DT VIDEOLABS

DT 18

Multi-system Show Controller

Show control for up to four systems with one controller

1.0

Safety

To prevent severe injury and loss of life or property, read this section before using to ensure safe operation of this product.

- Use only the power source supplied with the product.
- Do not overload power outlets or extension cords which may result in electric shock or fire.
- Do not operate in an explosive atmosphere.
- Connect the product power supply to a grounded power source.
- Unplug the product from power outlets if there are any abnormal smells, smoke or unusual noises.
- Ensure that the product enclosure is intact and that no power cords are frayed or damaged before use.
- Do not expose the product to any wet or moist environments and do not handle with wet hands.
- Do not disassemble the product, there are no user serviceable parts inside.
- Unplug unit when not used for extended periods of time.

What's Included

The DT18 order includes a DT18 Multi-System Show Controller, 6ft (1.8m) Ethernet cable and a 110-220 universal power supply with US Type B power cord. Non-US customers will receive an additional Type F, G or I power cord where applicable.

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① DT18 Overview

The DT18 can control up to **4 playback systems** connected over an **ethernet switch**. It has two sets of buttons, **channel** and **control**:

Channel Buttons

Control Buttons

Channel Buttons: Each button represents a **communications link** with a **single playback system**. They can be **toggled** to **engage** or **disengage** control to specific playback systems. The channel buttons are assigned from left to right, the lowest IP address to the highest.

Control Buttons: The **control buttons** affect playback systems that have a corresponding **channel button** that is **engaged**. Some controls of the playback system are changed by **pressing** a **combination** of **control buttons**.

② Configuration

2.1 PreFlight Checklist

Each version of macOS has specific settings which have a great impact on playback performance. Before you begin, please visit www.dtvideolabs.com/preflight to optimize each of your Playback-Pro Plus systems.

The DT18 requires PlaybackPro Plus 3.8.0+ (32-bit) or X (64-bit).

Download latest PlaybackPro Plus, 32-bit   IA (Internet Activated)   or   USB
Download latest PlaybackPro Plus X, 64-bit   IA (Internet Activated)   or   USB

If you are unsure which version (IA or USB) you are using, the filename of the app on your system now will indicate IA (Internet Activated) or USB (USB dongle).

2.2 Connecting Your Systems

Establishing a connection involves five steps:

(1) Configure macOS networking

Set the system IP

Each playback system requires a unique IP address. Open System Preferences > Network and configure using the manual IPs as shown.The values shown are based on the DT18 factory default IP address of 192.168.18.160.

First system	192.168.18.161
Second system	192.168.18.162
Third system	192.168.18.163
Fourth system	192.168.18.164
Subnet mask	255.255.255.0
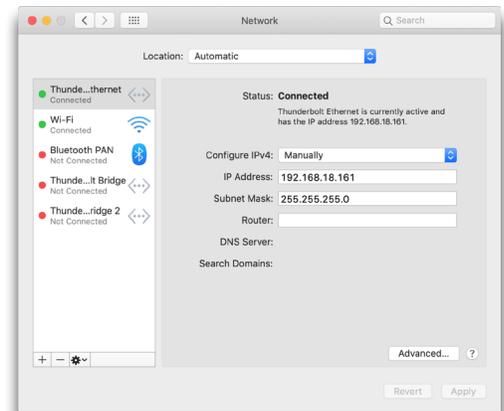
Configure the firewall

Confirm the macOS Firewall is not blocking PlaybackPro Plus network connections.

(1) Open System Preferences and then Security & Privacy

(2) Click on the Firewall tab and then the Firewall Options button

(2) Configure PlaybackPro Plus (default settings)

(1) Open PlaybackPro Plus and either open an existing show or start a new show

(2) Click the "Network Setup" button in the upper right corner of the Playback-Pro Plus interface

(3) Select "DT18 Controller" and PlaybackPro Plus will begin listening for communication from the DT18.

