Calrec Assist Offline - Setup

Calrec Assist is an application that acts as a virtual desk. It has two implementations, online and offline:

- Calrec Assist *Online* can run in two ways:
  - It can be launched from the Console PC, allowing the current desk settings to be exported as a "Desk Package". A Desk Package contains a complete description of a particular console including channel counts, bus counts, number of faders, and all required I/O.
  - It can be accessed by an external PC or laptop connected to the console's control processor MAC or LAN port, allowing the control of a number of functions that would normally only be controlled from the console surface.

- Calrec Assist *Offline* runs within a virtual machine that can be installed to any external PC or laptop:
  - An exported Desk Package will allow the configuration of shows, memories, fader layouts, bus resources, patching and routing away from the console.
  - Shows created offline can then be imported into the live console.

Calrec Assist (Online and Offline) runs within the Google Chrome web browser and is supported from Apollo and Artemis software version 9.0 (Summa target yet TBC).

Calrec Assist Offline additionally utilises a virtual web server. As such, it can run on any Mac, Windows (Win7 or higher), or Linux device that can support Oracle's VM VirtualBox software.

This document specifically details the Calrec Assist Offline Windows 7 installation process.

Full operational details can be found in the V9 Assist Manual.

N.B. A minimum of 1.5Gb free disk space is required for the Calrec Assist Offline installation.
A PC or laptop with an I5 Intel or A10 AMD processor and 4Gb Ram is also recommended.

All necessary files and documentation have been made available for download from the Calrec FTP server:

URL: **http://ftp.calrec.com**
Username: **Assist_Offline**
Password: **N7IVM9X4**

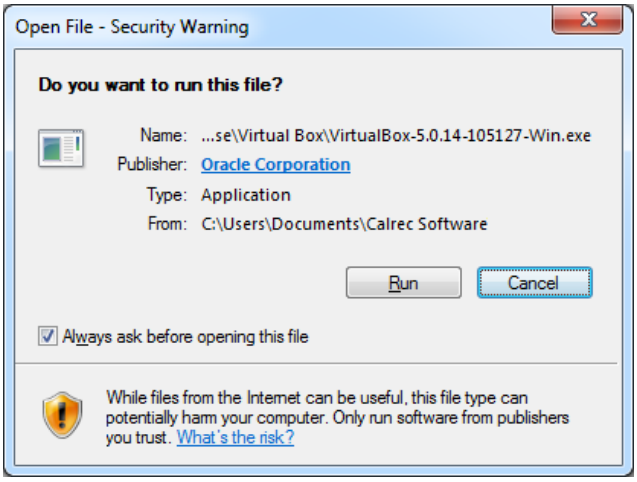
Calrec Assist Offline - Setup

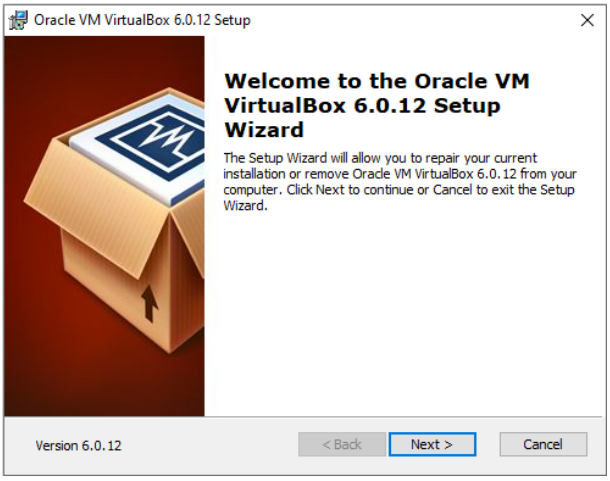
Configuring the Calrec Virtual Machine for Calrec Assist Offline

Install and configure Oracle VM VirtualBox

1. Download the latest version of VirtualBox from **https://www.virtualbox.org/**
   At the time of writing (09/09/19) the current version is: **`VirtualBox-6.0.12-133076-Win.exe`**

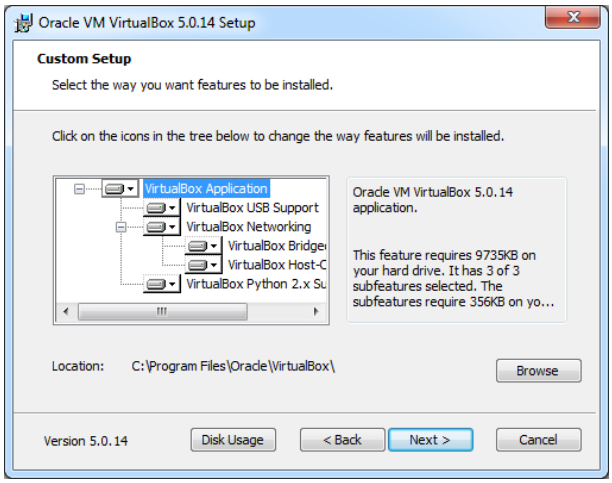
2. Install VirtualBox to your host PC or laptop:

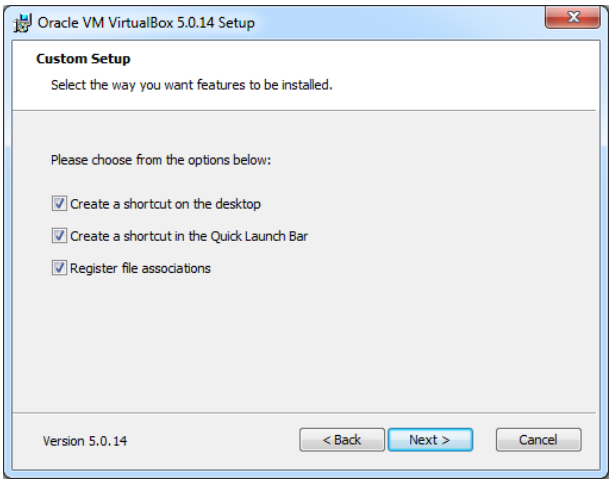




3. If the **`Open File – Security Warning`** dialogue is displayed (above left), please select **`Run`**, then click **`Next >`** to begin the installation (above right).

4. Install all VirtualBox components (below left).
   The default install location is **`C:\Program Files\Oracle\VirtualBox`**.
   To continue, select **`Next >`**, or to change this location, click **`Browse`** and manually choose a different install location.

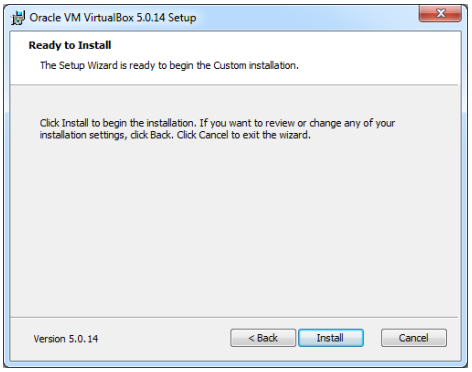


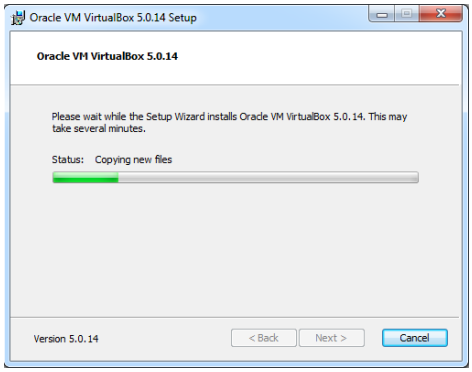


5. Ensure all options are ticked (above right), then click **`Next >`**.

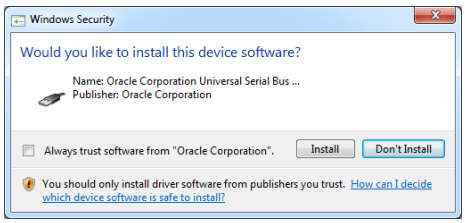
Calrec Assist Offline - Setup

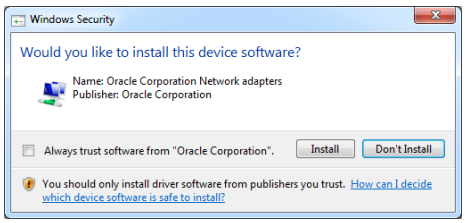
6. You will receive a warning that your PC or laptop's network adapter will be reset during the next stage of this installation. This is only a temporary interruption while VirtualBox installs a necessary virtual network adapter. Please select **`Yes`** (below left), then **`Install`** (below centre).

