SYNTHTOOLS SOUNDDIVINER V1.3

CONTENTS

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INTRODUCTION

Thank you for purchasing SynthTools SoundDiviner.

This workflow application allows for the importing, organising, modifying and converting of data from audio hardware and software. Projects can easily be created containing multiple instrument snapshots so patches can be managed in a more succinct manner. Communication through Tape, MIDI and Disk interfaces as well as importing and exporting a range of file formats, enables the use of both old and new audio hardware and software.

Different synthesisers are supported in SoundDiviner through the use of individual plugins.

OVERVIEW

SoundDiviner is used to create workflow projects that contain as many elements as required.

Projects contain folders and files in much the same way as any conventional file system.

Projects can be saved and imported to create complex workflows.

Synthesiser Snapshots can be viewed, imported and exported for a range of different uses.

Plugins are used to access Snapshots, opening a range of unique individual functions.

ADD-ONS

SoundDiviner is an application that can be extended with additional synthesiser and adaptor plugins. The application still has the potential for complex workflow projects with great import/export tools and communications methods without any plugins installed but at least one synthesiser plugin is required to reveal the true scope of its potential.

HOW IT WORKS

Snapshots can be made from most synthesisers with a Tape, MIDI or Disk interface.

Snapshots can be transferred back to synthesisers using a Tape, MIDI or Disk interface.

Previously saved or downloaded snapshots can be imported to increase the patch library collection.

Snapshots can be viewed and organised for easy transferral back to synthesisers.

Emulator and software synthesiser snapshots can be imported organised and exported.

Plugins allow for snapshots to be modified, edited and converted.

FIRST THINGS FIRST

It is recommended that you read through this manual and get a good understanding of SoundDiviner terminology and the way it works before you start building projects and connecting synthesisers, but if this is not your preferred way and you would rather take the fast track, skip to one of the following Fast Track Methods for importing a Snapshot of a synthesiser.

Fast Track Methods

First determine the type of interface your synthesiser uses for data transfer, Tape, MIDI or Disk.

Tape Interface

Synthesisers with a Tape interface to transfer data need to make a Tape Snapshot.

Skip to the TAPE SNAPSHOTS STEP BY STEP section below.

MIDI Interface

Synthesisers with a MIDI port that support (MIDI system exclusive data dump), need to make a MIDI Snapshot, skip to the MIDI SNAPSHOTS STEP BY STEP section below.

Disk Interface

Synthesisers with a USB port that support connection as a mass storage device or synths that have a floppy disk drive or other storage media need to make a Disk Snapshot, skip to the DISK SNAPSHOTS section below and for additional help also see the DISK SNAPSHOTS GUIDE.
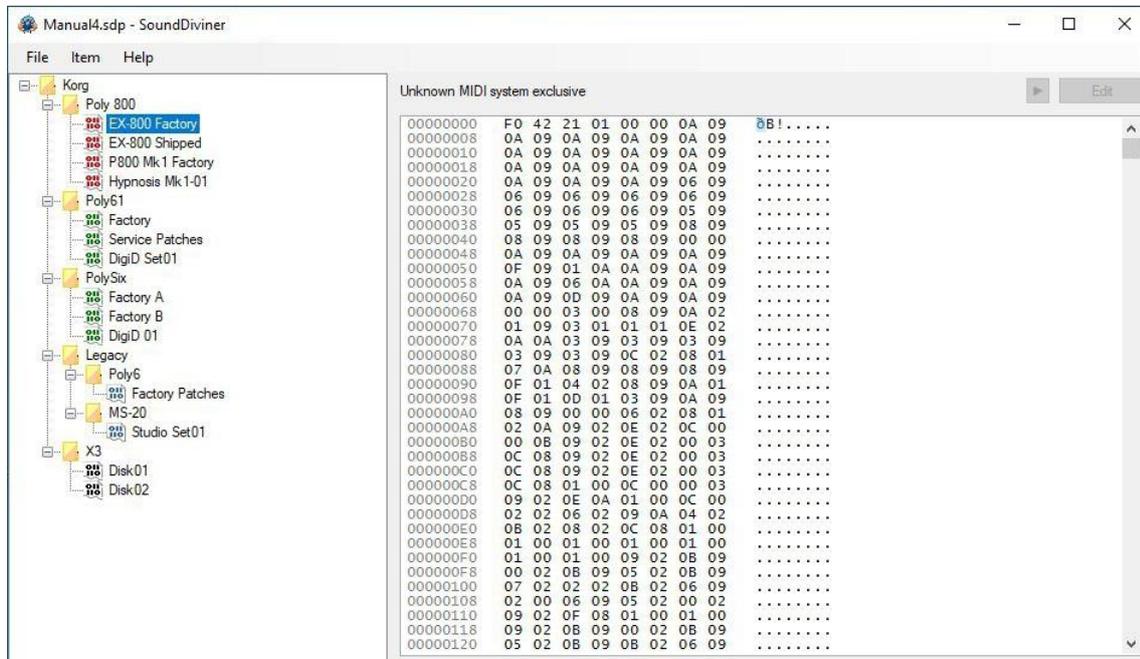
Figure1

WORK SPACE

The Work Space is divided into two sections, the Menu Bar and the Project Area.

Menu Bar

Like most applications the Menu Bar contains options, used to activate functions or dropdown lists. Dropdown lists reveal more options when clicked and these options activate functions, see below.

Project Area

Like other application the Project Area is where you create and manage your Projects.

MENU BAR
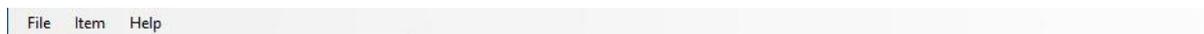
The Menu Bar contains three options, File, Item and Help (see below).

File

Reveals the File dropdown, used to manage projects (see MENU BAR OPTIONS – **File,** below).

Item

Reveals the Item dropdown, used to manage project items (see MENU BAR OPTIONS – **Item,** below).

Help

Reveals the Help dropdown, reveals related information (see MENU BAR OPTIONS – **Help,** below).

PROJECT AREA

The Project Area is divided into two panels, left is the Workflow Area and right is the Snapshot Area (see Figure1 above). Panels can be resized to suit the Project you are creating by dragging the divider bar to the required width.
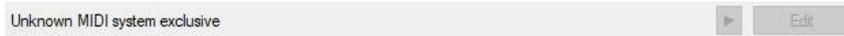
Workflow Area

This panel is used to create the Workflow Projects represented by a traditional file tree structure. In the simple example above (see Figure1), a folder has been created using the name Korg, inside this folder are additional folders all named to represent the synthesisers within this Project. Inside each of these folders are the Snapshot files relating to these synthesisers. Workflow structures can be as basic or complex as required to enable quick and reliable location and identification of the synthesiser Snapshots stored within them. Remember: Snapshots can contain a lot of Patches.

Snapshot Area

The Snapshot Area is divided in two sections, on top are the Snapshot Controls and below is the Snapshot Viewer (see figure1 above), this panel is used to view Snapshot files.

Snapshot Controls

Unknown MIDI system exclusive	▶	Edit

Information Bar

Information about the Item selected in the Workflow Area will be displayed here.

Play

Used to playback Samples assigned to Snapshot Items, Play will become available after selecting the appropriate Snapshot Item in the Workflow Area (see Sample Options below for more details).

Edit

Enables Edit Mode to edit Patch Snapshots, only available to Plugins (see related Plugin manual).

Snapshot Viewer

The Snapshot Viewer displays the hexadecimal data contained within the selected Snapshot. In the example above (see figure1) the selected Snapshot is called "EX-800 Factory"; this file is a MIDI Data Dump containing 64 factory Patches supplied with the Korg EX-800 when shipped from Korg.

Plugin Additions

When Plugins are installed the Workflow Area and Snapshot Area will have additional functions as mentioned throughout this manual and detailed in the related Plugin manual. These additional functions include device and data recondition, data converting, Snapshot expanding, patch level viewing and editing, for more information on the Snapshot Editor (see PATCH SNAPSHOTS below).

MENU BAR OPTIONS
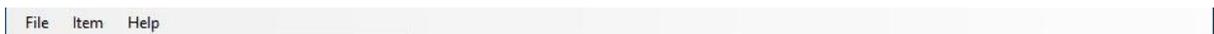
File	Item	Help

Like most applications the Menu Bar contains options used to activate functions or dropdown lists. Dropdown lists reveal more options when clicked and these options active functions, as follows.

File

File	Item	Help
New		
Open...		
Save		
Save As...		
Exit		
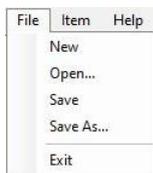
File dropdown list and available Project options.

New

Creates a New Project; unsaved Projects will require a prompted action.

Open...

Activates the file open dialog box, used to navigate and select the Project file to Open.

Save

Updates the opened project file with the loaded content.

Save As...

Allows the current Project to be saved with a new name to the same or a new location.

Exit

Closes the SoundDiviner application; unsaved Projects will require a prompted action.

Item

Item	Help	
Sample	▶	
New Folder		
New Patch Snapshot...		
Copy	Ctrl+C	
Paste	Ctrl+V	
Import	▶	
Export	▶	
Parse...		
Adapt...		
Rename	F2	
Delete	Del	
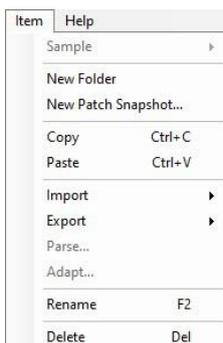
Item dropdown list, used to manage Items in the Workflow Area (see WORKFLOW AREA below).

Sample

Sample dropdown list and available options (see SAMPLE OPTIONS below). This option is only available for specific Items in the Workflow Area (see WORKFLOW AREA below).

New Folder

Used to create a new folder in the Workflow Area. As with any file system, folders are containers used to house additional folders and files. Name these Folder Items appropriately to identify the files stored within them (see WORKFLOW AREA below).

New Patch Snapshot…

Only available when Plugins are installed (see related Plugin manual), used to create a New Patch Snapshot in the Workflow Area (see PATCH SNAPSHOT below).

Copy

Makes a copy of the selected Item to the Windows Clipboard (see WORKFLOW AREA below).

Paste

Creates a duplicate Item using the data from the Windows Clipboard to the selected location. If no location is selected, the Item is created on the root.

Import

Reveals the Import dropdown list and available options (see IMPORT OPTIONS below). These options manage Snapshot Items in the Workflow Area (see WORKFLOW AREA below) using a range of different methods specifically designed for different hardware and software synthesisers.

Export

Reveals the Export dropdown list and available options (see EXPORT OPTIONS below) used to Export the selected Snapshot Item in the Workflow Area (see WORKFLOW AREA below) using a range of different methods specifically designed for different hardware and software synthesisers.

Parse...

Only available when Plugins are installed (see related Plugin manual), used to create Patch Folders from selected Snapshot Items in the Workflow Area (see PATCH SNAPSHOTS below).

Adapt…

Only available when Plugins are installed (see related Plugin manual), used to convert Patch Snapshots between Plugins (see PATCH SNAPSHOT below).
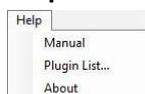
Rename

Used to Rename the selected Item in the Workflow Area (see WORKFLOW AREA below).

Delete

Used to Delete the selected Item in the Workflow Area (see WORKFLOW AREA below).

Help
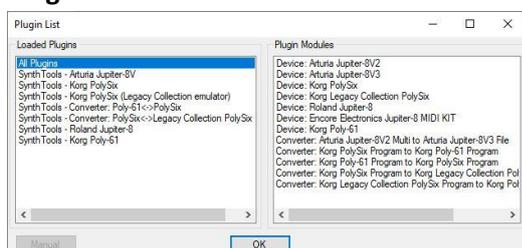

Help dropdown list and available options.

Manual

Opens the SoundDiviner main manual.

Plugin List...

Opens the Plugin List Window (see below), used to view all Loaded Plugins and Plugin Modules.

Plugin List Window

Plugins that have been installed will be listed here, if no Plugins are installed the list will be empty.

Loaded Plugins

Select any Plugin in the available list to display the related Plugin Modules and related manual.

Plugin Modules

Lists the Modules connected to the selected Plugin in the Loaded Plugins list. Here you can see what Devices and or Converters have been installed for the selected Plugin (see related Plugin manual).

Manual

Click the Manual button to view the selected Plugins related Manual.

OK

Click the OK button to close the Plugin List Window.

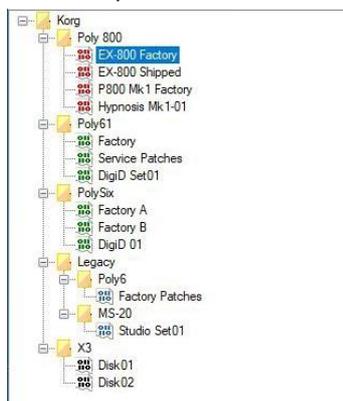About; Opens the About Window, Click the OK button to close the About Window.

Figure2

WORKFLOW AREA

The Workflow Area displays the current SoundDiviner Project (see Figure2 above).

Projects contain different types of Items: Folders and Snapshots (see Figure2 above).

Workflow Additions

When Plugins are used additional functions produce new types of Items (see related Plugin manual).

Items

Projects contain different types of Items that can be created using different methods.

Folder Item

Folders are containers as previously outlined and can be managed as with traditional folders.

Create New Folder, Copy, Paste, Rename and Delete are all functions that can be used to manage Folder Items available from the Item dropdown list or right click list (see Item above).

Folders can be expanded or reduced using the + or – icon adjacent to the folder icon (see Figure2).

Folder location can also be changed by clicking to select and dragging to a new location.

Folders can be exported using a range of Export options (see EXPORT OPTION below).

Snapshot Item

Snapshots are a way of identifying the different types of data stored within a SoundDiviner Project.

Different types of Snapshot Items are displayed using different icon colours (see Figure2).

Tape

This type of Item is a Tape Snapshot, used to identify Tape Dump files. Tape Snapshots are created by importing directly from a synthesiser Tape Interface or from previously saved files usually identified by the file extension ".wav" (see IMPORT OPTIONS below).

MIDI

This type of Item is a MIDI Snapshot, used to identify MIDI System Exclusive Data Dump files. MIDI Snapshots are created by importing directly from a synthesiser MIDI interface or from previously saved files usually identified by the file extension ".syx" (see IMPORT OPTIONS below).

Binary

This type of Item is a Binary Snapshot used to identify Application files. Binary Snapshots are usually associated with a specific software application but this is not a requirement, these files can be imported from any available storage media (see IMPORT OPTIONS below).

Disk

This type of Item is a Disk Snapshot used to identify Disk Images. Disk Images are usually associated with floppy disks but can be different media types, these files can be imported from any available storage media (see IMPORT OPTIONS below).

Patch

This type of Item is a Patch Snapshot used to identify synthesiser data. Patch Snapshots are also available in different types, for more information see Patch Snapshot Type in the related Plugin manual. Patch Snapshots are created using Menu Item New Patch Snapshot or by importing directly from a synthesiser using a Plugin or from previously saved files, but can also be created from any of the Snapshots listed above (see IMPORT OPTIONS below).

Snapshot Functions

Copy, Paste, Rename and Delete are all functions that can be used to manage Snapshot Items available from the Item dropdown list or right click list (see Item above).

Snapshot location can also be changed by clicking to select and dragging to a new location.

Sample options are available to Snapshot Items (see SAMPLE OPTIONS below).

Export options are also available to Snapshot Items (see EXPORT OPTIONS below).

Parse is available to Snapshot Items when Plugins are installed (see Parse above). Parse is used to convert Snapshot Items into Folder Items; these new Patch Folders contain all of the Patches and related data stored within the Snapshot Item as listed in the related Plugin manual.

Adapt is available to Patch Snapshots and Folders when Plugins are installed (see Adapt above). Adapt is used to convert patches between synthesisers as listed in the related Plugin manual.

SAMPLE OPTIONS

Sample

Available from the Menu Bar, Item option or Right mouse click in the Workflow Area, the Sample function reveals the Sample dropdown list and available options. Samples can be assigned to all Snapshot Items but are mainly used to finalise Patch Snapshot as they can't be removed once assigned. Samples are not copied when using the Copy function or exported when using any of the Export options but they will be saved in your SoundDiviner Project files.

Remember; finalised Patch Snapshots cannot be edited and require copying before Edit is available.

Option greyed out and not available for selected Folders, select a Snapshot Item to enable option.

Play

Option greyed out if no Sample has been assigned to the selected Snapshot Item (see Add/Replace). Plays the assigned Sample, selecting another Item Stops playback or right click in Workflow Area.

Add/Replace...

Activates the file open dialog box, used to navigate and select the ".wav" file to Add/Replace.

Use this Function to assign an audio example to the selected Snapshot Item. Only actual ".wav" files can be used and all other audio formats must be 3rd party converted. Using small 22KHz mono samples is recommended but stereo 44KHz files are supported just more RAM hungry.

IMPORT OPTIONS

Import
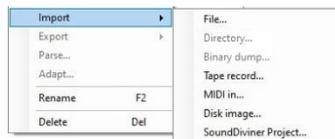
Available from the Menu Bar, Item option or Right mouse click in the Workflow Area; the Import option activates the Import dropdown list and available options that can be used to manage Snapshot Items in the Workflow Area (see Figure2 above).

File...

Activates the file Open Window, used to navigate and select the file to Import.

Use this function to Import synthesiser Snapshot files that you already have on disk.

Technically any file could be imported and stored within a SoundDiviner Project from e-books to game saves, but it is recommended that you stick to related synthesiser File Types. Generally these will be MIDI system exclusive data dumps ("".syx"" files), Tape data files "".wav"" or Disk Images "".img"" but they could also be emulator files like the Korg Legacy PolySix, "".fxb"" or patch sheets, "".csv"" or any other software synthesiser files you would like to store in your current SoundDiviner project. After locating, selecting and opening the required file you will need to complete the Import File Process using the Import File Window below (see IMPORTING SNAPSHOT FILES below).

Directory...

This option is only available for Plugins and not Unknown devices (see related Plugin Manual). Remember all devices are Unknown when Plugins are not installed. When functional this option is used to Import a directory's contents (see IMPORTING PATCH SNAPSHOT below).

Binary dump...

This option is only available for Plugins and not Unknown devices (see related Plugin Manual). Remember all devices are Unknown when Plugins are not installed.

When functional this option is used to Import a Patch file (see IMPORT PATCH SNAPSHOT below).

Tape record...

Opens the Record from Tape Interface Window (see below), used to make Snapshots of synthesisers directly from the Tape Interface (see RECORD TAPE SNAPSHOT below), use this function to Import directly from Vintage synths like the Korg PolySix and many others (see TAPE SNAPSHOTS below).

MIDI in...

Opens the Receive MIDI System Exclusive Data Window (see below), used to make Snapshots of synths directly from the MIDI Interface (see RECEIVE MIDI SNAPSHOT below), use this function to Import directly from synthesisers like the Korg EX-800 or Roland D-10 and many others that support System Exclusive Data Dump (see MIDI SNAPSHOTS below).

Disk image...

Opens the Choose Removable Drive Window (see below), used to make Snapshots of removable drive media including floppy disks (see READ DISK SNAPSHOT below), use this function to Import directly from supported devices (see DISK SNAPSHOTS below).

SoundDiviner Project...

Activates the file open dialog box, used to navigate and select the file to Import. This function is used to Import SoundDiviner Project files ("".sdp"") into the current Workflow Area allowing for complex Projects to be created that can contain as many previous Projects as required.

EXPORT OPTION

Export
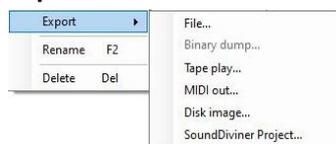
Available from the Menu Bar, Item option or Right Mouse Click in the Workflow Area, the Export option reveals the Export dropdown list and available options that can be used to export the selected Item in the Workflow Area (see Figure2 above).

File...

Available to all Items this option activates the file Save As Window, used to navigate and select the location to save the selected Snapshot Item. Use this function to Export Snapshots as Files for use with other application or users. Specific Items will be exported using the following formats.

MIDI Snapshots are exported and saved with the extension ".syx", example "EX-800 Factory.syx".

Tape Snapshots are exported and saved with the extension ".wav", example "Poly61 Factory.wav".

Disk Snapshots are exported and saved with the extension ".img", example "X3 Disk01.img".

Binary Snapshots are exported and saved with the extension ".bin", example "Factory.bin", this will not be the original file extension associated with the original application when the file was imported. Remember to rename the file during the Export process or afterwards but before importing, placing or opening with the appropriate software application or it may not be correctly identified.

The File option functions differently with Patch Snapshots and their related Plugins.

File Plugins

When used with Plugins; File... opens the Export Item Window used to create lists of Patch Snapshots to be saved in their supported File Types (see EXPORT PATCH SNAPSHOT below). For more details on Exporting Snapshot Files, see EXPORTING FILES below.

Binary dump...

This option is only available for Plugins and not Unknown devices (see related Plugin Manual). Remember all devices are Unknown when Plugins are not installed.

When functional this option is used to Export a Patch (see EXPORT PATCH SNAPSHOT below).

Tape play...

Opens the Play to Tape Interface Window used to Play a Tape Snapshot directly to the Tape Interface (see PLAY TAPE SNAPSHOT below), use this function to Export directly to Vintage synthesisers like the Korg PolySix or Poly-61 and many others (see TAPE SNAPSHOTS below).

Tape Play is available to Tape Snapshots and compatible Patch Snapshots.