(3) Plug in and power up the DT18

Single system

110 or 220 volts

Ethernet

Two or more systems

110 or 220 volts

110 or 220 volts

Ethernet Switch
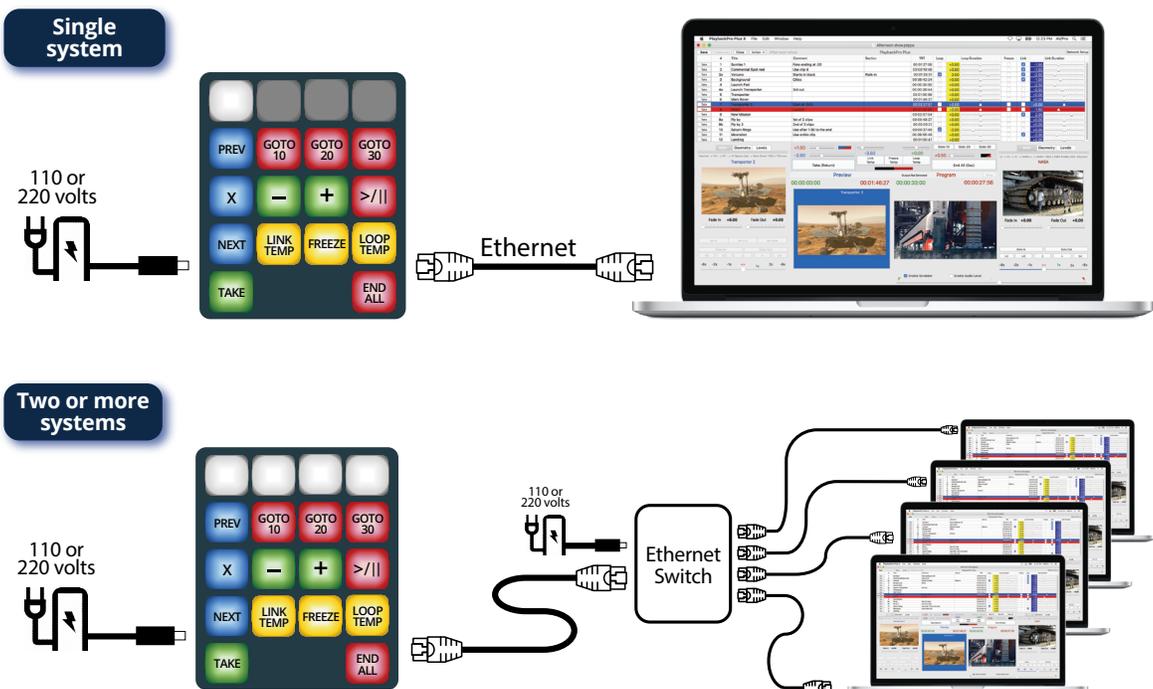
When the DT18 is powered up the buttons will turn on. Observing how the buttons flash will provide important Information about IP address status and system connection status.

Startup	Control Buttons	Channel Buttons
Factory default IP address	On	On 5 seconds, then flashing if controller is searching or on if connected
Not factory default IP address	Flash 4 times, off 5 seconds, then on	Flash 4 times, off 5 seconds then flashing if controller is searching or on if connected
Configuration		
New IP sent to DT18	Flash 3 times	
In Use		
Connection to playback system established	On	On
No connection or searching for connection to playback system	On	Flashing
Connection disabled by user	On	Off

(4) Reset the DT18 to factory default

We recommend starting with the factory default of 192.168.18.160 and then changing, if desired, as described in Section 3.2.1.

(1) Unplug the DT18 power supply

(2) Press and hold TAKE and END ALL buttons, while plugging in the power supply

(3) All buttons will flash 4 times, then turn off. Release TAKE and END ALL buttons. All buttons will illuminate within 5 seconds.

The DT18 IP address has now been reset to the factory default IP address 192.168.18.160.

