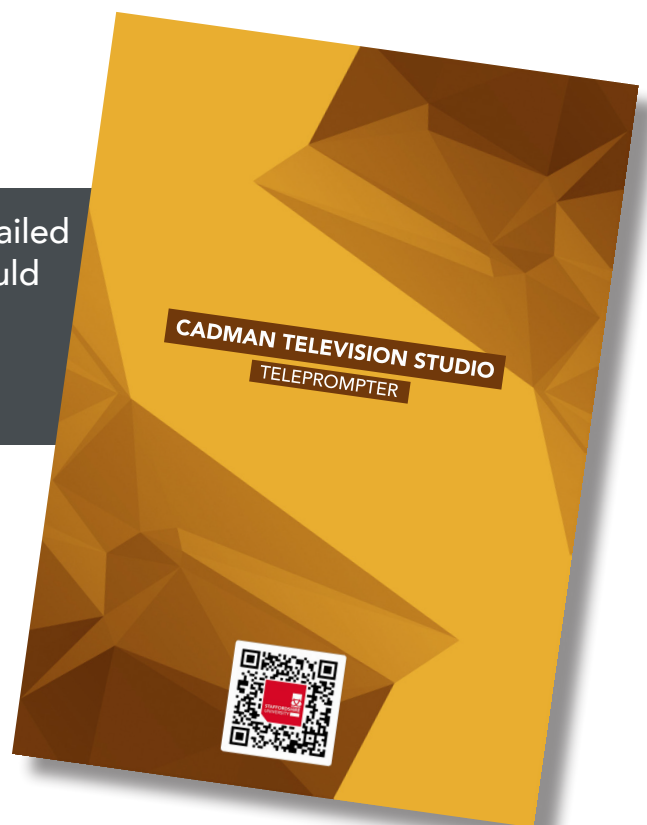
...Choose which level you are, L4, L5, L6 and select a Queue template within this folder. From here, you can right click in the Queue (in Pane 1) and select New Script. Give it a title, and click OK.

You can then start typing your script into the text box on the right, or instead, copy and paste from another source, such as Microsoft Word.

Pressing Prompt > Update Prompt Text, will update your script as you type.

The prompter manual will have a more detailed explanation of how to use the system, should you have any issues.

Please refer to this guide for help.



You are also able to write your scripts in the open access Macs in the Broadcast Newsroom (Windows partition).

Open up the software entitled **NewBlue Titler Present Standalone**.

Adjust these settings before you start making your graphics:

**Settings > Project Settings >
1080 50p Progressive > OK**

On the right hand side of the software, change the dropdown box from 'None' to 'NDI'.

You can now start to make your graphics.

On the bottom left hand side of the screen, you will find pre-made templates that you can use, by single clicking any of these thumbnails it will play a preview of the template in the left hand side screen, if you are happy with the graphic, drag and drop this to the right hand side of the software.

A small clock face will appear as the computer renders out this graphic, once the clock face disappears, pressing the spacebar will display this on the right hand side window.

To ensure this appears on your main programme output, ensure you have assigned one of the DSK's (Keys 1-4) to display 'PC GFX', with this key enabled, this will output your graphics to your main programme.

If you can't see what you are looking for, or need assistance with importing your own graphics, please scan the QR code at the front of this booklet or speak to a technician.

The talkback system features eight units, consisting of:

VISION GALLERY

Prompter rack mounted unit
 Vision mixer desk mounted unit
 Producer rack mounted unit

AUDIO GALLERY

Audio Gallery desk mounted unit
 Three wireless units
 (for camera operators / floor managers)

A rack room mounted unit

To use the units, first ensure that you have powered up each desk using the orange fused switches, then;

To use a rack mounted unit:

Press the 'talk' button underneath one of the four options and talk into either the gooseneck microphone, or connect a pair of headphones, let go of the button when you have finished talking.

To use a desk mounted unit:

Press the 'talk' button underneath one of the screens and talk. To change the screen to the second page, press the 'Shift' button. Then talk into either the gooseneck microphone, or connect a pair of headphones, let go of the button when you have finished talking.

