

PlayStation TIM export plug-in (4.0E) readme

1.1 08/29/1997

1 Operating environment

Adobe Photoshop 4.0, Windows 95, PlayStation Artist board

2 Installation

- 1 The directory to which the plug-ins installed has changed in Photoshop 3.0 or later version.
Copy **TIMexpE.8be** into the PLUGINS\EXPORT subdirectory in the Photoshop directory.
Copy **TIMexp.ini** into the system directory (such as C:\Windows).
- 2 Use **ABORD.EXE** to set the I/O address of the Artist board. You can confirm the address in the About Box by choosing Help > About plug-ins > PlayStation TIM export from the Photoshop menu bar. (The default address is 0x1340).

3 Usage

3.1 Setup of initial file: "TIMexp.ini"

This file is located in the system directory and includes some program settings as below:

- 1 Default values: Whole default values of the Export Options dialog box can be customized by editing [DefaultValue] section. See Table.1 for more detail.
- 2 Record masks: When you record actions, plug-ins will output whole parameters basically. Although this export plug-in contains 26 parameters, a few parameters may be changed in most cases. Setting a parameter at 1 in [RecordMask] section allows you to disable parameter output which you did not change and therefore do not have to notice. In order to record actions with more flexibility, use less number of parameters. Record mask is a useful function to reduce the number of parameters to a minimum. The items of maskable parameters are almost same as the default values. Exceptionally "Base" is a non-maskable parameter. See the initial file for more detail.

- 3 List of saved values: A list of whole parameter values needed to export the image. Clicking "Save" button in the Export Options dialog box, the plug-in will immediately generate / update the list associated with the full path of the target image file.

The list consists of 26 parameters in the following order:

Color,
DispModeH, DispModeV, DispStartX, DispStartY,
DispAreaX, DispAreaY, DispAreaW, DispAreaH,
TexX, TexY, TexW, TexH,
ClutX, ClutY,
ABR, Lower3, StpOthers, StpBlack, LoadOnly, ClearScreen,
ColorAuto, TexAddrAuto, TexSizeAuto, ClutAddrAuto, StpBitAuto

Table.1 Parameters specifiable in [DefaultValue] section of TIMexp.ini

Entry name	Content
Base(0)	Base setting (0:Default values, 1:Previously saved values)
ColorAuto(0)	Automatic Color mode (0:Off, 1:Auto)

Indexed(1)	Color mode for Indexed color (0:4 bit CLUT, 1:8 bit CLUT)
Direct(2)	Color mode for RGB color (2:16 bit Direct, 3:24 bit Direct)
DispModeH(0)	Horizontal screen resolution (0:256, 1:320, 2:512, 3:640)
DispModeV(0)	Vertical screen resolution (0:240, 1:480)
DispStartX(0)	Display start address: X
DispStartY(0)	Display start address: Y
DispAreaX(0)	Address: X of display area
DispAreaY(0)	Address: Y of display area
DispAreaW(1)	Width of display area
DispAreaH(1)	Height of display area
TexAddrAuto(0)	Automatic texture address (0:Off, 1:Auto)
TexX(0)	Address: X of texture
TexY(0)	Address: Y of texture
TexSizeAuto(1)	Automatic texture size (0:Off, 1:Auto)
TexW(1)	Width of texture size
TexH(1)	Height of texture size
ClutAddrAuto(0)	Automatic CLUT address (0:Off, 1:Auto)
ClutX(0)	Address: X of CLUT
ClutY(0)	Address: Y of CLUT
ABR(0)	Translucent rate (0 is compatible with version 1.2E) 0: Foreground: 50% + Background: 50% 1: Foreground: 100% + Background:100% 2: Foreground:-100% + Background:100% 3: Foreground: 25% + Background:100%
Lower3(0)	Rounding method (0 is compatible with version 1.2E) 0:round down, 1:round off, 2:round up
StpBitAuto(0)	Automatic STP bit control (0:Off, 1:Auto)
StpOthers(0)	Except black -> Translucent (0:Off, 1:On)
StpBlack(0)	Black -> Transparent (0:Off, 1:On)
LoadOnly(0)	Load only (0:Off, 1:On)
ClearScreen(0)	Clear screen initially (0:Off, 1:On)
WnNotSaved(1)	Warn of "Saved values not found" (0:Silent, 1:Warn)
WnModeDisagree(1)	Warn of "Color mode disagreement" (0:Silent, 1:Warn)
ReadIniFile(0)	Read initial file (0:For once at initial call, 1:At every call)

CAUTION: An entry name prefixed with ';' is ignored and the plug-in adopts the value in parentheses.

3.2 Cooperation of TIM format (4.0E) plug-in

TIM format plug-in always scans the file header and the contents of the CLUT and texture image data in order to check on STP bit, and writes the result into Caption section of the File Information. If the Caption is valid and the color mode agrees with the target image, then this export plug-in can enable four "Auto" check-boxes: "Color mode", "Texture Page address", "Texture CLUT address" and "STP bit". These check-boxes will be disabled when the Caption is incorrect.

3.3 To export an image to the Artist board

- 1 Choose File > Export > PlayStation TIM export.
- 2 The TIM Export Options dialog box is displayed as below.

Initial setting is based on

Select the base of the initial setting values of the Export Options dialog box either “Default values” or “Previously saved values”.

**Default values:* Retrieve from [DefaultValue] section of the initial file.

**Previously saved values:* Retrieve the saved values which was saved as follows.

"Save" push button allows you to save / update the whole parameters displayed in the dialog box into the initial file associated with the full path of the target image file immediately. Do it with some care because you may not cancel that action.