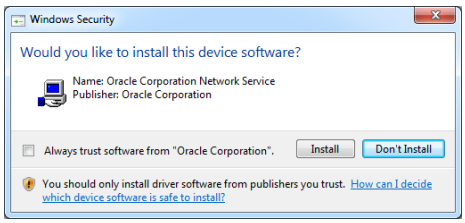




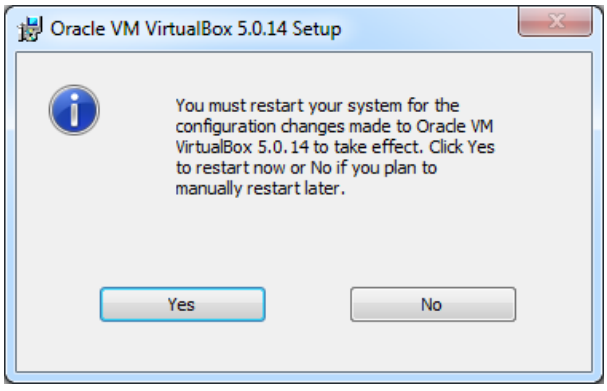
7. You will then receive three **`Windows Security`** warnings as the necessary Oracle drivers and network services are installed. In each case, please click **`Install`**.







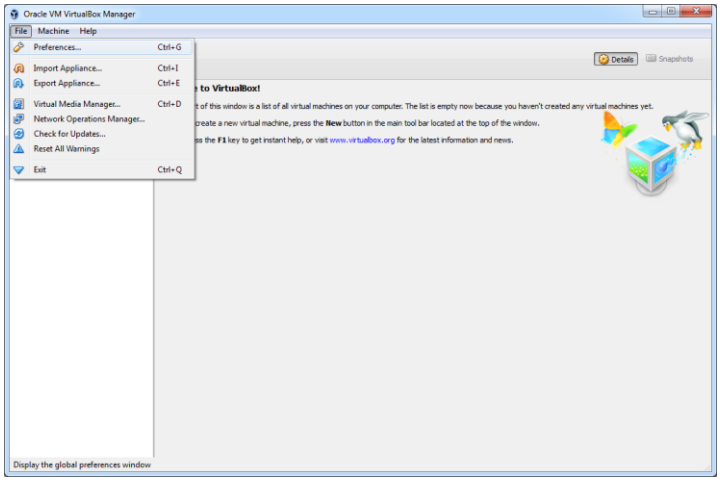
8. Once the installation is complete (below left), it may be necessary to restart your PC / Laptop before VirtualBox can be run correctly. If this is the case, please ensure any open files are saved before selecting **`Yes`** (below right). This will cause Windows to reboot.

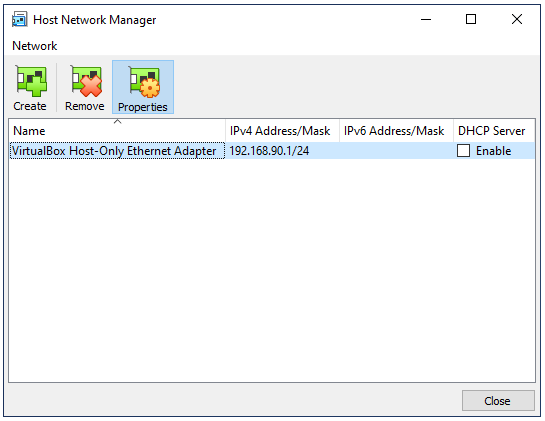


Calrec Assist Offline - Setup

9. Launch VirtualBox.
   If all options were ticked in step 5, a shortcut will be located on the desktop.

10. The VirtualBox front page will open, presenting an empty list (below left).
    In the **`File`** menu, select **`Host Network Manager`**…



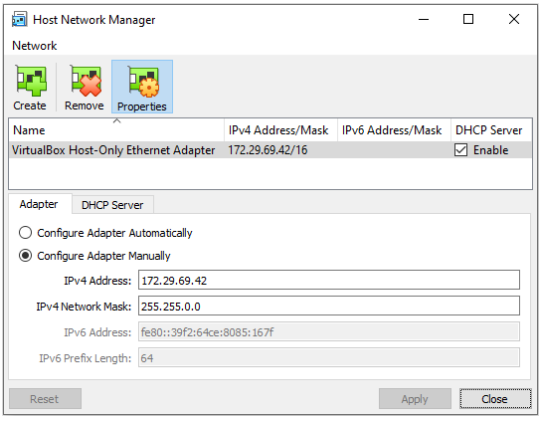


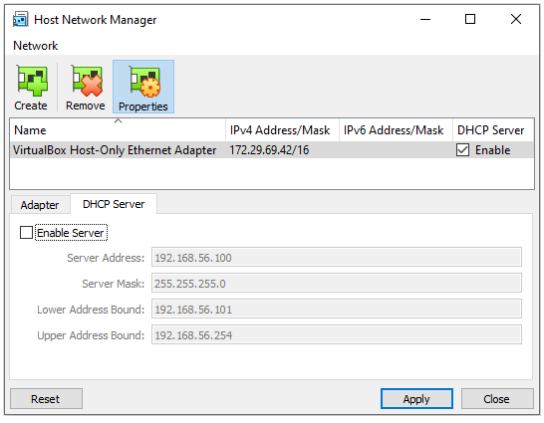
11. In the **`Host Network Manager`** window (above right), if the list is empty click the **`Create`** button to create a new adapter, otherwise highlight the adapter **`VirtualBox Host-Only Ethernet Adapter`**, then click on the **`properties`** icon in order to configure the adapter's settings.

12. On the **`Adapter`** tab (below left), select **`Configure Adapter Manually`** and set the IPv4 Address as follows:

```
IPv4 Address          = 172.29.69.42
IPv4 Network Mask     = 255.255.0.0
```

13. On the **`DHCP Server`** tab (below right), deselect (untick) the option **`Enable Server`**, then click **`Apply`**, then click **`Close`**.



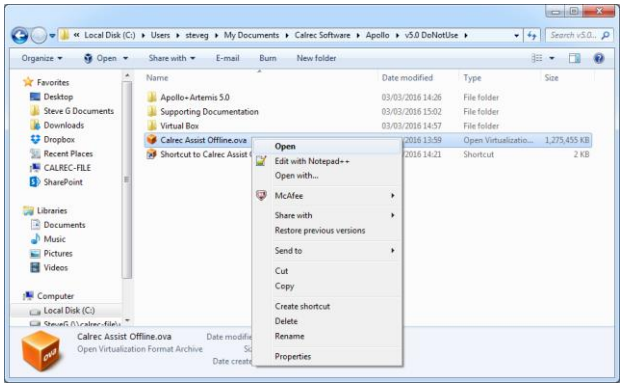


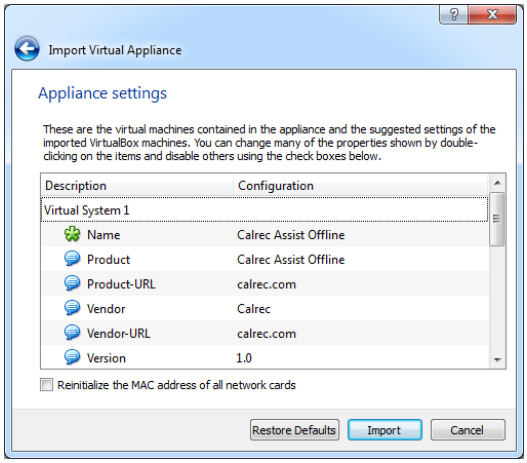
N.B. *The virtual adapter can also be configured in the Windows environment via the Network Connections window*

Calrec Assist Offline - Setup

Import the Calrec Virtual Machine

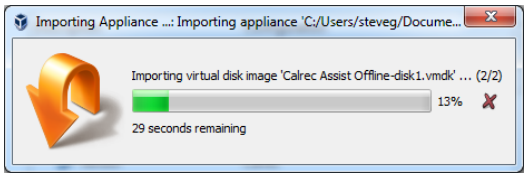
14. Open the Calrec Virtual Machine (below left). This file is called **`Calrec Assist Offline.ova`**.





