

Installation and Operation



Kaleidoscope to Krystal Effect Translator

Introduction

This document explains how to install and use the Kaleidoscope to Krystal Effect Translator utility program (Version 1.0). The Kaleidoscope/Krystal Translator utility is a Windows 95 based program that converts Kaleidoscope effect files to Krystal effect files. The files produced by the conversion are true Krystal DPM system effect files able to be loaded into a Krystal system and then be run, modified, and/or saved.

Components

The Kaleidoscope to Krystal Effect Translator utility consists of:

- The utility program (TRANSL8), installer (INSTALL), and Kaleidoscope unity keyframe (DEFAULT.KFR) files.
- Installation and Operation Instructions (this document TP0864-00-A2)

These files can be acquired from the Tektronix/Grass Valley web page, or may be supplied on a 1.44 Mb floppy disk.

Requirements

- The Kaleidoscope to Krystal Effect Translator utility minimum requirements are:
 - 486 PC
 - 8 Mb RAM
 - 8 Mb available disk space on the C: drive.
 - Windows 95 version 4.0 or later.
- Kaleidoscope uses 720K disks. Krystal uses 1.44M disks but supports 720K disks. On 720K disks with few effects, you can convert the files onto the same disk.
- Krystal files created with this utility program are compatible with Krystal Release 2.3.0 and higher software.

Installation

Web Site Acquisition

If you downloaded the software from the web page you will have a single file (CONVERT.EXE) that contains the software and documentation in a compressed archive format. To unpack the archive simply execute it. This extracts the various files from the archive and uncompresses them. Save the files to a floppy disk and label the disk. You can now install the software from the floppy disk onto your computer, using the procedure described below. Save the floppy disk copy as a back up, and to allow easy installation onto other computers.

Program Installation

The Kaleidoscope to Krystal Effect Translator program is installed into a new directory. To install the program:

1. Insert the floppy disk into the computer's A: or B: drive.
2. Open the Windows Run window (select "Start", "Run").
3. Type A: INSTALL (or B:INSTALL), then select "OK" or press the "Enter" key. An installation window appears (Figure 1).

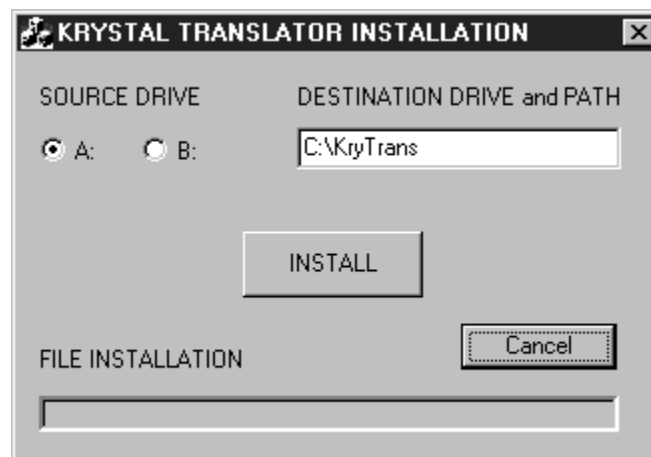


Figure 1. Krystal Translator Installation Screen

4. Click the "Install" button to create the directory and install the program into the default directory (C:\KryTrans\), or you can enter a path and different directory name, if you wish.

5. A progress bar will appear as the files are being installed. After a few seconds the message "Krystal Translator Load Successful!" appears. Click the "OK" button on this window.

6. Remove the floppy disk from the drive.

Because the installation process does not use DLLs, no changes will be made to your Windows configuration and initialization files. Because of this simplified installation process, the installed utility program will not appear in the Windows 95 "Programs" window.

To remove the application from the computer, simply delete the directory containing the installed program files.

General Operation

The Kaleidoscope to Krystal effect conversion process consists of the following steps:

- Select where the files to be converted are located.
- Select the specific files to be converted.
- Select a location to save the converted files.
- Assign names to the converted files, if desired, or you can use default names.
- Perform the file conversion.

Several options are provided to add flexibility to the process.

