



 dataton

W A T C H P A X

DATATON WATCHPAX 4 – USER’S GUIDE

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1. INTRODUCTION

WATCHPAX 4 is a dedicated display server with four video outputs and a built-in Dataton WATCHOUT license. It features a high-performance specification designed solely with WATCHOUT shows in mind. The four DisplayPort outputs support 4K (UHD) playback, making it a powerful and portable alternative to display servers in a multi-display setup.

WATCHPAX 4 is a locked-down unit, preconfigured for playback of WATCHOUT shows and, therefore, ready to be used straight out-of-the-box. Multiple units can be installed together in a rig or mixed with Dataton's other display servers WATCHMAX or WATCHPAX 2.

WATCHPAX 4 is compact, sturdy and stackable. Each unit weighs just under 3 kg, making it easy to transport. Other practical details include a strap handle, rubber bumpers and Kensington security slot. Two units may also be mounted together and installed in a 19-inch rack.

WHAT'S WATCHOUT?

Dataton WATCHOUT is the leading multi-display production and presentation software. Use WATCHOUT to orchestrate images, video, lighting, 3D and interactivity into a single impressive show. The essential components of a WATCHOUT show are the software, display servers and display devices, all running on a standard network. In an operational setup, WATCHOUT license keys are required for each display server. This license key is built into WATCHPAX 4.

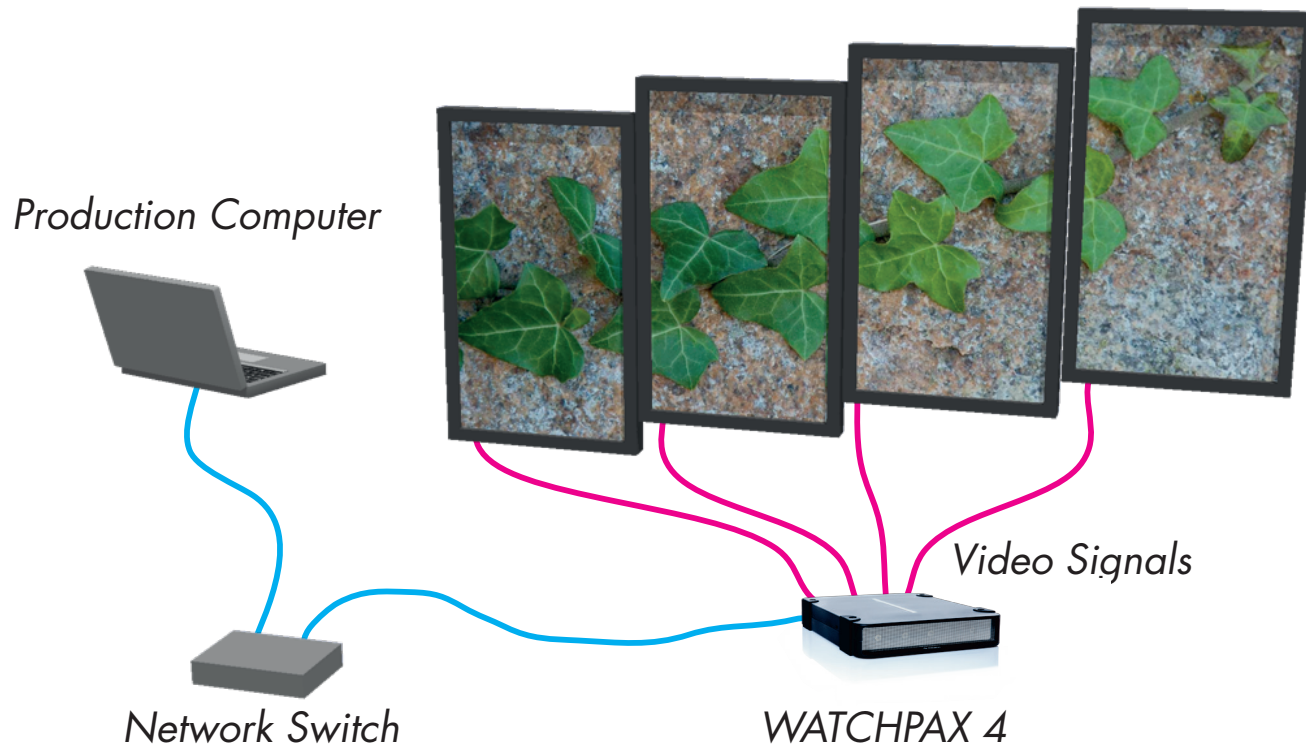
WATCHOUT shows can be presented with multiple projectors for large, seamless images or used with monitors, LED walls or other creative screen arrangements. WATCHOUT also has a strong set of projection and pixel-mapping features for applying content to complex three-dimensional objects.