(5) How to know everything is communicating

Three things will happen when a PlaybackPro Plus system is properly configured:

(1) In the Network Setup dialog box, the yellow "DT18 Listening" text will change to green "DT18 Connected"

(2) The associated Channel Button on the DT18 will change from flashing to on

(3) The playback system will receive commands from the DT18 controller
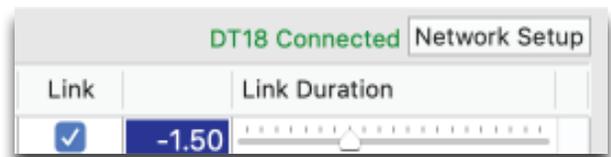
2.3 PlaybackPro Plus Advanced Settings

The "Network Setup" button is used to put the software into different listening modes. Options include TCP, UDP, DT Videolabs SimpleSync and the DT18.

Select "DT18 Controller" from the Connection dropdown to put PlaybackPro Plus into the listening mode and display the Connection Settings. PlaybackPro Plus will now be listening for the DT18 controller.

With a successful connection, the text color will change to green and indicate "DT18 Connected" in the dialog box and the program interface.
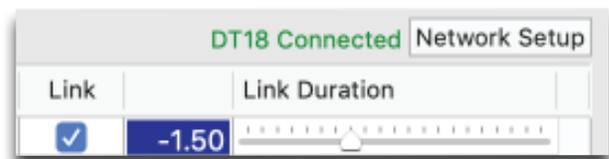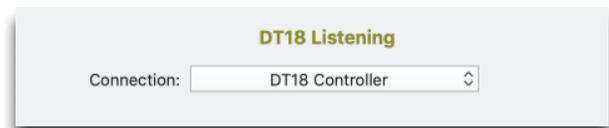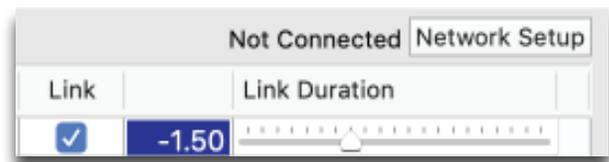
Connection Settings

Connection settings are available after the DT18 is selected as a remote control device in PlaybackPro Plus. The settings are for the specific playback system and not for other connected systems or the controller. The only exception is the "Setup Controller" function which changes the IP address on the controller itself as described in Section 3.2.1.
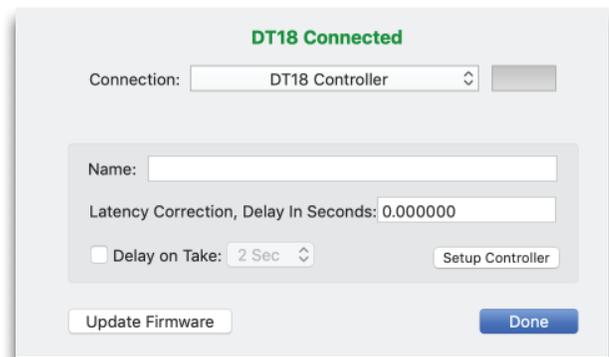
Latency Correction

When using systems with varying performance it may be necessary to delay the execution of commands received from the DT18. Adding a delay on faster systems will allow more uniform command execution. The delay may be entered in seconds and portions of seconds to tweak the accuracy of the delay.

Delay on Take

The "Delay on Take" function allows a specified delay after receiving the "Take" command from the DT18. This can be beneficial when using a primary / backup configuration to have the backup system begin playback slightly after the primary system.

Setup Controller

When the DT18 controller is connected to a system, the "Setup Controller" button will appear will appear in the Nework Setup dialog box. This button is used to change the IP address and update the firmware of the DT18 controller as described in Sections 3.2.1 and 3.2.2.

2.4 Managing Playback Connections

Each of the 4 channel buttons corresponds to a playback system at a specific IP address. The channel buttons will be assigned from left to right, the lowest IP address to the highest.