Startup

You can start the Kaleidoscope to Krystal Effect Translator utility two different ways:

1. If the default installation was used, you can double click "My Computer", "C: drive", "KryTrans\" to open the directory containing the program. Otherwise use standard Windows techniques to open the directory. Then double click on the "Transl8" icon.
2. Alternatively, you can select "Start", "Run", type the path to the Transl8 file (the default path is C:\KryTrans\transl8), then click the "Run" button.

NOTE: The DEFAULT.KFR file located in this directory is required for translator program operation. This file contains Kaleidoscope unity keyframe information used by the program during file translation.

To perform your conversions, you will need the Kaleidoscope effect files either on floppy disk or on a drive the computer can access. If you have many files to convert, you will want additional 1.44 Mb formatted floppy disks to receive the files.

User Interface

The Kaleidoscope to Krystal Effect Translator program has a simple, single screen user interface that employs standard Windows operating methods (Figure 2).

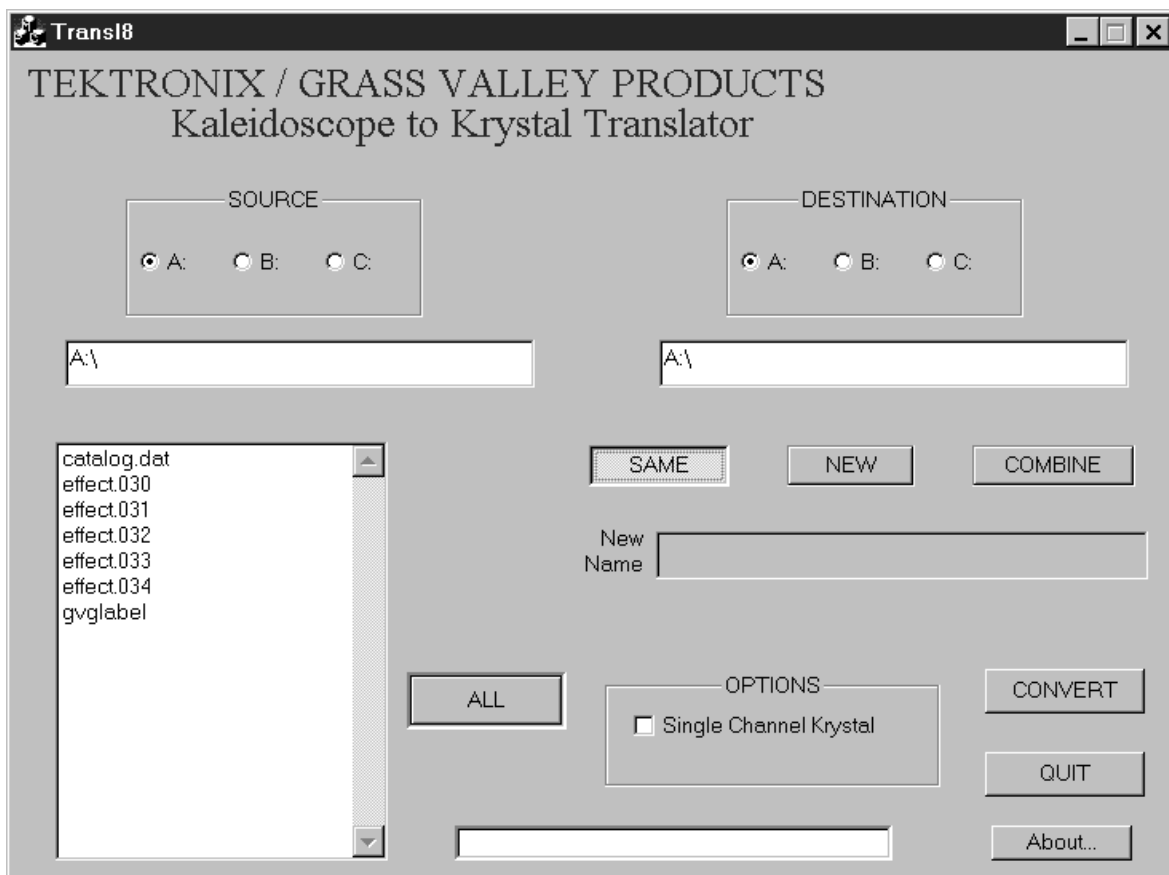


Figure 2. Kaleidoscope to Krystal Effect Translator User Interface Screen

About

You can click on the About button to open a window showing the version number of the translator software.