Download WATCHOUT for free from the Dataton website: www.dataton.com



SYSTEM OVERVIEW

WATCHPAX 4 is used as part of a WATCHOUT multi-display system.



A small WATCHOUT system with WATCHPAX 4

In the illustration above, there is a laptop (production computer) running WATCHOUT software and equipped with a WATCHOUT license key. This connects to a network switch which, in turn, connects to a Dataton WATCHPAX 4 player (acting as the display computer). The WATCHPAX unit connects and manages the display devices. In the example, these consist of four LED screens.

HINT: When connecting a single display computer to the production computer, a network switch may not be required.

WATCHPAX 4 IN YOUR RIG

The WATCHPAX has four DisplayPort outputs. Used as is, it will manage four display devices in your presentation. Splitters may also be used to increase the number of display devices managed.

As you increase the number of display devices in your show, add WATCHPAX units as needed.

Each WATCHPAX 4 has a built-in WATCHOUT license. That means that if you use Dataton's dedicated media players/servers (WATCHPAX, WATCHPAX 4 or WATCHMAX) the only additional license key required is for your production computer. If you are not using a Dataton WATCHPAX 2, WATCHPAX 4 or WATCHMAX you would need a WATCHOUT license key for each display computer.

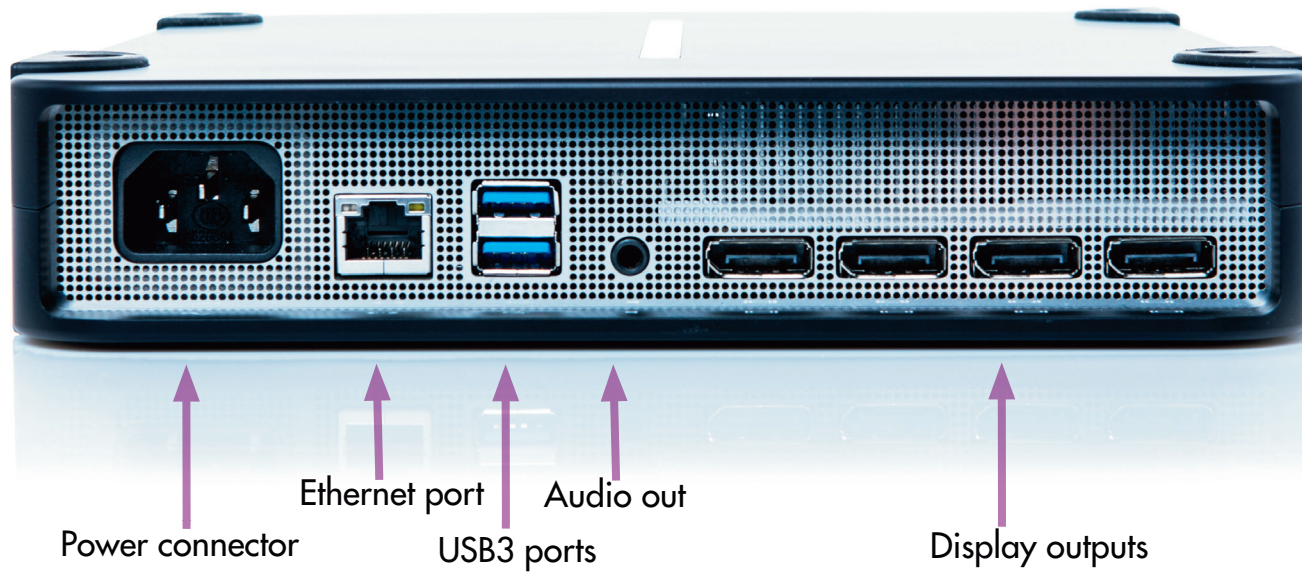
DISPLAY DEVICES

In the illustration above, four LED screens are used as the display devices. However, WATCHOUT can be used with virtually any display device that can be connected to a computer (such as projectors, LCD panels, LED walls etc).