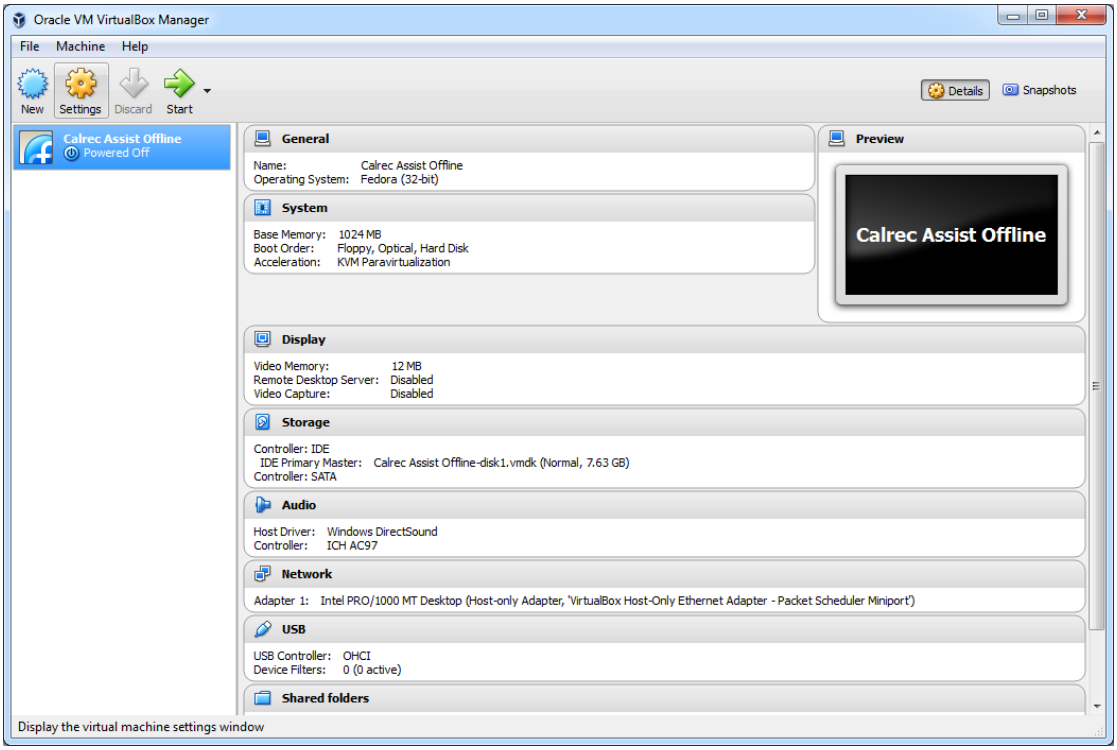
15. The **`Import Virtual Appliance`** window (above right) will list information about the Calrec Assist Offline virtual machine. These settings have been pre-configured by Calrec and do not require further configuration.

16. Click **`Import`** to begin the import of the virtual disk image. The progress of this import will be shown (right).



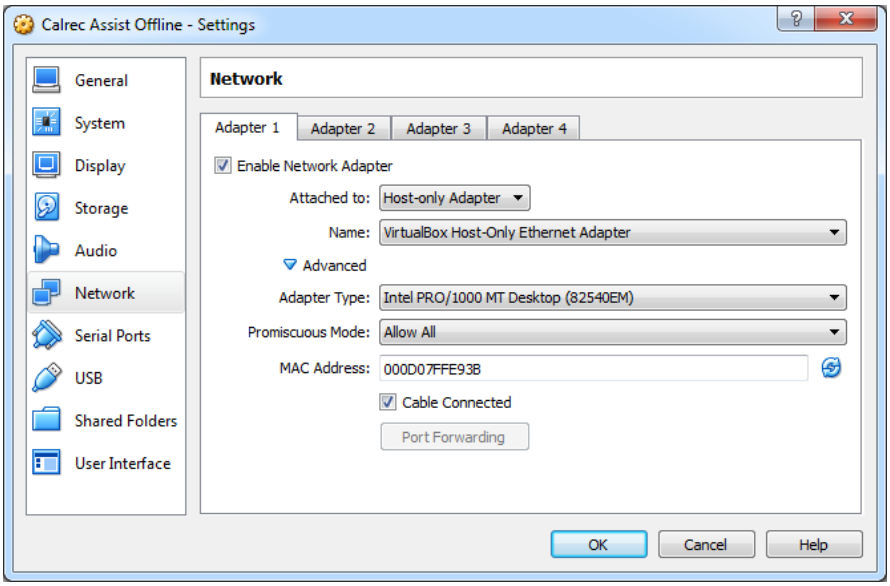
Configure the Calrec Virtual Machine

17. If more than one Virtual Machine is listed in the left-hand column, click once on the **`Calrec Assist Offline`** virtual machine to highlight it, then click **`Settings`** (below).



Calrec Assist Offline - Setup

18. In the **Calrec Assist Offline – Settings** window, select the **Network** view (below). Click on the **Adapter 1** tab, then click the **Advanced** arrow to reveal further options.



19. Ensure **Enable Network Adapter** is ticked, and that the name of the adapter selected is **VirtualBox Host-Only Ethernet Adapter**.

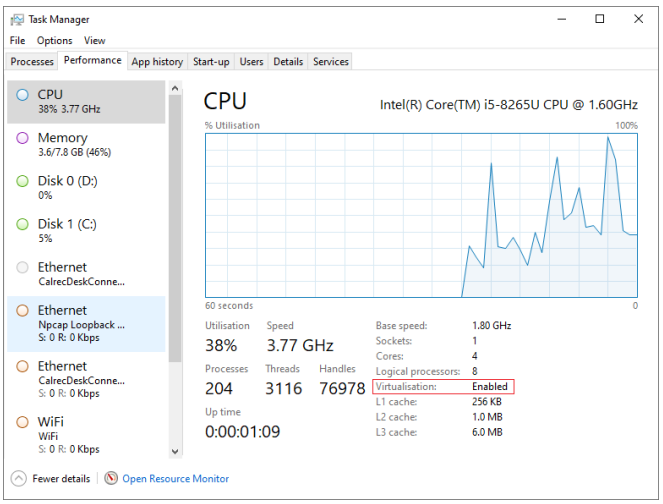
20. Ensure that **Promiscuous mode** is set to **Allow All**, then click **OK**.

Hardware Assisted Virtualisation

It is advised that Hardware Assisted Virtualisation (HAV) is enabled on the host machine, if supported. This is usually found in the BIOS settings of the computer that Calrec Assist Offline will be running on and may be referred to as “Intel VT-x”; “AMD-V”; or “ViA VT” depending on the Processor-Motherboard-BIOS combination. Often this is enabled by default.

For Windows 7:

Microsoft provide a “Hardware-Assisted Virtualization Detection Tool”:
https://www.microsoft.com/en-GB/download/details.aspx?id=592
This will inform if the host machine does or does not support HAV and if it is currently enabled or not.



For Windows 8 and Windows 10:

Open the Windows **Task Manager** and view the **Performance** tab.
Under the **CPU** graph, the system will state if **Virtualisation** is Enabled or Disabled.

Calrec Assist Offline - Setup

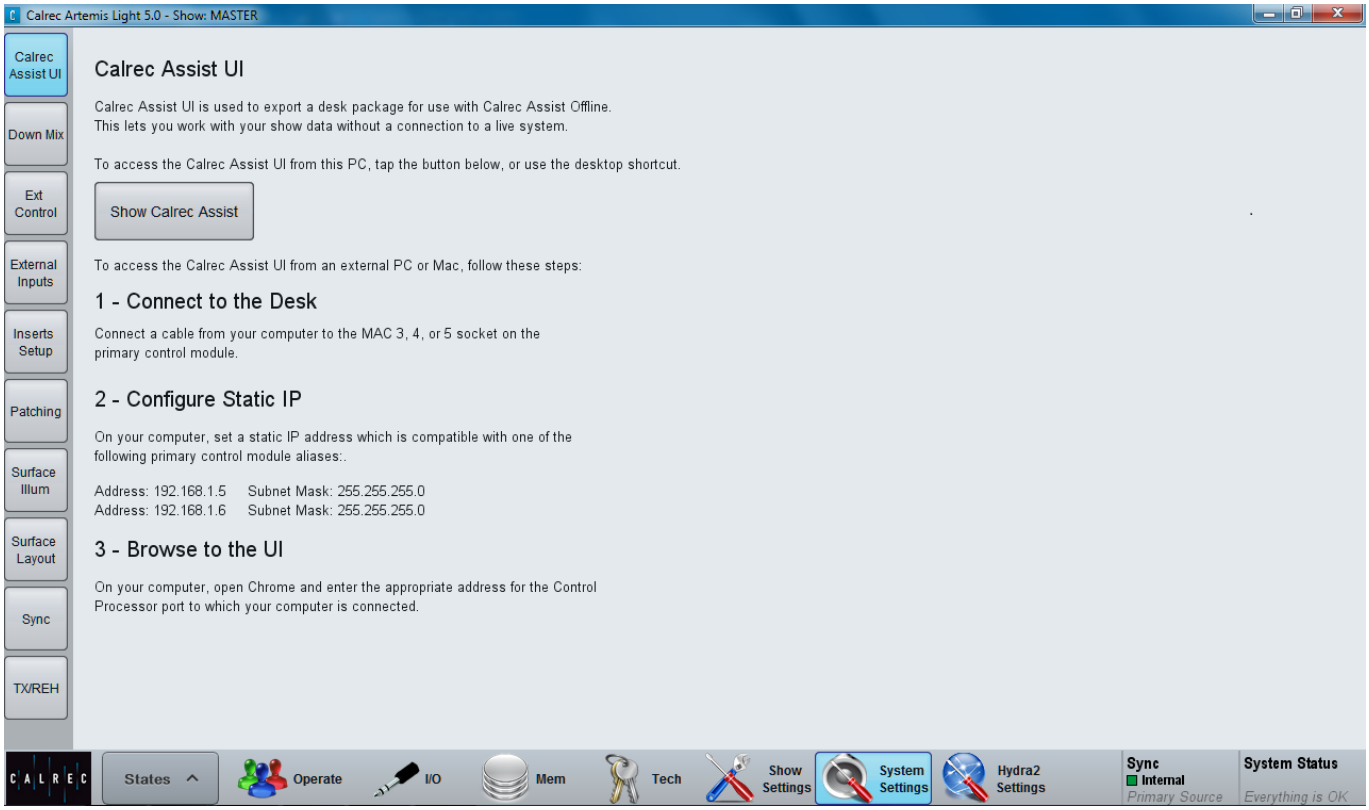
Exporting a Desk Package from a Live Console