Tape Plugins

When used with Plugins; Tape Play... opens the Export Item Window used to create lists of Patch Snapshots to send to the Play to Tape Interface Window, see EXPORT PATCH SNAPSHOT below.

MIDI out...

Opens the Send MIDI System Exclusive Data Window used to send MIDI Snapshots directly to the MIDI Interface (see SEND MIDI SNAPSHOT below), use this function to Export directly to synths like the Korg EX-800 that support MIDI Sysex Data Dump (see MIDI SNAPSHOTS below).

MIDI out is available to MIDI Snapshots and compatible Patch Snapshots.

MIDI Plugins

When used with Plugins; MIDI out... opens the Export Item Window used to create lists of Patch Snapshots to pass to the MIDI System Exclusive Data Window, see EXPORT PATCH SNAPSHOT below.

Disk image...

Opens the Choose Removable Drive Window used to Write Disk Snapshots directly to removable media like floppy disks (see WRITE DISK SNAPSHOT) use this function to Export directly to any supported media interfaces (see DISK SNAPSHOTS below).

Disk Image is available to Disk Snapshots and compatible Patch Snapshot Items.

Disk Plugins

When used with Plugins; Disk Image opens the Export Item Window used to create lists of Patch Snapshots to pass to the Choose Removable Drive Window, see EXPORT PATCH SNAPSHOT below.
SoundDiviner Project...

Activates the file Save As dialog box, used to navigate and select the location to save the selected Workflow Area Item. This function is used to Export trees or branches of your Project as a ".sdp" allowing for simplified Projects to be created or imported into later more complex Projects.

IMPORTING SNAPSHOT FILES

Understanding how SoundDiviner works is important when importing Snapshot files. As listed before all devices are Unknown unless Plugins are installed, when Plugins are installed, devices will be listed by manufacturer and model. SoundDiviner will always attempt to Import any selected file using the option selected by the user in the Select Device Window (see below). It is important that you select the correct option from the available lists for the file you want to Import, as incorrect identification will result in future problems or Import Error. SoundDiviner identifies different Windows file extensions but does not assume these to be factual as different applications apply different extensions to the same physical file types; this can result in incorrect identification after importing an Unknown Device if the wrong option is selected, and leads to later Export problems.
Example 1...

An Unknown Tape file "Tape.wav" should be a Wav file, but not all ".wav" files are Tape files.
Example 2...

An Unknown Disk file "Disk01.X3" is still a floppy disk image "Disk01.img".
Example 3...

An Unknown MIDI file "EX-800.syx" is actually a MIDI file, but selecting Tape will create a Tape Snapshot Item in the Workflow Area and not a MIDI Snapshot Item.
Example 4...

An Unknown MIDI file "Encore.syx" is actually a MIDI file, but selecting the Roland Jupiter 8 Plugin will result in an error, as the Roland Jupiter 8 only has a Tape Interface and supports Tape files not MIDI files, for this you would need the Encore Electronics Jupiter-8 MIDI Kit Plugin.

IMPORT FILE PROCESS

Used to create Snapshot Items in the Workflow Area, the Import File Process is slightly different when importing existing files than when using synth interfaces, but only in regards to the options. After locating, selecting and opening the required file you will need to complete the Import File Process using the Import File Window below.

Import File

Name

Use this field to give the Item a unique Name (for example, "EX-800 Factory"), as this name will be used to identify the Item in the Workflow Area (see Figure2 above). Items can be renamed.
Device...

Used to open the Select Device Window (see Select Device below). A device must be selected before the Import File Process can be confirmed.
Do not import duplicates

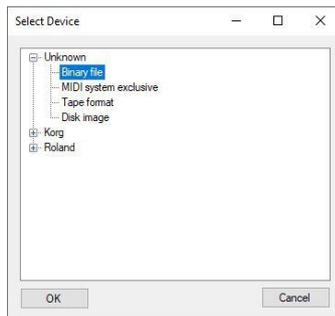This tick box function only works when using Plugins (see appropriate Plugin Manual).
OK

Click "OK" to start the Import File Process, only available after Device selection (see Device above).

Cancel

Click the Cancel button to exit the Import File Process without importing the selected file.

Select Device

Unknown

Use this option for any Device that is not available in any manufacturers lists; Unknown devices have the following four options available to create the Snapshot Item after the Import File Process.

Binary file

Select this option for all file types except for MIDI, Tape or Disk Image.

Unknown devices have Unknown file types so keeping a record of the extension or application will be useful when exporting Snapshots (for example "Korg\Legacy\MS-20\Studio Set01", see Figure2).

MIDI system exclusive

Select this option for all MIDI system exclusive data dump files, these files usually have the file extension ".syx", but as previously mentioned exercise caution. As with Binary files above good Workflow will always help (for example "Korg\Poly 800\EX-800", see Figure2 above).

Tape format

Select this option for all Tape files, these must be 8, 16 or 32bit PCM wave files only, usually with the extension ".wav"; other audio formats are not supported and must be 3rd party converted. As previously mentioned not all .wav files are Tape files so exercise caution.

Disk Image

Select this option for all Disk Images, these are usually Floppy Disk images used by Disk Emulators like the Gotek disk drives or HXC range but can be other removable media types. As previously mentioned not all Disk Images are ".img" files so exercise caution.

File Plugin Device

When Plugins are installed, they will be listed by manufacturer, expand the list to select the appropriate Plugin Device used to create Patch Snapshots (see PATCH SNAPSHOTS below), for more information on the selected Plugin Device (see related Plugin manual).

OK

Click to confirm the selection and continue the Import File Process (See Import File above).

Cancel

Click to return to the Import File Window and reject any selected Device option.

EXPORTING FILES

Some of the information listed below is also listed elsewhere in this manual and some may also be known to you from other manuals or previous knowledge, either way it has been included to help build a good understanding of how SoundDiviner works when Exporting Files. As listed before all Snapshot Items are identified to represent the type of data stored within them, some Items have a fixed Export file format whilst others don't and some can be converted using Plugins.

Wav Files

Tape Snapshots contain Tape Data and can only be exported as Wav Files; compatible Patch Snapshots can also be exported as Wav Files (see PATCH SNAPSHOTS below). Binary Snapshots could also be Wav Files if required as Wav Files are not restricted to Tape Data and can be collected for sample libraries but remember to identify them accordingly for correct exporting.

Syx Files

MIDI Snapshots contain MIDI SysEx Data and can only be exported as Syx Files; compatible Patch Snapshots can also be exported as Syx Files (see PATCH SNAPSHOTS below). Binary Snapshots could also be Syx Files if required as Syx Files are not restricted to Patch Data and can contain sample libraries but remember to identify them accordingly for correct exporting.

Img Files

Disk Snapshots contain the entire contents of the original disk and can only be exported as Img Files; compatible Patch Snapshots can also be exported as Img Files (see PATCH SNAPSHOTS below). Disk Snapshots can be of any volume size and as such can't always be exported back to the original media using the tools available in SoundDiviner, Exporting them as Img Files will allow you to use 3rd party software applications and if required legacy hardware to convert them to the correct media. Floppy disk Img Files may require 3rd party software like Omniflop and legacy hardware.

CDROM Img Files will require 3rd party software like ImgBurn as CD Burning is not supported.

Bin Files

Binary Snapshots can be of any File type and as such can contain any kind of data; by default Binary Snapshots are exported as Bin Files, remember to identify them accordingly for correct exporting.

Sdp Files

SoundDiviner Project Files can contain a single Snapshot Item, a Snapshot container, a Folder Branch or an entire Tree, but when exported the saved name of the Sdp File is used for the Folder name when importing the Sdp File into your SoundDiviner Project. Remember; Samples are not exported.

Plugin Files

Standalone software synthesisers use a range of File types, when exported using Plugins these will default to the appropriate File Type. Generally most VSTs will be Fxb Files or Fxp Files but not always, either way when exporting using Plugins these will default to the appropriate File type.

Binary Snapshots can be converted to Patch Snapshots as previously mentioned and compatible Patch Snapshots can be exported in the correct File type using the related Plugin, for more information on Plugins and the supported File types (see related Plugin manual).

Patch Sheets

Synthesisers that do not have patch memory are usually supplied with Patch Sheets; these sheets can be scanned or photographed and stored in a range of File types like Pdf or Jpg, other Patch Sheets are available in spread sheet form Xls Files or text form Csv Files, all these File types are currently supported in SoundDiviner as Binary Snapshots, remember to identify them accordingly for correct exporting. Patch Snapshots can be exported in the correct File type using the related Plugin, for more information on Plugins and the supported File types (see related Plugin manual).

TAPE SNAPSHOTS

Some of the information listed below is also listed elsewhere in this manual and some may also be known to you from other manuals or previous knowledge, either way it has been included to help build a good understanding of Tape Snapshots and Tape Interfaces.

Tape Interface History

Quite a few vintage synthesisers from a range of different manufacturers used a Tape Interface to transfer data from the synth's memory to magnetic tape for backup purposes. These synthesisers were often supplied with a tape containing the factory presets, copies of which and others can be found on the internet and downloaded in ".wav" format, these files can be imported into SoundDiviner Projects as previously listed (see IMPORT OPTIONS, **Import** - File... above). Synthesiser manufacturers implemented the Tape Interface data differently and some even went as far as changing their own format for different models. Some models used jack plugs and others used DIN plugs so connection to a tape recorder usually involved adapters. Some manufacturers referred to it as a Tape Interface, others a Cassette Interface and other variations, so you will need to check in

your appropriate synthesiser manual as standardisation was never attempted.

Tape Interface

The Tape Interface is usually located on the rear of the synthesiser (see synthesiser manual), different synthesisers will have their own unique way of accessing this interface and their own methods of connection which may include switchable options (see synth manual for details). All Tape Interfaces have a tape in and a tape out but these could be a range of different connector styles and be identified differently (see synthesiser manual). The one constant in these procedures is to replace the term "tape recorder" in your synthesisers manual with "computer" but remember your computer may have a selection of audio interfaces and connections (see appropriate manual).

Tape Interface Modes

Tape Interfaces usually have three different Modes of operation "Save, Load & Verify" but they may be referred to using different terminology (see synthesiser manual), but in use they will be the same.

Save Mode

Used to send data from the synthesiser to the tape recorder (Record Tape Snapshot).

Load Mode

Used to send data from the tape recorder to the synthesiser (Play Tape Snapshot).

Verify Mode

Used to confirm that the data recorded on the tape recorder is valid to the synthesiser.

RECORD TAPE SNAPSHOT

To Record a Tape Snapshot you will first need to connect the synthesiser to the computer running SoundDiviner using the synthesiser Tape Interface and Computer Audio Interface, It is probably a good idea to have your synthesiser and computer audio interface manuals to hand.

If you need additional guidance (see TAPE SNAPSHOTS STEP BY STEP – RECORD & VERIFY below).

Remember after; Item – Import – Tape Record... to open the Record from Tape Interface Window.

Record from Tape Interface Window

Driver:

Use this dropdown box to select the Audio Interface connected to Record (see appropriate manual).

Record

Used to start the Record process, remember to stop after synthesiser prompt (see synth manual).

Stop, Load

Used to Stop the Record process and Load the recorded Tape file into the Import Tape Process, this slightly differs from the Import File Process detailed above (see Import Tape Process below).

Properties

Used to open the Windows Sound Control Panel, this can be used to monitor the levels of your Audio Interface and make changes to your recording devices if required (see Windows Help).

Cancel

Used to exit the Record from Tape Interface Window discarding any recorded file.

VU Bar

Displays the audio signal for the selected Driver above.

Import Tape Process

Name

Use this field to give the Item a unique Name (for example, "Factory"), as this name will be used to identify the Item in the Workflow Area (see Figure2 above). Items can be renamed if required.

Device...

Used to open the Select Device Window (see Tape Record Select Device below), A Device must be selected before the Import Tape Process can be confirmed.

Do not import duplicates

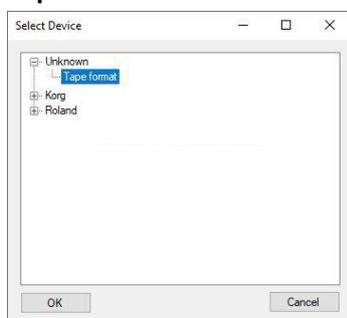This tick box function only works when using Plugins (see appropriate Plugin Manual).

OK

Click to confirm the Import Tape Process, only available after Device selection (see Device. above).

Cancel

Click to exit the Import File Window without importing the recorded Tape file.

Tape Record Select Device

Unknown

Use this option for any Device that is not available in any other list, unlike the Import File Process for File Snapshot (see above), Unknown devices for Tape Snapshots only have the Tape format option.

Tape Plugin Device

When Plugins are installed they will be listed by manufacture, expand the list to select the appropriate Plugin Device used to create Patch Snapshots (see PATCH SNAPSHOTS below). For more information on the selected Plugin Device, see related Plugin manual.

OK

Click to confirm selection and continue the Import Tape Process (see above).

Cancel

Click to return to the Import File Window and reject any selected Device option.

PLAY TAPE SNAPSHOT

To play any Tape Data you will first need to connect the computer running SoundDiviner to the synthesiser using the computer audio interface and the synth Tape Interface (see related manuals). If you need additional guidance (see TAPE SNAPSHOTS STEP BY STEP – PLAY & LOAD below). Remember after; Item – Export – Tape Play... to open the Play to Tape Interface Window.
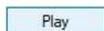
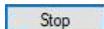**Play to Tape Interface**

Driver:

Use this dropdown box to select the Audio Interface connected for playback (see related manual).

Play

[Play]

Click the Play button to start playback of the Tape Data, after playback completion the Play to Tape Interface Window will automatically close. Used after Stop, Play restarts from the beginning.

Stop

[Stop]

Used to Stop playback of the Tape Data, use Play to restart playback from the beginning.

Cancel

Used to cancel any selection and exit the Play to Tape Window.

MIDI SNAPSHOTS

Some of the information listed below is also listed elsewhere in this manual and some may also be known to you from other manuals or previous knowledge, either way it has been included to help build a good understanding of MIDI Snapshots and MIDI Interfaces. Unlike a Tape Interface listed above, not all synthesisers with a MIDI Interface support system exclusive messages "SysEx", and not all synths that support SysEx also allow patch data dumping (see related synth manual for details).

MIDI Interface History

Since 1982 synthesisers from a range of different manufactures used a MIDI Interface to receive and transmit data for control purposes but it was not until 1983 that SysEx was used to transmit patch memory replacing the need for a Tape Interface. Unlike Tape Interface, SysEx backup required hardware that was not readily available in the early days so a lot of synthesisers had a factory reset method instead of a tape cassette to restore the factory patches. These days SysEx files are readily available on the internet and can be downloaded in ".syx" format, these files can be imported into SoundDiviner Projects as previously listed (see IMPORT OPTIONS, **Import** - File... above).

Early MIDI synthesisers supported the standardised five pin din connector, more commonly this Interface had three ports, Input, Output & Thru. Modern synthesisers also support alternative MIDI Interface connectors including USB, Mini-Jack, RJ45, Bluetooth and Wireless.

MIDI Interface

The MIDI Interface is usually located on the rear of the synthesiser; different synthesisers will have their own unique way of accessing this interface (see related synth manual). Some synthesisers have more than one MIDI Interface, and some may have different Interface types as listed above, but generally most synthesisers will still have the original five pin din connectors labelled MIDI In & Out.

RECEIVE MIDI SNAPSHOT

To Receive a MIDI Snapshot you will first need to connect the synthesiser to the computer running SoundDiviner using the synthesiser MIDI Interface and the computer MIDI Interface, it is probably a good idea to have your synthesiser and maybe computer MIDI Interface manuals to hand.

If you need additional guidance, see MIDI SNAPSHOTS STEP BY STEP below.

Remember after; Item – Import – MIDI In... to open Receive MIDI System Exclusive Data Window.
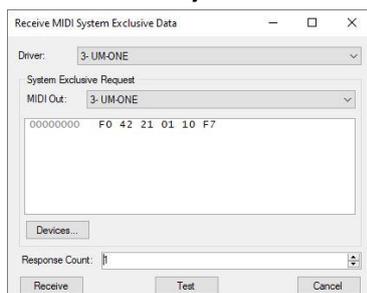
Receive MIDI System Exclusive Data Window

Figure3

Driver:

Use the Driver dropdown box to select the MIDI Interface used to receive data "MIDI In".

System Exclusive Request

Some synthesisers use a two way communication data request method where the computer sends a request to the synth and the synth replies by sending the data to the computer, like the Korg EX-800. Others use a one-way manual method to send the data where the computer is set to receive the data and the synth sends the data with the use of some kind of transmit mode that's manually triggered, like the Roland D-10 (see related synth manual). Use the options in this boxed section to setup correct two way communication between your computer and synthesiser.

MIDI Out:

Use this dropdown box to select the MIDI Interface used to transmit MIDI data "MIDI Out", only required for two way data communication (see related synthesiser manual).

Hex Editor

Used to manually input the SysEx Request or requests required by your synthesiser model in hexadecimal format as described in detail in your synthesiser manual. This message will be of various lengths but is always listed in blocks of two Hex digits, starting with "F0" and ending in "F7". Note; SysEx Message displayed in Figure3 above is used to request a data dump from a Korg EX-800. Remember; messages are automatically configured when MIDI Plugins are used.

Devices...

Opens the MIDI Request Window, used to select the correct synth Plugin and SysEx message type for the different options supported by the MIDI Plugin, see MIDI Request Window below.

Response Count:

Used for both two way communication and one way manual communication methods.

Enter the required amount of SysEx responses as detailed in your synthesiser manual or use the up/down arrows to increment/decrement the number by 1. If the value is not listed in your manual or you are not sure, use the testing process to establish the correct amount (see Test below). Note; the value listed in Figure3 above is required to complete correct data dump from Korg EX-800. Remember; this value is automatically configured when MIDI Plugins are used.

Receive

Click to start the Receive MIDI System Exclusive Data process using the options selected above.

Test

Click to activate the Receive MIDI SysEx data Test process and open the MIDI Receive Test Window (see MIDI Receive Test Window below), data receiving/recording starts on activation.

Cancel

Click to exit the Receive System Exclusive Data Window without starting any MIDI SysEx process.

MIDI Request Window

Device...

Used to open the Select Device Window, see Select Device Window below. A Device must be selected before other options can be used, only available to Plugins (see related Plugin manual).

Type:

Only available after correct Device selection (see Device... above). Used in conjunction with Plugins, this dropdown box allows selection of the different SysEx options supported by the MIDI Plugin.
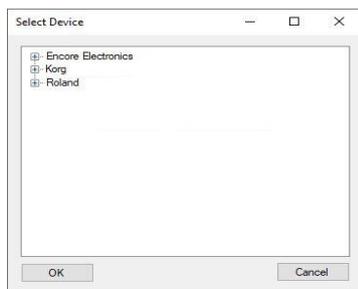
OK

Available after Device selection (see Device... above), click to accept all selected options.

Cancel

Click to Cancel any selections and return to the Receive MIDI System Exclusive Data Window.

Select Device Window

Expand the manufacturer lists to select the correct synthesiser model, if your manufacturer or model is not listed then you will be required to input all SysEx data manually or install the correct Plugin.
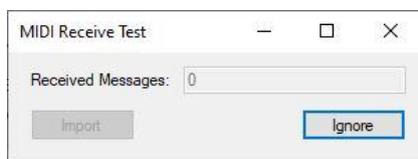
Ok

Click to confirm selection and return to the MIDI Request Window, see above.

Cancel

Click to Cancel any selection and return to the MIDI Request Window, see above.

MIDI Receive Test Window

Received Messages:

This value continues to increment as data is received, once data transmission is complete the total amount of Sysex messages received is displayed and can be used in the Response Count setting above. It is recommended that you take a note of this value as the next time you transmit this type of data from the connected synthesiser you will have it to hand.

Import

Click Import to accept this data and continue to the Import MIDI Process, this slightly differs from the Import File process detailed above, see Import MIDI Process below.

Ignore

Click Ignore to delete any Sysex Data stored in memory and pass the Response Count value back to the Receive MIDI System Exclusive Data Window (see Figure3 above). To continue with manual SysEx importing, remember to take note of the value before clicking Receive (see Receive above).

Import MIDI Process

Name

Use this field to give the Item a unique Name (for example, "EX-800 Factory"), as this name will be used to identify the Item in the Workflow Area (see Figure2 above), but can be renamed if required.

Device...

Used to open the Select Device Window, see MIDI Select Device below. A Device must be selected before the Import MIDI Process can be confirmed.

Do not import duplicates

This tick box function only works when using Plugins, see appropriate Plugin Manual.

OK

Click to confirm the Import MIDI Process, only available after Device selection (see Device... above).

Cancel

Click to exit the Import File Window and stop the Import MIDI Process.

MIDI Import Select Device
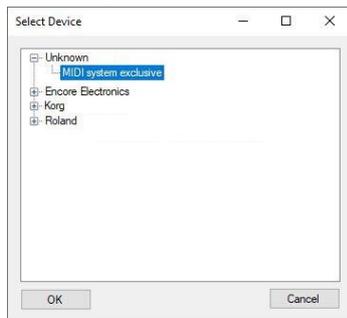
Unknown

Use this option for any Device that is not available in any other manufacturer lists, unlike the Import File Process for File Snapshot, see above. Unknown devices for MIDI Snapshots only have the option MIDI system exclusive available for selection.

MIDI Plugin Device

When Plugins are installed, they will be listed by manufacturer, expand the list to select the appropriate Plugin Device used to create Patch Snapshots, see PATCH SNAPSHOTS below. For more information on the selected Plugin Device, see related Plugin manual.