Source File Location

Source Disk

Three standard disk selections can be made for the source disk (A:, B:, C:). Each is mutually exclusive and the selection is reflected in the Source Path name. If the desired disk is not one of the selectable options, you can change the disk name by editing the source path (see below).

Source Path

After selecting a source disk, the path name can be modified by moving the mouse to the Source Path window and pressing the left mouse button. You can now enter a source path to the effect files to be converted, if necessary. If the last character typed is not a backslash '\', this character is automatically inserted when the disk files are retrieved.

If the desired source disk is not one of the selectable options, you can use the left arrow to move the cursor to the drive letter, delete it, and type in the desired replacement. Then enter the remainder of the path, if necessary.

After you have specified the source drive and path, press the Enter key with the cursor in the Source Path field. This tells the converter to retrieve the files. All the files at that location will be displayed in the Kaleidoscope Files window.

Source File Selection

You select files for conversion from those listed in the Kaleidoscope Files window. Use the mouse to move to a file name and press the left mouse button. The file name will change color indicating that file has been selected. More than one file can be selected at a time, and you can also deselect files by clicking on them.

All

The All selection button selects all files in the list. Even if you don't need to convert all the files, it is sometimes easier to select all the files and then deselect the files not needed.

If the disk was formatted by Kaleidoscope, CATALOG.DAT and GVGLABEL files will also appear in the list. Kaleidoscope uses these files for effect names and channel enables. The translator program does not use the information in these files and ignores them.

NOTE: *You must move the cursor into the Source Path field and press Enter before available files will be listed. If you change the available files (by adding converted files or swapping floppy disks) these changes are not updated on the on the list until Enter is pressed with the cursor in the field.*

Destination File Location

Destination Disk

Three standard disk selections can also be made for the destination disk (A:, B:, C:). Each is mutually exclusive and the selection is reflected in the Destination Path name. If the desired disk is not one of the selectable options, you can change the disk name by editing the destination path (see below).

Destination Path

After selecting a destination disk, the path name can be modified by moving the mouse to the Destination Path window and pressing the left mouse button. You can now enter a destination path to the location where you wish to save the converted files, if necessary. If the last character typed is not a backslash '\', this character is automatically inserted when the disk files are retrieved.

If the desired disk is not one of the selectable options, you can use the left arrow to move the cursor to the drive letter, delete it, and type in the desired replacement. Then enter the remainder of the path, if necessary.

Once the destination path is correct, proceed to the file name process.

File Naming

Same

The Same setting is the default. This setting uses the current Kaleidoscope effect file name, but changes the first character of the extension to a 'K'.

Example: Kaleidoscope "Effect.000" converts to Krystal "Effect.K00"

Kaleidoscope files saved with preset registers have extensions above 100. To resolve the conflict with Krystal file extensions, the last letter of the converted preset effect name is changed to 'P' to indicate it is a preset file extension name.

Example: Kaleidoscope"Effect.123" converts to Krystal "EffecP.K23"

New

NOTE: Only one file at a time can be selected for translation with the New setting. An error message will be displayed if this option is chosen after selecting multiple files.

When the New setting is selected, the File name window becomes active. You can enter a different file name to be used in place of the source Kaleidoscope file.

Combine

When Combine is selected, you can convert all the selected files to a single Krystal file. This is similar to using the "All" setting when saving Krystal effect registers to disk. You are able to enter a new file name for the combined file.

NOTE: Krystal effect files are much larger than Kaleidoscope files. Converting and then combining several large files into one Krystal file may make the resulting file too large for a 1.44 M floppy disk.

File Translation

Single Channel Krystal Option

This setting makes the translator program place Kaleidoscope background information in the appropriate channel. When Single Channel Krystal is selected, the background information stays with Channel 1, same as Kaleidoscope. When this setting is not selected, the Kaleidoscope background information will be placed in the Krystal Camera channel

Procedure

After the source and destination paths and file name have been set you can perform the actual file translation.