Before running the Calrec Assist Offline editor, it is first necessary to export a “desk package” from a live console using the Calrec Assist Online UI. This desk package contains data specific to the console, including (but not limited to) channel counts, bus counts, number of faders, required I/O, databases and software version information.

Connecting to Calrec Assist Online from the Console PC

There are two ways to launch Calrec Assist Online from the Console PC:

1. In the **`Calrec Console PC Application`**, navigate to **`Systems Settings -> Calrec Assist UI`**, then click **`Show Calrec Assist`**. This will open a Google Chrome browser, automatically configured with the correct URL.



2. Open Google Chrome and directly enter the appropriate URL. The URL will be the address of the primary control processor in the format **`a.b.1.0`**; where **`a.b`** is the console ID.

   A bookmark can be saved in Google Chrome, or alternatively a shortcut can be created on the desktop configured with the following settings:

   Target: **`"C:\Program Files\Google\Chrome\Application\chrome.exe" --app=http://a.b.1.0`**
   Start In: **`"C:\Program Files\Google\Chrome\Application"`**

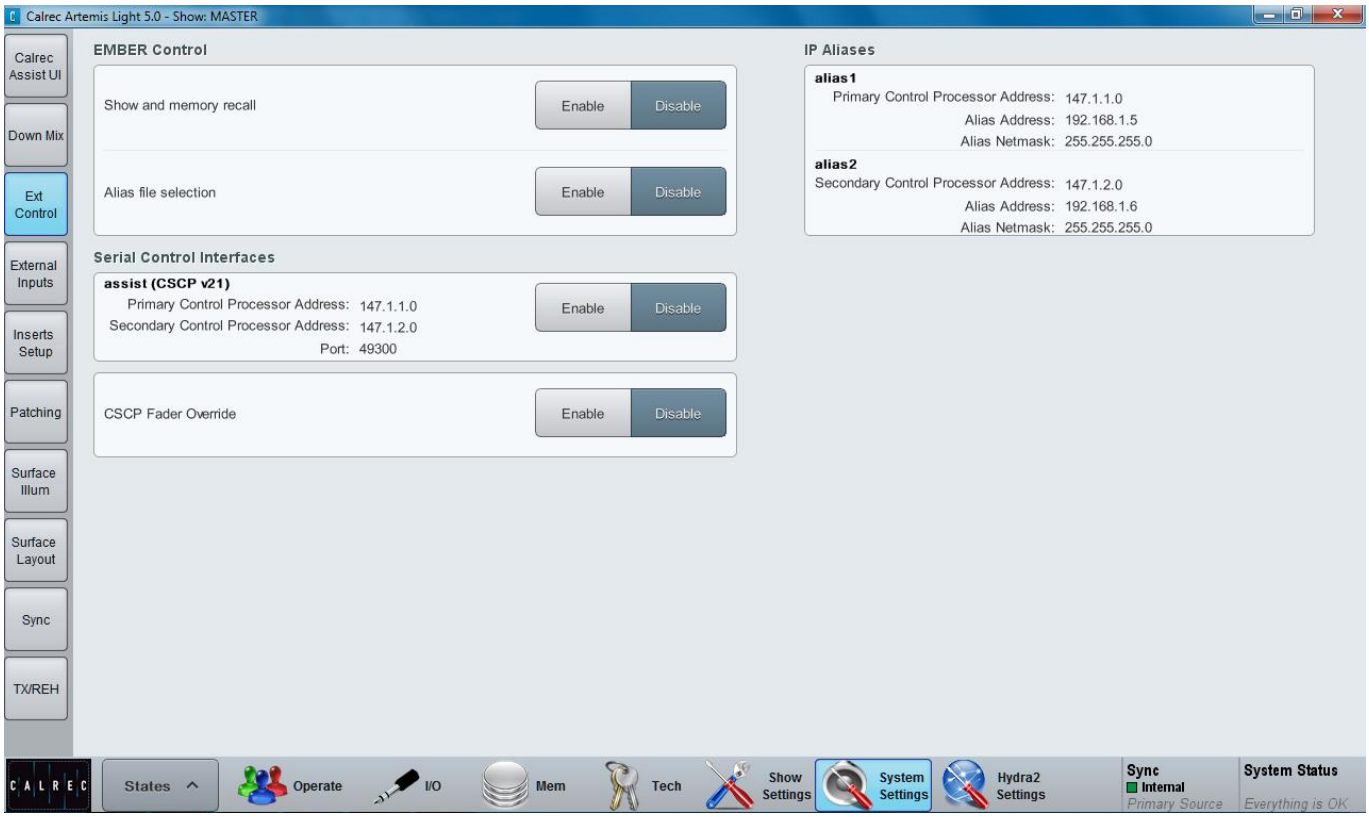
Calrec Assist Offline - Setup

Connecting to Calrec Assist Online remotely via MAC 3, MAC4 or MAC5 (ETX Processors)

Calrec Assist Online can also be accessed from a remote PC or laptop via a connection to one of the MAC ports on the active control processor (by default, the primary). This allows a desk package to be exported without interrupting the work flow of another person currently using the console.

A connection via a MAC port can be made via any user determined IP address, but relies on this particular IP address being pre-configured as an Alias IP Addresses within the control processor's configuration files (seek further guidance for further specific details).

If any alias addresses have already been pre-configured, these will be listed in the **`Calrec Console PC Application`**, on the **`Systems Settings -> Ext Control`** page:



N.B. *If a connection is direct from a PC or laptop, this can be made to any available MAC port. If a connection is via a corporate network or external (3rd party) switch, then this connection should only be made via the MAC 5 port.*

1. Configure the PC or laptop's network adapter with a unique IP address in the same range as the control processor's IP alias address.