TECHNICAL SPECIFICATION

DIMENSIONS

Width 214 mm
Height 43 mm
Depth 276 mm
Weight 2950 g



CONNECTORS

The picture above shows the rear panel of the WATCHPAX 4 unit.

Power connector

IEC C14 power inlet
Input voltage 85 to 264 VAC, 50 to 60 Hz
Power consumption max 250 W (internal 3.14 A fuse)
Unit contains a 3 V coin-cell battery to power the RTC (real-time clock) circuitry

Ethernet port

RJ45 Gbit Ethernet

USB ports

Two USB 3.0 connectors

Audio

3.5 mm stereo audio out connector

Video outputs

Four full-size DisplayPort outputs, 4K (UHD) playback

ENVIRONMENTAL

Temperature range

Operating 0 to +40 °C.
Storage and transportation -20 to +50 °C.

Relative humidity

Operating, storage and transportation 10 to 90 % (non-condensing).

Altitude

Operating max 2000 m above sea level.
Storage and transportation max 12000 m above sea level.

DISPOSAL

Only for European Union and EEA (Norway, Iceland and Liechtenstein)



This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU), the Battery Directive (2006/66/EC) and/or national legislation implementing those Directives.

If a chemical symbol is printed beneath the symbol shown above, in accordance with the Battery Directive, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in this battery or accumulator at a concentration above an applicable threshold specified in the Battery Directive.

This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE) and batteries and accumulators. Improper handling of this type of waste could have a possible impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources.

For more information about the recycling of this product, please contact your local city office, waste authority, approved scheme or your household waste disposal.

2. INSTALLATION AND OPERATION

BEFORE USING YOUR WATCHPAX 4

Please read the manual thoroughly before operation. WATCHPAX 4 is a plug-and-play unit – do not open, modify or repair the unit yourself. This invalidates the warranty and presents a risk for the user.

SAFETY FIRST

- To reduce risk of electrical shock, do not remove cover. Refer all servicing to Dataton. The unit shall be connected to a grounded outlet.
- High voltage runs through the product. Do not attempt to disassemble, repair, or modify the product on your own. Any attempt to do so will void the warranty.
- Do not use a damaged power cord or plug.
- Do not touch the power plug with wet hands.
- Insert the power plug all the way in, so it is not loose.
- Do not place the power cord or product near heat sources.
- Avoid installing the product in a narrow space with bad ventilation. Always keep front and back of unit clear, minimum 200 mm.
- Always keep plastic packaging away from children.
- Do not install the product on an unstable or vibrating surface.
- Do not suspend the unit using the strap handle or use the strap as an anchor point.
- Do not install the product in a place where it is exposed to dust, moisture, oil or smoke.
- Take care not to drop the product when moving it.
- When installing the product on a shelf, ensure the bottom edge of the product does not protrude.
- Installing the product in an unusual place (e.g., where the product is exposed to a lot of dust, chemicals, high temperatures, presence of moisture etc) may seriously affect its performance and lifetime.
- To move the product, first disconnect all the cables from it.
- If the product emits a burning smell, or smoke, remove the power cord immediately and contact Dataton.
- If the product falls, or the exterior is damaged, remove the power cord and contact Dataton.
- If there is a risk of thunderstorm or lightning strike, turn off the power and disconnect all cables.
- Ensure the front and back of unit are not blocked in any way. These are necessary for proper ventilation and require a clear space of minimum 200 mm.
- Do not insert a metallic object or inflammable object into any opening of the product.
- Only use the supplied screws and brackets for mounting in 19" rack.
- Unplug this product from the AC power supply before cleaning with a dry or very slightly damp cloth. Do not use liquid or aerosol cleaners on the product.
- After storage in cold conditions, let the product acclimatise to normal temperature for two hours before powering on.