OK

Click to confirm selection and continue the Import MIDI Process, see above.

Cancel

Click to return to the Import File Window above and reject any selected Device option.

SEND MIDI SNAPSHOT

To Send MIDI SysEx you will first need to connect the computer running SoundDiviner to your synthesiser using the Computer MIDI Interface and Synthesiser MIDI Interface. It is probably a good idea to have your synthesiser and maybe computer MIDI Interface manuals to hand. Some synthesisers (like the Roland D-10) need to be put into the correct Mode to receive MIDI SysEx Data dumping and some (like the Korg EX-800) don't, see related synth manual. It is very likely that the memory protection will need to be disabled for the data to be passed to the synth patch memory, if not already disabled by entering the correct mode; see related synthesiser manual for full details. If you need additional guidance, see MIDI SNAPSHOTS STEP BY STEP below.

Remember after; Item – Export – MIDI Out... to open Send MIDI System Exclusive Data Window.

Send MIDI System Exclusive Data Window
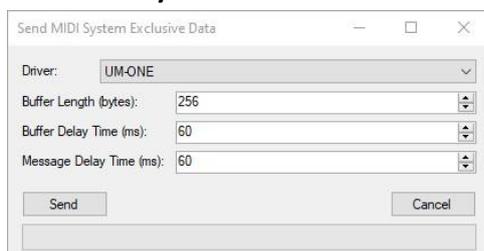
Driver:

Use this dropdown box to select the MIDI Interface used to send MIDI data "MIDI Out".

Buffer Length (bytes)

MIDI SysEx Data is sent in packets and different synthesisers support different packet sizes. The default size is 256 bytes but this can be set to any size from 1 to 2147483647 bytes but in most cases the default size is a good starting point. Some synthesisers like the Roland D-70 require a smaller Buffer Length (for example: 32 bytes), when others like the D-10 or Korg EX-800 will work at maximum. Remember; this value is automatically configured when MIDI Plugins are used.

Buffer Delay Time (ms)

System Exclusive Data can contain multiple packets and some synthesisers require time to deal with these packets before receiving the next one. The minimum setting is "0ms" as used by versions of

SoundDiviner before V1.3 with a maximum of "32768ms" but the default setting "60ms" should work in most cases. Remember; this value is automatically configured when MIDI Plugins are used.

Message Delay Time (ms)

MIDI SysEx Data can contain multiple System Exclusive Messages, each one ending with "F7". The Message Delay Time is used to separate each message. The minimum setting is "0ms" as used by versions of SoundDiviner before V1.3 and the maximum is "32768ms" but the default setting "60ms" should work in most cases. Remember; this is automatically configured when MIDI Plugins are used.

Send

Click the Send button to transmit the MIDI SysEx data to the connected synthesiser.

Cancel

Click to cancel any selection and exit the Send MIDI System Excusive Data Window.

SysEx Progress Bar

Displays the current progress status of the System Exclusive Data sending.

DISK SNAPSHOTS

Some of the information listed below is also listed elsewhere in this manual and some may also be known to you from other manuals or previous knowledge, either way it has been included to help build a good understanding of Disk Snapshots and Disk Interfaces. Not all synthesisers have a Disk Interface and some will have proprietary disk formats that are not supported without Disk Plugins.

Disk Interface History

The first synthesiser Disk Interface to be used was the Floppy Disk Drive introduced in 1981, but this was shortly followed by proprietary cartridges like those used in games consoles but these quickly evolved into JEIDA cards and later PCMCIA. Over the years Floppy drives changed in physical size as did the media, the media changed in both size and capacity and more importantly manufactures started supporting capacities not implemented on modern computers. Next was the SCSI Interface giving rise to Hard Disk, CDROM and a range of units supporting different media styles and capacities but generally these needed to be partitioned and formatted in small sections or disk slots and mounted individually but again in many instances utilizing custom file systems not supported directly by modern computers. Next came Compact flash and PCMCIA adapters to try to bridge the two medias but these where quickly followed by SD Cards in all their different guises and capacities again all falling foul in many cases to proprietary file systems. More recently USB in all its guises has become more common as this allows for a multitude of devices from Flash Drives to SSD but has also enabled the synths to become Mass Storage device when connected. Recently SCSI gave way to SATA and If not already available or in development ESATA and I am sure we will see synths networking though RJ45, Wireless and connecting through Bluetooth.

Disk Emulators

As the old Floppy Disk Drives have started to fail and the disk media itself becomes harder to obtain, not to mention consuming valuable space, Disk Emulators like the Gotek Drive and HXC range are finding their way into more and more of the vintage synths. Disk Emulators use images of the original disk media, stored on USB devices, these images can then be mounted using the Disk Emulator front panel controls enabling the synth to see the image as if it was the original media.

Disk Images

Any Disk Media can be imaged using the right tools and converted into standard ".img" format, these files can also be readily found on the internet and imported into SoundDiviner Projects as previously listed (see IMPORT OPTIONS, Import – File... above), images will always be the capacity of the media even if the volume size was less than the capacity as the blank space is always included.

Floppy Drives

Legacy Floppy Drives used Floppy Disk Interfaces as found on synths and most pre 2010 computers and support all Disk capacities. USB Floppy Drives use a USB Disk Interface, these only support 720Kb

DD, 1.44Mb HD and some support 1.25Mb HD disks, disks formatted to any other capacity are currently not supported in SoundDiviner and require 3rd party imaging software like Omniflop that uses Floppy Disk Interfaces and Legacy Floppy Drives, to create ".img" files and write media.

Mass Storage Device

This term is usually associated with SSD, HD internal or external, optical drives and flash memory cards to name a few but could really describe any kind of storage device including synthesisers if supported, but one thing to take into account when connecting this type of device is the capacity of the unit! SoundDiviner loads Projects into RAM before disk swapping, as the majority of synthesisers have less than 1Mb of memory. Obviously some synths have a greater memory capacity but again these are usually specified in Mb, but take this into account when creating Disk Snapshots of any synths that act as a DAW as SoundDiviner is designed and intended for Patch Memory and creating Projects that outgrow your RAM will result in disk swapping.

Warning

Caution should always be taken when inserting or attaching any disk media to a computer, especially when dealing with file systems not recognised by Windows. Some removable media have protection switches to prevent accidental data loss, enabling this switch will help protect your valuable data.

READ DISK SNAPSHOT

To Read a Disk Snapshot you will first need to connect the appropriate Disk Interface to the computer running SoundDiviner, different media types use their related drives and these drives use Disk Interfaces to allow the computer to communicate with them. If connecting a synth as a Mass Storage Device using the USB port it will be a good idea to have your synth manual to hand.

If you need additional guidance (see DISK SNAPSHOTS GUIDE below).

Warning; protection tabs prevent accidents.

Remember after; Item – Import – Disk Image... to open Choose Removable Drive Window.

Choose Removable Drive Window

Drive Selector Dropdown

Use the dropdown box to select the required Drive to Read the Disk Image from; only removable drives will be available listed differently depending on the type of Removable Drive selected.

Floppy Disk Drives & Optical Drives

Listed by assigned letter followed by the disk label and the capacity in MB.

All Other Removable Drives

Listed by Drive number followed by assigned letter, disk label and the capacity in MB.

When media has been partitioned the Drive number will be duplicated in the list but the assigned letter will change, the capacity will be listed the same for each partition as it is the Drive capacity and not the volume size. When Reading Disks all partitions will be included.

Remember: capacity to available memory space matters, exceeding RAM results in paging.

OK
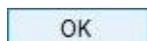
This style of OK button will be available for Optical drives only, click the OK button to accept the selection and continue to the Import Disk Process below, this slightly differs from the Import File process detailed above, see Import Disk Process below.

This style of OK button indicates that Admin Rights will be required to access this disk media, click the OK button to accept the selection and trigger the User Account Control Window see below.

Cancel

Click to cancel any selection and exit the Choose Removable Drive Window.
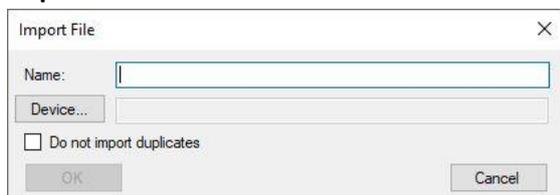
User Account Control

Yes

Click the "Yes" button to allow Admin access to the Drive selected in the Choose Removable Drive Window above and continue to the Import Disk Process below.

No

Click "No" to reject Admin access and return to the Choose Removable Drive Window above.

Import Disk Process

Name

Use this field to give the Item a unique Name (for example, "Disk01"), as this name will be used to identify the Item in the Workflow Area (see Figure2 above). Items can be renamed if required.

Device...

Used to open the Select Device Window, see Disk Select Device below. A Device must be selected before the Import Disk Process can be confirmed.

Do not import duplicates

This tick box function only works when using Plugins, see appropriate Plugin Manual.

OK

Click to confirm the Import Disk Process, only available after Device selection, see Device... above.

Cancel

Click to exit the Import File Window and stop the Import Disk Process.

Disk Select Device
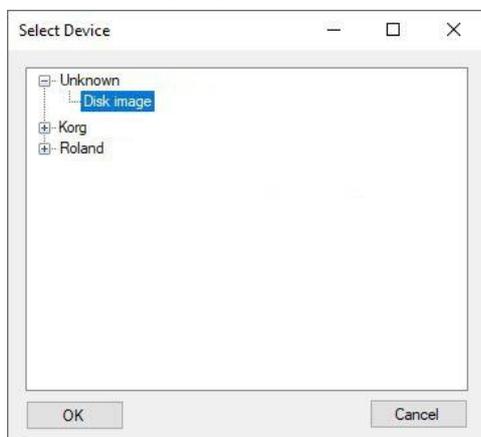
Unknown

Use this option for any Device that is not available in any other manufacture lists. Unlike the Import File Process for File Snapshot (see above), unknown devices for Disk Snapshots only have the option

Disk image available for selection.

Disk Plugin Device

When Plugins are installed, they will be listed by manufacturer, expand the list to select the appropriate Plugin Device used to create Patch Snapshots (see PATCH SNAPSHOTS below). For more information on the selected Plugin Device, see related Plugin manual.

OK

Click to confirm selection and continue the Import Disk Process, see above.

Cancel

Click to return to the Import File Window above and reject any selected Device option.

WRITE DISK SNAPSHOT

To Write a Disk Snapshot you will first need to connect the appropriate Disk Interface to the computer running SoundDiviner, different media types use their related drives and these drives use Disk Interfaces to allow the computer to communicate with them. All blank media should be formatted using the related synthesiser or equivalent low level formatting application, for more details on this see the related synthesiser or application manuals. If connecting a synth as a Mass Storage Device using the USB port it will be a good idea to have your synth manual to hand. Optical disc burning is not available in SoundDiviner, see CDROM Writing below.

If you need additional guidance, see DISK SNAPSHOTS GUIDE below.

Warning; always double check the media you are going to use is blank, accidents can happen.

Remember after; Item – Export – Disk Image... to open Choose Removable Drive Window.

Choose Removable Drive Window

Drive Selector Dropdown

Use the dropdown box to select the required Drive to Write a Disk Image to; only compatible drives will be available listed differently depending on the type of Removable Drive selected.

Floppy Disk Drives

Listed by assigned letter followed by the disk label and the capacity in MB.

All Other Removable Drives
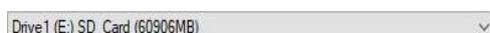
Listed by Drive number followed by assigned letter, disk label and the capacity in MB.

When media has been partitioned the Drive number will be duplicated in the list but the assigned letter will change, the capacity will be listed the same for each partition as it is the Drive capacity and not the volume size. When Writing Disks all partitions will be included.

Remember; Media must be preformatted and the correct capacity.

OK

This style of OK button indicates that Admin Rights will be required to access this disk media, click the OK button to accept the selection and trigger the User Account Control Window see below.

Cancel

Click to cancel any selection and exit the Choose Removable Drive Window.

User Account Control

Yes

Click the "Yes" button to allow Admin access to the Drive selected in the Choose Removable Drive Window above and Write the selected Item to the selected Drive media.

No

Click "No" to reject Admin access and return to the Choose Removable Drive Window above.

CDROM Writing

Optical disc burning is not available directly from SoundDiviner; to write to an optical disc you will need to Export the Disk Snapshot as an ".img" File, using (Item – Export - File... see above), and then use a 3rd party application like ImgBurn to burn the disc; ".img" files may require renaming to ".iso".

BINARY SNAPSHOTS

Some of the information listed below is also listed elsewhere in this manual and some may also be known to you from other manuals or previous knowledge, either way it has been included to help build a good understanding of Binary Snapshots and the way they are used in SoundDiviner. Unlike Tape, MIDI and Disk Snapshots, Binary Snapshots can be any type of file format you require in a SoundDiviner Project, primarily intended for software synthesiser application files but not restricted to this purpose; Binary Snapshots encapsulate the remaining File Types.

File Types

Different synthesiser related File Types can be imported into SoundDiviner Projects and used to create Binary Snapshots as detailed above but remember identification is the key. Accurate Snapshot naming and Folder structures will help identification when exporting, see Figure2 above.

Soft Synths

Standalone software synthesisers store patch data in related File Types, these can be imported to create Binary Snapshots. Generally most VST's use ".fxb" or ".fxp" Files but not always, either way these File Types can also be imported to create Binary Snapshots.

Patch Sheets

Synthesisers that do not have patch memory are usually supplied with Patch Sheets; these sheets can be scanned or photographed and stored in a range of File types like ".pdf" or ".Jpg", other Patch Sheets are available in spread sheet form (".xls" Files) or text form (".csv" Files), either way these File Types can also be imported to create Binary Snapshots.

Sample Libraries

Different types of samples can also be imported if required and these can be in a rage of File Types from ".wav" to ".syx", either way these File Types can also be used to create Binary Snapshots.

Binary Plugins

When Plugins are used these File Types will be converted into Patch Folders containing Patch Snapshots, for more information see PATCH SNAPSHOTS below and the related Plugin manual.

IMPORT BINARY SNAPSHOT

Unlike Tape, MIDI and Disk Snapshots, there are no interfaces required to Import Binary Snapshots as they are created using the File Open Window and this was covered fully in the following topics: "IMPORT OPTIONS, Import – File...", "IMPORTING SNAPSHOT FILES" and "IMPORT FILE PROCESS". Remember; Binary Snapshots are created when "Select Device - Unknown – Binary File" is used.

Bin Files

When Exporting Binary Snapshots the default File Type will be ".bin", as detailed throughout this manual, accurate identification when importing will help you Export File Types correctly.

File Plugins

When Plugins are used Binary Snapshots are converted into a Patch Folder containing Patch Snapshots, for more information see PATCH SNAPSHOT below or the related Plugin manual.

EXPORT BINARY SNAPSHOT

Unlike Tape, MIDI and Disk Snapshots, there are no interfaces required to Export Binary Snapshots as they are saved using the Save As Window as detailed above, Binary Snapshots default to ".bin" Files as detailed above, but also see (EXPORT OPTIONS, Export – File...) and (EXPORTING FILES). Remember; enter the name and the required file extension in the Save As Window - File name dropdown box, or the File Type will default to ".bin" as detailed above.

Example 1 "Factory Patches.fxb" as "Factory Patches" becomes "Factory Patches.bin".

Example 2 "Patch Sheets.csv" as "Patch Sheets" becomes "Patch Sheets.bin".

PATCH SNAPSHOT

Only available to Plugins, a Patch Snapshot contains all of the elements used to create sound on your synthesiser model and the individual values required to make the patch sound the way it does. When Patch Snapshots are selected the Snapshot Viewer is replaced with the Snapshot Editor, for more information on Patch editing, see the related Plugin and synthesiser manuals. Patch Snapshots can be created, extracted, imported, exported and converted using a range of different functions as listed below but only through the use of the correct Plugin.

Snapshot Editor

The Snapshot Editor is divided into two panels, the Parameter Lists and the Information Display.

Parameter Lists

Each synthesiser Plugin will populate the Parameter Lists differently (see related Plugin manual), but the interface style and basic operations are generic as detailed below.

Parameter Group

Used to group together individual parameters that relate to the same topic, DCO1 in this example.

Use the ⌄ control to hide the list of Parameters and the › control to reveal the list of Parameters.

Selecting a Parameter Group Name updates the Information Display as detailed below.

Parameters

Lists contain all of the Parameters available to each Parameter Group as detailed in the related Plugin manual. Each Parameter has two parts, a Parameter Name and a Parameter Value.

Parameter Name

Used to identify the Parameter, Octave in this example as detailed in the related Plugin manual.

Selecting a Parameter Name updates the Information Display as detailed below.

Parameter Value

Displays the current Parameter Value for the selected Patch Snapshot, to change any Parameter Value click the Edit Control (see Snapshot Controls above), to enter Edit Mode (see below). The Parameter Value can be changed using one of three different Value Styles as listed below.

Value Style 1
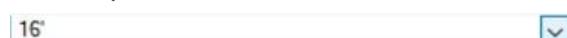
Click the dropdown pick list ⌄ and select the required value from the list or double click the value to step through the list in order or select the value and use the up\down cursor keys to list scroll.

Value Style 2

Click to dropdown the value selector box and use the slider control or enter a value in the value box; when entering a value without using the dropdown selector, enter a valid value to prevent error.

Value Style 3

This style of dropdown opens a box window used to select special data, different Plugins have their own unique ways of using this style of dropdown, see related Plugin manual for full details.

Edit Mode

Used to change any amount of Parameter Values, Edit Mode is both destructive and disconnected. Once Edit Mode is activated the Edit Control becomes invisible, to exit Edit Mode select another Item in the Workflow Area. All Parameter changes are destructive (without undo), it is recommended that you adopt a standard practice of editing New or Copy Patch Snapshots only. Any Parameter changes are disconnected (non-audible), as no physical connection is made between Edit Mode and the related synthesiser, for more details on Edit Mode see the related Plugin Manual. Remember; finalised Patch Snapshots cannot be edited (see SAMPLE above).

Information Display

1) Digital Controlled Oscillator 1
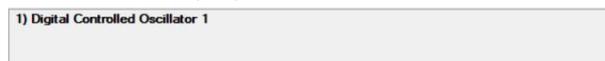
Used to convey information about the selected Parameter in the Snapshot Editor, this Panel can be resized in relation to the Parameter List by click dragging the divider bar to the require hight.

New Patch Snapshot

Used to open the Create Patch Snapshot Window for creating a Patch Snapshot.

Create Patch Snapshot Window
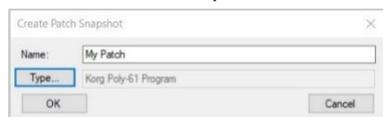
Name

Use this field to give the Patch Snapshot a unique name but they can be renamed like other items.

Type

Used to open the Select Patch Snapshot Type Window, see below.

OK

Click "OK" to create the New Patch Snapshot.

Cancel

Click "Cancel" to close the Create Patch Snapshot Window.

Select Patch Snapshot Type

Used to select the correct Plugin and Patch Snapshot Type (see related Plugin manual for details).
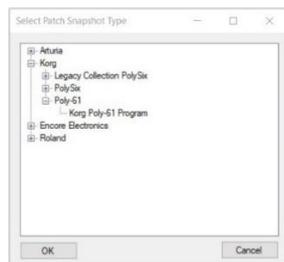
Manufacture Lists

Expand the correct lists to locate the required Plugin (Korg Poly-61, example above), and then select the correct Patch Snapshot Type (Korg Poly-61 Program, as above).

OK

Click "OK" to create the selected Patch Snapshot Type in the Workflow Area.

Cancel

Click "Cancel" to close the Window without creating.

Parse…

As listed throughout this manual Parse is used to create Patch Folders that contain Patch Snapshots, these are created by extracting the data from existing Project Snapshot Items as follows. Select the

required Snapshot ("Korg PolySix Factory A" for example, see Figure2 above), then select Parse from the Menu Bar - Item Dropdown List or right click selection to open the Parse Select Device Window.

Parse Select Device
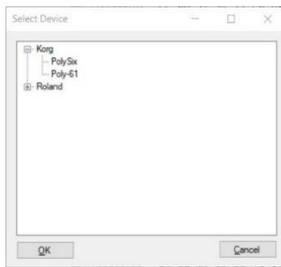
Parse Plugin Device

Expand the required Manufacture list and select the correct Plugin Device, Korg PolySix in this example but the chosen device must correspond to the Snapshot Item selected in the Workflow Area or the Parse Process will error, (see below).

OK

Click "OK" to start the Parse Process.

Cancel

Click "Cancel" to close the Parse Select Device Window and exit the Parse Process.

Parse Process Successful

A new Patch Folder will be created within the same Folder Branch (Factory A (1), in this example). Expand the Patch Folder to reveal all the individual Patch Snapshots extracted.

Parse Process Error

The Snapshot Item selected in the Workflow Area is not compatible with the Plugin Device selected. Remember; Unknown Tape files should be Wav files, but not all ".wav" files are Tape files.

Adapt…

Only available when the correct Plugins are installed (see related Plugin manual), Adapt uses Plugin Adaptors to convert Patch Snapshots from one synthesiser model to another. SoundDiviner has two ways of using Plugin Adaptors, the first utilizes the Adapt Function as detailed here and the second when exporting Patch Snapshots as detailed below (see EXPORT PATCH SNAPSHOT).

Software Emulators

Some vintage synthesisers have now been cloned using software emulations like the Korg Legacy Collection Polysix. SoundDiviner has Plugins available for both the hardware PolySix and software Polysix. When both Plugins are installed additional Plugin Adaptors can be installed to create a link between these devices enabling the Adapt Function and bidirectional conversion capabilities.