2. Connect the cable between the PC or laptop's network adapter and the primary control processor's MAC port.

3. Open Google Chrome and enter the URL that matches the chosen alias IP address

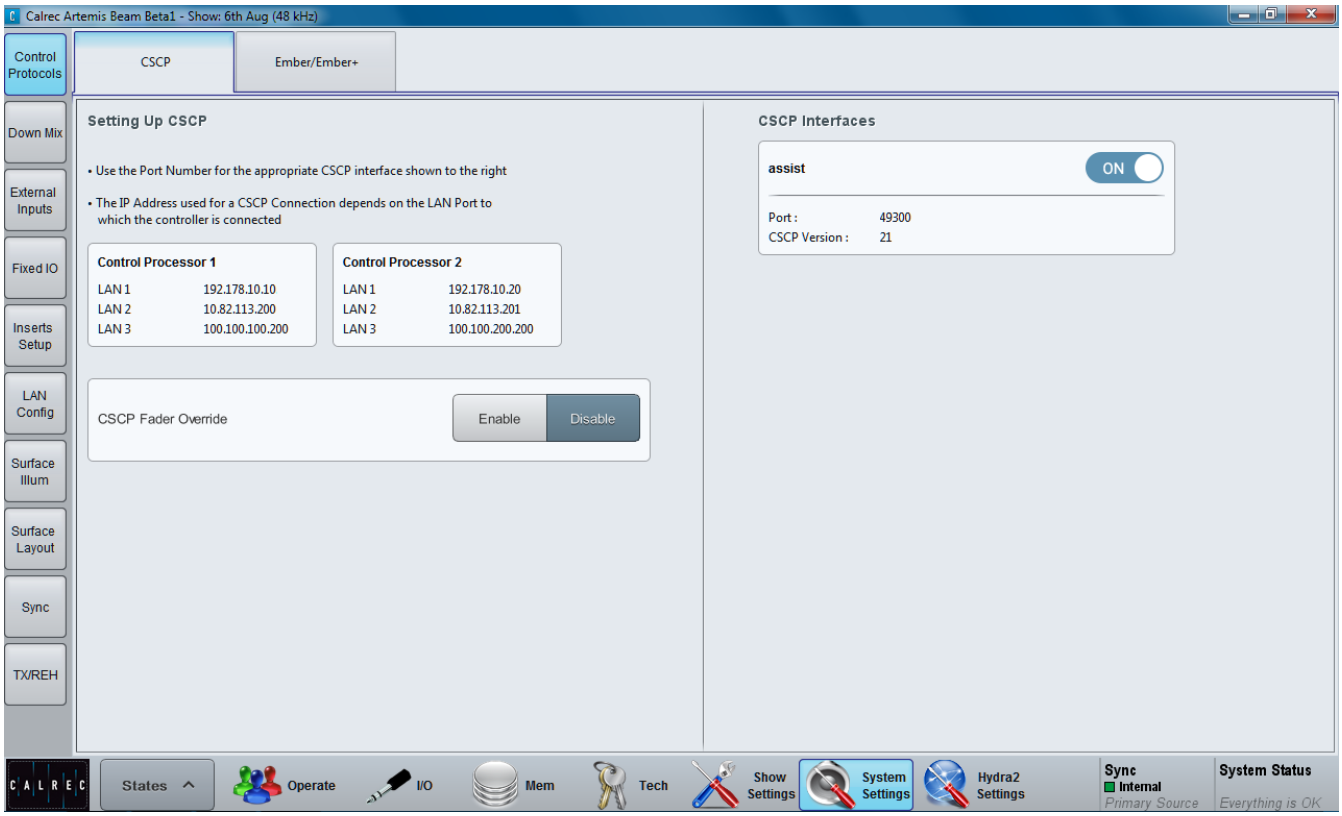
Calrec Assist Offline - Setup

Connecting to Calrec Assist Online remotely via LAN1, LAN2, LAN3 (COMe Processors)

Calrec Assist Online can also be accessed from a remote PC or laptop via a connection to any one of the available LAN adapters on the active control processor (by default, the primary). This allows a desk package to be exported without interrupting the work flow of another person currently using the console.

A connection via a LAN port can be made via any user determined IP address, but relies on this particular IP address being pre-configured within the control processor's configuration files (seek further guidance for further specific details).

If any IP addresses have already been pre-configured, these will be listed in the **`Calrec Console PC Application`**, on the **`Systems Settings -> Control Protocols -> CSCP`** page:



1. Configure the PC or laptop's network adapter with a unique IP address in the same range as the LAN adapter's IP address.

2. Connect the cable between the PC or laptop's network adapter and the primary control processor's LAN adapter.

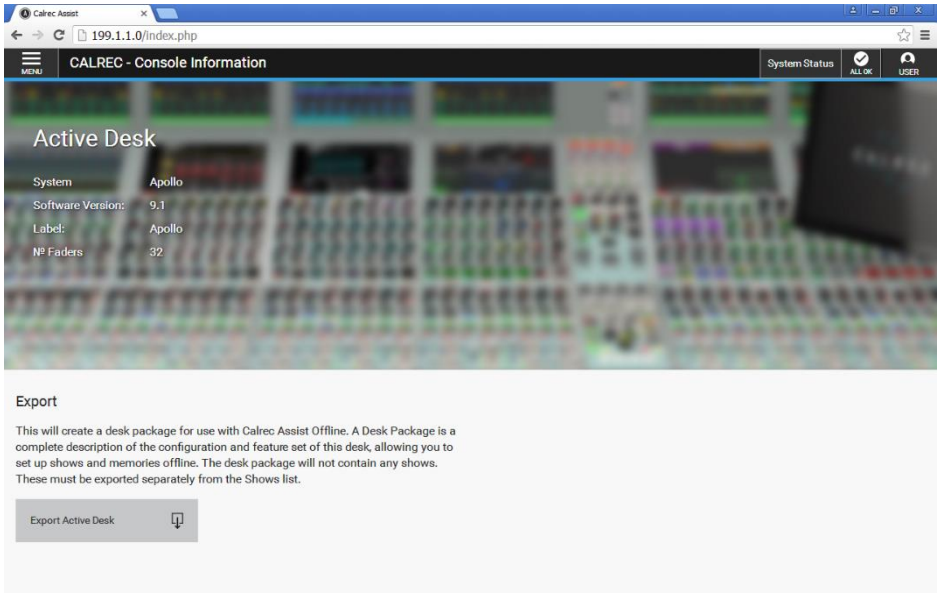
3. Open Google Chrome and enter the URL that matches the chosen LAN adapter's IP address.

Calrec Assist Offline - Setup

Calrec Assist Online

Once connected, Calrec Assist Online will show the **`Console Information`** page. This provides a breakdown of the active desk, including:

System:	the type of console (Apollo, Artemis Shine / Ray / Beam / Light)
Software Version:	the current software version
Label:	the client name (ie: as set in H2O)
No Faders:	number of faders (ie: as set by the active surface layout file)



Exporting a Desk Package

1. Clicking **`Export active desk`** at the bottom of the **`Console Information`** page (above), will begin the export of the desk package.

2. Depending on your settings within Google Chrome, either:
   - The package will download automatically to your default download location using the default file name.
   - Google Chrome will ask where you would like to save the package to and will also give you the opportunity to download the package with a user defined file name.

   N.B. *This option can be modified within the Google Chrome browser by entering the URL* ***`chrome://settings`****; clicking* ***`Show advanced settings`****… ; scrolling down to* ***`Downloads`*** *; then modifying the Download location or checking the box* ***`Ask where to save each file before downloading`***

The default file name uses the format **`Label-System-Software Version.CalrecDeskPackage`**
For example, the desk package from the active desk displayed in the image above would be:

`Studio 1-Artemis Light-v9.1.CalrecDeskPackage`

The file extension will always be **`.CalrecDeskPackage`**

Calrec Assist Offline - Setup

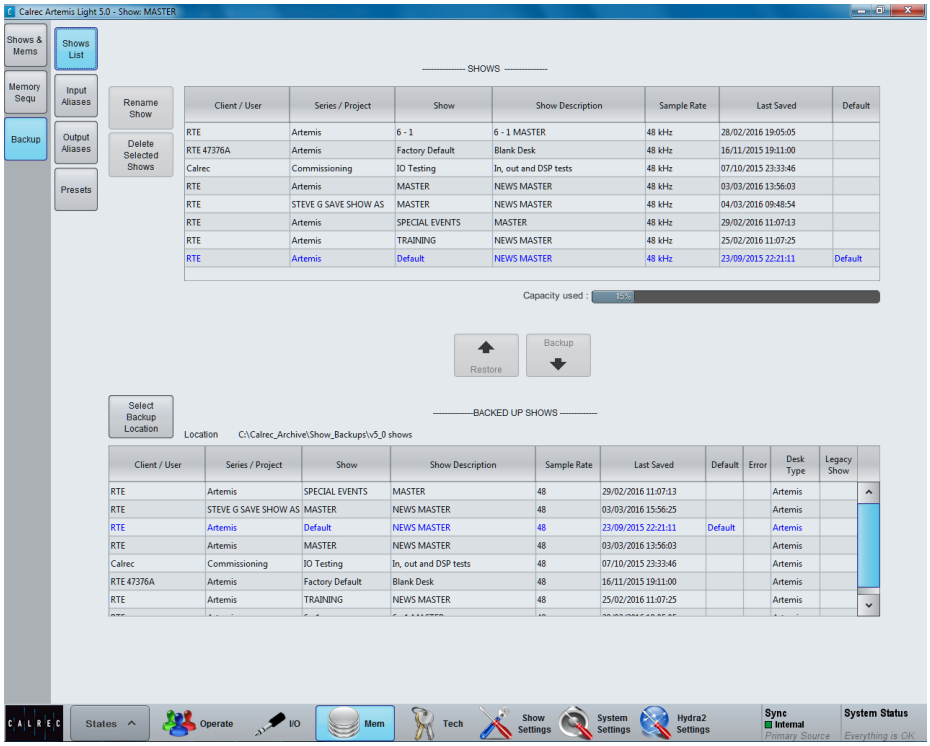
Exporting Shows from a Live Desk

Whilst a desk package will contain data specific to a particular console, a desk package exported via Calrec Assist Online (ie: from a live system) will **not** contain any shows other than the Calrec default show. This includes any other customer default shows.