FCC NOTICE

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

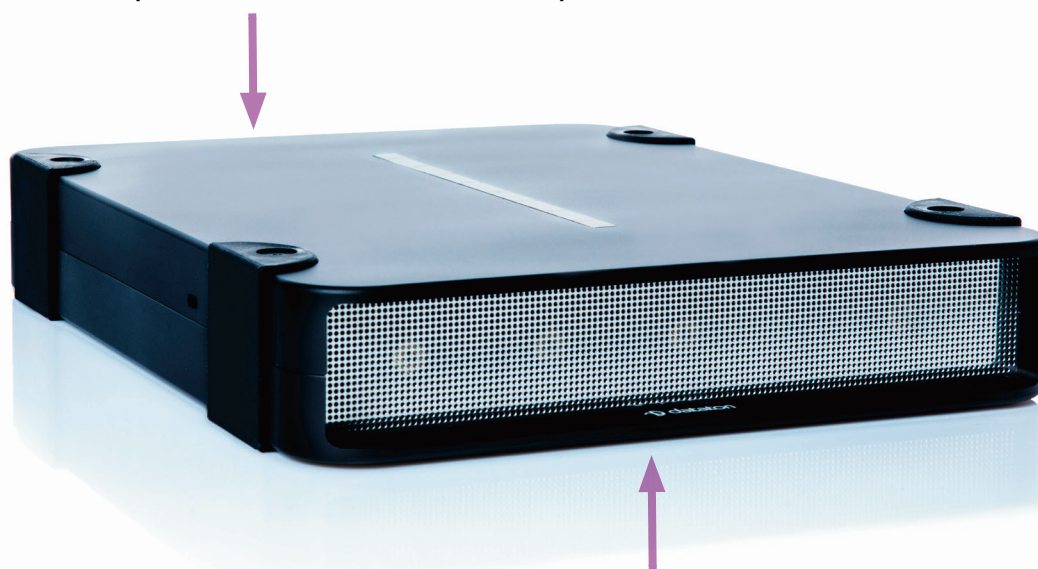
Use of a shielded Ethernet cable is required to comply with class B limits in Subpart B of Part 15 of FCC Rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the instructions. If such changes or modifications should be made, you could be required to stop operation of the equipment.

VENTILATION

IMPORTANT: Airflow is critical for the correct operation of WATCHPAX 4. There are four built-in fans which maintain airflow and cooling during operation. Air flows from the front of the unit to the rear. Keep therefore both front and rear panels clear of obstruction at all times. In an installation, there should be a minimum of 200 mm clear space at front and 200 mm at back of the unit.

