



YAMAHA

Power User

BE SMART WITH SMARTMEDIA

Working with the SmartMedia Card and the Modular Synthesis Plug-in System

Knowing about saving and loading different file types will be important. There are several file options open to you when it comes to organizing your data. Because of the modular or component nature of the system the organization of the data is a bit complex, but learning to deal with it will give you a heads up on archiving our data efficiently. There are 2 kinds of Voice data concerning the PLG150 series: Plug-in Voices and Board Voices. Plug-in Voices are sounds that have been integrated into the host product, while Board Voices are elements (raw data) that are housed on the PLG150 itself. There are separate file protocols to backup and restore these data types.

The optional SmartMedia card (included with the CS6) works just like a floppy disk. If you are familiar with computers, you will have no trouble finding your way around. If, however, you are unfamiliar with file structures of computer disks, it may be a bit confusing at first, but it will be well worth the hassle to learn how to protect your data. SmartMedia cards operate at approximately 4 times the speed of the typical floppy drive and comes in various sizes - 4, 8, 16 and 32Mb sizes. It is also possible to create folders in the file structure of a SmartMedia card (for file management and organizational purposes).

The most versatile file type that can be saved on the SmartMedia card is the 'ALL' file (extension **.s2a**). This is because when you want to reload data, you have the most options. You do not just have to reload everything – you can be selective and choose which data you want to recall. From an 'ALL' file it is possible to load entire Voice banks or individual Voices, entire Performance banks or individual Performances or entire Plug-in Voice banks or individual Plug-in Voices.

To SAVE an ALL file to SmartMedia card

- Press [CARD] to enter the Card mode
- Use the PAGE knob to select the SAVE Card function

- If necessary set the TYPE to "all"
- Name your file (8 characters).
- Press [ENTER]; and [YES] to execute
- If you name your file in the root directory (literally): AUTOLOAD.S2A the synthesizer will automatically load this file when you switch it ON. (Obviously, there can only be one such file).

It is important to note that an "ALL" file will save the S/CS Voice and Performance Banks including:

- 128 [INT] Voices + 2 [INT] Drum Voices
- 128 [INT] Performances
- 128 [EXT] Voices + 2 [EXT] Drum Voices
- 64 [EXT] Performances
- 64 [PLG1] Plug-in Voices
- 64 [PLG2] Plug-in Voices

It does **not** save custom Board Voice data, however, that is a separate bulk.

To SAVE an ALL_VOICE file to SmartMedia card

- Press [CARD] to enter the Card mode
- Use the PAGE knob to select the SAVE Card function
- Set the TYPE to "all_voice"
- Name your file (8 characters).
- Press [ENTER]; and [YES] to execute

It is important to note that an "ALL_VOICE" file will save the S/CS Voice banks: *

- 128 [INT] Voices + 2 [INT] Drums
- 128 [EXT] Voices + 2 [EXT] Drums

*ALL_VOICE files do **not** save Performances or PLG Voice banks, just INT and EXT Voices are saved.

Loading individual Voices and Performances from an ALL file:

- Press [CARD] to enter the Card mode
- Use the PAGE knob to select the LOAD Card function
- Under FILE (KN C) select the ALL data file you wish to extract data from (.s2a extension)
- Use KN B to choose the data type to extract – Voice or Performance

- Press [Enter]
- Use the knobs to choose the source file and destination location, either INT or EXT (for Performances); INT, EXT, PLG1 or PLG2 (for Voices). Items on the left are on the SmartMedia Card / Items on the right represent your current S/CS synth memory
- Select either an entire bank (all) or an individual Voice (001-128) as the source (to the left on the screen)
- Select a target individual location as the destination. If you select 'all' as the source the target will automatically be set to 'all'.
- Press [ENTER]; and [YES] to execute

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Load) [Pi: JazzFlute ] [Br: Trumpet 1 ]
Card PLG1:032(B16) > PLG1:001(A01)
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Fig: The Jazz Flute Voice on the SmartMedia card is set to replace the Trumpet 1 Voice in [PLG1] bank.

You can **only** load PLG data to the proper bank that physically contains the PLG150 board (TYPE MISMATCH will occur) in question. Likewise you can only save PLG data from the bank containing the board. If at some later time you switch the location of the board you only need to point the data toward the PLG slot with the board – the system will figure it out.

TIP: While viewing this type of selection page hold [SHIFT] and press the [INC/YES] button and [DEC/NO] button to move the cursor left and right in the screen. Moving the cursor can also be accomplished by holding [SHIFT] and turning the Knob that is directly below the parameter you want to work with – the cursor will jump to that location without changing the data. It will revert to changing data when you let go of the [SHIFT] button.

We mentioned that "ALL" files do **not** save custom Board Voice data. Data that is in the RAM bank of a PLG150 series board must be stored in a separate file (extension **.s2b**). The file type is called **plugin**. It is only necessary to save this "plugin" type when you have created or imported new Board Voices into either Custom or Internal board locations. Remember that these banks are volatile and revert to preset sounds when the unit is powered down. The PLG150 series boards with RAM banks are: the PLG150-AN, PLG150-DX and the PLG150-VL.