To use a wireless unit:

Collect a unit from the charging station in the Audio Gallery, press the power button on the top of the unit and connect a headset. Then choose your role, either Camera or Floor Manager and press the **D** button. This will then give you four options on the screen, press the corresponding number and talk. Let go of the button when you have finished talking.

Please note: all other areas with a talkback unit will be able to hear your conversations at all times. Please keep communications professional and brief.

WORKING WITH... THE VISION MIXER

The Vision Mixer is the main control centre of the entire gallery.

Once you have started up the mixer in the rack, log on using the password: cadman

After thirty seconds you will be displayed with a welcome screen.

If you haven't created a session yet, press 'New Session' and base it on the template '50p HD Template'. This will ensure all your camera feeds and audio routing is set up correctly.

Once this has completed, press 'Start Production', this will now load your workspace.

On the left monitor, you will see all of your inputs, from cameras, DDR's (Digital Disk Recorders, or VT's), graphics, PC inputs and M/E's (Mix / Effects).

The right monitor shows you your Preview (up next) shot and your Program (what is live) shot, as well as a live production clock.



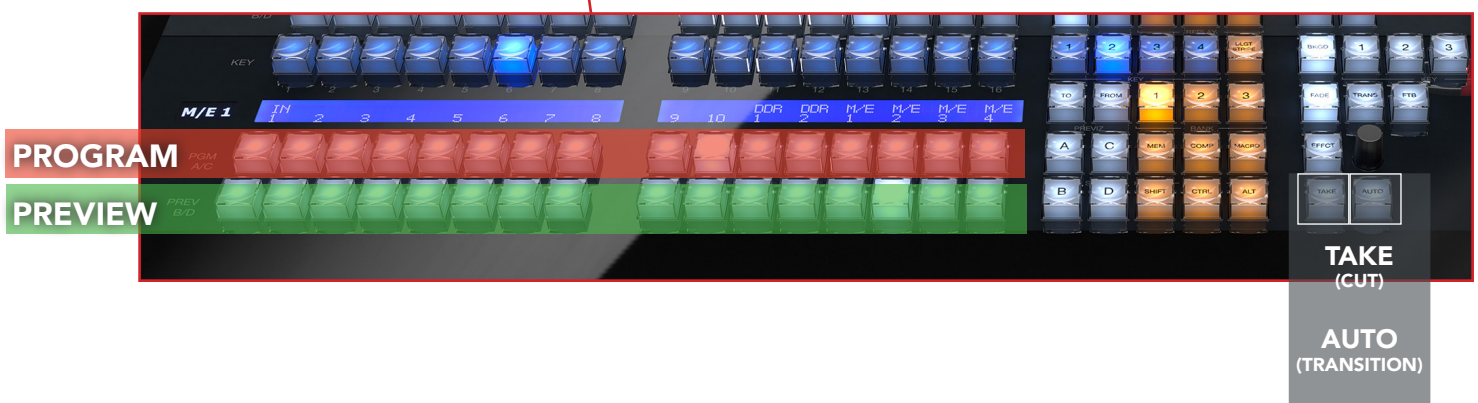
WORKING WITH... THE VISION MIXER

The 'Control Surface' will allow you to switch between cameras, add live graphics and much more.

The bottom green row, allows you to select an input to preview, when you are ready to put this feed live, press either the 'Take' or 'Auto' buttons to the right hand side of the desk. The 'Take' button is a direct cut, the 'Auto' button will apply either a fade, or transition, depending on which button is selected above it.



© Vizrt



This is a very short overview of the vision mixer's potential, for additional information or training, please scan the QR code at the front of the booklet or speak to a technician.

THE REMOTE CONTROL PANELS (RCP'S)

In it's simplest form, the RCP's are where you can make changes to the camera settings, look and style.

From this panel you are able to white balance cameras and adjust the iris, gain and RGB levels.



Different parameters can be accessed via the six buttons located above the panel's ID display, these act as sub menus for the various controllable parameters within the camera. Between sessions these parameters may get adjusted, creating unwanted results when you come to use it and the default values for certain parameters can cause confusion, see below.

Contrast: 50%

Hue: 180°

White Balance: 4200k

(This is only a recommended figure and will vary dependant on the lighting colour temperature)

Remember: If you are including theatrical colour lights in your programme, turn these off whilst you are setting the white balance, or the system will try and balance out the colour.