Plugin Adaptors

These Plugins are available separately and designed specifically for the devices intended but SoundDiviner can use multiple Plugins to create complex conversion. Take for example both hardware PolySix and software Polysix Plugins are installed with the related Adaptor Plugin and the hardware Korg Poly-61 Plugin is also installed; by adding the Poly-61 to PolySix Adaptor, Patch Snapshots created on any of these synth's can be converted from one Device to another. Due to the complexities and differences between devices conversion results may not be exactly as expected and could need slight adjustments as listed in related Plugin Adaptor manual.

It is worth noting that you don't actually need the hardware synth's for conversions of all these Plugins to function but if you own one or both the hardware synths and emulation software and the

related SoundDiviner Plugins then you only require two Adaptor Plugins even though a third Adaptor Poly-61 to Legacy Polysix is also available as this is a better compatible link between these Plugins. SoundDiviner will always choose the most compatible route when converting Patch Snapshots between Devices so the more Plugins you have the better the conversion will be.

Adapt Function

Adapt can be used to convert a single Patch Snapshot a Patch Folder and contents or a full SoundDiviner Project if compatible, just select the required Snapshot Item in the Workflow Area and then Adapt for the Menu Bar - Item or right mouse click list to open the Adapt Window.

Adapt Window
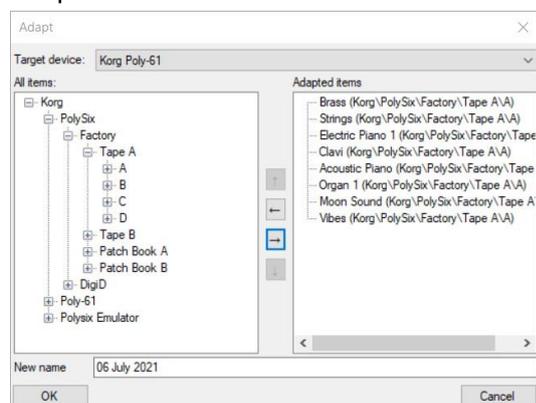
Adapt Target Device

Use this dropdown list to select the synth model to Adapt the Items to, in this example the Korg Poly-61 is the Target Device the Patch Snapshots should be converted to.

Adapt All Items

Only Items compatible with the selected Target Device will be available in the All Items area; expand the required List and select the Item to Add to the Adapted Items List, in this example Korg PolySix, Factory, Tape A, A, has been selected and added to the Adapted Items area.

Adapted Items

Displays the list of all the Items to be Adapted to the Target Device, in this example all eight Patch Snapshots contained in List A, originally supplied with the Korg PolySix will be Adapted to work with a Korg Poly-61 and converted into Poly-61 Patch Snapshots.

Control Buttons

Click this Control to add the selected Item in the All Items area to the Adapted Items List.

Click this Control to remove the selected Item in the Adapted Items area from the Adapted Item List.

New Name

By default this field will contain the parent directory name or the current date when selecting route but can be modified; This field is used as the new Patch Folder name and will contain all the converted Patch Snapshots after the Adapt Process completes.

OK

Click "OK" to start the Adapt Process.

Cancel

Click "Cancel" to exit the Adapt Window without starting the Adapt Process.

IMPORT PATCH SNAPSHOT

Only available to Plugins, Patch Snapshots can be imported individually or in groups using the different options available. Single Patch Snapshots can be imported with the Binary dump option (see Import – Binary dump, above), or from any of the other options listed above available to the related Plugin (see related Plugin manual for full details). Multiple Patch Snapshots can be imported with the SoundDiviner Project option (see Import – SoundDiviner Project, above) or from any of the

other options listed above available to the related Plugin (see related Plugin manual for full details). Some software synths store patch files in folders and some hardware synths backup files to folders, the contents of these folders can be imported using Plugins and the Import Directory function.

Import Directory

Only available to specific Plugins, the Directory function enables the contents of a folder to be imported using the Import Directory Process. Used to create Patch Folders containing Patch Snapshots, the Import Directory Process is slightly different to importing single files or using synth interfaces but only in regards to the options.

Import Directory Process

After selecting Import Directory… to open the Browse For Folder Window.
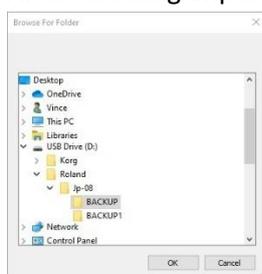
Locate and select the folder containing the files to be imported; in this example a backup folder from a Roland Boutique JP-08, but it could be any folder with the correct contents for the required Plugin (see Plugin manual for more information). After correct selection click "OK" to continue.

Import Directory Window

Name

Use this field to give the Folder Item a unique name (for example, "Backup").

Device…

Used to open the Select Device Window (see Select Device below). A device must be selected before the Import Directory Process can be confirmed.

Do not import duplicates

This tick box function only works when using Plugins (see appropriate Plugin Manual).

OK

Click "OK" to start the Import Directory Process, only available after Device selection (see above).

Cancel

Click the Cancel button to exit the Import Directory Process without importing the selected folder.

Select Device
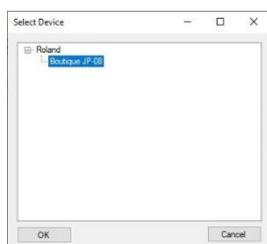
Expand the manufacturer list and select the required Plugin Device, then click "OK" to continue.

EXPORT PATCH SNAPSHOT

Only available to Plugins, Patch Snapshots can be exported using a range of different functions. Single and multiple Patch Snapshots can be exported and saved with the Binary dump or SoundDiviner project file options (see Export – Binary dump or SoundDiviner project above), or directly to synthesisers using the Export Item Process. Each Plugin will have its own way or ways to Export Patch Snapshots to the related synth model using whatever Interface is required, but all of

these will use the Export Item Process (see Export – File, Tape play, MIDI out and Disk Image above). After selecting the required Item in the Workflow Area and the required Export option, the Export Item Process is started with the Export Item Window (see Export Item Window below).

Export Item Process

Each Plugin has different ways of utilizing the Export Item Process (see related Plugin manual).

Export Item Window
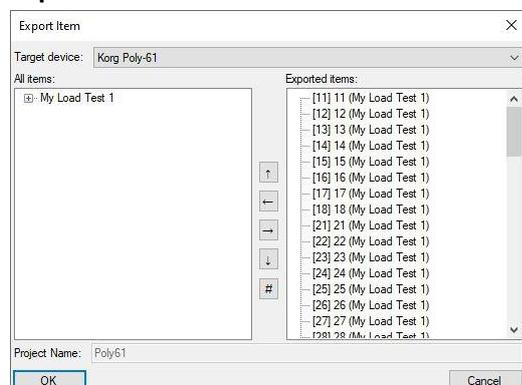
Figure4

Target Device

Use this dropdown box to select the synth model to Export the Items to; each Plugin will have its own specification and Preset limits, see related Plugin manual to prevent Export List capacity Errors. All installed Plugins will be available in the dropdown box including Adaptors, select the correct Target Device for the Export Process required. The default choice will always be the 1st Plugin in the list that is compatible with the Items selected for the Export Process; Remember when more than one compatible Plugin is available the default choice may not be your required Target Device.

All Items

By default this area will list all of the compatible Items contained within the Export Items Parent Folder unless a Patch Snapshot was selected, in this case only the selection will be available.

This area contains all the compatible Items available to the Target Device above; incorrect Target Device selection may result in a blank area, if so reselection of a correct Device restores the Lists. Lists can be expanded for individual Patch selection, Folder or Patch Items can be selected and added to the Exported Items area using the Control Buttons (see below).

Exported Items

Blank by default, this area is used to create the Export List, all Items in the area will be exported to the Target Device above; Items can be added from the All Items Lists, removed and organised using the Control Buttons (see below). Exceeding your synthesiser Preset memory capacity will result in error; see related synth & Plugin manuals for full details.

Export List

Divided into three sections the Export List displays the synthesiser Preset Number, the Patch Name and the Patch Folder as detailed below, see Figure4 above.

This value represents the synthesiser Preset Number, used to identify the memory location the Patch will be saved to after Data transfer.

This is the Patch Name as listed in the Workflow Area, some synthesisers utilise naming and others do not, for more information on Patch Names, see related synth and Plugin manual.

This is the name of the Patch Folder as displayed in the Workflow Area.

Control Buttons

→

Click this Control to add the selected Item in the All Items area to the Export List.

←

Click this Control to remove the selected Item in the Exported Items area from the Export List.

↑

Click this Control to move the selected Item in the Exported Items area up the Export List, moving an Item up the Export List will decrease the Preset Number changing the final memory location.

↓

Click this Control to move the selected Item in the Exported Items area down the Export List, moving an Item down the Export List will increase the Preset Number changing the final memory location.

#

Click this Control to open the Change Exported Item Number Window, see below.

Project Name

Project Name:	Poly61

Used by some synthesisers the Project Name is the Parent Folder of the Export selection unless the selected Folder was the route in which case the route will be used. If supported by the Target Device above the Project Name will not be greyed out, editing the Project Name will affect the Target Device but not change the Parent Folder Name (see related Plugin or synth manual).

OK
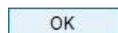
Click the OK button to accept the Export List and continue the Export Item Process as follows.

EIP Files... opens the Save As Window (see Export – File...above).

EIP Tape Play... opens the Play to Tape Interface Window (see Export – Tape play...above).

EIP MIDI Out... opens the Send MIDI System Exclusive Data Window (see Export MIDI out...above).

EIP Disk Image... opens the Choose Removable Drive Window (see Export Disk image...above).
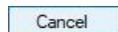
Cancel

Click the Cancel button to discard the selections and exit the Export Item Window.

Change Exported Item Number Window

Used to change the destination Preset Number.

Change Exported Item Number

Please enter the number or identifier you want this item to be known as.

11

OK   Cancel
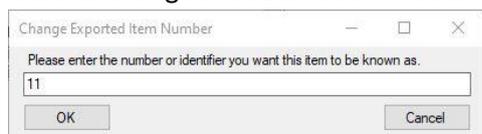
Identifier Value

Changing the Identifier Value will swap the Preset location of the selected Item with the Item currently listed at that Preset location "swap Preset [15] with [11]".

OK
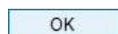
Click the OK button to accept any changes and update the Export List.
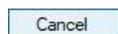
Cancel

Click the Cancel button to discard any changes and return to the Export Item Window, see Figure4.

TAPE SNAPSHOTS STEP BY STEP

Certain SoundDiviner terminology may differ from your synthesiser manual as listed above, reading this manual fully will help explain some of these differences. Before continuing with the steps below please have your synthesiser manual and computer Audio Interface manual to hand. It is a good idea to read through your synthesiser manual's Tape Interface section and have a good understanding of its modes, processes, connections and terminologies as this help with the procedures below.

The following Step by Step is divided into two sections, RECORD & VERIFY followed by PLAY & LOAD.

RECORD & VERIFY

A two part process used to Record Tape Snapshots containing the synths patch memory using the Synthesisers Tape Interface and Computer Audio Interface, including detailed data verification.

Step 1...

Interface Connection
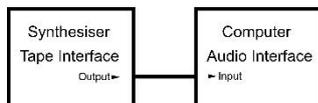
Locate and connect one end of the cable to the synthesiser Tape Interface Output and the other end to the Computer Audio Interface Input using adapters if required, then continue with Step2.

Example: Korg EX-800 Tape Interface, mono mini jack to Computer usb Audio Interface mic input.

Step 2...

Creating A Tape Snapshot

Right click in the Workflow Area or left click MENU BAR and select (Item – Import – Tape Record...), to open the Record from Tape Interface Window.

Step3...

Audio Interface Selection
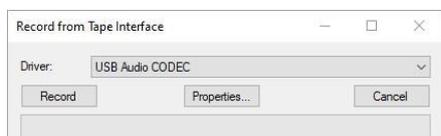
Driver:

Use the Driver dropdown box to select the Audio Interface you connected in Step1 above.

Step4...

Record Levels

For the Tape Data to be created correctly you will need to adjust the record levels to prevent audio clipping whilst maintaining a good overall level, this will be slightly different on every computer and every synthesiser (see appropriate manuals), but audio clipping must be avoided.

Test Tone

Enabling the synthesisers Tape Interface should start the Test Tone output but not on all, in many cases this may be a switch on the rear of the unit next to the Tape Interface connectors labelled Tape Enable/Disable, often when enabled the synthesiser will then display "TAPE" but these may all differ with your model (see related synth manual in all cases), this Test Tone output is used to set the Computer Record Level. Recommend record levels should be outlined in your synth manual, but always avoid audio clipping as this will result in data loss and later problems.

Computer Record Level

To check and or adjust the record level you will need to use your Audio Interface Mixer software (see related manual), or the Windows Volume Mixer (see related help). If you are experiencing trouble viewing or adjusting the record level with the any of the listed mixers, click Properties.

Properties
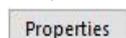
Activates the Windows Sound Control Panel with the Recording tab selected (see related help), from here you can view the connected Audio Interface and ten segment level meters. If required you can make adjustments to the recording device levels using the related properties and level controls.

Note:- If you are not receiving any audio levels, please check the connections in Step1 above.

Step5...

Recording

Each synthesiser will have its own way of sending data out of the Tape Interface but often this will be through the use of a save button (see synth manual), to locate function but do not activate yet.

Record

Record

First you will need to click the Record button in the Record from Tape Interface Window and then activate the synthesiser Save Mode, often this will be displayed by the synthesiser as "SAVE" and on some models this may flash when sending, but this may differ on your model (see synth manual). After the Save Mode has completed the synthesiser may return to the previous display "TAPE" but this may differ on your model (see manual), at this point stop the recording.

Stop, Load

Stop, Load

Click to Stop the recording and Load the file into the Tape Import File Process.

Try to Stop the recording as soon as possible after the synthesiser prompts you too, this will help to prevent unnecessary data on the end of your recording when Unknown devices are used.

Step6...

Naming The Tape Data

Name

Use this field to give the Item a unique Name (for example, "My Tape Test"), as this name will be used to identify the Item in the Workflow Area, but Items can be renamed later if required.

Step7...

Selecting A Device

Device...

Click the Device button to open the Select Device Window.
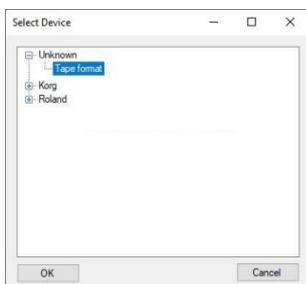
You must now select the synthesiser you attached in Step1 above, if your model is not available from any of the manufacturer Plugin lists (use ⊞ to expand list), select option Unknown – Tape format.

Click "OK" to confirm selection and continue the Import Tape Process (see Step6 above).

Click "OK" in the Import File Window to confirm all selections and create one of the following Items.

Step8...

Checking Your Creation

The type of Item created in the Workflow Area depends on the Device you selected in Step7 above.

Unknown – Tape format

My Tape Test

This type of Item is a Tape Snapshot and contains all of the patches from the synthesiser connected in Step1. If this type of Snapshot Item has been created, you will need to continue to Step9 below.

Patch Folder

⊞ My Tape Test

This type of Item is a Patch Folder, when expanded all of the patches and related data from the synthesiser connected in Step1 above are accessible for additional functionality, see related Plugin manual. If this type of Item was created you can continue to Step14 below, Finishing Up.

Step9...

Testing Your Creation

This Step is only required for Tape Snapshots as correct Plugin importing confirms data validity. Most synthesisers will refer to this as process as verifying, see related manual.

Interface Connection
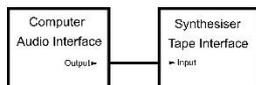
Locate and connect one end of the cable to the Computer Audio Interface Output and the other end to the synthesiser Tape Interface Input (see related manuals), some synthesisers have a switch to adjust the Input impedances often labelled High/Low (see synth manual), for correct selection. Example: Computer usb Audio Interface line output to EX-800 Tape Interface, mono mini jack, Low.

Step10...

Playing Preparation

First you will need to select the Tape Snapshot in the Workflow Area, then Right click or Menu Bar Item – Export – Tape Play... to open the Play To Tape Interface Window.

Driver:

Use the dropdown box to select the Audio Interface you connected in Step9 above.

Step11...

Data Verification

Next you will need to put the synthesiser's Tape Interface into Verify Mode (see synth manual), this is often a switch labelled "VERIFY", on some models this may be displayed when activated as "VrFy", this may also start flashing when receiving data, see synthesiser manual.

Step12...

Adjusting & Playing

Before you Play the Tape Snapshot to be verified by the connected synthesiser it is worth adjusting the output level of the Audio Interface to around 75% using the related software mixer. If using the Windows Volume Mixer the output should be labelled "Play to Tape Interface" see Figure5. If you notice a signal on the input device used to record the Tape Snapshot it is a good idea to mute this channel by clicking the speaker icon as this can introduce a loopback resulting in a verification error.
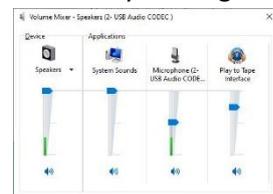
Figure5

Play & Verify

Click the Play button in the Play to Tape Interface Window to start Tape Snapshot verification. As listed above the synthesiser may display "VrFy" and this may also flash (see synthesiser manual). After Tape Snapshot Play completion the Play to Tape Interface Window will close and your synthesiser should display one of the following messages, see related manual.

GOOD

If the data is verified correctly the synthesiser should notify you of this, on some models this maybe indicated in the display using the word "Good" but this may differ (see synthesiser manual). Either way, if your synthesiser confirms verification of Snapshot data continue to Step14 below.

ERROR

If data verification fails the synthesiser should notify you of this, on some models this maybe indicated in the display using the word "Err" but this may differ (see synthesiser manual).

On some synthesiser you may need to exit this Error using a cancel function before you can attempt the verification process again (see synth Manual). Either way you will need to test a few different things to establish the reason for this Error, continue to Step13 and run through the options.

No Change

On some occasions it is possible for the data not to pass or fail, when this happens the synthesiser screen may still display "VrFy", this usually only happens if the playback volume is too low, if this is the case continue to Step13... Verify Error 3 and 4 but remember the synth is still in Verify Mode.

Step13...

Unlucky For Some

Verification errors can be caused by several different issues as outlined in your synthesiser manual (see synth manual), but generally it is related to the playback level or the recorded level. Assuming that the Tape Snapshot Item was recorded correctly and absolutely no audio clipping occurred as outline in Step4 above, you can proceed with the following Verify Error checks.

Verify Error 1...

It is possible to get a loopback issue with some Audio interfaces if the Mic/Line Input used to record the Tape Snapshot is not muted during playback. Repeat Steps10-12 above but if the Mic/Line Input is displayed in the Windows Volume Mixer and an input level is detected (see Figure5), mute this input before continuing to Play & Verify.

Verify Error 2...

It is possible for the Tape Snapshot to distort if the Audio Interface playback level is too high. Repeat Steps10-12 above and confirm that the level of the Play to Tape Interface is the same as in Figure5.

Verify Error 3...

It is possible for the Tape Snapshot volume to be so low that the synthesiser cannot decipher the data correctly; in this case you will need to turn the Audio Interface playback level up. Repeat Steps10-12 above and confirm that the level of the Play to Tape Interface is the same as in Figure5. Remember to skip Step11 if the synthesiser Tape Interface remains in Verify Mode.

Verify Error 4...

Some synthesisers have an impedance switch on the Tape Interface input as listed in Step9 above. If this switch is set High try switching it to Low and then repeating Steps10-12 and confirm the level of the Play to Tape Interface is the same as in Figure5.

Remember to skip Step11 if the synthesiser Tape Interface remains in Verify Mode.

Verify Error 5...

Some synthesisers are very specific about the audio playback level of the Tape Snapshot, if your model is one of these (see synth manual) you might need to repeat Steps10-12 but adjust the Play to Tape Interface level to the correct setting during playback and then either repeat Steps10-12 using this level or Stop playback before completion as this allows Play to be restarted.

Verify Error 6...

If you have tried all of the Playback Error solutions above and you are still getting an Error from your synthesiser, then it is likely that correct Tape Snapshot playback is not possible due to incorrect Tape Snapshot Recording. It is recommended that you start again from Step2 but double check all the record levels as outlined in Step4 avoiding all audio clipping, but also double check your synthesiser manual as some models use line level outputs and others use mic level outputs and this will affect the levels you get in Step4 and the connections used in Step1.

Step14...

Finishing Up

At this point everything went OK and you can disable the Tape Interface on your synthesiser with the

same method used to enable the Interface outline above in Step4, see related synth manual. It might also be a good idea to save your new Project.

PLAY & LOAD

Used to transmit Tape or Patch Snapshots from the Computer Audio Interface to the Synthesiser Tape Interface and updating the synthesiser patch memory.

Step1a...

Interface Connection
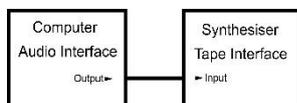
Locate and connect one end of the cable to the Computer Audio Interface Output and the other end to the synthesiser Tape Interface Input (see related manuals), some synthesisers have a switch to adjust the Input impedances often labelled High/Low (see synth manual), for correct selection. Example: Computer usb Audio Interface line output to EX-800 Tape Interface, mono mini jack, Low.

Step2a...

Activating Tape Modes

Before the synthesiser can receive a Tape Data you will need activate the Tape Interface, in many cases this will be a switch on the rear of the unit next to the Tape Interface connectors labelled Tape Enable/Disable but this may differ on your model (see synthesiser manual), often when enabled the synthesiser will then display "TAPE" but this may differ with your synthesiser model as listed above.

