codex™

CAPTURE DRIVE DOCK [THUNDERBOLT]

CDX-7513

GETTING STARTED GUIDE

Safety Warnings

Please observe any warnings and follow all instructions.

- Do not use this equipment near water and clean only with a dry cloth.
- Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other equipment (including amplifiers) that produce heat.
- Do not expose to excessive vibration, or drop this product.
- Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade, or the third prong, is provided for your safety.
- If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched, particularly at plug ends, convenience receptacles, and the point where they exit from the equipment.
- Only use accessories specified by the manufacturer.
- Unplug this equipment during lightning storms or when not in operation for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the equipment has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the equipment, has been exposed to rain or moisture, does not operate normally, or has been dropped.
- To reduce the risk of fire or electric shock, do not expose equipment to rain or moisture.
- To avoid electrical shock, do not attempt to open this equipment. Refer servicing to qualified personnel only.

Caution! The surfaces of docked Capture Drive media can get hot during standard use.

Disclaimer

Codex products are continually developed to remain at the forefront of the industry, and as such the information in this guide is subject to change without notice. Whilst Codex endeavour to ensure that all documentation provided is correct at the time of writing, this document is not guaranteed to be error-free.

Codex does not assume responsibility for issues or losses due to misinterpretation of the information in this document, errors in this document, or incorrect configuration or installation of the equipment described herein.

Please report any errors found in this document to **support@codexdigital.com**

Support and Servicing

For assistance with your Capture Drive Dock (Thunderbolt) please contact **support@codexdigital.com**

User Guides are available from **https://www.codexdigital.com/support/user-guides**

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Capture Drive Dock [Thunderbolt] - Getting Started

Introduction

The Capture Drive Dock (Thunderbolt) is the hub of your file-based workflow. It can easily be configured to produce a full set of deliverables – everything you need for your production and post, from viewing copies to archives. It can provide them all in less time than traditional systems take to make a single copy.

Installation

Specification

Operating System: Apple Mac OS X 10.9 or higher.

Recommended Hardware:

Workstation - Mac Pro late 2013 or newer
CPU - 3.7GHz Quad Core Intel Xeon E5 or higher
RAM - 12GB
HDD - 500MB free space
Thunderbolt port
Monitor - Support for 1920x1080 or 2560x1600

Laptop - Retina MacBook Pro 15"
CPU – 2.7GHz Quad Core Intel Core i7
RAM – 16GB, 1600MHz DDR3L
HDD – 500MB free space
Thunderbolt port
Display – 2880x1800

Software

Go to **codexdigital.com/software** to register and download software. There are installation instructions available from this webpage.

Under the section 'Capture Drive Dock (Thunderbolt)' download the latest Software Pack and install all software that this contains.

Hardware

The Dock comes with a power supply and Thunderbolt cable included. Connect the power supply first to the mains electricity, and then connect the power supply to the Dock. Then connect the Thunderbolt cable from the Dock to the computer.

12V POWER   THUNDERBOLT CONNECTION   STATUS LED   EJECT

Licensing

When the Dock is connected to your computer the licensed features will be enabled automatically in the Codex software.

The included features allow copying of Digital Camera Negative files (ARRIRAW, CanonRAW, DPX or ProRes, depending on what format was recorded) and transcoding with the Codex Virtual File System (VFS), metadata management, and verified backups using the Codex Disk and Tape Offloader.

It is recommended to go to **https://www.codexdigital.com/support/user-guides** for full documentation. Here you can download guides that describe using the Codex software for common workflows.

Finder Preferences

For ease of use it is recommended to set up the Finder Preferences so that External disks are shown on the Desktop:

Loading and Unloading a Capture Drive

Insert a Capture Drive into the Dock and it will begin loading automatically. During this time the LED will flash blue. When it is loaded the LED will flash green, and this typically takes 5-10 seconds. The LED will continue to flash green periodically when the Dock is idle.

The LED on a Capture Drive flashes green quickly when it is reading/writing data. Do not unload a Capture Drive when it is reading/writing as this can compromise data integrity.