WORKING WITH... THE AUDIO MIXER

Ensure you have followed the **powering up** section on page 8 first.

The audio desk features up to 32 channels of audio input. These feeds are labelled below the faders.



PAGES 1 / 2
Please do not make any changes within the other two buttons

Ensure the 'On' button is selected for the inputs you need.

Do not adjust these dials

STEREO Master fader should be at 0

© Yamaha

Lav Mics: The wireless clip on microphones in the boxes located to the right of the audio desk

Handheld Mics: The wireless handholds located to the right of the audio desk

DDR's: The audio from any VT's playing from the Vision Gallery

GFX: Audio from the graphics machine located within the Vision Gallery

Sound: Audio from the graphics machine located within the Vision Gallery

Effects: Sounds from animated transitions played from the vision mixer

Skype: Audio output from the Skype channels (this may need setting up further once you are in the call, please speak to a technician)

PC: Audio output from the PC to the right of the audio desk. Please log in with your standard university account.

Wallbox 1 & 2: Connect additional mics using the input modules on each side of the studio floor. Ensure you are on page two (shown on the top left of the image) to adjust these inputs. These can be set up for Mic or Line level, depending on the input source being used.

All of the audio desk settings have been set up and should not be altered. If you are in any doubt, please speak to a technician.

Solo- allows you to listen to the audio that is coming through the feed without outputting it to your main programme. Make sure the 2TR IN button is depressed out if you wish to use this function (located at top-right side of desk). Once complete, activate the button again.

THE LIGHTING DESK

Ensure you have followed the **powering up** section on page 8 first.

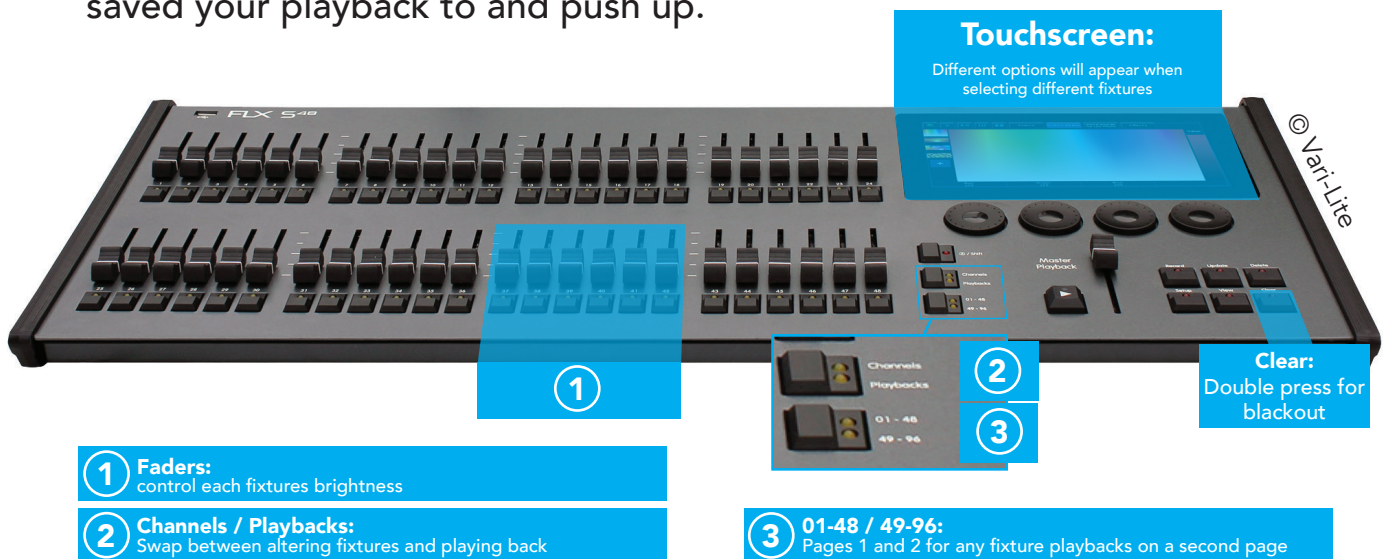
Once the lighting desk is powered up the inbuilt screen will show all the available fixtures (1-48).