Step3a...

Memory Protect

Most synthesisers will have a Memory Protect or Write switch this is often located on the rear of the synthesiser and labelled Write Enable/Disable but this terminology may be different on your model. This must be enabled for the data transfer to copy from the Tape Interface to the synthesiser's internal memory, see related synthesiser manual for full details. Some synthesisers like the Korg EX-800 have two Write Enable/Disable switches, one for the sequencer memory and one for the patch memory (see synthesiser manual), for correct selection and appropriate uses.

Step4a...

Tape or Patch Snapshot

Depending on the type of Snapshot you are going to Export will affect the steps you follow.

If you are exporting a Tape Snapshot then select the Tape Snapshot in the Workflow Area, then Right click or Menu Bar Item – Export – Tape Play... to open the Play to Tape Interface Window; then continue to Step6a below, Playing Preparation using the "Play to Tape Interface".

If you are exporting a Patch Folder containing Patch Snapshots then select the Patch Folder in the Workflow Area, then Right click or Menu Bar Item – Export – Tape Play... to open the Export Item Window; then continue to Step5a below, "Export Item Window".

Step5a...

Creating An Export List

Before you can transmit any data to the connected synthesiser you need to start the Export Item Process by selecting the following options and creating an Export List that is compatible with your synthesiser model, see selections below.
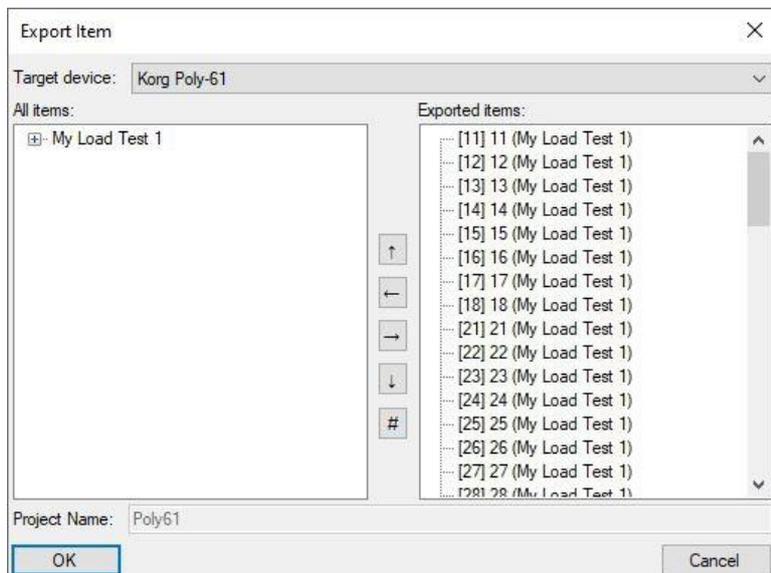
Figure6

Selecting The Tape Plugin

Target device: Korg Poly-61

Use this dropdown box to select the synth connected in Step1a; in this example the Korg Poly-61.
Building The Export List...

⊞ My Load Test 1

1st select the Patch Folder in the All Items area, see Figure6 above.

→

2nd click the add Control Button, as this adds everything in Patch Folder to the Export List, see
Exported Items area in Figure6 above as this displays the Export List.

3rd use the scroll bar in the Export List if required to confirm the total amount of patches; in this
example the first and last items are "[11] 11 (My Load Test 1) – [88] 88 (My Load Test 1)", as these
represent the sixty four Preset locations available to the Korg Poly-61 but this may be different for
the Target Device you selected (see related synth or Plugin manual for full details).
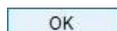
OK

4th once you are happy with your Export List, click the OK button to accept the selections and
continue the Export Item Process by using the Play To Tape Interface below, see Step6a.

Step6a...

Playing Preparation

Next you need to setup the Computer Audio Interface but don't click Play in the Play to Tape
Interface Window yet as the synthesiser is not ready to receive the Tape Data.

Driver:

Use the Driver dropdown box to select the Audio Interface you connected in Step1a above.

Step7a...

Load Mode

Now you need to put the synthesiser into its loading mode (see related synthesiser manual), this is
often a switch labelled "LOAD", on some models this may be displayed when activated as "LoAd",
this may also start flashing when receiving data, but again this may differ on your model.

Step8a...

Adjusting & Playing

Before you click Play in the Play to Tape Interface Window it is worth adjusting the output level of
the Audio Interface to about 75% using the related software mixer. If using the Windows Volume

Mixer, the output should be labelled "Play to Tape Interface"; see Figure7 below.
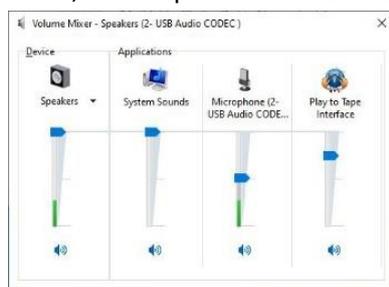
Figure7

Play & Load

Click the Play button in the Play to Tape Interface Window to start Tape Data transfer. As listed above the synthesiser may display "LoAd" and this may also flash (see related synth manual). After Tape Data Play completion the Play to Tape Interface Window will automatically close and your synthesiser should display one of the following messages, but this may differ on your model.

GOOD

If the data transferred correctly the synthesiser should notify you of this (see related synth manual). On some models this maybe indicated in the display using the word "Good" but this may differ, either way, if your synthesiser confirms Tape Data transfer continue to Step10a below.

ERROR

If data transfer fails the synthesiser should notify you of this, on some models this maybe indicated in the display using the word "Err" but this may differ on your model (see related synth manual). On some synthesiser you may need to exit this Error using a cancel function before you can attempt the transfer process again (see related synth manual). Either way you will need to test a few different things to establish the reason for this Error, continue to Step9a below.

No Change

On some occasions it is possible for the data not to pass or fail, when this happens the synthesiser screen may still display "LoAd", this usually only happens if the playback volume is too low, if this is the case continue to Step9a Playback Error 3 and 4.

Step9a...

Something Went Wrong

Data transfer error's can be created by several different issue's as outlined in your synthesiser manual (see related manual), but generally it is related to the playback level or the validity of the Tape Data itself. Assuming that the Tape Snapshot you are playing is both recorded correctly and verified as outlined above (see TAPE SNAPSHOTS STEP BY STEP, RECORD & VERIFY), and is actually compatible with your synthesiser (see IMPORTING SNAPSHOT FILES above), then you can proceed with the following Playback Error checks.

Playback Error 1...

It is possible to get a loopback issue with some Audio interfaces if the Mic/Line Input used to record the Tape Data is not muted during playback. Repeat Steps4a-8a above but if the Mic/Line Input is displayed in the Windows Volume Mixer (see Figure7 above), and an input level is detected; mute this input before continuing to Play & Load.

Playback Error 2...

It is possible for the Tape Data to distort if the Audio Interface playback level is too high. Repeat Steps4a-8a above and confirm that the level of the Play to Tape Interface is the same as in Figure7.

Playback Error 3...

It is possible for the Tape Data volume to be so low that the synthesiser cannot decipher the data correctly; in this case you will need to turn the Audio Interface playback level up. Repeat Steps4a-8a above and confirm that the level of the Play to Tape Interface is the same as in Figure7.

Playback Error 4...

Some synthesisers have an impedance switch on the Tape Interface input as listed in Step1a above. If this switch is set High try switching it to Low and then repeating Steps4a-8a and confirm the level of the Play to Tape Interface is the same as in Figure7.

Playback Error 5...

Some synthesisers are very specific about the audio playback level of the Tape Data, if your model is one of these (see synthesiser manual) you might need to repeat Steps4a-8a but adjust the Play to Tape Interface level to the correct setting during playback and then either repeat Steps4a-8a using this level or Stop playback before completion as this allows Play to be restarted.

Playback Error 6...

If you have tried all of the Playback Error solutions above and you are still getting an Error from your synthesiser, then it is likely that correct Tape Snapshot playback is not possible due to incorrect Tape Snapshot Recording, data corruption or incompatibility. If the file you are using was downloaded from the internet it is possible that this file was not verified after it was recorded or the sample bit rate was or is so low that data corruption has occurred, either way this file cannot be used. It is also possible that the ".wav" file you have Imported is actually incompatible with your synthesiser and actually for a different model altogether or is not actually Tape Data, either way it cannot be used.

Step9a...

Deactivating Tape Modes

At this point everything transferred OK and you can disable the Tape Interface on your synthesiser with the same method used to enable the Interface outline in Step2a above. It is also recommended that you re-enable the Memory Protect mode disabled in Step3a above.

Step10a...

Double Checking

If the patch data has changed as expected then all is OK, if the data has not changed see below.

Check1...

The Memory Protect mode had not been disabled as listed in Step3a above, so the Tape Data could not be transferred from the Tape Interface to the synthesiser memory.

Start the Play & Load process again from Step2a using the correct settings (see related manuals).

Check2...

The Tape Data transferred to the synthesiser was exactly the same as the data already stored in the synthesiser patch memory, for example Factory Presets sent when Factory Presets already loaded. Start again from Step4a above but selected a different Tape Snapshot to transfer.

Check3...

There may be a problem with your synthesisers Memory Protect switch or Patch Memory. If you have not made a backup of your synth's Patch Memory now is a good time to do it, see TAPE SNAPSHOTS STEP BY STEP - RECORD & VERIFY above, then try the following.

Try making a simple change to one of the synth Patches using the synth control panel and save it back to the same Preset Number, then re-enter the Preset Number to reload the change. If all worked OK and the change was saved, start again from Step1a above double checking each Step, but this time select your new Tape Snapshot as this will return everything back to before the change.

Check4...

There may be a problem with your synthesisers Tape Interface, Memory Protect switch, Patch Memory or Battery, please seek advice from a service centre or vintage synthesiser Technician.

MIDI SNAPSHOTS STEP BY STEP

Certain SoundDiviner terminology may differ from your synthesiser manual as listed above, reading this manual fully will help explain some of these differences. Before continuing with the steps below please have your synthesiser and maybe your computer MIDI Interface manuals to hand. It is a good idea to open your synthesiser manual at the MIDI Implementation section and have a good read through to familiarise yourself with its functionalities. Any sections regarding System Exclusive Messages, data transfer, one way transfer, patch or present dumping will be of interest.
The following Step by Step is divided into two sections, RECEIVING MIDI followed by SENDING MIDI.

RECEIVING MIDI

Receiving MIDI SysEx is not as straight forward as Sending MIDI SysEx unless using MIDI Plugins but to help with this process you first need to establish what method of transfer your synth uses as outlined in your synthesiser manual and then follow the appropriate Step by Step below. METHOD 1 is for synths that use one way transfer, relying on a manual transmit operation like the Roland D-10. METHOD 2 is for synths that require a data request message from the computer before responding with a data transfer like the Korg EX-800, this method will involve some manual Sysex data entry. Method 2 is not to be confused with "handshaking" as listed in some synth manuals as this requires data verification and is only supported by related Plugins. METHOD 3 is for Plugin users.

METHOD 1

As listed above this is for synths that support some kind of one-way manual transmit operation where you can select the type of data to send and start the process with a push of a button. This procedure will be outlined in your synthesiser manual.

Step1b...

Interface Connection
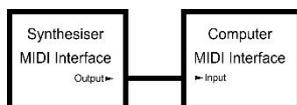
First you will need to establish which type of MIDI Interfaces your synthesiser and computer have, as these could be different and require adapters as previously listed, see related manuals. Once you have established the type of MIDI Interfaces you have you need to connect the synth MIDI Output to the computer MIDI Input, with the original standard this would be five pin DIN Out to five pin DIN In.

Step2b...

Creating a MIDI Snapshot

Right click in the Workflow Area or left click MENU BAR and select (Item – Import – MIDI In...), to open the Receive MIDI System Exclusive Data Window, see below.

Step3b...

Selecting The Computer MIDI Interface
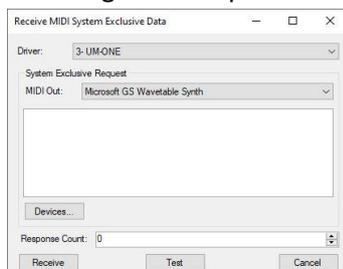
Figure8

Driver:

Use the dropdown box to select the MIDI Interface you connected in Step1b above.

Step4b...

Readying The Synthesiser

Next you need to get your synthesiser ready to transmit the data dump as detailed in your synth

manual , this will probably be some kind of Data Transfer Mode (see synth manual), with a list of options to select the type of data to send. Using your synth manual follow this procedure but do not actually send the messages yet as you need to get the Computer ready to receive the data first.

Step5b...

Setting The Data Response Count

Response Count: | 0 | ▲▼ |

Next you need to let the computer know how many SysEx messages the synth will send, with this method of transfer the Response Count could be any value, for example when dumping all from a Roland D-10 the value will be "166" but if only dumping the sounds it will be "87", but this should be detailed in your synthesiser manual, if you don't know this value or can't find any information about the Response Count in your synthesiser manual continue to the Test Process Step7b below. If you can confirm the Response Count value and are 100% confident that this value is correct enter the value and continue to Step6b below, incorrect values will result in data lose or incomplete operation, either way it will result in errors that could be avoided by using the Test Process.

Step6b...

Receiving The Data Dump

Receive

If you are 100% sure that the Response Count entered is correct, click Receive and then start the synthesiser transmitting data, usually by confirming the options you selected in Step4b above. Once the synthesiser completes the data dump it will probably exit the Data Transfer Mode but this may differ with your model (see synth manual). After data transfer completion the MIDI Import File process is automatically activated by closing the Receive MIDI System Exclusive Data Window, see Figure8 above and opening the Import File Window below, continue to Step8b below.

If Figure8 above remains open continue to Step11b below, Something Went Wrong.

Step7b...

The Test Process

Test

Leaving the Response Count above set to "0", click the Test button to open the MIDI Receive Test Window simultaneously starting the Test process.

Using The MIDI Test Window

MIDI Receive Test — □ ✕
Received Messages: | 0 |
Import   Ignore

Start Sending

Next start the synthesiser transmitting data, usually by confirming the options you selected in Step4b above and then observe the Received Massages value start to increment.

Receive Messages

Received Messages: | 166 |

If the Received Messages value remains at "0" continue to Step11b below, Something Went Wrong; MIDI Receive Problem 3 and follow the recommended connection issues.

Once the synthesiser completes the data dump it will probably exit the Data Transfer Mode but this may differ with your model (see synth manual). After confirming the synthesiser has stopped transmitting data and the Received Messages value has increased continue below.

Automatic Progress
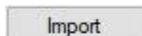
Import

First take note of the value in the Received Messages display for future importing from the connected synthesiser and then click the Import button to continue the MIDI Import File process.

Step8b...

Naming The MIDI Snapshot
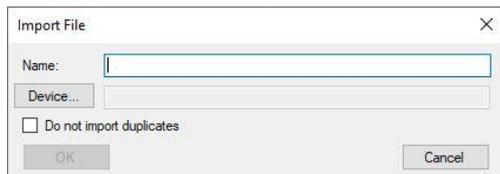
Name

Use this field to give the MIDI Snapshot a unique Name (for example, "My MIDI Test"), as this name will be used to identify the Snapshot in the Workflow Area, but Items can be renamed later.

Step9b...

Selecting A Device
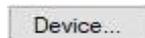
Click the Device button to open the Select Device Window
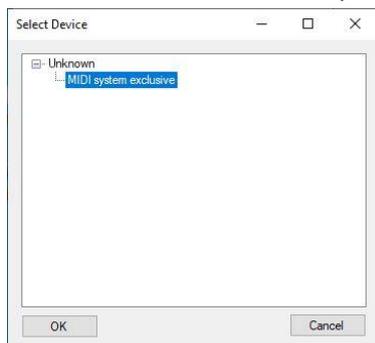
OK

Click to confirm selection of Unknown MIDI system exclusive and continue the Import File process.

OK
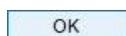
Click OK in the Import File Window to confirm all options and create your new MIDI Snapshot.

Step10b...

Finishing Up

Now check your new MIDI Snapshot creation in the Workflow Area and Save your new Project.

If you manually inserted the Response Count value it is recommended that you use the Snapshot Viewer to double check that the last message received was as detailed in your synthesiser manual, if this message is not as detailed in your manual or you are not sure what this message should be, the SysEx message could have truncated creating problems later. For more information on truncated messages and the related problems see Step11b below, MIDI Receive Problem 4.

Step11b...

Something Went Wrong

When transmitting MIDI Data from the synthesiser to the computer there are a few different things that could go wrong, generally these are all connection related but could be related to incorrect Response Count values as detailed in the following four MIDI Receive Problems below.

MIDI Receive Problem 1...

Figure8, Receive MIDI System Exclusive Data Window remains open; the computer has not received any MIDI SysEx Data. Click the Cancel button to exit the Window and correct the following issues.

Incorrect MIDI connection in Step1b above, start again from Step1b above and double check the MIDI Output and MIDI Input connections are correctly located; also confirm that any MIDI leads and or any adapters are functioning correctly, if required use a cable tester.

Incorrect MIDI Interface Driver selection in Step3b above, if multiple MIDI Interfaces are installed in your computer, double check the selection in Step3b matches the connection in Step1b above.

MIDI Receive Problem 2...

Figure8, Receive MIDI System Exclusive Data Window remains open; the computer has not received all of the expected SysEx Data. Click the cancel button to exit the Window and correct the following issue. The value entered into the Response Count exceeds the amount of SysEx Messages sent by the synthesiser, start again from Step2b above but skip Steps5b & 6b and continue with Step7b.

MIDI Receive Problem 3...

MIDI Receive Test Window, Received Messages value remains at "0"; the computer has not received any MIDI SysEx Data. Click the Ignore button to exit the MIDI Receive Test Window followed by the Cancel button to exit the MIDI System Exclusive Data Window and correct the following issues. Incorrect MIDI connection in Step1b above, start again from Step1b above and double check the MIDI Output and MIDI Input connections are correctly located; also confirm that any MIDI leads and or any adapters are functioning correctly, if required use a cable tester.

Incorrect MIDI Interface Driver selection in Step3b above, if multiple MIDI Interfaces are installed in your computer, double check the selection in Step3b matches the connection in Step1b above.

MIDI Receive Problem 4...

Truncated SysEx Message; the value entered into the Response Count is less than the amount of SysEx Messages transmitted by the synthesiser. This type of error will not be detected by the SoundDiviner Receive MIDI System Exclusive Data process or the following MIDI Import File process as the Response Count value has been honoured. This kind of user error will only be discovered when Sending MIDI Snapshots, as the synthesiser will be unable to complete the operation. To prevent this type of error use the MIDI Receive Test process until a true value is obtained.

METHOD 2

As listed above this is for synths that require a data request message from the computer before responding with a data transfer as outline in the synth manual, this method will involve some manual Sysex data entry (have your synthesiser manual to hand).

Step1c...

Interface Connection
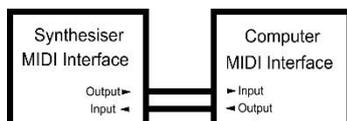
First you will need to establish which type of MIDI Interfaces your synthesiser and computer have, as these could be different and require adapters as previously listed (see related manuals). Once you have established the type of MIDI Interfaces you have you need to connect the synth MIDI Output to the computer MIDI Input and the computer MIDI Output to the synth MIDI Input, using the original standard this would be five pin din Output to five pin din Input from both computer and synth.

Step2c...

Creating A MIDI Snapshot

Right click in the Workflow Area or left click MENU BAR and select "Item – Import – MIDI In...", to open the Receive MIDI System Exclusive Data Window.

Step3c...

Selecting the computer MIDI Interface
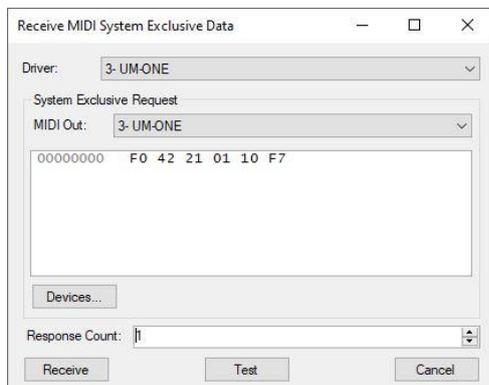
Figure9

Driver:

Use the dropdown box to select the MIDI Interface you connected in Step1c above, used for MIDI In.

Step4c...

Building A SysEx Data Request

Next you will need to use the System Exclusive Request options (see Figure9 above), to set up the Interface and the SysEx Data Request required by the synth connected in Step1c above to transmit patch data back to the computer (see related synthesiser manual section).

MIDI Out:

Use this dropdown box to select the MIDI Interface connected in Step1c above, used for MIDI Out.

Computer Request Message

Next you need to input the SysEx Request Message, this message will be listed in your synth manual and can be of various lengths, but will always be in two digit blocks (see Figure9 above), this data will always start with "F0" and end with "F7" but the data in-between will be unique to your synth model. The example listed in Figure9 above is the Data Request Message required by a Korg EX-800 as outlined on page 42 of the manual, if you are attempting to connect this synth model then input the value above, if not you will need to obtain this value from your synth manual. Once you have located this value, left click in the Hex Editor block and enter the value, double checking it is correct.

Step5c...

Setting The Computer Response

Next you need to let the computer know how many SysEx messages the synth will return, usually with this method of transfer the Response Count will be "1" see Figure9 above, but this should be detailed in your synth manual, if you don't know this value or can't find any information about the Response Count in your synthesiser manual continue to Step7c below.