To unload press the eject button on the end of the Capture Drive or go to the STORAGE tab of the Codex UI and click the EJECT button. The LED will flash blue while it unloads. When the LED is solid blue it is safe to remove the Capture Drive.

Always eject the Capture Drive before removing it from the Dock.

# Copying ARRIRAW/CanonRAW/DPX files from the Capture Drive

When the Codex software is installed the Codex VFS drive will be shown on the Desktop:

The Codex VFS drive is always shown, but will be empty until a Capture Drive containing ARRIRAW/CanonRAW/HD recordings is loaded. After loading the Capture Drive, the files are available to be copied from the Codex VFS drive.

ARRIRAW files are in the following folder structure in the Codex VFS drive:
<Reel>/<Clip>/<Width>x<Height>/<Clip>.<FrameCount>.ari

For example:
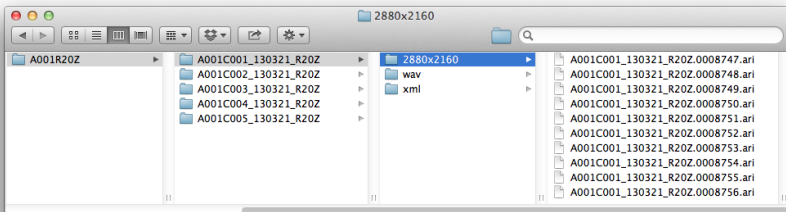
Copy the top level Reel folder (A001R20Z in the above example) to another storage device to back-up the image data.
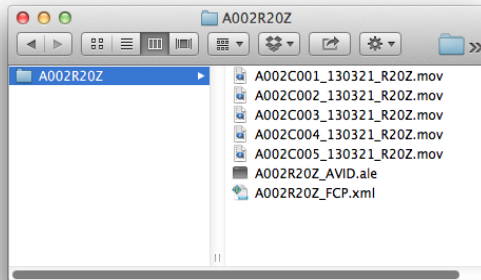
Any copy tool can be used to back-up files from the Codex VFS drive to another storage device. In each <Clip> folder there will also be an xml folder containing a CodexShot XML metadata file for the clip, and if the clip has audio there will be a wav folder containing a Broadcast WAV file.

Copying ProRes files from the Capture Drive

When a Capture Drive containing ProRes files from the ALEXA XT is loaded in the Dock it will appear like any other external drive on the Desktop:

A002R20Z

Open the drive to access the ProRes files, which will be in a Reel folder along with an ALE file (metadata for Avid) and an XML file (for Final Cut Pro):

Copy the top level Reel folder (A002R20Z in the above example) to another storage device to back-up the image data. Any copy tool can be used to back-up files from the Capture Drive to another storage device.

Using the Codex User Interface software

When the Codex UI is opened the 'Connect To Server' dialog will specify **localhost**. This is correct – simply click the checkbox icon.

The Codex UI is divided into the **MAIN, STORAGE,** and **SETUP** tabs:

MAIN tab - Editing metadata and creating reports

The **MAIN** tab is used for viewing clip thumbnails, editing metadata and creating reports. The following functions are available:

Thumbnail/List View - to toggle between a thumbnail or list view of clips.

Filter - to limit the clips that are displayed based on location (if more than one Dock is connected), and/or metadata.

Filecard - to view and edit clip metadata. Click the first clip then click this button. Use the Up and Down arrows on your keyboard to move between clips. Make changes and then click the checkbox to save. The **Log Note** field contains details of any issues detected during recording.

The MANAGE button gives access to a range of tools, for example to CREATE REPORT or CREATE ALE.

STORAGE tab - Deleting an ARRIRAW/CanonRAW/HD Capture Drive

The **STORAGE** tab is mainly used for deleting the Reel. It also shows the number of clips and total duration of the Reel. Once your data is securely backed-up, click the Reel name and then click **DELETE**, followed by OK.

WARNING: There is no undo function after a Reel has been deleted!

SETUP tab - Configuring the VFS, Disk and Tape Offloader, and Licensing

The **SETUP** tab is used for configuring the software for transcodes with the VFS, making verified backups from the OFFLOAD screen, and checking/adding licensed features.