The channel buttons have three modes - engaged, disengaged and searching.

Engaged: The corresponding playback system will indicate "DT18 Connected" and the DT18 channel button is on. Commands will be sent from the controller and accepted by the playback system.

Disengaged: The corresponding playback system will continue to indicate "DT18 Connected", however, commands will not be sent from the controller to the playback system and the channel button will be off.

Searching: The button will flash while it is searching for a playback system.

To engage a DT18 network connection

Press a disconnected (off) Channel Button once

- The button will turn on and begin flashing as it searches for a connection
- The button will stop flashing when a connection is established
- The corresponding playback system will show "DT18 Connected"

To disengage a DT18 network connection

Press a connected (on) Channel Button once

- The channel button will turn off
- The corresponding playback system will continue to show "DT18 Connected" but no commands will be received from the DT18

③ Operation

3.1 Playback Control Functions

Preview	Transition	Program
+2.50		Goto 10	Goto 20	Goto 30
-1.00	-3.50 +0.00	+0.50
Take	Link Temp	Freeze Temp	Loop Temp	End All
Preview		Program	Setup

Preview

PREV	Moves the blue selection bar in the Playlist up to the previous clip
X	Clears the selection in the Playlist
NEXT	Moves the blue selection bar in the Playlist down to the next clip
TAKE	Transitions a clip from Preview to Program and starts playback
+	Increases Take Duration
–	Decreases Take Duration

— + + Increase Fade On Take Duration

+ + — Decrease Fade On Take Duration

> **❗ Take Duration** controls how the Preview clip transitions to Program when Take is selected

> **❗ Fade On Take Duration** controls Program clip fade before performing the Cut or Delay

`X` **+** `+` Go to beginning of playlist and load clip into Preview

`X` **+** `−` Go to end of playlist and load clip into Preview

Transition

`LINK TEMP` The next clip in the Playlist will be selected and played at the end of the Program clip

`LINK TEMP` **+** `+` Increase Link Duration

`LINK TEMP` **+** `−` Decrease Link Duration

> **!** **Link Duration** controls how the Preview clip transitions to Program when LINK TEMP is selected and the Program clip has reached its end. ✶

`FREEZE` The Program clip will stop and hold on the last frame of the Program clip until the FREEZE button is pressed again, TAKE is used to start another clip or END ALL is pressed

`LOOP TEMP` A Program clip will play again when it reaches the end

`LOOP TEMP` **+** `+` Increase Loop Duration

`LOOP TEMP` **+** `−` Decrease Loop Duration

> **!** **Loop Duration** controls how a loop will transition upon itself. ✶

Program

`GOTO 10` Moves the Program playhead to 10 seconds from the end of the clip

`GOTO 20` Moves the Program playhead to 20 seconds from the end of the clip

`GOTO 30` Moves the Program playhead to 30 seconds from the end of the clip

`>/II` Toggles Pause and Play of the Program clip

`END ALL` Ends playback of Program clip

`FREEZE` **+** `+` Increase End All Duration

`FREEZE` **+** `−` Decrease End All Duration

> **!** **End All Duration** specifies how long a clip will fade out when END ALL is pressed.

> **✶** A negative number creates a Dissolve (-3.00 = 3 second dissolve)
> zero creates a Cut
> a positive number creates a Delay (+3.00 = 3 second Delay)

3.1.1 Playback Control Key Combinations

Change	Fade on Take
+ −	**Hold** "-" and **press** "+" to increase **Hold** "+" and **press** "-" to decrease

Change	Link Duration
LINK TEMP + −	**Hold** "Link Temp" **Press** "+" or "-" to change "Link Temp" needs to be engaged.

Change	Loop Duration
LOOP TEMP + −	**Hold** "Loop Temp" **Press** "+" or "-" to change "Loop Temp" needs to be engaged.

