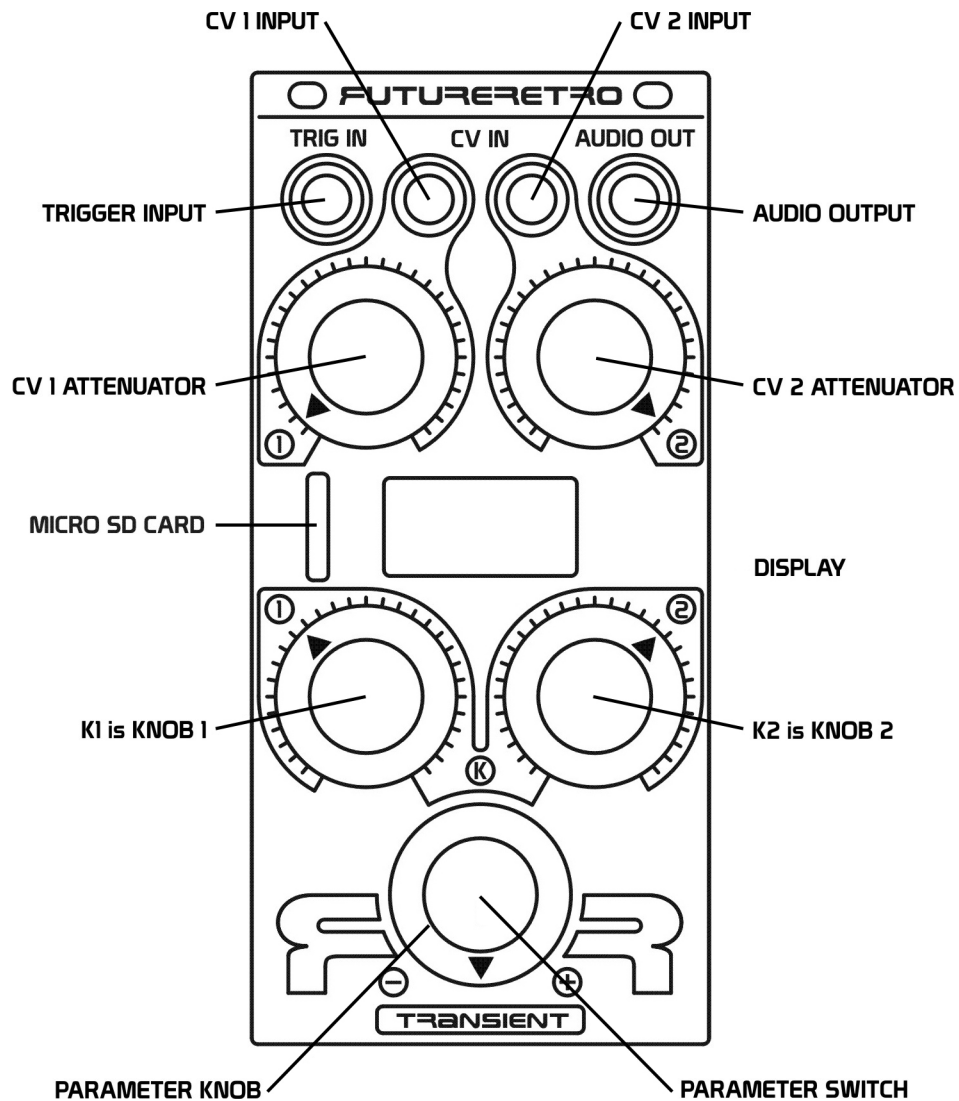


FUTURERETRO

TRANSIENT PLUS FEATURES ADDENDUM



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TRANSIENT PLUS NEW FEATURES

Welcome to the newly improved Transient Plus!

The Transient Plus has undergone both hardware and software updates, in comparison to the original Transient. Owner's of the original Transient unit can send their unit in to Future Retro, and for fee get all the great new software features of the Transient Plus.

Let's have a look at the new features the Transient Plus has to offer...

HARDWARE CHANGES

The look of the Transient Plus has been upgraded with slightly different artwork, and an updated display of functions.

While the original Transient units have a microSD card slot tucked behind the front panel, the Transient Plus provides access to the microSD card from the front panel.

The Transient Plus has an additional rear panel grounding shield, to help isolate and protect the Transient's circuits. However, always discharge yourself of any static electricity before handling the Transient unit, and/or removing or installing it in your eurorack system. In addition, always make sure the power for your eurorack system is turned OFF! before installing or removing the Transient from the system.