The SETUP->VFS screen is where you configure the software to create files from shots on your Capture Drive. These files are available in the 'Codex VFS' drive on the Desktop of your Mac, and can be copied from here to any attached storage.

Setting up the Codex VFS – including use of preset configurations – is covered in the "VFS Guide".

Using the OFFLOAD screen is covered in guides such as "Processing ARRIRAW with Codex Transfer Station".

Click the *i* button to view licensed features and get details of the Hardware Key which is needed by Codex to generate a licence.

Licences can be requested from: **https://www.codexdigital.com/licence-request**

Deleting a ProRes Capture Drive

There are two SSDs inside a Capture Drive. When the Capture Drive is formatted on the ALEXA XT for recording ProRes only one drive is used, and this is formatted with a UDF filesystem.

After securely backing up the ProRes files it is recommended to use the Disk Utility application in Mac OS X to reformat the UDF drive with a FAT partition.

When this is re-inserted into the ALEXA XT the user will then be asked to reformat the Capture Drive in the camera with the appropriate filesystem.

Appendix

Firmware Upgrade Process

When a software update is installed, if there is a new firmware included this will be loaded onto the Dock during installation.

However, if the Dock is not connected when the software is installed, follow the steps below to update the firmware separately:

1. Open **System Preferences**->**Codex**.

2. Click the padlock symbol to unlock the Preference Pane.

3. Click **Stop Server**.

4. Click the **Refresh** button so the Firmware Info of the Dock is shown, for example Thunderbolt Dock 1.5.

5. Click **Upgrade...** and select the new firmware file, for example **tbtsngl_v106.fw**, then click **Open**. (This file is located in /Library/Application Support/Codex)

6. Click **Continue** to proceed with the firmware upgrade.

7. Wait for the **Firmware Upgrade Complete** message to be displayed.

8. Click **OK** and then click the **Start Server** button to restart the Codex Server software.

Support Software

There are some third party software packages that may be of use:

ARRIRAW Converter (http://www.arri.com/camera/digital_cameras/tools.html)
GlueTools (http://www.gluetools.com/)
Da Vinci Resolve (http://www.blackmagicdesign.com/uk/products/davinciresolve)
These applications provide different options, but all provide a means of viewing and playing ARRIRAW (.ari) files natively.

Calibrated MXF allows playback of MXF files using Quicktime 7.

Example Workflow

Here is an example outline of a workflow that could be employed using the Dock:

1. Load a Capture Drive
2. Check global metadata of material, e.g. Roll, Shoot Day, Shoot Date
3. Verify metadata for material shot-by-shot, including contents of Log Note field
4. Review material to confirm recorded metadata matches photographed slates
5. Choose VFS Configuration for deliverable files
6. Copy deliverable files to external storage (disk or LTFS tape)
7. Confirm successful copy
8. Clear magazine and return unformatted (with no Roll) to set

See the guide 'Processing ARRIRAW with Codex Transfer Station' for more details.

Troubleshooting

Capture Drives have an LED that shows the status and can help with troubleshooting.
The table below describes the meaning of the LED modes:

LED colour	LED state	Description	Course of action
Blue	Flashing	Capture Drive is loading or unloading	Wait for loading/unloading to complete
Blue	Constant	Capture Drive is not loaded, and is safe to remove	Remove or reload Capture Drive
Green	Flashing	Capture Drive is loaded and idle	No action required
Green	Constant	Capture Drive is being read or written	Do not eject drive until reading/writing is finished
Red	Constant	Capture Drive has failed to load	Restart computer and try again

If the Codex Software won't start check you have installed a version of OSX FUSE that is compatible with your operating system.

If the Capture Drive is not loading the problem could be the Thunderbolt connection or power to the device. After this check that the latest software from the Codex website is installed.

If you experience 'Load Failure' it could be lack of drivers or a hardware issue with the media.

For further assistance, or if you are asked to provide an issue report go to System Preferences->Codex and select 'Generate issue report…' and email this to **support@codexdigital.com**