1. If you are converting Kaleidoscope effects to run on a single channel Krystal system, select the Single Channel Krystal option. Otherwise, leave this setting unselected. See page 7 for more information about this option.
2. Use the left mouse button to select the Convert button and start the file translation. The start of each conversion is indicated by the transfer description in the action display window.

Example: Effect.023 -> Effect.K23

3. A pop-up window indicates when the conversions are complete. The converted Kaleidoscope files can now be used in a Krystal system.

Same Disk Source and Destination

If the Source and Destination use the same disk drive, the system will ask whether the new converted files should be placed on the same disk or if a disk swap is required.

Disk Swap For Multiple Files

If a disk swap is needed and multiple files have been selected, all files are converted to temporary files on the C: drive and then the disk swap is requested. After the swap, all temporary files are copied to the destination drive using the correct file name, and then the temporary files are deleted from the C: drive.

Conversion Notes

Single Channel Krystal Option

The Single Channel Krystal setting makes the translator program place the Kaleidoscope background information in the appropriate channel.

When Single Channel Krystal is selected, the Kaleidoscope background information goes into Krystal Channel 1 (same as Kaleidoscope). When not selected the Kaleidoscope background information goes into the Krystal Camera channel.

Effect File Sizes

Krystal files are ASCII format, not binary like Kaleidoscope. This is one reason why a Kaleidoscope effect becomes larger when it is converted into a Krystal effect. One advantage to the ASCII file format is the file can be read with a text editor.

The translator program checks the A: and B: drives for available space during translation, and posts a warning message if there is not enough room. The program assumes space is available on the C: drive and does not check that drive during translation.

An extremely long or complicated Kaleidoscope effect could translate to a 3 Mb Krystal effect, too large to fit on a 1.44 Mb floppy disk. To translate a large Kaleidoscope file, you may need to reduce its size by splitting it into segments or removing unnecessary parameters or keyframes.

Combining several smaller Kaleidoscope files into one Krystal file can also make the resulting file too large for a 1.44 M floppy disk. In this case, simply select the files to convert individually.

Channels

Five Channel Effects

- Kaleidoscope supports up to five channels for effects, but Krystal supports up to four. To convert a five channel effect, the fifth channel data is used to build a separate effect. Global information is added to this effect, and it is saved to a separate file name. The last letter of the file name for this fifth channel effect is changed to '5'. For example, Kaleidoscope 5 Channel "Effect.001" file name converts to:
 - a. Krystal 4 channel file name "Effect.K01"
 - b. Krystal 5th channel file name "Effec5.K01"
- If a file is a Preset register file with five channels of effects, the file converts as follows. Example: Kaleidoscope 5 Channel "Effect.118" file name converts to:
 - a. Krystal 4 channel file name "EffecP.K01"
 - b. Krystal 5th Fifth channel file name "EffeP5.K01"
- If you don't want to convert channel 5 as a separate effect, use the Kaleidoscope swap channels feature to move it to another channel before saving the effect.

Global Channels

- Kaleidoscope Global keyframes are converted to Global 1.

- Krystal's Global attachment of Global 1 to Global 2 should be removed in the new effect. Global 2 will not influence the effect in any way.

Camera Channel

- Krystal's Camera channel is affected when Kaleidoscope's background and combiner selections are used. On Kaleidoscope, channel 1 controls the background. On Krystal, the combiner controls the background for multi-channel effects. Kaleidoscope backgrounds, if used, are converted to Camera keyframes for multi-channel Krystal effects, or included in Channel 1 on single channel Krystal effects, depending on the Single Channel Krystal setting.

Effects Editing

- Krystal has more control parameters for the same effect than Kaleidoscope. Once effects are converted, you can apply new Krystal features to your older effects. Look at defocus, glow, emboss, and input recursive. You can apply masking to all these effects.
- Kaleidoscope doesn't have a mask bus. Because of this, Kaleidoscope sometimes used the key bus as a mask source. Krystal has a mask bus and two pattern generators. Krystal allows you to mix one mask pattern and an external source, and crop with completely different pattern solid. You can modify effects to take advantage of Krystal's improved masking and cropping capabilities.
- When modifying effects on Krystal to exactly match what Kaleidoscope produced, remember to use GET and PUT to retrieve or save different versions of an effect you are modifying. This will save you time if unintentionally you blow the effect away. UNDO is still unsupported on Krystal's control panel.