+2.50
-1.00

-3.50   +0.00

Goto 10 | Goto 20 | Goto 30

+0.50

Take

Link Temp | Freeze Temp | Loop Temp

End All

Preview   Program   Setup

Change	Take Duration
+ −	Press "+" to increase Press "-" to decrease

Change	Playlist Position
X + −	**Hold** "X" **Press** "+" or "-" to change + move to the top of the playlist - move to the bottom of the playlist

Change	End All Duration
FREEZE + −	**Hold** "Freeze" **Press** "+" or "-" to change

3.2 Controller Settings

3.2.1 Customizing DT18 IP Settings

The DT18 IP address can be changed to any value within the accepted range of
0-255 . 0-255 . 0-255 . 0-250.

Changing the IP requires four steps:

(1) Configure macOS networking

If you need to change the controller IP address you must first connect your Mac
to the DT18 using the steps outlined in the **"Connecting your systems"** section
of this User Guide. Acceptable IP number ranges for the DT18 are 0-255 . 0-255 .
0-255 . 0-250.

(2) Change the IP address of the DT18 Controller

Select "Network Setup" and then "Setup Controller" on any of the connected playback systems. Enter the IP address you wish to use for the controller and click "Update". PlaybackPro Plus will then send the new IP address to the controller. All buttons on the controller will flash 3 times to show the IP address change has occurred.
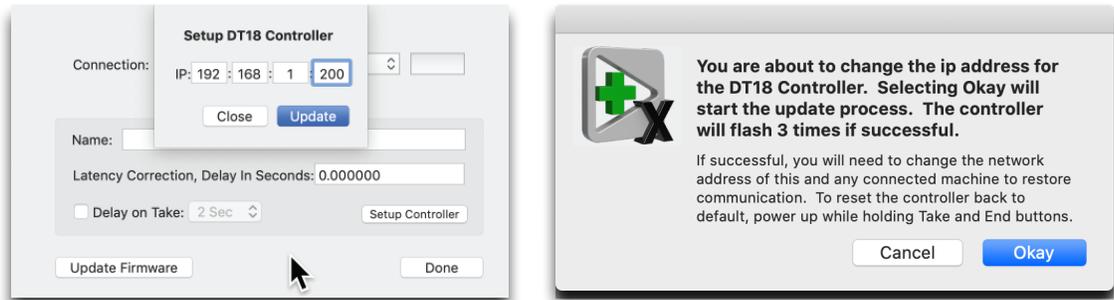
(3) Configure each PlaybackPro Plus system

The IP address of each playback system will need to be changed to the next sequential addresses. For example, if the DT18 IP address is changed to 192.168.1.200, the PlaybackPro system's IP addresses will need to be:

192.168.1.201
192.168.1.202
192.168.1.203
192.168.1.204

The Channel Buttons will stop flashing as each connected system IP address is updated.

(4) Confirm everything is communicating

- The PlaybackPro Plus Network Setup dialog box will show "DT18 Connected"
- The channel buttons for any attached system will not be flashing. They will be on or off depending on whether the channel button is engaged.

3.2.2   Reset Controller to Factory IP Address

The factory default IP address of the controller is 192.168.18.160. We recommend this setting so the controller and playback systems are always operating in their default modes. Resetting the default IP requires three steps.

(1) Unplug the DT18 power supply

(2) Press and hold TAKE and END ALL buttons, while plugging in the power supply

(3) All buttons will flash 4 times, then turn off. Release TAKE and END ALL buttons. All buttons will illuminate within 5 seconds.

3.2.3 Update Controller Firmware

A DT18 firmware update may be necessary to improve controller functionality and can be accomplished using a licensed or demo version of PlaybackPro Plus 3.8.0 or PlaybackPro Plus X.

WARNING: Keep power to the DT18 connected. Disconnecting the power during the firmware process can result in a non-functional controller which must be sent back to DT Videolabs for reprogramming.