If show files are required, for example to base a new setup on an existing show (user or default), then the relevant show files should also be exported from the console.

Exporting shows from the Calrec Console PC Application

Shows (including the memories within them and their relevant options files) can be backed up (exported) to the console PC HDD, or a USB drive connected to the console's upstand USB port using the **`Calrec Console PC Application`** on the **`Mem -> Backup -> Show List`** page:



1. The top table displays all the shows currently saved on the console. The lower list displays any exported shows in the currently selected backup location.

2. Press **`Select Backup Location`** to change the currently selected backup location.

3. To export a show to the Selected Backup Location, press the **`Backup`** button.

An exported show will use the file format: **`Client/User-Series/Project-Show.CalrecShow`**
For example:

`Calrec-Commissioning-IO Testing.CalrecShow`

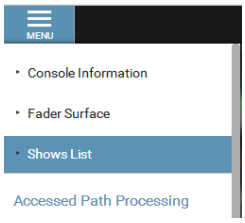
The file extension will always be **`.CalrecShow`**

N.B. *Any default shows will be listed with blue text.*

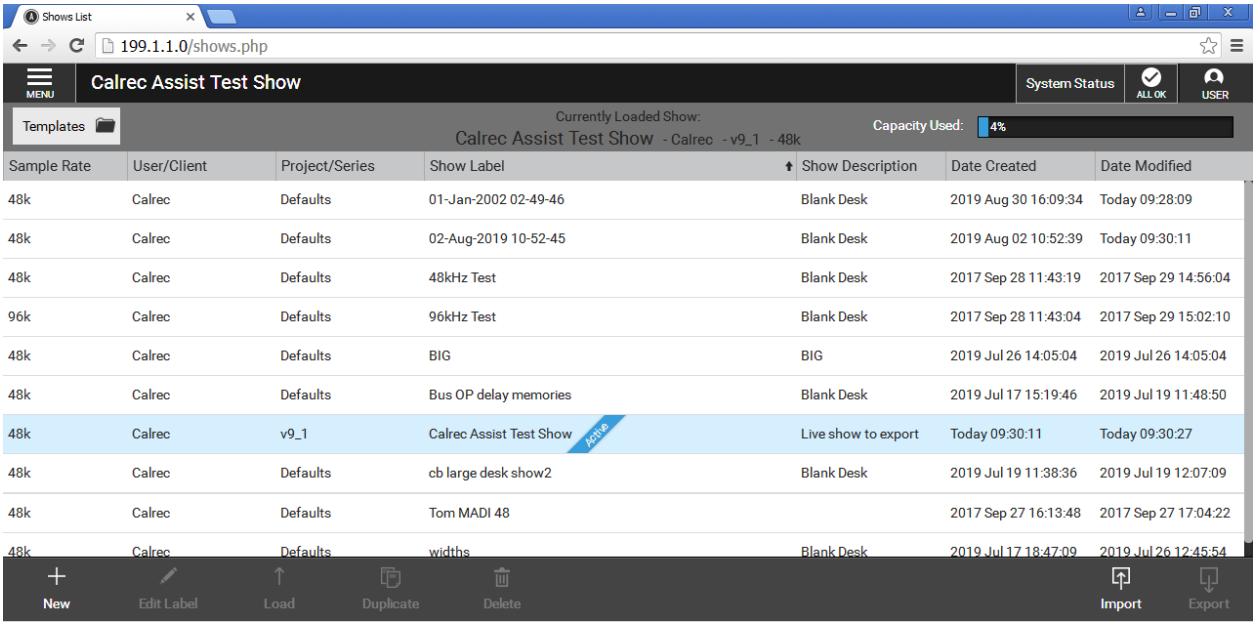
Calrec Assist Offline - Setup

Exporting shows via Calrec Assist Online

If connected to Calrec Assist Online, in the top left-hand corner of the **Console Information** page, click the **Menu** button, then select **Shows List** from the drop-down menu.



This page provides a list of all shows (shows include the memories contained within them, plus their relevant options files), including an indication of the currently loaded show.



1. Highlight a show in the list.
2. Press the **Export** button.

An exported show will use the file format: **Client/User-Series/Project-Show.CalrecShow**
For example:

Calrec-v9_1-Calrec Assist Test Show.CalrecShow

The file extension will always be **.CalrecShow**

N.B. *As of v5.0, Apollo and Artemis consoles use an updated data structure for show files, making it easier to export and manage show files offline. As such an exported show file will now always use the file extension* ***.CalrecShow***

Any old format (pre v5.0) shows imported into a console running software version 5.0 or later will be automatically converted to the latest format upon import.

Calrec Assist can only utilise shows in the new format. As such, any old format shows must first be imported into a console running software version 9.1 or later in order to carry out the data conversion before it can be re-exported for use with Calrec Assist.

Calrec Assist Offline - Setup

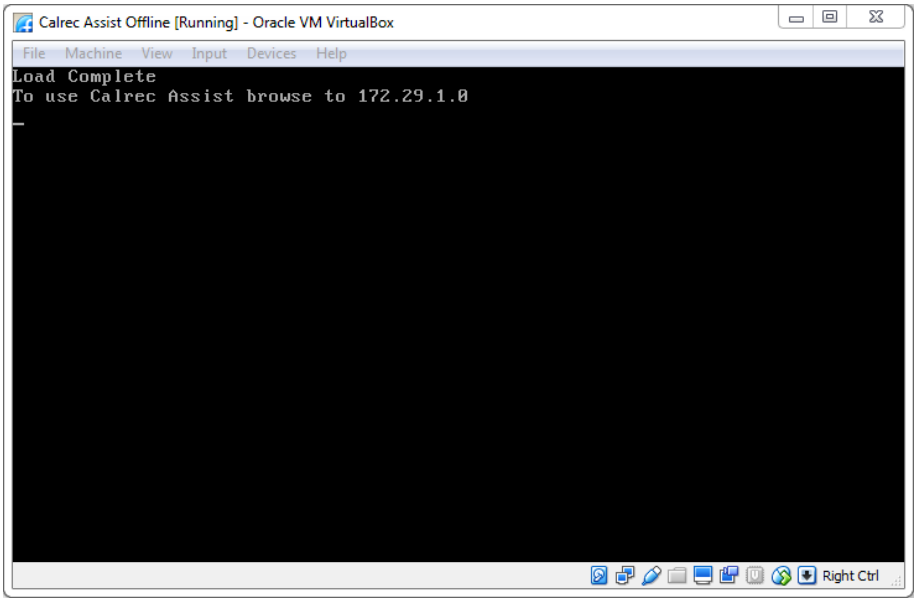
Calrec Assist Offline

Accessing Calrec Assist Offline on a PC or laptop

1. Launch VirtualBox. A shortcut should be located on the desktop.

2. In the VirtualBox front page, double click on **`Calrec Assist Offline`** in the left-hand column. The virtual machine will now begin to boot, and a new window will open. This is the VM and the window will be named **`Calrec Assist Offline [Running] – Oracle VM VirtualBox`**. Please wait approximately 45 seconds, until the VM displays:

   `Load Complete`
   `To use Calrec Assist browse to 172.29.1.0`



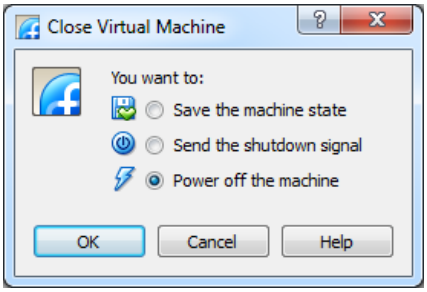
3. Open an instance of the Google Chrome browser and enter the URL **`172.29.1.0`**

   A bookmark can be saved in Google Chrome, or alternatively a shortcut can be created on the desktop configured with the following settings:

   Target: **`"C:\Program Files\Google\Chrome\Application\chrome.exe" --app=http://172.29.1.0`**
   Start In: **`"C:\Program Files\Google\Chrome\Application"`**

N.B. *The VirtualBox front page can be closed at any time, however it is important that the Calrec Virtual Machine (ie: the window named **`Calrec Assist Offline [Running] – Oracle VM VirtualBox`**) remains open, otherwise Google Chrome will be unable to connect to Calrec Assist Offline.*

*If the Calrec Virtual Machine is closed, the **`Close Virtual Machine`** window will be displayed:*
***`Power off the machine`** will instantly close the VM. This is safe. No data will be lost as any changes made within Calrec Assist Offline are saved to the local PC or laptop in the location:*
`C:\Users\[name]\VirtualBox VMs\Calrec Assist Offline`
***`Save the machine state`** dumps the current VM session to disk, allowing the Calrec Virtual Machine to boot much quicker next time (<5s).*