If you can confirm the Response Count value either enter the value or use the arrows to increment/decrement by one. The value in Figure9 above is correct for the Korg EX-800.

Step6c...

Receiving The Data Dump

Click Receive to send the SysEx Request Message and receive the requested Data Dump.

After data transfer completion the MIDI Import File process is automatically activated by closing the Receive MIDI System Exclusive Data Window, see Figure9 above and opening the Import File Window below, continue to Step8b below.

If Figure9 above remains open continue to Step11c below, What Went Wrong.

Step7c...

Testing Your SysEx Message
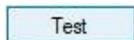
Test

With the Response Count above set to "0", click the Test button to send the SysEx Request Message and open the MIDI Receive Test Window simultaneously starting the test and receive process.

Using The MIDI Test Window

MIDI Receive Test

Received Messages: 0

Import   Ignore

Received Messages:

Received Messages: 1

If the Received Messages value remains at "0" continue to Step11c below, What Went Wrong; MIDI Receive Issue 5 and follow the recommendations.

The Received Messages value should continue to increment as each new SysEx Message is received, watch this value closely and once you can confirm that the value has stopped increasing, usually within 5-10 seconds of last increment you will be safe to continue with Automatic Progression.

Automatic Progress

Import

First take note of the value displayed in the Received Messages display for future importing from the connected synthesiser and then click Import to continue to the MIDI Import File process.

Step8c...

Naming The MIDI Snapshot

Import File

Name:

Device...

☐ Do not import duplicates

OK   Cancel

Name

Use this field to give the MIDI Snapshot a unique Name (for example, "My MIDI Test"), as this name will be used to identify the Snapshot in the Workflow Area, but Items can be renamed later.

Step9c...

Selecting A Device
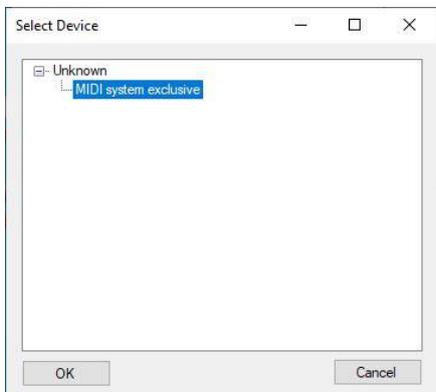
Device...

Click the Device button to open the Select Device Window

Select Device

⊟ Unknown
    MIDI system exclusive

OK   Cancel

OK

Click to confirm selection of Unknown MIDI system exclusive and continue the Import File Process.

OK

OK
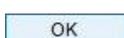
Click OK in the Import File Window to confirm all options and create your new MIDI Snapshot.

Step10c...

Finishing Up

Now select the new MIDI Snapshot Item in the Workflow Area and use the Snapshot Viewer to check that the SysEx Data received is correct as detailed in your synth manual, then Save your new Project. If the SysEx Message displayed in the Snapshot Viewer is only a single line reply, continue to Step11c, What Went Wrong, MIDI Receive Issue 8.

If you manually inserted the Response Count value it is recommended that you use the Snapshot Viewer to double check that the last message received was as detailed in your synthesiser manual, if this message is not as detailed in your manual or you are not sure what this message should be, the SysEx message could have truncated creating problems later. For more information on truncated messages and the related issues see Step11c below, MIDI Receive Issue 9.

Step11c...

What Went Wrong

When making a SysEx Request from the computer to Receive SysEx Data from the synthesiser, just about every part of the process could go wrong, starting with the connections then the selections and of course the SysEx Request message itself. Try using the following nine MIDI Receive Issues to help identify what actually went wrong and how to rectify it.

MIDI Receive Issue 1...

Figure9, Receive MIDI System Exclusive Data Window remains open; the computer has not received any MIDI SysEx Data. Click the Cancel button to exit the Window and correct the following issues. Incorrect MIDI connection in Step1c above, start again from Step1c above and double check that all MIDI connections are correctly located; also confirm that any MIDI leads and or any adapters are functioning correctly, if required use a cable tester. Remember MIDI Output is not MIDI Thru. Incorrect MIDI Interface Driver selection in Step3c above, if multiple MIDI Interfaces are installed in your computer, double check the selection in Step3c matches the connection in Step1c above. Incorrect MIDI Output connection selected in Step4c above; if multiple MIDI Interfaces are installed in your computer, double check the selection in Step4c matches the connection in Step1c.

MIDI Receive Issue 2...

Figure9, Receive MIDI System Exclusive Data Window remains open; Windows Error!!!
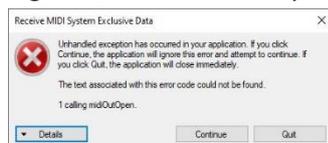
Incorrect MIDI Output connections selected in Step4c above; If Microsoft GS Wavetable Synth or any other listed soft synth that is not SysEx compatible is selected, Microsoft standard error message will be generated. Click Continue to exit Error Window and continue with Step4c MIDI Out selection.

MIDI Receive Issue 3...

Figure9, Receive MIDI System Exclusive Data Window remains open; the computer has not received any SysEx Data. Click the cancel button to exit the Window and correct the following issue. Incorrect SysEx message entered in the Hex Editor; the SysEx message entered does not start with "F0" or the Manufacture ID is incorrect resulting in no Sysex Response, start again from Step2c above but double check the Computer Request Message entered at Step4c above.

MIDI Receive Issue 4...

Figure9, Receive MIDI System Exclusive Data Window remains open; the computer has not received all of the expected SysEx Data. Click the cancel button to exit the Window and correct the following issue. The value entered into the Response Count exceeds the amount of SysEx Messages sent by the synthesiser, start again from Step2c above but skip Steps5c & 6c and continue with Step7c.

MIDI Receive Issue 5...

MIDI Receive Test Window, Received Messages value remains at "0"; the computer has not received

any MIDI SysEx Data. Click the Ignore button to exit the MIDI Receive Test Window followed by the Cancel button to exit the MIDI System Exclusive Data Window and correct the following issues. Incorrect MIDI connection in Step1c above, start again from Step1c above and double check all the MIDI connections are correctly located; also confirm that any MIDI leads and or any adapters are functioning correctly, if required use a cable tester. Remember MIDI Output is not MIDI Thru. Incorrect MIDI Interface Driver selection in Step3c above, if multiple MIDI Interfaces are installed in your computer, double check the selection in Step3c matches the connection in Step1c above. MIDI Receive Issue 6...

MIDI Receive Test Window; Windows Error!!!
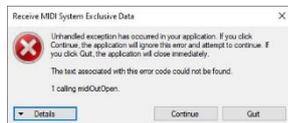
Incorrect MIDI Output connections selected in Step4c above; If Microsoft GS Wavetable Synth or any other listed soft synth that is not SysEx compatible is selected, Microsoft standard error message will be generated. Click Continue to exit Error Window, then Click Ignore to exit the MIDI Receive Test Window and continue with Step7c after correct MIDI Out selection. MIDI Receive Issue 7...

MIDI Receive Test Window, Received Messages value remains at "0"; the computer has not received any MIDI SysEx Data. Click the Ignore button to exit the MIDI Receive Test Window and correct the following issue. Incorrect SysEx message entered in the Hex Editor; the SysEx message entered does not start with "F0" or the Manufacture ID is incorrect resulting in no Sysex Response, amend the Computer Request Message in the Hex Editor and continue with Step7c above. MIDI Receive Issue 8...

System Exclusive Data Dump is only a single line reply; the synthesiser has replied with a Data Error. Incorrect SysEx message entered in the Hex Editor, as long as the SysEx message "start, Manufacturer ID, Device ID and End are correct", some synthesisers could reply an Error. Start again from Step2c but double check the Computer Request Message as detailed in your synth manual. MIDI Receive Issue9...

Truncated SysEx Message; the value entered into the Response Count is less than the amount of SysEx Messages transmitted by the synthesiser. This type of error will not be detected by the SoundDiviner Receive MIDI System Exclusive Data process or the following MIDI Import File process as the Response Count value has been honoured. This kind of user error will only be discovered when Sending MIDI Snapshots, as the synthesiser will be unable to complete the operation. To prevent this type of error, use the MIDI Receive Test process until a true value is obtained.

METHOD 3

As listed above this method is for Plugin users and only requires option selections for a range of different functions accessible to the model selected, see related Plugin manual.

Step1d...

Interface Connection
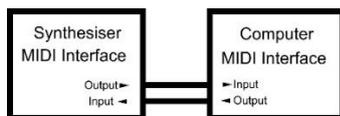
First you will need to establish which type of MIDI Interfaces your synthesiser and computer have, as these could be different and require adapters as previously listed (see related manuals). Once you have established the type of MIDI Interfaces you have you need to connect the synth MIDI Output to the computer MIDI Input and the computer MIDI Output to the synth MIDI Input, using the original standard this would be five pin din Output to five pin din Input from both computer and synth.

Step2d...

Creating A MIDI Patch Folder

Right click in the Workflow Area or left click MENU BAR and select (Item – Import – MIDI In...), to open the Receive MIDI System Exclusive Data Window.

Step3d...

Selecting The Computer MIDI Interface
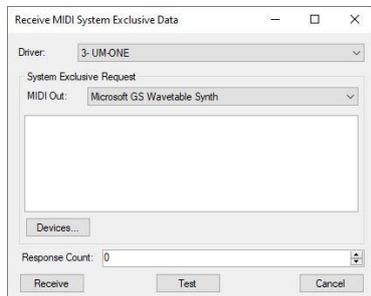
Figure10

Driver:

Next use the Driver dropdown box to select the MIDI Interface you connected in Step1d above.

Step4d...

Selecting A MIDI Plugin
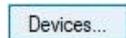
Click the Devices button to open the MIDI Request Window.

Figure11

Choosing Your MIDI Plugin
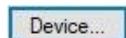
Click the Device button to open the Select Device Window.
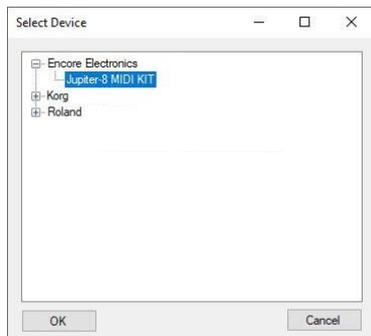
Next use the ⊞ to expand a manufacture list and click to select the MIDI Plugin model you require.

OK
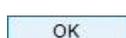
Click the OK button to accept your selection and return to the MIDI Request Window, see Figure11.

Step6d...

Choosing Your SysEx Request Type

Now you need to use the Type dropdown box to select what kind of information you want to receive, each Plugin will have its own types available (see related Plugin manual).

OK
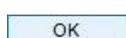
Next click the OK button in the MIDI Request Window to accept the selection and return to the automatically configured Receive MIDI System Exclusive Data Window, see Figure12 below.

Step7d...
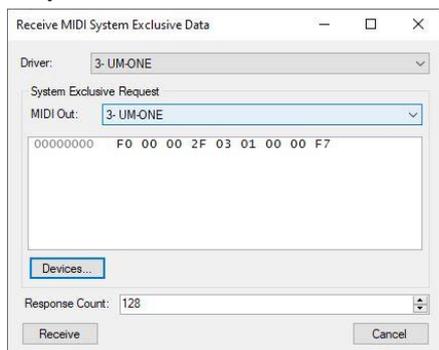
Figure12

Note that Figure12 differs from Figure10 above and is now automatically configured using the Plugin selections made in the MIDI Request Window; these values will be different for every Plugin, for more information about these values see related Plugin manual or RECEIVE MIDI SNAPSHOT above.

Receive

Click the Receive button to start the MIDI data transfer. After data transfer completion the MIDI Import File process is automatically activated by closing the Receive MIDI System Exclusive Data Window, see Figure12 above and opening the Import File Window below, continue to Step8d below. If Figure12 above remains open continue to Step10d below, Connection Problems.

Step8d...

Naming The MIDI Patch Folder
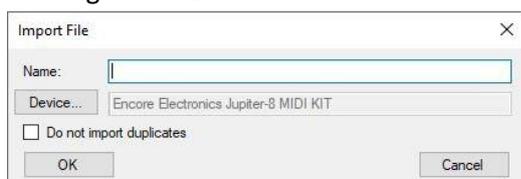
Name

Use this field to give the Patch Folder a unique Name (for example, "My Jupiter 8 Banks"), as this name will be used to identify the Patch Folder in the Workflow Area, but it can be renamed later.

OK
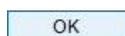
Finally click the OK button to confirm the Import File options and create your new Patch Folder.

Step9d...

Finishing Up

Now check your new Patch Folder in the Workflow Area and Save your Project. Patch Folders can be expanded and reduced as with other Folders, but contain all the patches and related data from the synthesiser connected in step1d above, for more information see related Plugin manual.

Step10d...

Connection Problems

When using Plugins to request MIDI Data from a synthesiser very little can actually go wrong. If you have arrived at this section then you have some kind of MIDI connection problem as outline below.

Connection Problem 1...

Figure12, Receive MIDI System Exclusive Data Window remains open; the computer has not received any MIDI SysEx Data. Click the Cancel button to exit the Window and correct the following issues. Incorrect MIDI connection in Step1d above, start again from Step1d above and double check that all MIDI connections are correctly located also confirm that any MIDI leads and or any adapters are functioning correctly, if required use a cable tester. Remember MIDI Output is not MIDI Thru.

Connection Problem 2...

Figure12, Receive MIDI System Exclusive Data Window remains open; the computer has not received any MIDI SysEx Data. Click the Cancel button to exit the Window and correct the following issues. Incorrect MIDI Interface Driver selection in Step3c above, if multiple MIDI Interfaces are installed in your computer, double check the selection in Step3d matches the connection in Step1d above.

SENDING MIDI

Sending MIDI SysEx is a lot simpler than receiving MIDI SysEx, but first you need to establish how your synthesiser receives the Data as outlined in your synthesiser manual and then follow the appropriate Step by Step below. METHOD 1A is for synths like the Roland D-10 that have a Data Transfer Mode where you set up a one way manual transfer. METHOD 2A is for synths that respond directly to the transmitted SysEx messages like the Korg EX-800. METHOD 3A is for Plugin Users. Before following any of the Step by Steps below it might be a good idea to have your synthesiser and maybe computer MIDI Interface manuals to hand.

METHOD 1A

As listed above Method 1a is for synths that have a Data Transfer Mode where you set up a one way manual transfer, like the Roland D-10 (see related synthesiser manual).

Step1e...

Interface Connection
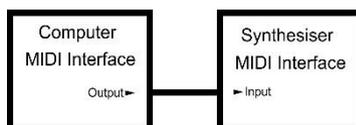
First you will need to establish which type of MIDI Interfaces your computer and synthesiser have, as these could be different and require adapters as previously listed (see related manuals). Once you have established the type of MIDI Interfaces you have, you need to connect the Computer MIDI Output to the Synthesiser MIDI Input, using the original MIDI Connection standard this would be five pin DIN Output to five pin DIN Input from computer to synthesiser.

Step2e...

Selecting For Exporting

First select the MIDI Snapshot to be sent to the synthesiser connected in Step1e above.

Next; Right click the selected Item or MENU BAR – Item – Export – MIDI out..., to open the Send MIDI System Exclusive Data Window, see below.

Step3e...

Picking Your MIDI Interface
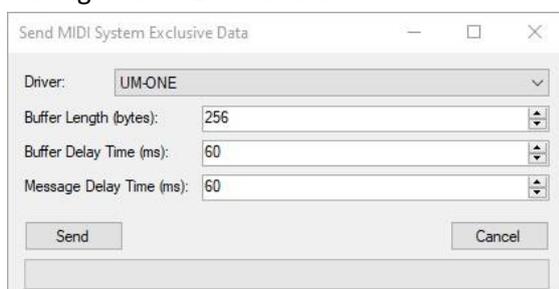
Next use the Driver dropdown box to select the MIDI Interface you connected in Step1e above.

Step4e…

Configuring the MIDI Data

Next you need to set the Buffer Length, Buffer Delay Time and Message Delay Time settings to match your synthesiser. The default values will work in most cases but not in all so this becomes a trial-and-error process, as its generally not detailed in your synth manual. Versions of SoundDiviner before V1.3 fixed the Buffer length at maximum and both delays to minimum, but the values above

will still work for the Roland D-10, however a "1024" Buffer Length is a closer match. Some synthesisers need a smaller Buffer Length or they will not process the Data correctly, like the Roland D-70 that requires a Buffer Length of "32".

Step5e...

Readying The Synthesiser

Next you need to get your synth ready to receive the data dump as detailed in your synth manual, this will probably be some kind of Data Transfer Mode (see related manual), with a list of options used to select One Way transfer and the type of data to receive. Using your synth manual follow this procedure fully, this should also involve turning the Memory Protect Mode off or Write enabled Mode on depending on your model (see synth manual), either way once readied correctly the synthesiser should display "Waiting" as with the Roland D-10 but this may differ with your model.

Step6e...

Sending The MIDI Snapshot

Send

Click the send button to transmit the data to the connected synthesiser, this should not take long, after Send completion the Sending MIDI System Exclusive Data Window will automatically close.

Step7e...

What Happened Next!

Some synthesisers will change the display to "Loading" as they start to receive compatible data, like the Roland D-10 but this may differ on your model (see synthesiser manual). If the Data transfer went OK your synthesiser may briefly display "Complete" before returning to its normal state as with the Roland D-10 but again this may also differ with your model , either way if all has completed smoothly without error continue to Step8e below, Checking Your Data.

Waiting...

If the synthesiser is still waiting for the Data transfer after Send completion, it is most likely that you have some kind of connection problem, proceed to Step9e below, Waiting Errors.

Loading...

If the synthesiser started receiving data but the data did not complete correctly it is most likely that your synth has received truncated MIDI Data, if this happens your synth may continue to display "Loading" as with the Roland D-10 but this may differ on your model (see synth manual), either way "Exit" the transfer mode using your synth front panel and continue to Step9e Data Errors below.

Data Mismatch

If the Data transfer went wrong it will create some kind of Error, this may be displayed by your synth as "Data Mismatch", as in the case of the Roland D-10 but this may differ on you model as detailed in your manual. If you receive some kind of Data Error continue to Step10e below Data Errors.

Step8e...

Checking Your Data

It is a good idea to check that the patch memory in your synthesiser has actually changed, you can do this by reselecting the displayed preset number or another as either will load a patch from memory. If the patch memory in your synth has changed continue to Step12e below, Finishing Up. If the patch memory has not changed then continue to Step11e below, Patch Errors. Remember; Some synthesisers like the Roland D-70 require rebooting for the changes to take full effect.

Step9e...

Waiting Errors

Your synth has not received any MIDI SysEx Data and is still waiting to receive it, try the following.

Waiting Error 1...

Start again from Step1e above but check that the Computer MIDI Output is connected to the Synthesiser MIDI Input and that any leads and or adapters are functioning correctly and then run through the remaining steps skipping Step4e above, as the synthesiser is already waiting.

Waiting Error 2...

Start again from Step2e above but if multiple MIDI Interfaces are installed in the computer, double check the Computer Interface Driver selected in Step3e above, and then skip Step5e, Readying The Synthesiser as the synthesiser is already waiting.

Step10e...

Data Errors

Your synth has received corrupt, truncated, invalid or incompatible MIDI Data and is unable to update the patch memory using this MIDI Snapshot, if you would like more information regarding any of these kinds of errors continue below. If this file has been downloaded from the internet it is a good idea to try a different file that you know is compatible with your synthesiser to confirm everything is working correctly, once correct data transfer is confirmed you can attempt to identify if the data is corrupt, truncated, invalid or incompatible, see Data Errors below.

Data Error 1...

Corrupt MIDI Data; the MIDI Snapshot is corrupt, use the Snapshot Viewer to confirm that the Hex data is corrupt. If the MIDI Snapshot was downloaded from the internet try downloading the file again or download from a different source and Import/Export the file again.

Data Error 2...

Truncated MIDI Data; the MIDI Snapshot is truncated, the MIDI Snapshot was imported using an incorrect Response Count value and SysEx Data is incomplete, use the Snapshot Viewer to confirm how many messages are missing as the MIDI Snapshot will not function correctly or at all. Some Plugins support truncated file importing for correction, see related Plugin Manual.

Data Error 3...

Invalid MIDI Data; the MIDI Snapshot is invalid, use the Snapshot Viewer and confirm that the Snapshot Item is actually a SysEx file and not an incorrectly imported file type. Sysex messages start with "F0" and end with "F7", if the Hex data in the Snapshot Viewer does not start with "F0" it is not a MIDI SysEx file. If it does start with "F0" the Snapshot might be incompatible. If the MIDI Snapshot looks good then the Data Error maybe due to the Buffer Size, try reducing this and sending again.

Data Error 4...

Incompatible MIDI Data; the MIDI Snapshot is incompatible, use the Snapshot viewer to confirm that the file is compatible with your synthesiser model. A good place to start is with the second two digits as this is the manufacturer ID (example: "F0 41" = Start SysEx Message \ Manufacturer Roland). This ID will be detailed in your synth manual along with all the other messages that should be contained in the SysEx Data Dump to make it compatible with your model (see related synth manual). If the MIDI Snapshot looks good then check the exclusive ID in case it is different to the one you have set for your synthesiser. Use the Snapshot viewer to confirm that the third two digits match your synthesiser settings (example: "10" = System Exclusive ID 17), if this number is different you will need to change the synth to match.

Step11e...

Patch Errors

The synthesiser has accepted the MIDI Snapshot Data but the patches within your synth have not changed, see Patch Errors below for help with this type of error.

Patch Error 1...