Krystal Timelines

Krystal Camera Channel

- If you converted a Kaleidoscope effect that did not use the Global channel, don't be surprised to see Camera keyframes. Some combiner parameters that Kaleidoscope stored with channel keyframes are now stored in Krystal's Camera channel.

For example, depth is now controlled by Krystal's combiner in the

Camera channel, as is the background in multi-channel effects. If these effects are used, expect to see the same number of keyframes in the Camera channel as the channel(s) creating the effect. Combiner effects in Kaleidoscope's Global channel are also included in Krystal's Camera channel.

Unity Keyframe and Timelines

- The converter's unity default keyframe (UKF) is the Kaleidoscope's GVG defaults with the background turned off. This makes Kaleidoscope transparent to the video stream. No effects are applied and transforms are set to unity defaults.
- When building a new effect on Kaleidoscope, make sure that you have cleared the work buffer for all channels. The converter compares all effects and transform parameters against a Kaleidoscope unity keyframe that has all effects turned off. Any keyframe parameters that differ from default UKF will have a corresponding selection and keyframe on Krystal's timeline.

For example, you have just started building an effect in a new register and the channels you are using have been cleared to the UKF. Now suppose you go and experiment with a wipe effect. You turn on the wipes and change parameter such as shape, size, and softness. Then you change your mind and turn the wipe effect off. The shape, size, and softness values are still different from the default UKF used by the converter. The converter will see a difference between these values and create keyframes for them on Krystal's timeline. By the way, if the current work buffer is saved as the new UKF, the changed values are defined too.

- Use Clear Menu Function to reset the menu back to the UKF when building effects on Kaleidoscope. Whether or not an effect is turned on or off, the values are still stored with each keyframe.

Paths

Linear and S-Linear paths are matched. Some conversion errors exist with other paths:

Curve

- This path matched almost exactly. Inbetweening of motion paths is identical for both products. The further you are away from origin point, the greater the path error. The error is only a few pixels. Make sure that crop values match.

Smooth

- There are differences with this path. The default values for TCB are very different. Try building a three keyframe corner- to-corner move. Kaleidoscope will move the channel off screen while Krystal will keep the channel on screen.

Ease

- It appears that EASE converts to S-LIN. Even though EASE is missing from the Krystal's control panel, the Effects Manger does support it. Please be aware that if you change the path from ease to another path type, you will not be able to get back to ease. If you do, reload the effect from disk.

Parameter Values

- Because of scale factor conversions, some keyframe values will be out of range. Expect to see percentages above (i.e.+112.25) and below (i.e.-3.20) the control panel's limits. If you turn a soft knob the control panel will reset the keyframe value to it's limits. If you did not modify the keyframe, press Prev and Next keyframe to restore the value. The effect will still run with the out-of-range values.
- Because of differences between the two wipe systems, you may have to adjust Krystal's wipes to achieve exactly the same effect Kaleidoscope produced.
- During a conversion, only those parameter values that have equivalent functions in Krystal are converted. The additional effect parameters in Krystal are not affected. They will be kept at unity and the timeline will be unaffected.

Masking & Cropping

NOTE: *A Kaleidoscope effects that uses masking and has crops disabled will not translate properly. The mask and crops on this effect will have to be edited on the Krystal to make them match the Kaleidoscope effect.*

- Kaleidoscope does not have a mask bus. Its key bus was used for certain effects as a mask bus. Effects that used this feature are: Pseudo Color, Defocus, Motion Track, and Video Only Freeze.
- If an external key was used for masking and not keying, the key is not applied to channel and picture crops stay disabled.