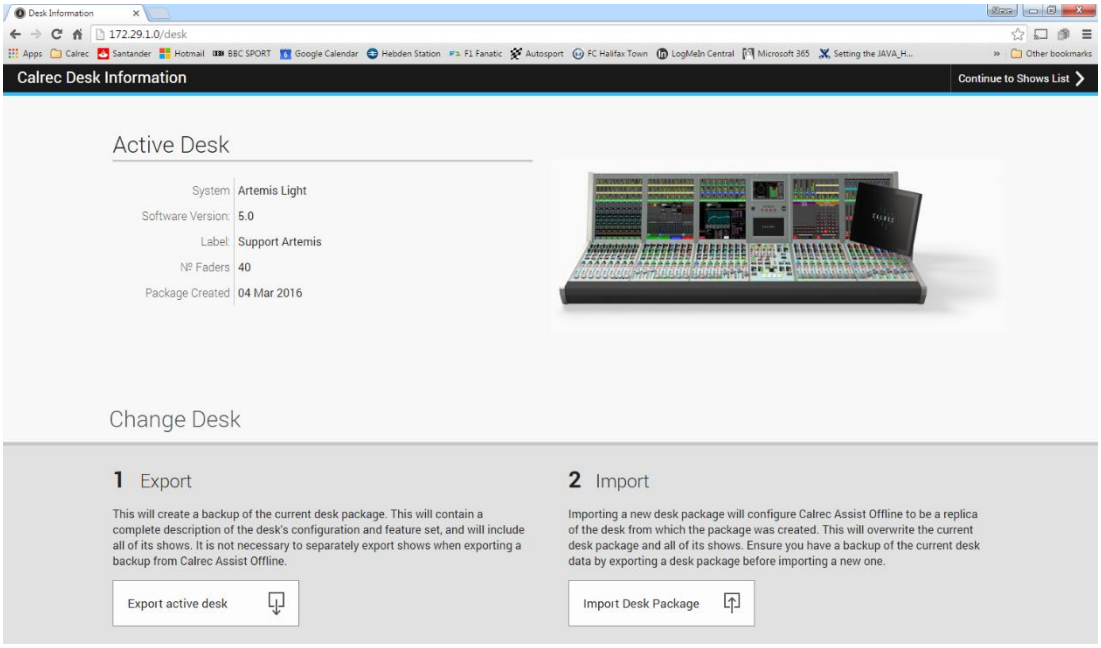
Calrec Assist Offline - Setup

Importing a Desk Package

Once connected, Calrec Assist Offline will show the **`Desk Information`** page. This provides a breakdown of the current active desk, including:

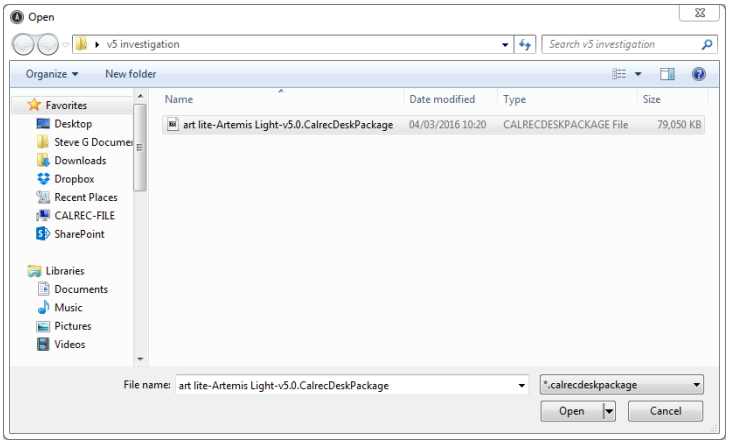
System:	the type of console (Apollo, Artemis Shine / Ray / Beam / Light)
Software Version:	the current software version
Label:	the client name (ie: as set in H2O)
No Faders:	number of faders (ie: as set by the active surface layout file)
Package Created:	the date that the current active desk package was originally exported from the live system

On the first running of Calrec Assist Offline, the active desk will default to an 80 fader Apollo console. This should not be used for creating a setup as it will not relate to your console. Instead you should first import a desk package exported from a live desk (via Calrec Assist Online).



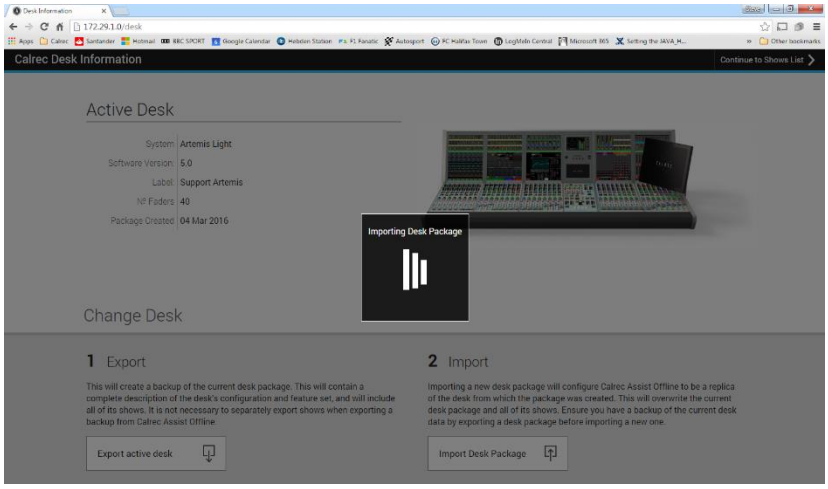
1. Click **`Import Desk Package`** (above right).

2. Select a desk package via the **`Open`** window (below), then click **`Open`**.



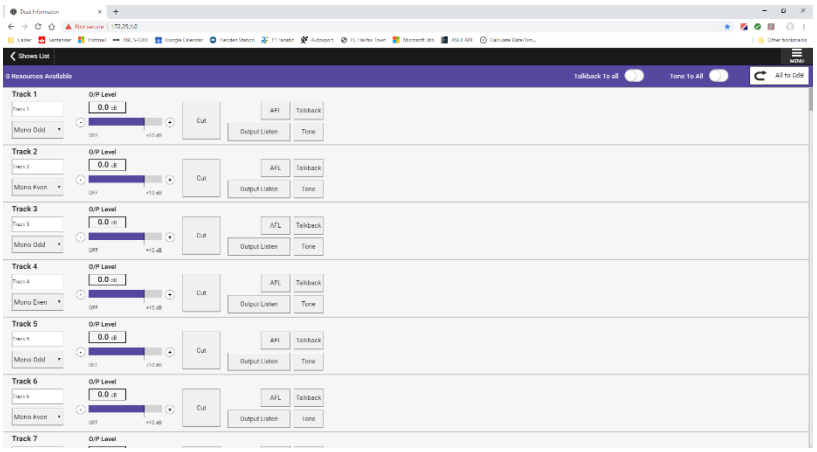
Calrec Assist Offline - Setup

3. Depending on the size of the desk package, the import can take up to 3 minutes. During this time, the loading widget will be displayed (below).



4. Please note that during this import, the Calrec Virtual Machine will restart (by design), causing the Calrec Assist Offline UI screen (ie: Google Chrome browser) to temporarily lose connection.

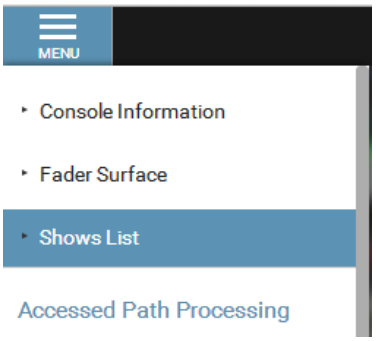
   This commonly manifests itself as the Calrec Assist Offline UI screen changing to the **`Track buss setup page`** (below), appearing that the package import process has completed. Please ignore this and wait until the Calrec Virtual Machine has restarted and the Calrec Assist Offline reconnects automatically.



5. You will then be returned to the **`Desk Information`** page which will now display the correct information for the imported desk package.

Calrec Assist Offline - Setup

Import Shows into Calrec Assist Offline



1. On the top left corner of the page, click on the **Menu** button, then select **Shows List** from the drop- down menu.