The original Transient required -12v, +5v, and +12v power from a eurorack system's power buss. The Transient Plus requires only -12v and +12v power, omitting the need for the +5v from the system's power buss. Also notice the overall current draw of the Transient Plus is slightly higher than the original.

TRANSIENT CURRENT DRAW

+5v Supply Current Draw: 74mA (typical)

+12v Supply Current Draw: 17mA (typical)

-12v Supply Current Draw: 17mA (typical)

TRANSIENT PLUS CURRENT DRAW

+5v Supply Current Draw: (no longer required)

+12v Supply Current Draw: 105mA (typical)

-12v Supply Current Draw: 17mA (typical)

SOFTWARE CHANGES

User Samples

The Transient Plus now offers users the ability to load their own samples from the microSD card.

Up to 16MB (megabytes) of sample data can be loaded into the Transient. Up to 600 user samples can be loaded as well as long as the total memory requirements for these samples is under the 16mB limit.

Instruments Stored on microSD card

While the original Transient provided a specific number of Preset Instruments, and 40 User Instruments, the Transient Plus now stores all of its Instruments on the microSD card. Up to 256 Instruments can be loaded into the Transient. NOTE: More instruments can be stored on the microSD card, however only 256 will load into the Transient for use at any time.

Users can now assign their own custom 8-character name for Instruments. In addition, Instruments can now be backed up to your computer for archiving your work, or sharing with others.

LAST INSTRUMENT RECALL

The Transient Plus now stores the last Instrument you were working with to the microSD card automatically each time a new instrument is selected. When the unit is turned off and back on, the last used Instrument is automatically selected for use.

SCREENSAVER

The Transient Plus now has a screensaver to help extend the life of the display and prevent image burn. By default the screensaver will appear after 5 minutes of no activity, including receiving Trigger Input signals or any adjustments using the encoder/Parameter Knob. Once the screensaver is active, it will return to the normal menu view once a Trigger Input signal is received, or you press the encoder/Parameter Switch. The screensaver time setting can be adjusted by selecting the DISPLAY menu page. Press the Parameter Switch to edit the Sleep Time setting, and make adjustments using the Parameter Knob. Available time settings are: 5 minutes, 10 minutes, 20 minutes, 30 minutes, 60 minutes, and OFF (no screensaver). Always select the lowest possible time for your situation. Avoid using the OFF setting unless you are in a live performance setting, where you require the display to always be active. Continued use of the Transient Plus with the Sleep Time set to OFF can and will result in image burn of the display.

DOWNLOAD FUTURE SOUNDS SETS FOR THE TRANSIENT PLUS

Now that users can load their own Samples and Instruments from microSD card, Future Retro will make additional sound sets available for the Transient. These can be purchased and downloaded through our website: www.future-retro.com

RANDOMIZING INSTRUMENTS

A new Instrument numbered 000 RANDOM, is provided even when no other Instruments exist on the microSD card. This RANDOM Instrument is useful in that each time you select it a new random Instrument patch will be generated automatically. In addition, this RANDOM Instrument will be given a unique random name. If you like the randomized Instrument the Transient Plus generates, you can rename it if you prefer, and then simply save it off to the microSD card.

VOICE MODULATIONS CONFINED

A few changes have been made to Voice 1 and Voice 2 Modulation Sources. All modulation sources that use the “+” in their name (such as CV1 + K1) will confine the modulation amount within the 0 to Modulation Amount value. We find this is more useful in allowing only a specific range of samples to play.

SEQUENTIAL VOICE MODULATION SOURCE

A new Modulation Source called Sequential has also been added. This allows sample selection to play in sequential order either above or below the base sample for each voice. This can be useful if you have sliced beats from existing material, and want to play back those slices sequentially. You can then use the Mod Amount to determine the loop point or number of samples to play before looping back and playing the base sample again. And since Sequential is provided for each Voice, you can do some really interesting polyrhythm sample selections between the two voices.

VOICE MODULATION AMOUNT IN SAMPLES

Voice 1 and Voice 2 Modulation Amount has also been updated. This Mod Amount value now determines how many samples the modulation source will cover. Notice setting the Mod Amount to 0 plays only the base sample. If you want the Modulation Source to cover 16 samples total, you will need to set the Mod Amount to 15 since the base sample already counts as 1 sample.

When Sequential is selected as the Voice’s Mod Source, a Mod Amount of 0, -1, or +1 will play just the base sample. If you want 16 samples to loop, you would then set the Mod Amount to -16 or +16.

VOICE 1 AND 2 PITCH ADJUSTMENTS AND MODULATION

There are six new menu pages for altering the Pitch for Voices 1 and 2 samples.

PITCH 1 settings are for Voice 1, while **PITCH 2** settings are for Voice 2.