Duplicate Data, the data transmitted was the same as the data already stored in the synth memory (example: Factory patches sent when the factory patches where loaded). Start again from Step2e above but select a different compatible MIDI Snapshot. Remember; Some synthesisers require rebooting before all of the changes are implemented.

Patch Error 2...

Data not saved to the synthesiser patch memory, the patch memory was protected and had not been correctly unprotected as detailed in your synthesiser manual, start again from Step2e above

paying special attention to any Memory Protection setting required by your synth in Step5e above. Remember; Some synthesisers require rebooting before all of the changes are implemented.

Patch Error 3...

There may be a problem with your synth's memory protection and or battery. If you have not made a backup of your synth, it would be best to do it now, see MIDI SNAPSHOTS STEP BY STEP above. Once you have made a MIDI Snapshot of your synth, make a small change to one of your synth patches and save it back to the same preset number. Confirm that this change has been saved by entering the same preset number again to reload the data, if the patch change has not saved correctly then you have an issue with your synth and need technical help, if the patch did save ok you can now go back to Step2e above, but this time select the MIDI Snapshot you just made of your synth and follow the remaining steps as this will return everything back as it was.

Step12e...

Finishing Up

Some synths may require you to manually reset the Memory Protect or Write Mode using whatever method is detailed in your synth manual but this is done automatically with others like the Roland D-10, for more information on these procedures see your synth manual. You can now return your synth to its normal playing mode if it has not already done so and enjoy the new patches.

METHOD 2A

As listed above Method 2a is for synthesisers that respond directly to the transmitted SysEx messages like the Korg EX-800 and the D-70 (see related synthesiser manual).

Step1f...

Interface Connection
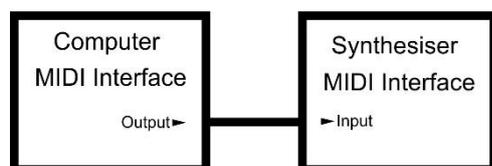
First you will need to establish which type of MIDI Interfaces your computer and synthesiser have, as these could be different and require adapters as previously listed (see related manuals). Once you have established the type of MIDI Interfaces you have, you need to connect the Computer MIDI Output to the Synthesiser MIDI Input, using the original MIDI Connection standard this would be five pin DIN Output to five pin DIN Input from computer to synthesiser.

Step2f...

Memory Protection

Synthesisers with patch memory will have some kind of Memory Protection that needs disabling or Write mode that needs enabling for the transferred data to be saved correctly, as detailed in your synth manual. This procedure must be completed next, on some models this could be a single switch on the rear of the unit or two switches as in the case of the Korg EX-800 but this may also be some kind of panel mode or both as with the Roland D-70, see related synth manual for full details.

Step3f...

Selecting For Exporting

First select the MIDI Snapshot to be sent to the synthesiser connected in Step1f above.

Next; Right click the selected Item or MENU BAR – Item – Export – MIDI out..., to open the Send MIDI System Exclusive Data Window, see below.

Step4f...

Picking Your MIDI Interface
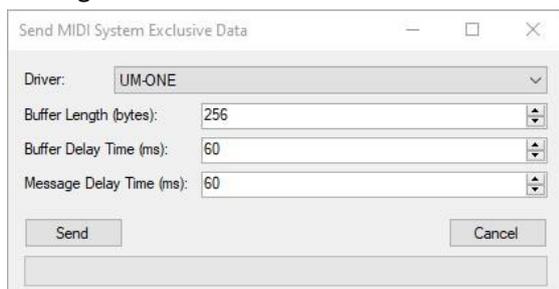
Next use the Driver dropdown box to select the MIDI Interface you connected in Step1f above.

Step5f...

Configuring the MIDI Data

Next you need to set the Buffer Length, Buffer Delay Time and Message Delay Time settings to match your synthesiser. The default values will work in most cases but not in all so this becomes a trial-and-error process, as its generally not detailed in your synth manual. Versions of SoundDiviner before V1.3 fixed the Buffer length at maximum and both delays to minimum, but the values above will still work for the Korg EX-800 but not the Roland D-70 that requires a Buffer Length of "32".

Step6f...

Sending The MIDI Snapshot

Click the Send button to transmit the data to the connected synthesiser, this should not take long but will depend on the complexity and amount of Sysex messages transferred. After data transfer completion the Sending MIDI System Exclusive Data Window will automatically close.

Step7f...

Checking All Is OK

Next re-enter or change the preset number on your synth as the current patch will be from the old memory and not the new transferred patch memory. If the new selected patch is as expected different from your old patch of the same number, then all went OK and you can continue to Step9f below. If the patch data has not changed then continue to Step8f below Something Went Wrong. Remember; Some synths like the Roland D-70, require rebooting for the memory to fully refresh.

Step8f...

Something Went Wrong

When transmitting MIDI Data from the computer to the synthesiser using this method, there are a few different things that could go wrong, generally these are connection related but could also be configuration problems or issues with the Snapshot files themselves, as outlined below in the thirteen different MIDI Transfer Problems. Working through the list below will help you to identify & hopefully fix the problem.

MIDI Transfer Problem 1...

Incorrect MIDI connection in Step1f above, start again from Step1f above and double check the MIDI Output and Input connections are correct, also confirm the MIDI lead and or any adapters are functioning correctly, use a cable tester if required and or available.

MIDI Transfer Problem 2...

Incorrect Interface selection in Step4f above; Computers with multiple MIDI Interfaces, start again from Step3f above paying special attention to the MIDI Interface Driver selected in Step4f above.

MIDI Transfer Problem 3...

Data not saved to the synthesiser patch memory, the patch memory was protected and had not been correctly unprotected as detailed in your synthesiser manual, start again from Step2f above paying special attention to Memory Protection in Step2f.

MIDI Transfer Problem 4...

Duplicate Data, the data transmitted was the same as the data already stored in the synth memory (example: Factory patches sent when the factory patches were loaded). Start again from Step3f above but select a different MIDI Snapshot.

MIDI Transfer Problem 5...

Incompatible MIDI Snapshot, the transferred data is not for the synth model connected in Step1f. If this file has been downloaded from the internet it is a good idea to try a different file that you know is compatible with your synthesiser to confirm everything is working correctly, once correct data transfer is confirmed you can attempt to confirm if the file is incompatible or corrupt, see below.

MIDI Transfer Problem 6...

The MIDI Snapshot is corrupt; this can be checked by using the Snapshot Viewer to view the Hex Data within the MIDI Snapshot. If the MIDI Snapshot was downloaded from the internet, then try to download the file again or download it from a different source.

MIDI Transfer Problem 7...

The MIDI Snapshot is truncated, the MIDI Snapshot was recorded using an incorrect Response Count value and SysEx Data is incomplete. This can be checked by using the Snapshot viewer and your synth manual to confirm the correct last messages, either way the MIDI Snapshot will not function correctly or at all without data correction. Some Plugins support importing truncated files for data correction, see related Plugin manual for details.

MIDI Transfer Problem 8...

Invalid MIDI Snapshot, use the Snapshot Viewer and confirm that the Snapshot Item is actually a SysEx file and not an incorrectly imported file type. Remember; Sysex messages start with "F0" and end with "F7", if the Hex data in the Snapshot Viewer does not start with "F0" it is not SysEx.

MIDI Transfer Problem 9...

The MIDI Snapshot is incompatible, use the Snapshot viewer to confirm that the file is compatible with your synthesiser model. A good place to start is with the second two digits as this is the manufacturer ID (example: "F0 42" = Start SysEx Message / Manufacturer Korg). The manufacturer ID will be detailed in your synth manual along with all the other messages that should be contained in the SysEx Data Dump file to make it compatible with your model.

MIDI Transfer Problem 10...

The MIDI Snapshot uses a different exclusive ID to the one you have set for your synthesiser. Use the Snapshot viewer to confirm that the third two digits match your synthesiser settings (example: "10" = System Exclusive ID 17), if this number is different you will need to change the synth to match.

MIDI Transfer Problem 11...

The Buffer Length is set to large for the synthesiser to process correctly. Synthesisers that receive very large System Exclusive Messages require time to process all of the Data correctly. Try sending the Data again but change the Buffer Length to something smaller like "32 Bytes".

MIDI Transfer Problem 12...

The Delay Time between Data packets or System Exclusive Messages is insufficient. Some synthesisers may require a larger Delay time to process Data correctly, try sending the Data again but increase the Buffer Delay Time and or the Message Delay time.

MIDI Transfer Problem 13...

There may be a problem with your synth's memory protection and or battery. If you have not made a backup of your synth it would be best to do it now, see MIDI SNAPSHOTS STEP BY STEP above. Once you have made a MIDI Snapshot of your synth, make a small change to one of your synth patches and save it back to the same preset number. Confirm that this change has been saved by entering the same preset number again to reload the data, if the patch change has not saved correctly then you have a problem with your synth and need technical assistance, if the patch did save ok you can now go back to Step2f above, but this time select the MIDI Snapshot you just made

of your synth and follow the remaining steps as this will return everything back as it was.

Step9f...

Finishing Up

Next return the synth Memory Protect or Write mode back to its safe state using the reverse procedure to the one used in Step2f above, as detailed in your synth manual.

METHOD 3A

As listed above Method 3A is for Plugin users, some Plugins will require two way communication for correct transfer and some will not as detailed in the related Plugin manual, for the purpose of the following Step by Step connectivity for all Methods is listed even if not required. Each Plugin supports unique types of transfer modes and memory capacities see related Plugin and synthesiser manuals for full details as this will help with Export List creating.

Step1g...

Interface Connections
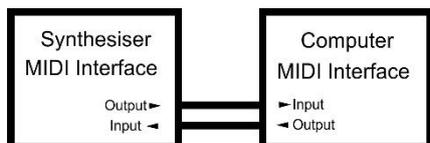
First you will need to establish which type of MIDI Interfaces your synthesiser and computer have, as these could be different and require adapters as previously listed, see related manuals. Once you have established the type of MIDI Interfaces you have you need to connect the synth MIDI Output to the computer MIDI Input and the computer MIDI Output to the synth MIDI Input, using the original standard this would be five pin din Output to five pin din Input from both computer and synth.

Step2g...

Selecting Folders

When exporting Patch Snapshots, patches from different Folders can be used to create new Export Lists (see Patch Snapshots above), but for the purpose of this Step by Step only the patches from a single non modified or amended Patch Folder have been used.

Select A Patch Folder

Select the Patch Folder in the Workflow Area, then Right click or Menu Bar Item – Export – MIDI out... to open the Export Item Window; then continue to Step3g below.

Step3g...

Creating An Export List

Before you can transmit any Data to the connected synthesiser you need to start the Export Item Process by selecting the following options and creating an Export List that is compatible with your synthesiser model, see selections below.
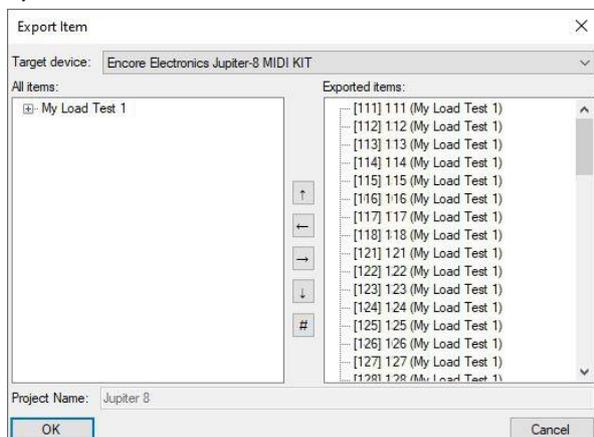
Figure13

Selecting The Connected Synthesiser

Target device:	Encore Electronics Jupiter-8 MIDI KIT	∨

Use this dropdown box to select the synthesiser connected in Step1g above; in this example the selected Plugin is the Encore Electronics Jupiter-8 MIDI KIT (a modification which gives the Roland Jupiter 8 MIDI capabilities when installed), but could be any of the available MIDI Plugins.

Building The Export List...

⊞ My Load Test 1

1st select the Patch Folder in the All Items area, see Figure13 above.

→

2nd click the add Control Button, as this adds everything in Patch Folder to the Export List, see Exported Items area in Figure13 above as this displays the Export List.

3rd use the scroll bar if required to check the Items in the Export List, as "My Load Test 1" see figure13 above has not been modified or amended, adding this to the Export List would have worked without Error, for full details on building Export Lists see Patch Snapshots above.

OK

4th once you are happy with your Export List, click the OK button to accept the selections and continue the Export Item Process by using the Send MIDI System Exclusive Data Window below.

Step4g..

Selecting The MIDI Driver
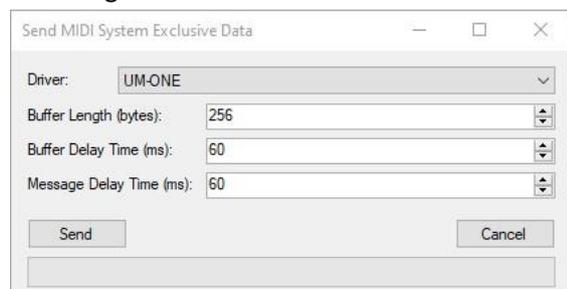
Send MIDI System Exclusive Data	— □ ✕
Driver:	UM-ONE ∨
Buffer Length (bytes):	256
Buffer Delay Time (ms):	60
Message Delay Time (ms):	60
Send	Cancel

Next use the Driver dropdown box to select the MIDI Interface you connected in Step1g above, but don't Send any Data yet as you need to get the synthesiser ready first.

Step5g...

Identifying Transfer Method

Next you need to establish how your synthesiser receives the Data as outlined in your synthesiser manual and listed above in METHOD 1A & 2A and outlined in the Plugin manual, then follow the appropriate Step below. Method1A is for synths like the Roland D-10 that have a Data Transfer Mode where you set up a one way manual transfer, see Method1A below. Method2A is for synths that respond directly to the transmitted SysEx messages like the Korg EX-800, see Method2A below.

Step6g...

Setting Up The Synthesiser

Method1A

Next you need to get your synthesiser ready to receive the Export List or Data Dump as detailed in your synth manual, this will probably be some kind of Data Transfer Mode with a list of options used to select One Way transfer and the type of data to receive. Using your synth manual follow this procedure fully, this should also involve turning the Memory Protect Mode off or Write enabled Mode on depending on your model; either way once readied correctly the synthesiser should display "Waiting" as with the Roland D-10 but this may differ with your model, after readying the synth to receive the Export List correctly continue to Step7g below.

Method2A

Synthesisers that support this method work without manual intervention but they will have some kind of manual Memory Protection that needs disabling or Write mode that needs enabling for the transferred data to be saved correctly, as detailed in your synth manual. This procedure must be

completed next, on some models this could be a single switch on the rear of the unit or two switches as in the case of the Korg EX-800 but this may also be some kind of panel mode as detailed in your synth manual, either way follow this procedure and once completed continue to Step7g below.

Step7g...

Sending The Export List
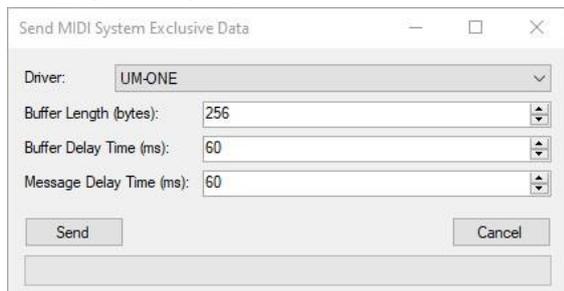
Click the Send Button to transmit the data to the connected synthesiser, this should not take long (less than a second in some counts). After Send completion the Sending MIDI System Exclusive Data Window will automatically close. Remember; MIDI Plugins configure the Buffer and Message values.

Step8g...

What Did The Synth Do!

Depending on the connected synthesiser and Plugin used, will determine what kind of response if any the synthesiser will give during and after data transfer completes, see related synth and Plugin manual s for full details. Some synthesisers may display "Loading" once transfer starts like the Roland D-10 but this may differ with your model. Once data transfer completes the synthesiser may briefly display "Complete" before returning to its normal state as with the Roland D-10 but again this may differ on your model but will be detailed both in the synth and Plugin manuals.

If everything seems to have transferred correctly, continue to Step9g below, Checking Your Synth.

Waiting

If the synthesiser is still "Waiting" for the data transfer after Send completion then you have some kind of connection problem see Step10g below, Connection Errors.

Step9g...

Checking Your Synth

Next is a good idea to check that the patch memory in your synthesiser has actually changed, re-enter the current Preset number to reload the current Patch and check that everything has changed as expected, if the patch memory has changed continue to Step12g below Finishing Off. If the patch memory has not changed then your next steps will depend on the Method followed in Step5g above.

If you followed Method1A in Step5g then continue to Step11g below, Memory Problems.

If you followed Method2A in Step5g then continue to Step10g below, Connection Errors but if you have already tried all of these continue to Step11g below, Memory Problems.

Step10g...

Connection Errors

Your synth has not received any MIDI Sysex Data and is either still "Waiting" or did not respond, try the following Connection Errors below.

Connection Error 1...

Start again from Step1g above but check that the Computer MIDI Output is connected to the Synthesiser MIDI Input and that any leads and or adapters are functioning correctly using a cable checker if required and then run through the remaining Steps but skip Step5g and Step6g above as the synthesiser is either still waiting or ready.

Connection Error 2...

For Plugins that support Handshake connection; start again from Step1g above but check that the Synthesiser MIDI Output is connected to the Computer MIDI Input and that any leads and or

adapters are functioning correctly using a cable checker if required and then run through the remaining Steps but skip Step5g and Step6g as the synthesiser is either still waiting or ready.

Connection Error 3...

Start again from Step2g above but if multiple MIDI Interfaces are installed in the computer, double check the Computer Interface Driver selected in Step4g above, and then skip Step5g and Step6g, "Setting Up The Synthesiser" as the synthesiser is either still waiting or ready.

Step11g...

Memory Problems

The synthesiser has excepted the MIDI Sysex Data but the patches within your synth have not changed, see Memory Problems below for help with this type of problem.

Memory Problems 1...

Duplicate Data, the data transmitted was the same as the data already stored in the synth memory (example: Factory patches sent when the factory patches were loaded). Start again from Step2g above and select a different Patch Folder to Export or use the same Patch Folder but change the order of the first 2 Patches in the Export List in Step3g above, by selecting the first Patch in the Export List and clicking the down arrow Control Button to swap the order of the first two Preset s.

Memory Problems 2...

Data not saved to the synthesiser patch memory, the patch memory was protected and had not been correctly unprotected as detailed in your synthesiser manual, start again from Step2g above paying special attention to any Memory Protection setting required by your synth in Step6g above.

Memory Problems 3...

There may be a problem with your synth's memory protection and or battery. If you have not made a backup of your synth it would be best to do it now (see MIDI SNAPSHOTS STEP BY STEP above). Once you have made a Patch Folder of your synth, make a small change to one of your synth patches, using your synth's front panel (not the Snapshot Editor) and save it back to the same preset number. Confirm that this change has been saved by entering the same preset number again to reload the data, if the patch change has not saved correctly then you have an issue with your synth and need technical help, if the patch did save ok you can now go back to Step2g above, but this time select the new Patch Folder that you just Imported from your synthesiser and follow the remaining steps as this will return everything back as it was.

Step12g...

Finishing Off

Some synthesisers require you to manually reset the Memory Protect or Write Mode using whatever method is detailed in your synth manual but this is done automatically with others like the Roland D-10, for more information on these procedures see your synth manual. Once this has been completed, return your synthesiser to its normal playing mode if this has not already been done automatically and enjoy playing your new patches.

DISK SNAPSHOTS GUIDE

Certain SoundDiviner terminology may differ from your synth manual as outlined above, reading this manual fully will help explain some of these differences. Before reading the guides below please have your synthesiser and related computer hardware manuals to hand. It is a good idea to open your synths manual at any disk related sections and have a good read through to familiarise yourself with the uses and functionalities, if your synth supports connection via USB as a Mass Storage Device this section may also be of interest. Computer hardware manuals for external drives and disk related media are notoriously poor but if you still have them, they may be of value especially when dealing with old SCSI devices, some of which may be beyond the scope of this manual.

The following guide is divided into two sections, READING DISKS followed by WRITING DISKS.

Disk Facts

Capacity is the total size of the media, volume is the total size used.

Remember; SoundDiviner only supports devices that are listed as a removable drive.

Warning

Caution should always be taken when inserting or attaching any disk media to a computer, especially when dealing with file systems not recognised by Windows. Some removable media have protection switches to prevent accidental data loss, enabling this switch will help protect your valuable data.

Remember; Windows may ask to format your media if it's not recognised! DO NOT AGREE.

READING DISKS

Reading Disks should be straight forward and in many cases it will be, but due to the large amounts of proprietary file systems and disk capacities supported by the many synthesiser manufactures and the huge array of drives and media introduced over the years, all of which utilise different and not always available interfaces, the reality is that without Plugins this may be fraught with issues. To help with some of these issues the next section has been divided into six different categories as follows, Floppy Disks, Optical Disks, Card Media, SCSI, USB Media and USB Synth, see below.

Remember; some media have write protect switches, enabling them prevents accidental damage.

Floppy Disks

Floppy Disk drives are available in two different styles as previously mentioned, legacy and USB.

Legacy Floppy Drives

These are the original types of Floppy Disk drive and utilise Floppy Disk Interfaces. This technology spanned well over twenty years and incorporates a large range of different capacities that are not supported by modern USB Floppy Drives as listed throughout this manual. At present SoundDiviner only supports the capacities available to USB Floppy Drives so to utilise any of the other sizes you will need to use a 3rd party application like Omniflop to create image files to Import.