- If you want to use an external key as mask and not a key, you will need to route the key signal to the external mask and modify keyframes. This application works well when Krystal is integrated with our digital production switchers.
- Kaleidoscope user crops convert to box crops in Krystal when wipes are not used to mask. If you want both, you will need to turn on the mask mix, check the box mask values and adjust the mix.
- Krystal has two separate pattern generators: pattern crop and pattern mask. The crops and masks are affected whenever a Kaleidoscope effect uses wipes for masking instead of keying.
- The following rules are used when converting wipe crops:
 - a. If masking is used, Kaleidoscope wipe crops will convert to pattern masks on Krystal.
 - b. If masking is not used, Kaleidoscope wipe crops will convert to pattern crops on Krystal.
- After a conversion that used the wipe system, both pattern crops and pattern masks will share values keyframe for keyframe. Mask crop will be turned on and pattern crop will be turned off.

Keying

- Krystal has two separate key generators: keyer and external mask. The keyer and external masks are affected whenever a Kaleidoscope effect uses keying for masking instead of keying.
- The following rules are used when converting keyers:
 - a. If masking is used, Kaleidoscope keys will convert to external masks on Krystal.
 - b. If masking is not used, Kaleidoscope keys will convert to keyer on Krystal.
- After a conversion that used the keyer, both keyer and external masks will share values keyframe for keyframe. Keyer will be turned on and external mask will be turned off.

Pseudo Color

- All pseudo colors effects except contrast are converted completely. If a Kaleidoscope effect uses contrast, COLOR COR will be enabled on Krystal and its values set at unity. You can then modify the keyframes to the desired settings.

Input Recursive

- Currently, Krystal only supports freeze, strobos, and motion decay.
- All Kaleidoscope input recursive modes are converted.
- Certain Kaleidoscope parameters (like motion track) are not yet available on Krystal.

Wipe Solids

Kaleidoscope Linear Group (100)

Every attempt was made to make this group convert exactly. But, because of differences between the two wipe systems, you may have to adjust Krystal's wipes to achieve the same effect Kaleidoscope produced.

- All patterns convert except 142, the pyramid (Krystal #5). Only the shape is converted.
- The pyramid construction between the two wipe systems is too different to correct with offsets. Kaleidoscope's pyramid is tied to the 4x3 aspect of the monitor, while Krystal's is not. Also, the wipe center is handled differently between the two. The pattern will be converted, but the effect will not match. If you were using the pyramid to crop a channel, it is suggested you try using the wedge wipe instead (Kaleidoscope pattern 108, Krystal pattern 32).
- The rest of wipes will convert with offsets applied to various parameters, such as H POS, V POS and ASPECT. Errors in Size will be slightly noticeable when wipes are near the limits of 0% and 100%. Because of conversion factors for size, the size values may not match exactly keyframe for keyframe between the two systems. Expect to see keyframe values beyond Krystal's limits.
- Apply path holds to wipe offsets. They are not by the conversion program.

Kaleidoscope Matrix Group (200)

Krystal does not have matrix wipes. If these wipes were used in Kaleidoscope, they will be ignored during the conversion. Krystal pattern crops are not effected.

- If you need matrix wipes to mask with, and have a production switcher such as the Model 2200, feed a matrix wipe from the 2200's mask bus to mask bus of Krystal. Simply select a background generator, set the mattes to B/W, and select a matrix wipe for a secondary wash. Use the offset knob to change the size.

Kaleidoscope Circle Group (300,301)

- These two wipes convert correctly. The circle (300) matches exactly. The heart (301) has offsets applied.

Error Messages

Disk Full

This condition will occur when the converted Krystal file will not fit on the remaining portion of the disk. Get a disk with more space on it and try again.

File Too Large

This condition will occur when the converted Krystal file is larger than the floppy disk being used. If using a 720K floppy, try using a 1.44Mb file. If a 1.44Mb floppy is already being used, the only solution is to edit the Kaleidoscope file to remove some keyframes and try again.

Invalid File Type

The file selected for conversion is not a Kaleidoscope file. Make sure the selected file is a Kaleidoscope effect file. If it is a Kaleidoscope file, the file or the disk may be corrupted. Resave the Kaleidoscope effect and try again.

No File Selected

The conversion was attempted without selecting a file from the file list. Make selection and try again.

No Files Found

The selected disk or path was empty. Change the selection criterion and try again.

Only One File Selection Allowed With New Name Option

The New naming option can only handle one file at a time. Deselect until only one file remains and convert the files individually.