Ratio: Allows you to set the initial playback rate for Voice 1's sample. With a value of x1.0000, samples will play back at their original pitch. A value of x2.0000 will play the sample one octave higher than it was originally recorded, while a value of x0.5000 will play the sample one octave lower than it was originally recorded at. The Ratio setting extends all the way down to x0.0313 allowing samples to play 5 octaves lower than originally recorded.

Mod Source: Allows you to select a Modulation Source to alter the pitch of each sample.

Mod Amount: Allows you to select the Modulation Amount to alter the pitch of each sample.

NEW FILTER MODULATION SOURCES

You can now use Modulation Oscillator 1 and 2 to modulate the filter's cutoff frequency, by selecting any of the modulation sources with Osc 1 or Osc 2 in their name.

USER DEFINED INSTRUMENT NAMES

The Transient Plus allows you to enter a user defined name for each Instrument on the card. First select the Instrument you want to edit, then select the EDIT NAME mode. Press the Parameter knob switch to select each of the 8 letters of the name, and use the Parameter knob to adjust the letter for each position. Once you have entered the last letter, pressing the Parameter knob switch again will exit from editing the name. After editing the name, you should then save the Instrument to the microSD card.

SAVING INSTRUMENTS TO THE MICRO SD CARD

The Transient Plus allows you to save any Instrument to the microSD card. Rotate the Parameter knob until you see the microSD image with the display showing "SAVE INSTR?". Pressing the Parameter knob switch will then save the currently selected Instrument to the card. Note: If an Instrument already exists on the card with the same name as the current Instrument you are saving, the Instrument on the card will be overwritten with the new data. If you do not wish to overwrite the Instrument on the card, be sure to give the current Instrument a unique name before saving to the microSD card.

DELETE INSTRUMENTS ON THE MICRO SD CARD

The Transient Plus allows you to delete Instrument stored on the microSD card. To delete an Instrument from the card, first select that Instrument as though you were going to play it. Rotate the Parameter knob until you see the microSD image with the display showing "DELETE INSTR?". Press the Parameter knob switch to delete the currently selected Instrument from the card.

NOTE: You can delete Instruments from the card, by editing the contents of the INSTR folder of the microSD card when viewing the card data on a computer. You can also rename Instruments in the same way using a computer. If editing Instrument names on your computer, please note that all Instruments must have an 8-letter name. Be sure to use only CAPITAL letters, and the underscore "_". Instrument file names with spaces " " or other characters will not load properly into the Transient, as this does not follow the file format the Transient uses to access and load the files by name from the microSD card.

LOADING YOUR OWN SAMPLES

Users can transfer their own samples stored on the microSD card, to the EEPROM memory of the Transient Plus. Loading of samples from the card to EEPROM memory only needs to be done once when the user wants to use different samples than are currently loaded into the Transient Plus.

NOTE: Loading samples will replace all samples in EEPROM memory with all samples located in the SAMPLES folder of the microSD card.

QUICK STEP GUIDE FOR LOADING SAMPLES

1. Edit samples
2. Convert samples to mono, 16bit, 44.1k, RAW file
3. Organize samples in a folder
4. Check overall size of files in folder to see if it is less than 16MB
5. Format microSD card (FAT32)?
6. Transfer samples from computer to microSD card in the order they should appear in memory
7. Transfer samples from microSD card to the Transient Plus.

PREPARING SAMPLES

Samples to be loaded into the Transient Plus must meet certain requirements. The Transient uses mono, 16bit, 44.1k (sample rate) .RAW files. These RAW files are simply WAV files with the header information removed providing a more compact file for storage.

There are many sample editing software packages that can convert your WAV files to the RAW file type. We recommend Audacity because it is free, simple to use, and provides excellent results. Here's a quick tutorial on using Audacity for sample editing.

If you do not already have Audacity software, search the internet and download a free copy to your computer, and install the software.

Launch Audacity, and then Open the audio file you want to edit. If the audio file you opened is Stereo, in the Audacity menu, select: Tracks/Stereo Tracks to Mono. This will convert the stereo track to a mono track.

Select the portion of audio you want to use for your sample. Make sure the beginning and end of the sample are trimmed nice and tight to the main portion of the waveform, and that these points are at 0-point crossing of the waveform to prevent audible clicking from occurring during sample playback.

From the Audacity menu, select: Edit/Remove Special/Trim Audio.

Next you should normalize the samples level. Select the entire sample, then go to the menu and select: Effect/Normalize. A window will open with several options. Place a checkmark next to "Remove DC offset", and the "Normalize maximum amplitude to". Next to that, enter a value of -0.1 dB.