Each fader on the desk is assigned to a lighting fixture. Each fixture is labelled as such on the inbuilt monitor on the right hand side. As you move the fader up, you will see a red number increase, from 0-100, this is the percentage intensity of the light.

The monitor in front of the lighting desk shows a live output from the studio floor, to make it easier to plot lights.

By pressing the button underneath the fader, the touchscreen information will change. Here you can change a fixtures colour, position (if the lights are moving head fixtures) and shape (if the lighting fixture allows).

Saving & playing back: Once you are happy with your lighting setup, press the 'Record' button, any available slots will flash, press any available slot to save. Double press 'Clear' to turn off all fixtures. To play back, ensure you are in 'Playbacks' not 'Channels', find the fader you saved your playback to and push up.



Please Note:

The lighting fixtures are set in place and cannot be moved without discussion with a technician.

DDR's (DIGITAL DISK RECORDERS)

The vision mixer has two dedicated DDR's, which are more commonly referred to as VT's.

Any edited VT's that you would like to use in your programme need to be imported into the mixer before your broadcast. This includes moving graphics, intro titles and animated credits etc.

The mixer accepts a whole range of formats, but to ensure smooth playback, the ideal format is:

1920x1080, 50fps. Export your VT as a H.264 MP4 video with a high bitrate.

Import to the player...

To import your VT, first copy over the file to a hard drive or large capacity memory stick. Then, put the memory stick into the USB port next to the control surface.

On the GUI monitor in front of the mixer, go to the top right hand corner of the screen, choose File > Import. Navigate to your hard drive and select the clips you'd like to import and press OK.

At the bottom of the screen select whether you'd like the clips to be imported into DDR 1 or DDR 2, select either DDR (you can move these clips afterward if you change your mind) and press import.

Depending on the length of your VT's, this may take a few minutes to import. We recommend importing all your VT's before your programme recording as the importing of clips may affect the performance of the vision mixer.

After the import has finished, these clips are ready to play from the DDR's.

There is another way to import your VT's, information on the next page.

RECORDING, IMPORTING & EXPORTING

Recording your programme

To record your output, press the 'Rec' button on the control surface. The button will turn red.

To stop the recording press the shift button and 'Rec' (this stops any accidental presses).

Importing VT's from Cadman

On any Mac in G001, click the 'Vision Mixer File Drop' icon, open the 'Imports' folder and drag your footage to this folder. Then when you open your session on the mixer, press the + on a DDR and navigate to 'My Media Locations' on the left hand side. Your imports should appear.

Exporting your programme

The mixer will record your programme in a large, uncompressed format. To export your programme to a smaller, more manageable format, you will need to encode it.

To do this, press the cog next to the 'Export' button at the top of the screen. Ensure H.264 is selected (unless you wish to export in a different format). Then press 'Export Media' at the top of the drop down.

Press 'Add' and navigate to any clips you want exporting. Your recordings should be in a folder called 'Recent'. Select them and press OK. Once all your clips are in, press 'Export'.

This may take some time, so ensure you have factored in any transcoding and exporting time into your studio booking time.

Once the transcoding has finished, you can download / copy these from any Mac in G001. Click the 'Vision Mixer File Drop' icon on the desktop and find your export.

Please ensure you backup any exports once you have copied them over.
All exports will be deleted at the end of each semester.

If you are having issues with the import / export process please speak to a technician.

TROUBLESHOOTING

If you are having issues with the studio, the below troubleshooting guide should help you solve some common problems.

If you are still having problems or are unsure about something, please scan the QR code at the front of the booklet or speak to a technician.

Issue	Solution
The cameras aren't showing up on my inputs screen.	Double check you have followed the power on section fully, then; * Ensure that the 'cap' button is not pressed on the CCU. * On the camera itself ensure the power switch is set to 'CCU', not to 'Standby' *Speak to a technician.
I cannot hear anything through the microphones.	Double check you have followed the power on section fully, then; *Ensure you have fresh AA batteries in the transmitter. * Ensure you have the correct fader chosen for the correct microphone (they are numbered on the back) *Speak to a technician

UNSURE ON SOMETHING?

SPEAK TO OUR STUDIO TECHNICIANS