"Delete" push button allows you to delete the saved values list in the initial file. Even after deletion the list, you may select “Previously saved values” until the dialog box is closed. Do it with some care because you may not cancel that action.

CAUTION: A plug-in will always read a descriptor(*) handed from Photoshop and update the specified parameters before opens the dialog box. So the values in the dialog box do not necessarily MATCH with the values selected at “Initial setting based on” because some parameters may be changed by the descriptor handed from Photoshop.

When you set all parameters in [RecordMask] section at 1 and record an export action command without changing any parameters, this plug-in will record a command with “Based on” parameter only. This command allows you to export a image with the original settings as you specified.

*: A descriptor is a component of a command for an action, and is a pair of data in the form of [key value] that describes the property of an object or the parameter of an event.

Color mode

Sets the pixel format to be used with the Artist board. Choose one of the following settings according to the image mode:

Indexed color:	4 bit CLUT or 8 bit CLUT
RGB color:	16 bit Direct or 24 bit Direct

Display mode

Sets the horizontal (H) and vertical (V) resolution of screen of the Artist board. By changing the start address, you can see any area of VRAM.

Display area

Sets the address in VRAM (from the upper left corner) and the width and height of the rectangle to be texture mapped. These are disabled in Load only mode.

Texture page

Sets the address in VRAM (from the upper left corner) and the width and height of the texture data. The width and height provided by Photoshop are available by clicking the "Auto" of the size.

The address is automatically set to (0, 0) in Load only mode.

Texture CLUT

Sets the address in VRAM (from the upper left corner) of the CLUT. These parameters are disabled when the color mode is set at 16 bit Direct or 24 bit Direct.

STP bit

STP bit settings are enable except in Load only mode.

** Except black -> Translucent*

Sets the transparency control bit for pixels or CLUT entries other than those where the (R, G, B) values are set to (0, 0, 0) after 8 bits to 5 bits conversion. As a result, all colors other than black become translucent only in translucent mode.

** ABR*

When you check the check box of "Except black -> Translucent", you can select the rate of translucent as below:

- 1) Foreground: 50% + Background: 50% (compatible with version 1.2E)
- 2) Foreground: 100% + Background:100%
- 3) Foreground:-100% + Background:100%
- 4) Foreground: 25% + Background:100%

** Black -> Transparent*

Clears the transparency control bit for pixels or CLUT entries where the (R, G, B) values are set to (0, 0, 0) after 8 bits to 5 bits conversion. As a result, black becomes transparent, regardless of translucency mode.

Round lower 3 bits as

In Photoshop RGB components are represented at a resolution of 8 bits for each, but Artist board supports only 5 bits for each (except in 24 bit Direct mode). Therefore a transformation from 8 bits to 5 bits is required on exporting a image data. This export plug-in can select the way of round off as below:

- 1) 00000.XXX -> 00000 round down unconditionally (compatible with version 1.2E)
- 2) 00000.1XX -> 00001 round up if Bit2 is 1 (here Bit0 is LSB)
- 3) 00000.XXX -> 00001 round up unconditionally

Miscellaneous

** Load only*

Sets the Load only mode. In this mode, texture data is only sent to VRAM, and mapping of the display area is not performed. Transparency control bits are therefore ignored. This mode is automatically selected when the color mode is set at 24 bit Direct.

** Clear screen initially*

Clears VRAM before exporting image data.

Cancel

Cancels drawing and keeps the values the same on recording an action again.

OK

Exports image data to the Artist board.

4 A method of setting the contents displayed in Export Options dialog box

The contents displayed in the Export Options dialogue box will be set as shown below:

- 1 If you set "Base=1" (Previously saved values) in the [DefaultValue] section of the initial file, then this plug-in has a try at finding the saved values list and set them. The default values will be adopted when search failed or the color mode disagreement(*) occurred or "Base=0".

*: The color mode specified in the descriptor or the saved values list disagrees with the color mode of target image data.

- 2 If Photoshop hands the plug-in a descriptor, see below. Otherwise go to 4.
At first the plug-in will check color mode. If the color mode specified in the descriptor agrees with the target image data then the plug-in changes the parameters specified in the descriptor. Otherwise the descriptor will be discarded.
- 3 If the descriptor set "Base=1" then the plug-in has a try at finding the list of saved values and set them. The default values will be adopted when search failed or the color mode disagreement occurred or "Base=0".
- 4 "Auto" check-boxes will become effective at this stage if possible.
- 5 The dialog box will be opened.

CAUTION: When this plug-in finished exporting an image normally, whole parameters are handed to Photoshop as a descriptor. Photoshop keeps it, and hands again to this plug-in on re-invocation. Therefore some warnings below will be caused by receiving the preceding descriptor.

No descriptor will be handed to Photoshop if you cancel the export operation.

** Color mode disagreement in the correct operations:*

When you export a RGB color image after exporting another indexed color image with "Color mode: 8 bit CLUT" on condition that the plug-in outputs the color mode descriptor by setting "Color=0" in [RecordMask] section of the initial file, Photoshop hands a descriptor of "Color mode: 8 bit CLUT" to the plug-in therefore a color mode disagreement will occur.

** Unexpected changes of parameter:*

For example, on the condition of "Base = 0 (Default values)" in the initial file, when you export an image without saved values after exporting another image with "Based on: saved

values”, the plug-in will warn you that “No saved values found” because Photoshop hands the plug-in a descriptor of “Based on: saved values”.

5 IMPORTANT

- * Transparency control bits are only valid in the display area where the texture mapping is drawn.
- * You cannot perform mapping in a single display area using both "Transparent" and "Translucent except black" attributes at the same time. For situations such as this, set all "black" pixels to an alternate value such as (R, G, B) = (0, 0, 1) in the TIM format.

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