USB Floppy Drives

These Floppy Drives only support 720Kb double density disks, 1.44Mb high density disks and some support 1.25Mb HD disks but this will depend on your unit as listed above, when Importing media the capacity will be used unless Plugins are selected (see related plugin manual). Lots of synthesisers support these capacity disks and these should read and Import without issue but if you are having problems Reading Floppy Disks try the following FD-Errors below. All Floppy Disks have write protect switches, using these prevents accidental writing or formatting of the media.

Remember; insert the floppy disk into the drive and let Windows detect it before Importing.

FD-Error 1...

Disk cannot be read; try reading the disk media in the original synthesiser to confirm the media is ok.

FD-Error 2...

Disk cannot be read; see the related synth manual to confirm the media capacity is supported.

FD-Error 3...

Drive not present; try the unit in a different USB port and confirm the unit is available to Windows.

FD-Error 4...

Drive not present; if connecting using a USB hub, try again using a USB port on the computer.

FD-Error 5...

Drive not present; if connecting using a USB hub, confirm the hub is correctly powered.

FD-Error 6...

Drive not present; Windows struggles with USB Floppy Drives when they are connected, disconnected and reconnected, try disconnecting the unit and rebooting the PC, then reconnecting the USB Floppy Drive and starting again.

Optical Discs

Technically Optical Discs refers to any type of storage media that uses laser head technology and

over the years there have been a few different styles utilising discs and cartridges. Cartridge units like the Plasmon drives or mini disc unit fall into the SCSI category listed below. Discs like CDROM or DVD in all their variants are what SoundDiviner classes as Optical Discs. These discs can contain a range of different file formats and be of any capacity from Mb up to the maximum permit by the media itself and in some cases this may have been stretched using over burning, either way take this into account when importing collections of discs as the capacity will be used unless Plugins are selected (see related plugin manual). Optical Discs differ from other media as the capacity and volume sizes are the same due to fixing in the burn process. Discs should read and Import without issue but if you are having problems Reading Optical Discs try the following OD-Errors below. Remember; after inserting a disc wait for Windows to finish exploring the disc before importing.

OD-Error 1...

Disc ejected; insert disc again but wait for windows to finish exploring the disc before importing.

OD-Error 2...

Disc Failed; check the disc in the related synthesiser to confirm the disc is not damaged.

OD-Error 3...

Disc Failed; check the disc is not dirty, clean with disc cleaner if required.

OD-Error 4...

Disc Failed; check the disc is not scratched or degrading.

OD-Error 5...

Drive not detected; if connected via a USB hub, check that the hub has sufficient power.

OD-Error 6...

Drive not detected; if connected via a USB, check that the lead is working correctly.

Card Media

Over the years a full range of Card Media has been used in synthesisers from proprietary cartridges to SD Cards as fully detailed above, most of these will be proprietary formats and some may even contain multiple partitions (see related synth manual for details). Cards can be of any capacity from Kb to Gb but it is usually detailed on the media itself, either way take this into account when importing collections of Cards or partitioned media as the capacity will be used unless Plugins are selected, see related plugin manual. Some but not all of these Cards are supported through internal or external USB multi or single card readers and some like PCMCIA are supported directly through internal ports but these are not common place on modern PC's. All Card Media with a compatible reader should read and Import without issue but if you are having problems Reading any Card Media try the following CM-Errors below. Before inserting any Card Media into your card reader enable the protection switch if available.

Remember; after inserting a Card wait for Windows to finish exploring the Card before importing.

Warning; Do not let Windows Format your media.

CM-Error 1...

Card Read Error; try reading the Card in the original synthesiser to confirm the media is ok.

CM-Error 2...

Card Read Error; the Card may be damaged, check again in the synth and attempt data recovery.

CM-Error 3...

Card Error; the card is damaged; some Plugins can access the available Card data and use this to rebuild a new one, see related plugin manual for full details.

CM-Error 4...

Card Error; the card is damaged, if windows identifies the media correctly without attempting to format you may be able to fix the Card using Scan and Fix or 3rd party recovery software.

SCSI

Starting with SCSI 1 first introduced in the 1980's, SCSI devices have been available as hard disks, tape media, cartridge media and optical media in a range of different capacities. As SCSI devices can

be chained together early units required manual configuration of ID and some additional chain termination as detailed in your hardware manuals. Over the years different devices have been favoured by particular manufactures but this did not restrict the use of other units but as SCSI evolved so did the related Interface and connectors and associated adapters or cable converters. Before using SCSI devices in SoundDiviner it is important that you follow all the instructions required to install the appropriate SCSI Interface in your computer and confirm that the Interface is working correctly, once this is working correctly you can then follow all the instructions related to your SCSI device and confirm this is working correctly, it is worth noting that your media format maybe unknown to your computer so do not allow it to be formatted. SCSI media can be of any capacity and may contain multiple partitions and be in proprietary formats, either way take this into account when importing collections or partitioned media as the capacity will be used unless Plugins are selected (see related plugin manual). All SCSI Media correctly connected should read and Import without issue but if you are having problems Reading any SCSI Media try the following SCSI-Errors below. If your SCSI Media has a write protection switch then enabling this will prevent damage. Remember; when using removable media wait for Windows to finish exploring before importing. **Warning;** Do not let Windows Format your media.

SCSI-Error 1...

Device not found; check the device is self-terminating or requires a terminator.

SCSI-Error 2...

Device not found; check the SCSI ID is set correctly.

SCSI-Error 3...

Device not found; check the SCSI lead is OK

SCSI-Error 4...

Read error; try reading the media with the original synth and confirm the media is ok.

SCSI-Error 5...

Read error; the media may be damaged, check again in the synth and attempt data recovery.

SCSI-Error 6...

Media error; the media is damaged; some Plugins can access the available media data and use this to rebuild a new one, see related plugin manual for full details.

SCSI-Error 7...

Media error; the media is damaged, if windows identifies the media correctly without attempting to format you may be able to fix the media using Scan and Fix or 3rd party recovery software.

USB Media

This section deals with all Mass Storage Devices that connect directly to a USB port apart from the synthesiser itself that is covered in the next category, see USB Synth below. USB Media includes USB Sticks and flash drives and external hard disks and solid-state drives; all other devices have been listed in one of the categories above. USB Media can be of any capacity from Mb to Tb but it is usually detailed on the media itself, it is unlikely that this media would be in a proprietary format but it could be and may also contain multiple partitions, either way take this into account when importing as the capacity will be used unless Plugins are selected (see related plugin manual). All USB Media should read and Import without issue but if you are having problems Reading any Media try the following USBM-Errors below.

Remember; after inserting Media wait for Windows to finish exploring the Card before importing.

Warning; Do not let Windows Format your media.

USBM-Error 1...

Read error; try reading the media with the original synth and confirm the media is ok.

USBM-Error 2...

Read error; try ejecting and reading the media again using a different USB port on your computer.

USBM-Error 3...

Read error; the media may be damaged, check again in the synth and attempt data recovery.

USBM-Error 4...

Media error; the media is damaged; some Plugins can access the available media data and use this to rebuild a new one, see related plugin manual for full details.

USBM-Error 5...

Media error; the media is damaged, if windows identifies the media correctly without attempting to format you may be able to fix the media using Scan and Fix or 3rd party recovery software.

USB Synth

Some synths like the Roland Boutique JP-08 support connection over USB as a Mass Storage Device, when connecting your synthesiser using this method it is a good idea to have your synth manual to hand as it is likely you will need to activate this mode, possibly as you switch the unit on as is the case with the JP-08, once activated and connected the synth will be displayed as a removable drive that can be read just like any other USB Media. Depending on your synth the capacity of this disk could be measured in Kb as with the JP-08 or Tb if dealing with an internal SATA device but this should be listed in your synth manual and taken into account when importing larger disk capacities unless using Plugins. Some Synth Media will be formatted using a Windows recognised file systems but others may not be, more and more synthesisers are using Linux based operating systems and it is still possible for some to be using proprietary systems, either way do not let Windows format or scan fix your device. All USB Synths should read and Import without issue but if you are having problems Reading any Media try the following USBS-Errors below and check in your synth manual.

Remember; after correct USB connection wait for Windows to finish exploring before importing.

Warning; Do not let Windows Format your media.

USBS-Error 1...

Synth not listed; if the synth is not listed as a drive, see your synth manual for details.

USBS-Error 2...

Synth not listed; if the synth manual has not helped try checking the USB lead.

USBS-Error 3...

Synth not listed; if the synth USB lead is OK try using a different USB port.

USBS-Error 4...

Drive not ready; if the drive is not ready, see your synth manual for details.

USBS-Error 5...

Read error; if the drive cannot be read correctly, see your synth manual for details on drive checking.

WRITING DISKS

Writing Disks should be straight forward and in many cases it will be especially if you have already managed to Read a Disk and create a Disk Snapshot, however if this is not the case and you are attempting Writing Disks for the first time or are Writing Disks of a different type than before, you need to consider the following; due to the large amounts of proprietary file systems and disk capacities supported by the many synthesiser manufactures and the huge array of drives and media introduced over the years, all of which utilise different and not always available interfaces, the reality is that without Plugins this may be fraught with issues. To help with some of these issues the next section is divided into six different categories as follows, Floppy Disks, Optical Discs, Card Media, SCSI, USB Media and USB Synth, see below. When Writing Disks, it is worth noting that all blank media must be the same capacity as the selected Snapshot as displayed in the Information Bar unless Plugins are used (see related plugin manual for details). When Writing Disks, it is a good idea to understand Reading Disks of the same type listed above under the same category.

Remember; the inserted blank media and selected Disk Snapshot must be the same capacity.

Warning

Always use pre-formatted blank media when Writing Disks, double check as accident do happen. All media should be formatted using the related synthesiser as detailed in the related synth manual. Some media have write protect switches, these need to be disabled before formatting or Writing.

Floppy Disks

Floppy Disk drives are available in two different styles as previously mentioned, legacy and USB.

Legacy Floppy Drives

These are the original types of Floppy Disk drive and utilise Floppy Disk Interfaces that support a large range of different capacities that are not supported by modern USB Floppy Drives as listed throughout this manual. SoundDiviner currently supports capacities available to USB Floppy Drives. To Write Disks of any other capacities you will need to Export the Disk or Patch Snapshots as a File (see Item – Export – File... above), and then use a 3rd party disk writing application like Omniflop.

USB Floppy Drives

These Floppy Drives only support the following capacities, 720Kb, 1.44Mb and some may support 1.25Mb. Lots of synthesisers support these capacity disks and these should write without issue but if you are having problems Writing Floppy Disks try the following FD-Issues below.

Remember; blank media must be the same capacity as the selected Disk Snapshot.

Floppy Disk Plugins

When Plugins are used both capacity and volume Writing is possible, see related Plugin manual.

Warning

All media must be blank and pre-formatted before inserting into the Floppy Drive, it is recommended that you format all media using the correct synthesiser following the instructions in the related synth manual. Floppy Disks have a write protect switch, this must be disabled before formatting or Writing to any media. Always double check that any media is new or unwanted, accidents can happen.

Remember; insert the floppy disk into the drive and let Windows detect it before Exporting.

FD-Issues 1...

Drive not present; if the selected Disk Snapshot is a larger capacity than the inserted media, the Drive will not be available in the list, check the Disk Snapshot capacity size in the Information Bar.

FD-Issues 2...

Drive not present; try the unit in a different USB port and confirm the unit is available to Windows.

FD-Issues 3...

Drive not present; if connecting using a USB hub, try again using a USB port on the computer.

FD-Issues 4...

Drive not present; if connecting using a USB hub, confirm the hub is correctly powered.

FD-Issues 5...

Drive not present; Windows struggles with USB Floppy Drives when they are connected, disconnected and reconnected, try disconnecting the unit and rebooting the PC, then reconnecting the USB Floppy Drive and starting again.

FD-Issues 6...

Write Error; write protect switch not disabled, check tab and disable if required.

FD-Issues 7...

Write Error; media has bad sectors, try reformatting the media but use low level or full format option from the synth disk options and not quick format (see related synth manual).

FD-Issues 8...

Write Error; media has bad sectors and is not usable for capacity Writing, as media starts to go bad it is possible to use it on some synth models as sectors are marked as bad and not used when volume writing but this prevents capacity Writing, try using new formatted media.

Optical Discs

Technically Optical Discs refers to any type of storage media that uses laser head technology and over the years there have been a few different styles utilising discs and cartridges as mentioned above. Cartridge units like the Plasmon drives or mini disc unit's fall into the SCSI category listed below. Discs like CDROM or DVD in all their variants are what SoundDiviner classes as Optical Discs. Burning optical discs is not available in SoundDiviner (see CDROM Writing above).

Optical Disc Plugins

When Plugins are used both capacity and volume Writing is possible, see related Plugin manual.

Card Media

Over the years a full range of Card Media has been used in synthesisers from proprietary cartridges to SD Cards as fully detailed above, most of these will be proprietary formats and some may even use multiple partitions (see related synth manual for details). Cards can be of any capacity from Kb to Gb but it is usually detailed on the media itself, either way take this into account when Writing to blank Cards as the capacity of the inserted Card must match the selected Disk Snapshot, see the Information Bar for details, or the Device will not be listed. Some but not all of these Cards are supported through internal or external USB multi or single card readers and some like PCMCIA are supported directly through internal ports but these are not common place on modern PC's. All Card Media with a compatible reader should Export and Write without issue but if you are having problems Writing any Card Media try the following CM-Issues below.

Remember; blank media must be the same capacity as the selected Disk Snapshot.

Card Media Plugins

When Plugins are used both capacity and volume Writing is possible (see related Plugin manual).

Warning

All media must be blank and pre-formatted using the synthesiser by following the instructions in the related synth manual before inserting into the PC Card Reader/Writer. Some Cards have a write protect switch, this must be disabled before formatting or Writing to any media. Always double check that any media is new or unwanted, accidents can happen.

Remember; insert the Card into the drive and let Windows detect it before Exporting.

Warning; Do not let Windows Format your media.

CM-Issue 1...

Disk not available; Card Media capacity is different to the selected Disk Snapshot, check the capacity of the Disk Snapshot using the Information Bar and use the correct Card Media.

CM-Issue 2...

Disk duplicates listed; Card Media is partitioned, select any listed Disk for capacity Writing.

CM- Issue 3...

Card Write Error; the Card may be damaged, try checking with the synth, maybe reformat using full format option and not quick format if available and use any scanning tools available.

CM- Issue 4...

Card Write Error; the media is damaged; or has bad sections, try a different Card.

CM- Issue 5...

Card Write Error; the media is damaged, if Windows identifies the media correctly without attempting to format you may be able to fix the Card using Scan and Fix or 3rd party recovery software, but any sign of Card failure is time to replace with new media.

SCSI

SCSI devices have been around for over 40 years and come in all forms as fully detailed above, see Reading Disk – SCSI. As SCSI devices can be chained together early units required manual configuration of ID and some additional chain termination as detailed in your hardware manuals. Before using SCSI devices in SoundDiviner it is important that you followed all the instructions required to install the appropriate SCSI Interface in your computer and confirm that the Interface is

working correctly, once this is working correctly you can then follow all the instructions related to your SCSI device and confirm this is working correctly, then you need to format your new media by following the synthesiser instruction fully but remember to check that any media is new or unwanted, this may partition the media into lots of small sections and it may not (see related synth manual for details). If the media is partitioned and the format is recognised by Windows when inserted each partition will be listed with the same drive number but an individual letter, you only need to select one as the media will be filled after capacity Writing completion, as long as the Disk Snapshot used is correct and filled every partition as blank partition's will still be blank as is the nature of capacity Writing as mentioned throughout this manual. All SCSI Media correctly connected should write without issue but if you are having problems Writing any SCSI Media try the following SCSI-Issues below. When using compatible removable SCSI Hard Disks and not cartridge media you will need to take extra precautions as these devices may need connecting before you boot your PC. Remember; the inserted media and selected Disk Snapshot capacities must match.

SCSI Media Plugins

When Plugins are used both capacity and volume Writing is possible (see related Plugin manual).

Warning

All media must be blank and pre-formatted as listed above before inserting to any SCSI unit. Some SCSI Media have a write protect switch, this must be disabled before formatting or Writing to any media. Always double check that any media is new or unwanted, accidents can happen.

Remember; insert the Media into the drive and let Windows detect it before Exporting.

Warning; Do not let Windows Format your media.

SCSI-Issue 1...

Device not found; check the device is self terminating or requires a terminator.

SCSI-Issue 2...

Device not found; check the SCSI ID is set correctly.

SCSI-Issue 3...

Device not found; check the SCSI lead is OK

SCSI-Issue 4...

Write error; try the media with the original synth and confirm the media is ok.

SCSI-Issue 5...

Write error; the media may be damaged, check again in the synth and use any available scan tools.

SCSI-Issue 6...

Media error; the media is damaged; when old media is damaged sectors get marked as bad when formatting, this will prevent capacity Writing but not volume Writing, try different media.

USB Media

This section deals with all Mass Storage Devices that connect directly to a USB port apart from the synthesiser itself that is covered in the next category, see USB Synth below. USB Media includes USB Sticks, flash drives, external hard disks and solid-state drives, all other devices have been listed in one of the categories above. USB Media can be of any capacity from Mb to Tb but it is usually detailed on the media itself but as with other media the capacity must match the selected Disk Snapshot that you want to write to the media. All compatible USB Media should write without issue but if you are having problems Writing USB Media try the following USBM-Issues below.

USB Media Plugins

When Plugins are used both capacity and volume Writing is possible, see related Plugin manual.

Warning

All media must be blank and pre-formatted using the synthesiser by following the instructions in the related synth manual before inserting into the PC USB Port or hub. Always double check that any media is new or unwanted, accidents can happen and can be costly.

Remember; insert the Media into the USB Port or Hub and let Windows detect it before Exporting.

Warning; Do not let Windows Format or Scan & Fix your media.

USBM-Issue 1...

Write error; eject the media and try with the original synth and confirm the media is ok.

USBM- Issue 2...

Write error; try ejecting and Writing the media again using a different USB port on your computer.

USBM- Issue 3...

Write error; if you are using a USB hub and connecting a USB Drive, check the hub has the correct additional power, if you are using a USB port on a tablet it may not have enough power and need a powered hub attached with the correct external PSU.

USBM- Issue 4...

Write- Issue; the media may be damaged, check again in the synth and use any scanning tools but if any bad sectors or areas are found then capacity Writing will not be possible only volume Writing.

USBM- Issue 5...

Media error; the media is damaged; use a different USB media of the correct capacity.

USBM- Issue 6...

Media error; the media is damaged, if windows identifies the media correctly without attempting to format you may be able to fix the media using Scan and Fix or 3rd party recovery software but if any sectors or areas are marked as bad capacity Writing will not be possible only Volume Writing.

USB Synth

Some synths like the Roland Boutiques support connection over USB as a Mass Storage Device, when connecting your synthesiser using this method it is a good idea to have your synth manual to hand as it is likely you will need to activate this mode, possibly as you switch the unit on as is the case with some of the Boutiques, once activated and connected the synth will be displayed as a removable drive that can be written to just like any other USB Media but this will all be detailed in your synth manual. Most USB Synths should write without issue but some like the Roland Boutiques require Plugins as writing directly from within SoundDiviner is not possible (see Roland Boutiques below). If you are having problems Writing to your USB Synth try the following USBS-Issues below and double check all the details in your synthesiser manual.

USB Synth Plugins

When Plugins are used both capacity and volume Writing is possible, but may require additional confirmation as is the case with the Roland Boutiques, see related Plugin manual for details.

Warning

When connecting a USB Synth without using Plugins you will need to consult your synth manual before Writing any Disk Snapshots directly to the synth in case this overwrites valuable data. Some USB Synths use temporary or virtual memory and don't support capacity Writing as is the case with the Boutiques and these will require manual file copying (see Boutiques below). It is vital that you check your synth manual fully before attempting capacity Writing as the results could be catastrophic if not done correctly, if in doubt extract files and follow any copying instructions.

Remember; after correct USB connection wait for Windows to finish exploring before Exporting.

USBS- Issues 1...

Synth not listed; if the synth is not listed as a drive, see your synth manual for details.

USBS- Issues 2...

Synth not listed; if the synth manual has not helped try checking the USB lead.

USBS- Issues 3...

Synth not listed; if the synth USB lead is OK try using a different USB port or if connecting via a hub check the hub has the correct external PSU.

USBS- Issues 4...

Drive not ready; if the drive is not ready, see your synth manual for details.

USBS- Issues 5...

Write error; if you cannot write to the drive, see your synth manual for full details as this could be due to incorrect setup, write protection or disk related problems.

Roland Boutiques

As detailed above the Roland Boutique JP-08, JU-06 and JX-03 and probably others, use temporary or virtual memory when in USB Synth mode. When using SoundDiviner Plugins, direct capacity Writing is possible but requires confirmation of Admin Rights, the usual windows correct disk selection warnings before overwriting, User Account Control acceptance as fully detailed above and activation using the manual button as detailed in the relevant synth and Plugin manuals. When not using Plugins, the Boutiques listed above fail the writing process when the manual button is pushed and this could be the case with other USB Synths. If experiencing this type of capacity Writing error, the only solution is to proceed manually.

USB Synth Manual Writing

Export the required Disk Snapshot using the Export File Process and save the file as "Boutique.img", for example. once the image has been exported; locate the file and use a 3rd party image mounting application like OSFMount, to mount the file "Boutique.img", as a virtual drive. Once mounted the files can be manually copied to the Roland Boutique as detailed in the Backup\Restore process and activated with the manual button as normal.

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