Air outlet: do not block.
Keep a minimum 200 mm clear space at rear of unit



Air inlet: do not block.
Keep a minimum 200 mm clear space at front of unit

INSTALLATION

STANDALONE

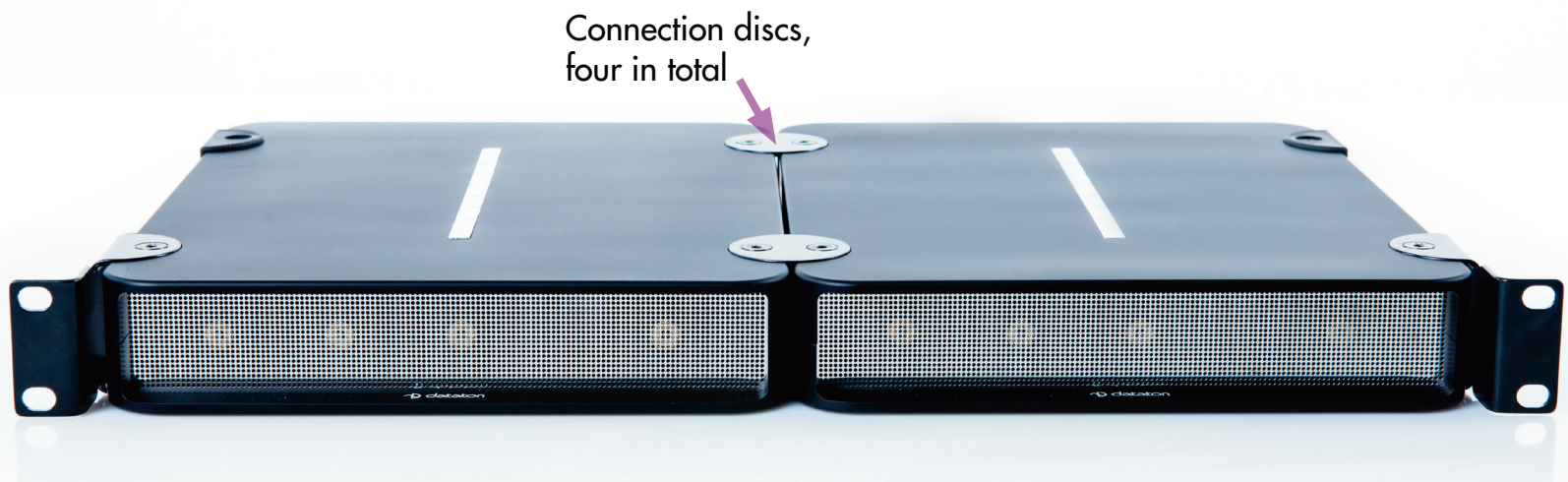
Place the unit flat. The base is the side of the unit showing the serial number and Dataton logo.

IN 19-INCH RACK

Two WATCHPAX 4 units may be joined together and inserted into a 19-inch rack.

IMPORTANT: The two units are attached with brackets at the front. The rack must therefore be equipped with a shelf at the back to support the units.

- Using a hex key, remove the rubber bumpers on both units and retain the screws. Save the bumpers in case you wish to re-mount them at a later date.
- Place the two units side-by-side and join them along the center line with the connection discs. Using the screws from the bumpers, first mount two discs on the top of the units. Carefully turn the unit over and mount the remaining two discs along the center line on the underside of the units.



- **IMPORTANT:** Always mount all four discs to ensure the units are safely joined together.
- Mount the two rack brackets (or ears) on the front corners of the joined units. These can be fitted facing forward or backward, depending on the airflow, and cabling.

OPERATION

POWER ON

There is no on/off switch on a WATCHPAX 4. The unit is turned on by inserting the power cord.

NOTE: The first time you power up the unit, WATCHPAX 4 will initiate an installation routine which typically takes about five minutes to complete.

POWER OFF

Unplug the power cord to turn off the unit.

WAKE-ON-LAN

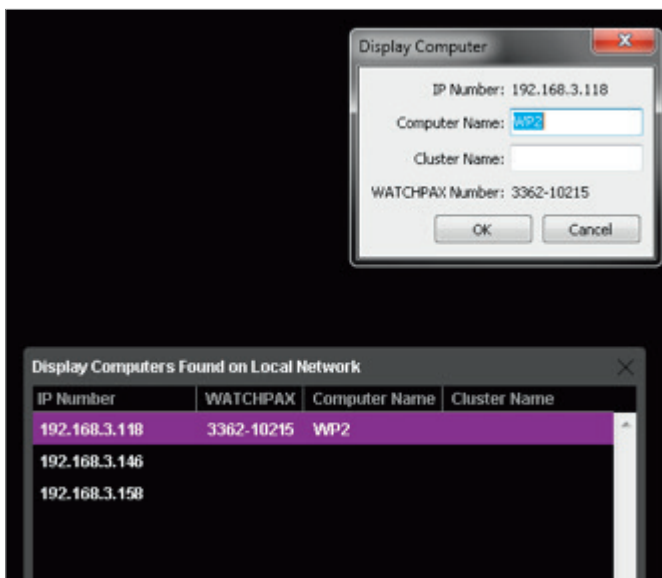
WATCHPAX 4 supports WakeOnLAN which enables users to remotely power on a computer or to wake it up from sleep mode by a network message from WATCHOUT or WATCHNET. Please see WATCHOUT and WATCHNET user guides for more information.

GETTING STARTED

- Connect the displays to the WATCHPAX 4.