2. To create a new show from the Calrec Default Show, click **New** on the footer bar.

3. To edit an existing show, highlight the show in the list and click **Load** on the footer bar.

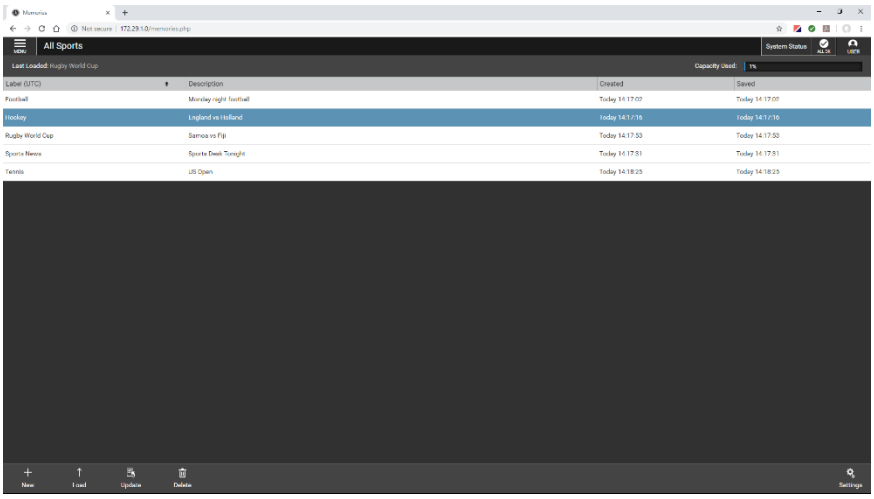
4. To import a show that has been exported from a live desk, click **Import** on the footer bar (below)

5. Locate the show you would like to import and click **Open**.

6. The show will now be imported. This may take up to a minute depending on the size of the show (ie: the number of memories contained within the show).

7. The imported show can now be edited by highlighting the show in the shows list, then clicking **Load** on the footer bar.

8. Upon loading a show (or creating a new show), you will now be taken to the **Memories** page. The **Last Loaded** memory is indicated above the table of memories.

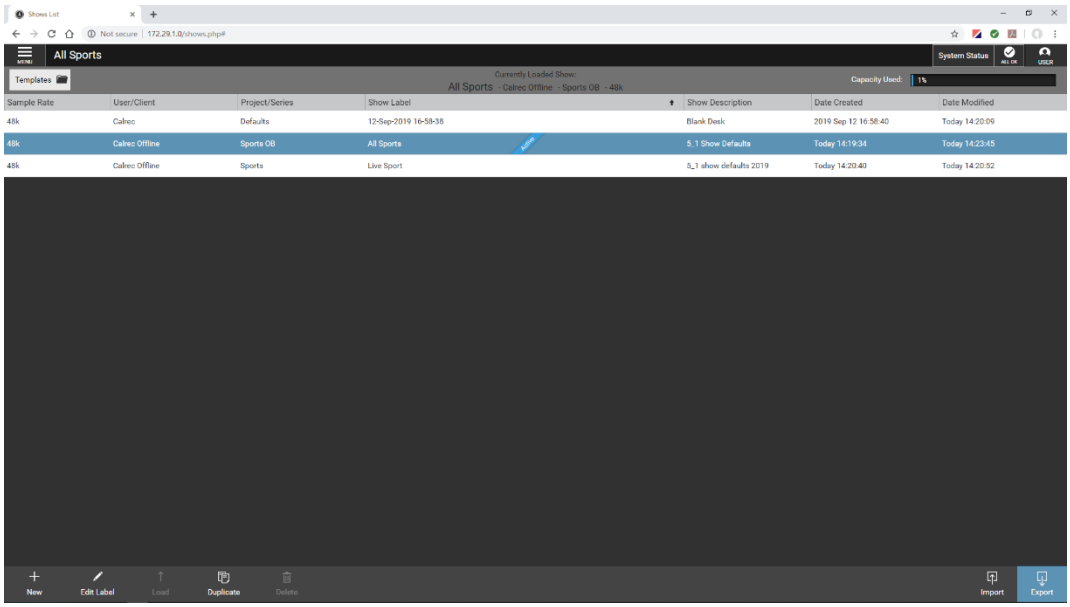


9. To load a different memory, simply highlight the memory in the lost and click **Load**. Otherwise, in the top left-hand corner, click the **Menu** button in order to navigate elsewhere and begin configuring / modifying this memory.

Calrec Assist Offline - Setup

Exporting a Show from Calrec Assist Offline

1. Once you are happy with your edited show; in the top left-hand corner, click the **Menu** button, then select **Shows List** from the drop-down menu.



2. Highlight the show you wish to export, then in the bottom right corner of the screen, click the **Export** button.

An exported show will use the file format: **Client/User-Series/Project-Show.CalrecShow**
For example:

Calrec-Commissioning-IO Testing.CalrecShow

The file extension will always be **.CalrecShow**

Exporting a Package from Calrec Assist Offline

A desk package cannot be re-imported back onto a real console. The desk package is used only for the offline simulation of the console.

The Calrec Virtual Machine can only contain information from a single console / package at one time. If you wish use Calrec Assist Offline with a desk package from a different console, you should first export the current desk package before importing the new package. This is effectively saving your work.

N.B. *A desk package exported from Calrec Assist Offline will contain **all** shows.*

1. In the top left-hand corner, click the **Menu** button, then select **Console Information**

2. Click **Export Active Desk**.

The default file name uses the format **Label-System-Software Version.CalrecDeskPackage**
For example:

Studio 1-Artemis Light-v9.1.CalrecDeskPackage

The file extension will always be **.CalrecDeskPackage**

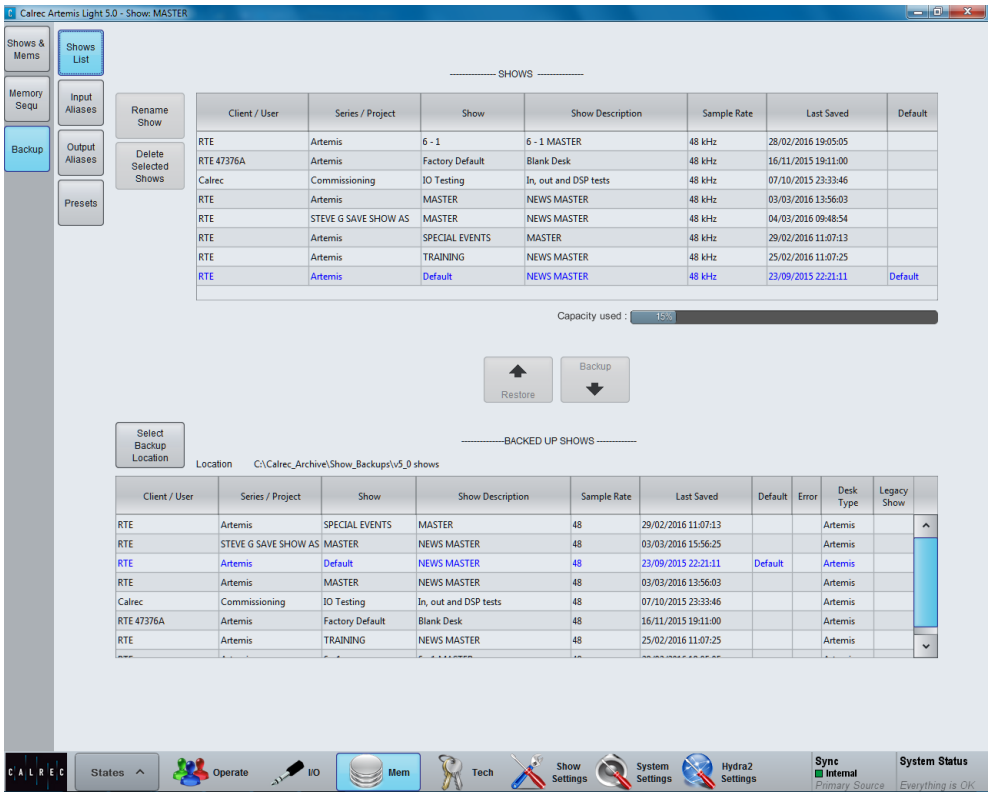
Calrec Assist Offline - Setup

Importing Shows to a Live Desk

Importing shows into the Calrec Console PC Application

Shows that have been edited offline can be restored (imported) to the console's control processors.

1. Connect the USB drive containing the shows to the console's upstand USB port.
2. In the **`Calrec Console PC Application`** navigate to the **`Mem -> Backup -> Show List`** page:



3. The upper table displays all the shows currently saved on the console. The lower list displays any exported shows in the currently selected backup location.
4. Press **`Select Backup Location`** to change the currently selected backup location.
5. To import a show from the Selected Backup Location, press the **`Restore`** button.
6. Once imported, the show can now be loaded from the **`Mem -> Shows & Mems`** page.