

Application Notes



Recording and exporting XML in Colour-Tramp

Release v5-9 of Colour-Tramp includes the ability to record the output to an xml file. The XML file can then be used for visualisation and simulation.

Operation

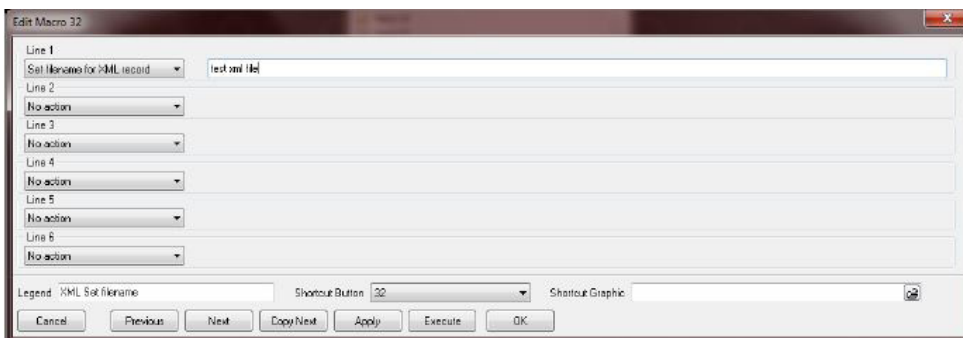
The xml file will be created by Colour-Tramp in real time, in parallel to outputting the lighting data over the usual network connection. In order for this process to occur, these items must be defined in Colour-Tramp:

1. Define the xml file name.
2. Start recording.
3. Stop recording.

The user may wish to record single sequences, stacks, or ad-hoc time intervals of the output. To provide the maximum flexibility, these three commands will be implemented as Macro commands. That allows the commands to be initiated from:

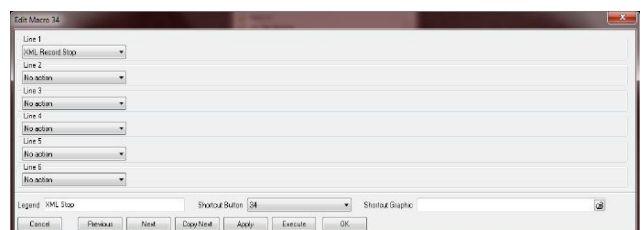
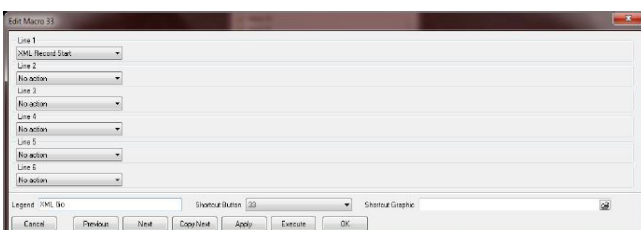
1. A Sequence Step
2. A Stack Step
3. Based on a condition such as time of day or astronomical time.
4. A button press
5. A remote network trigger

The screenshot below shows the macro to define the xml filename.



The filename can include a full path. If it does not, the file will be saved to the Colour-Tramp Export folder. If the file exists, it will be renamed by pre-pending the date.

The screenshot below shows the start and stop macros.



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File Format:

The file will be populated with two types of data:

1. Control data which defines the lamp channels. The information will be taken from the Colour-Tramp patch information.
2. Live data which provides a snapshot of all output levels at a regular time slot.

Draft XML:

```
<RecordingCT>
  <Header>
    <ShowName>Independence Day.xml</ShowName>
    <Patch PixelIndex = "1">
      <Name>Pixel 1</Name>
      <Uid>000.000.000.000.000.000</Uid>
      <Pipe>1</Pipe>
      <Universe>0</Universe>
      <StartAddress>1</StartAddress>
      <Type>RGB</Type>
      <Xpos1>1</Xpos1>
      <Ypos1>1</Ypos1>
      <Xdelta1>1</Xdelta1>
      <Ydelta1>1</Ydelta1>
      <Xpos2>1</Xpos2>
      <Ypos2>1</Ypos2>
      <Xdelta2>1</Xdelta2>
      <Ydelta2>1</Ydelta2>
      <Xpos3>1</Xpos3>
      <Ypos3>1</Ypos3>
      <Xdelta3>1</Xdelta3>
      <Ydelta3>1</Ydelta3>
      <Xpos4>1</Xpos4>
      <Ypos4>1</Ypos4>
      <Xdelta4>1</Xdelta4>
      <Ydelta4>1</Ydelta4>
      <Notes1>Text</Notes1>
      <Notes2>Text</Notes2>
      <Notes3>Text</Notes3>
      <Notes4>Text</Notes4>
```