NOTE: Settings of -0.0 dB may cause waveform clipping in the Transient!

Leave the "Normalize stereo channels independently" box unchecked. Press "OK", to normalize the audio.

Now let's save the sample as a RAW file. Select the entire sample waveform, and from the menu select: File/Export Selected Audio. A Save window will open, be careful to make the following selections. In the "Save As:" window type a unique 6 character name for your sample such as: BASSDRM

Leave the "Tags" window blank. Select where on your computer you would like to save the new sample to. In the "File type" window you will need to select "Other uncompressed files". In the FORMAT OPTIONS section, change the "Header:" parameter to "RAW (header-less)", and change the "Encoding:" parameter to "Signed 16-bit PCM". Then click on "SAVE". An Edit Metadata window will then open up. Simply click "OK" and you are done converting your audio sample to the RAW format. Edit all the samples you wish to install in the Transient in this same way.

PREVIEWING RAW FILES IN AUDACITY

If your software ever asks you to define the sample byte priority, the Transient samples use “little-endian” or LSB first. This will be useful once you have converted many RAW files, should you choose to ever want to audition them on your computer, you can go into Audacity and select: File/Import/Raw Data... Then select the RAW sample file you want to import and click “Open”.

You will then see an Import Raw Data window.

The settings for this window should be as follows:

Encoding: Signed 16-bit PCM

Byte order: Little-endian

Channels: 1 Channel (mono)

Start offset: 0 bytes

Amount to import: 100%

Sample Rate: 44100 Hz

Then click “Import” to load the RAW file into Audacity.

CONFIRM THE TOTAL SIZE FOR ALL SAMPLES

Keep the samples you want to load into the Transient Plus in a specific folder on your computer. By exploring the properties of this folder you can easily check the total size in memory for all samples in that folder. It is important to verify that the total sample memory is less than 16MB, since this is the max sample memory within the Transient Plus.

BACKING UP YOUR MICRO SD CARD

It is important to back up your microSD card from time to time to prevent loss of data.

IMPORTANT: Turn your eurorack system’s power OFF before removing and/or installing the microSD card in the Transient Plus. Removing the microSD card while the power is on may result in damage and/or loss of data.

Once the microSD card has been removed from the Transient Plus, insert the card into the SD card adapter, and then insert in a USB card reader for your computer.

There are two ways to back up your microSD card...

The first way would be to simply browse the microSD card files on your computer, and copy and paste them to a folder on your computer’s hard disk. This is particularly useful when you simply want to back up specific Instruments from the card.

The second way to back up the card is to create a disk image of the card. There are multiple disk imaging tools that you can search for and download for free on the internet. In our example here we will be using software for the PC called “Win32DiskImager”. Download the disk imaging software, install it, and then launch the program. Make sure your microSD card is connected to your computer using a card reader.

In the Win32DiskImager software, click on the blue folder icon next to the “Image File” window. Browse your computer drive to locate where you want this disk image to be written to, then enter a file name for the disk image such as “MyTransientSet.img” and click “Open”. In the Win32DiskImager window, make sure to select the location of your microSD card under the “Device” menu. Then click “Read” in the disk imager window. The software will make an exact copy of all data that is on your microSD card and store it to the location you specified. The larger your microSD card is, the longer the back up process will take.

LOADING A DISK IMAGE TO THE MICRO SD CARD

The Sound Sets available to purchase through the Future Retro website will be provided as a disk image. You will need to load this disk image onto the microSD card that will be installed in the Transient Plus. In addition, you can use this method to reload your own disk image backups you have made of your work. Start by inserting your microSD card in your computer card reader. Explore the card, right click on the drive for the card, and do a “Quick Format” of the card.

Launch a disk imaging software program such as Win32DiskImager. In the Win32DiskImager software, click on the blue folder icon next to the “Image File” window. Browse your computer drive to locate the disk image you want to write to the card. Make sure to select the location of your microSD card under the “Device” menu, and then click on “Write”. The disk image file will be written to the card. You can then close the software, safely eject your USB card reader device from the computer, and install the card in the Transient Plus (making sure to turn off your eurorack system before installing the microSD card in the Transient Plus).

These disk image backups are much more reliable than simply dragging and dropping sample files to the microSD card. Since the order samples are placed on the card determine where these samples will be located in memory, if they were ever placed on the card in a different order and played with the same Instruments, those Instruments would most likely sound different than they originally did when saved.