NOTE: Both active and passive DisplayPort adapters to DVI/VGA/HDMI can be used with WATCHPAX 4. Use a passive adapter if you can guarantee continuous power-on for the projector/display or are certain it will already be powered up when you connect the WATCHPAX. Use an active adaptor if there is a risk that the projector/display will shut down while connected to a powered WATCHPAX.

- Connect the network to the WATCHPAX 4 using the Ethernet port.
- Insert the power cord to turn on the WATCHPAX 4. (Unit shall be connected to a grounded outlet.)
- Start WATCHOUT software on the production computer which is on the same network. Make sure you are using version 6.1.3 or higher.
- The WATCHPAX and any WATCHOUT display computers on the local network will be listed in *Window > Network*. Assign display and cluster names (if required) by double-clicking an item in the list, see screenshot.



WATCHPAX and display computers on the network

IP NUMBER ASSIGNMENT

WATCHPAX automatically retrieves an IP address via a DHCP server. If no DHCP server is available, the WATCHPAX will get a self-assigned IP address in the range 169.254.x.y

If you are using a control system, you may want to use a fixed IP address for WATCHPAX. Still in WATCHOUT, assign a fixed IP through the WATCHOUT protocol command "setIP" in the Startup Script as shown below:

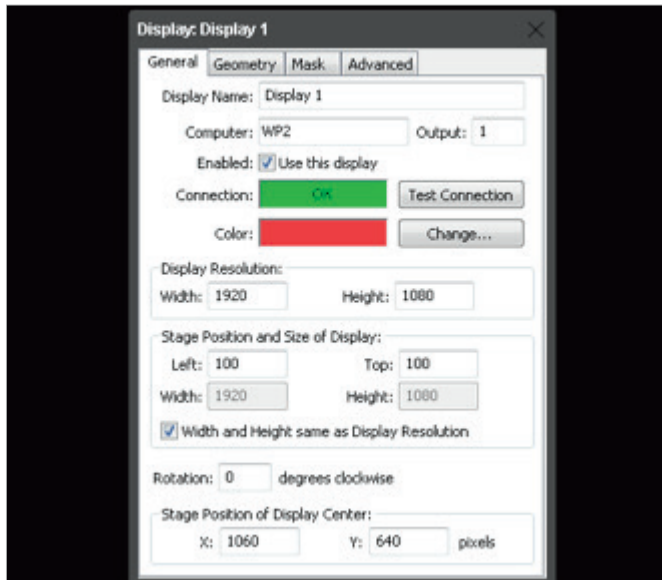
```
authenticate 2  
setIP 192.168.0.32
```

Make sure you choose an IP address in the correct subnet range. To remove the fixed IP number, use the same command but with an empty string parameter, as below:

```
authenticate 2  
setIP
```

SET NATIVE RESOLUTION

Double-click the display in the Stage window and set the native resolution of your screen or projector, see screenshot.



Set display resolution

AUTO START

A WATCHOUT production computer has to be connected when you compose or create your show. Once that's done, you can replace the production computer with an external control system, or auto-start the WATCHPAX by using the built-in Startup Script.

NOTE: Use Edit Startup Script in WATCHOUT to define initial WATCHPAX settings. This lets you load shows and perform other WATCHOUT protocol commands. For more information, please see the WATCHOUT User's Guide, Command Line Options, "Display Software".

DELETE FILES

To remove unused files from the WATCHPAX unit, open WATCHOUT on the production computer on the network. Go to the Stage menu, as below:

Stage > Manage Display Computer > Delete Other Shows

This deletes files from online display computers for all shows, with the exception of the current (open) show.

REBUILD SHOW CACHE

WATCHOUT usually manages the cached data associated with the current (open) show automatically. This ensures that the files stored on your WATCHPAX 4 reflect the latest version of the show.

Occasionally, for example if the files on the WATCHPAX 4 have been corrupted in some way, you may want to force the show cache to rebuild.

Open WATCHOUT on the production computer on the network. Go to the Stage menu, as below:

Stage > Manage Display Computer > Re-build Show Cache

This removes and rebuilds all cached data associated with the current show.