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```
</Patch>
<Patch PixelIndex = "2">
  <Name>Pixel 2</Name>
  <Uid>000.000.000.000.000.000</Uid>
  <Pipe>1</Pipe>
  <Universe>0</Universe>
  <StartAddress>4</StartAddress>
  <Type>RGB</Type>
  <Xpos1>1</Xpos1>
  <Ypos1>1</Ypos1>
  <Xdelta1>1</Xdelta1>
  <Ydelta1>1</Ydelta1>
  <Xpos2>1</Xpos2>
  <Ypos2>1</Ypos2>
  <Xdelta2>1</Xdelta2>
  <Ydelta2>1</Ydelta2>
  <Xpos3>1</Xpos3>
  <Ypos3>1</Ypos3>
  <Xdelta3>1</Xdelta3>
  <Ydelta3>1</Ydelta3>
  <Xpos4>1</Xpos4>
  <Ypos4>1</Ypos4>
  <Xdelta4>1</Xdelta4>
  <Ydelta4>1</Ydelta4>
  <Notes1>Text</Notes1>
  <Notes2>Text</Notes2>
  <Notes3>Text</Notes3>
  <Notes4>Text</Notes4>
```

```
</Patch>
```

```
</Header>
```

```
<RealTime>
```

```
<Sample SampleIndex = "1">
  <TimeStamp>1000</TimeStamp>
  <TimeDelta>25</TimeDelta>
  <Pixel PixelIndex = "1">
    <R>255</R>
    <G>255</G>
    <B>255</B>
```



```
</Pixel>
<Pixel PixelIndex = "2">
  <R>255</R>
  <G>255</G>
  <B>255</B>
</Pixel>
</Sample>
<Sample SampleIndex = "2">
  <TimeStamp>1025</TimeStamp>
  <TimeDelta>25</TimeDelta>
  <Pixel PixelIndex = "1">
    <R>0</R>
    <G>0</G>
    <B>0</B>
  </Pixel>
  <Pixel PixelIndex = "2">
    <R>0</R>
    <G>0</G>
    <B>0</B>
  </Pixel>
</Sample>
</RealTime>
</RecordingCT>
```

Tag Definitions

- RecordingCT: Defines this as a Colour-Tramp recording.
- Header: Contains the configuration information
- ShowName: This will be taken from the xml file name defined by use in macro.
- Patch: Contains the patch and general configuration for each pixel (composite RGB unit)
- PixelIndex: A positive integer starting from zero that provides a unique reference for each pixel and allows data within Header and Sample to be cross referenced.
- Pipe: The Colour-Tramp output pipe to which the pixel is patched. A positive integer starting at 1. This field is FYI.
- Universe: The Colour-Tramp output universe to which the pixel is patched. A positive integer starting at 0. This field is FYI.
- StartAddress: The Colour-Tramp output start address to which the pixel is patched. A positive integer ranging from 1 to 512. This field is FYI.



- Uid: The RDM UID. Dot notation.
- Type: The pixel type. RGB. Text string.
- Xpos1: The X coordinate of the pixel in Colour-Tramp 2D space, Layer 1. An integer.
- Ypos1: The Y coordinate of the pixel in Colour-Tramp 2D space, Layer 1. An integer.
- Xdelta1: The cell width or diameter in Colour-Tramp 2D space, Layer 1. An integer.
- Ydelta1: The cell height or diameter in Colour-Tramp 2D space, Layer 1. An integer.
- Xpos2: The X coordinate of the pixel in Colour-Tramp 2D space, Layer 2. An integer.
- Ypos2: The Y coordinate of the pixel in Colour-Tramp 2D space, Layer 2. An integer.
- Xdelta2: The cell width or diameter in Colour-Tramp 2D space, Layer 2. An integer.
- Ydelta2: The cell height or diameter in Colour-Tramp 2D space, Layer 2. An integer.
- Xpos3: The X coordinate of the pixel in Colour-Tramp 2D space, Layer 3. An integer.
- Ypos3: The Y coordinate of the pixel in Colour-Tramp 2D space, Layer 3. An integer.
- Xdelta3: The cell width or diameter in Colour-Tramp 2D space, Layer 3. An integer.
- Ydelta3: The cell height or diameter in Colour-Tramp 2D space, Layer 3. An integer.
- Xpos4: The X coordinate of the pixel in Colour-Tramp 2D space, Layer 4. An integer.
- Ypos4: The Y coordinate of the pixel in Colour-Tramp 2D space, Layer 4. An integer.
- Xdelta4: The cell width or diameter in Colour-Tramp 2D space, Layer 4. An integer.
- Ydelta4: The cell height or diameter in Colour-Tramp 2D space, Layer 4. An integer.
- Notes: A Unicode text string taken from the “Aux Data1” field of the Colour-Tramp fixture patch. This is free form and could be used by the operator to encode Z axis information if required.
- RealTime: Encapsulates the entire real time recording.
- Sample: Encapsulates a snapshot of all pixel levels.
- SampleIndex: A positive integer starting at zero which increments for each successive sample.
- TimeStamp: A positive integer which represents the total number of mS from the start of recording to this sample.
- Pixel: Encapsulates the level information for a single pixel.
- R: The Red intensity in range 0-255.
- G: The Green intensity in range 0-255.
- B: The Blue intensity in range 0-255.