ABOUT THE MICRO SD CARD

If the microSD card is ever lost or damaged, you should replace with a high quality microSD card. We recommend the SanDisk brand as we have thoroughly tested them. The card you choose should be at least 256MB (megabytes) in size, although most cards you find in stores today are all 1GB (gigabyte) or larger, those should work fine too. We have tested cards as large as 32GB with no problems. Keep in mind that the larger card you use will take longer to back up with the disk image method. MicroSD cards have speed class ratings. Class 4 cards work, but may cause some latency when saving or loading instruments. The card provided with your Transient+ is a Class 10 type. These are faster than the Class 4 type, and should provide the best results.

You can view the contents of the Transient Plus files on the microSD card with a computer. In the Root of the card you should see or have a folder called “SAMPLES”, another folder called “INSTR”, and a single text file called “LASTUSED”. Avoid storing other files not used in the Transient Plus on the microSD card.

When starting from scratch to make your own Sample and Instrument files, you should always perform a “quick format” of the microSD card using your computer. Be sure to back up any data that previously existed on the card before formatting the card, as this will erase all data on the card. Be sure to select the FAT type of file format.

MICRO SD CARD, NO CARD DETECTED

The Transient Plus requires that a microSD card be installed in the unit for the Transient to work properly. If you ever power the Transient Plus up without the microSD card installed, you will be greeted with “NO CARD DETECTED” in the display. Should that happen, turn the power OFF for your eurorack system, install a microSD card in the Transient Plus, and then turn your eurorack system ON. If a card is installed in the Transient Plus and you still get this message, it could be that your card is not fully seated in the microSD connector slot, that the card is damaged, or the data on the card has become corrupt. In any case, always turn the power OFF, before adjusting or removing the card, then check the card on your computer to see what data exists on the card. If you suspect the card data has been corrupted, reformat the card, and try transferring Samples and Instruments back onto the card using the Disk Image method.

TRANSFERRING USER SAMPLES AND INSTRUMENTS TO THE MICRO SD CARD

So you want to load your own samples into the Transient Plus. You have edited all your samples, converted them to the RAW file type using software like Audacity, given each sample a unique 6-letter name, placed all the files in a folder on your computer, and have confirmed that the contents of all sample data is under the 16MB limit. You must also perform a quick FAT format of the card to clear out previous data from the card.

You can now explore the files of the microSD card using your computer. You could simply drag and drop the folder containing the samples on your computer to the microSD card, then rename this folder on the microSD card to “SAMPLES”.

However, if you want precise control over how the samples you load into the Transient Plus are mapped out in memory, you can drag and drop samples one at a time from the computer to the microSD card’s “SAMPLES” folder. If this folder does not exist, simply create one in the root directory.

At this point you may not have any Instrument to load into the “INSTR” folder. And that’s ok. In fact you don’t even need the INSTR folder on the card to get started, and load your own samples into the Transient Plus. When the card is loaded into the Transient Plus, if the INSTR folder is not detected the Transient Plus will create one for you, as well as the LASTUSED file.

You may wish to load Instruments from other sound sets, such as those that came with the Transient Plus when purchased new. In that case, simply copy the “INSTR” folder you would have backed up to your computer from the microSD card before formatting it, and paste the folder back in the microSD card.

Keep in mind that those Instruments were intended to use different samples than you will be loading, so some Instrument parameter tweaking will most likely be necessary to make those Instruments sound good with your samples. But it is a quick way to get started.

You can always rename, add, or delete Instruments from the “INSTR” folder using your computer. Just keep in mind that Instruments names should be all CAPS and limited to 8-letter names. Any changes to the Instruments stored on the card will automatically be updated the next time the Transient Plus is turned on with the microSD card installed.

To transfer the samples on the microSD card to the EEPROM memory of the Transient Plus, first turn your eurorack system power OFF! Then install the microSD card into the Transient Plus. Press and Hold the Transient’s Parameter knob switch, then turn the power on for your eurorack system.

Once the initialization screen disappears, the display should show “LOAD ALL SAMPLES?”. Release the Parameter knob switch, and press the Parameter knob switch once again to confirm and begin loading the samples. This transfer procedure will take approximately 1 minute. The unit will then reboot itself, and you should then see your samples are available for Voices 1 and 2. You are ready to go.

NOTE: The original version of the Transient had the ability to initialize the USER Instrument memory locations. This feature no longer works in the Transient Plus, as there really is no need for this function anymore.

NOTE: If you have upgraded the first generation Transient to the new Transient Plus operating system and features, the microSD card slot will be located inside the unit on the left-hand side. MicroSD cards should be installed with the gold fingers pointing down and inserted first into the slot. To remove the card, DO NOT PULL ON IT, instead press in on the card to eject it, then pull the card out.