DT18 Connected

Connection: DT18 Controller

Latency Correction, Delay In Seconds: 0.000000

☐ Delay on Take: 2 Sec   Setup Controller

Update Firmware   Done
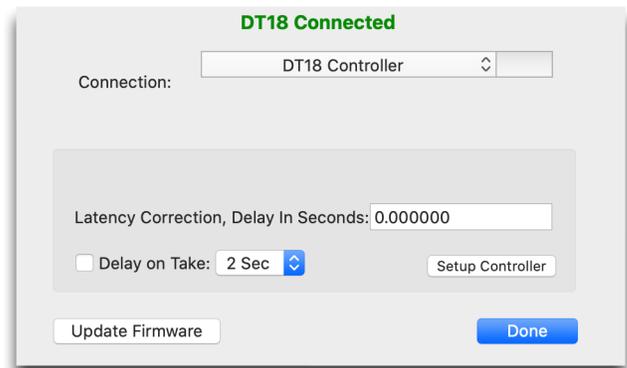
(1) Download the Firmware update .hex file from https://www.dtvideolabs.com/dt18-firmware

(2) Connect DT18 using steps from Section 2.2

(3) Click the "Network Setup" button in the PlaybackPro Plus 3.8 or X application interface

(4) Click on the "Connection:" dropdown list and select "DT18 Controller"

(5) Click "Update Firmware"

(6) Navigate to the .hex file downloaded in step 1, select it and click "Update"

(7) Dialog boxes will confirm the progress of the firmware upload

(8) Once the firmware file has been successfully uploaded, the DT18 will begin the update process and restart within 2 minutes

(9) After the DT18 restarts, a dialog box will confirm the successful firmware update

Uploading Firmware to DT18

Firmware uploaded. DT18 will update and reboot. Leave power to all devices on. This may take a minute or two.

DT18 has updated and restarted successfully

Done
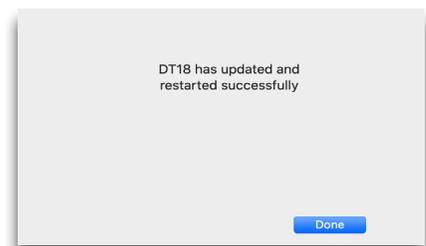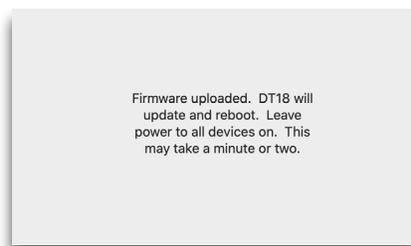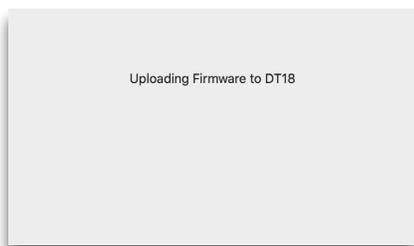
④ Troubleshooting

For help with troubleshooting please contact DT Videolabs at technical@dtvideolabs.com or (602) 687-8507.

Problem	Possible Problems
What if the controller does not power up?	(1) Check for power supply damage (2) Check for power supply power cord damage (3) Check power source (4) Check DT18 power port for damage
What if the controller does not see the PlaybackPro Plus software?	(1) Bypass any switch and test a connection to a single system (2) Go through IP, hardware and software setup steps again. (3) Check ethernet cables for damage (4) Check switch for power (5) Check switch for damage (6) Power cycle the switch (7) If switch is programmable, reset to defaults (8) Make sure each system has a manual IP address as outlined in this User Guide

⑤ Technical Specifications

	DT18		Power Supply	
Weight	1lb	.45kg	8oz	.23kg
Height	2.12″	5.39cm	1.125″	28.57mm
Depth	7.07″	17.96cm	4″	101.6mm
Width	6.42″	16.31cm	1.6″	40.64mm
Input Voltage			100~240V	
Output Voltage			12.0 Volts	
Output Current			2.5 Amps	