To understand this better use this analogy - think of the Board Voice data like a user sample in a sample playback synthesizer. If you do not restore the wave data to the proper location, the Voice data will not see the sample. If you do not restore the correct user board voice

data to the proper RAM location, then the S/CS Voice data will not find the sound.

To SAVE a PLUGIN file to SmartMedia card

- Press [CARD] to enter the Card mode
- Use the PAGE knob to select the SAVE Card function
- Set the TYPE to "**plugin**"
- Name your file (8 characters).
- Press [ENTER]; and [YES] to execute
- If you name your file in the root directory (literally): AUTOLD1.S2B for PLG1, or AUTOLD2.S2B for PLG2, the synthesizer will automatically load this file when you switch it ON with the SmartMedia card in the slot.

What are the different S80 file types?

(.s2a) ALL– saves all INT and EXT Voices and Performances (and the Master Keyboard setups), and all INT and EXT Drum Voices. In addition, it saves the S80 PLG1 and PLG2 Voices. PLG Voices will require that the PLG board they are associated with be physically in the S80. The PLG Voices will not work if they do not find the correct board. If at some later time you move or swap the boards, simply call up the .s2a file but instead of loading it all directly, select 'voice' as the TYPE and you will be able to extract the Voice data you want and point it at the appropriate slot.

The ALL data file is the most flexible when it comes to reload options. You can choose to load all or any individual Voice or Performance. You can re-direct INT sounds to the EXT bank and vice versa, EXT sounds can be loaded to the INT bank. And, as mentioned, you can store and retrieve PLG Bank Voices with the ALL file, as well. PLG Voices can be redirected to their appropriate slots. You can make an auto load ALL file by, literally, naming it: "**autoload.s2a**" This file will automatically load your INT, EXT, PLG1 and PLG2 Voices as well as your song chain and Performances/Master Keyboard setups when you power up. Only one file by this name can be stored in the root directory of the SmartMedia card.

(.s2b) Plugin– saves custom Board Voice data that can be edited via the provided PLG Voice Editors. ('ALL' data files do not save custom Board Voices – these are saved in a separate type of file, which is a **plug-in bulk** file - the 'b' in .s2b). Certain of the PLG150 Professional series boards have user RAM locations. The RAM locations are volatile and this bulk file type is used to back up the RAM voice data. ((These Board Voices work in a similar manner to wave

data in the EX, in that you save the wave data separate from the Voice data)). You can create an auto load file by naming it: **"autold1.s2b"** for slot 1, or **"autold2.s2b"** for slot 2. When you power up, the S80 will automatically load your custom board elements. Saving data in this format is only necessary when you have made custom elements via the PLG Voice Editor software.

(.s2c) Chain– this file type refers to your song Chain. Note that it does not contain the song data itself, just the list of files, their tempos, the Performance that they use and set list commands. The song data (.mid) files can be placed in the root directory of the card. The Chain (.s2c) file does not include the .mid file, just the instructions on how and when it is to playback.

(.s2e) External – it is best **not** to mess with this file. It is automatically created by the S80 and represents any data that you store to the [EXT] bank. Here is why it exists: The kind of memory that is the INT bank (battery backed RAM) is very expensive. The EXT bank kind of memory (volatile) is a lot less expensive. Taking advantage of the SmartMedia Card's ability to automatically load the EXT bank on power up gives you an additional 128 Voice and 64 Performance locations. It is like a 'virtual' bank. When the card is in the slot you can write to it and be assured that your latest edits will return when you power up next time.

This is a file type that the S80 makes by itself. If you start moving and copying .s2e files – be very careful. You run the risk of losing some of your own custom sounds. Remember the S80 will create an EXT bank automatically and it is possible to have it write over some of your precious work. As soon as a card is inserted in the S80 slot it will automatically save and/or load a file named "extbank.s2e". **Only one such file can exist on the SmartMedia card.** Here's how you can get into potential trouble:

- If you copy an extbank.s2e card to your SmartMedia card, it will replace the one that already exists on the card.
- You can forget to backup your current S80 EXT bank and when you insert another SmartMedia card the new card's data will load into the EXT bank. Your current work will be gone, overwritten.
- If no extbank.s2e exists on a card, the S80 will just write the current S80 EXT bank to the card when you insert it.

(Use the 'ALL' file type to backup your INT, EXT Voices/Performances, and PLG Voices. Use the 'ALL-VOICE' file type to back up just the INT and EXT Voices – this is a highly efficient way of backing up your EXT bank Voices. It is **highly recommended** that you do not attempt to manipulate the .s2e file type.

How the EXT bank works: You computer savvy people know how this works – the [EXT] bank is a RAM bank, a *volatile* RAM bank – meaning it loses its memory at power down. You can write to the [EXT] bank as long as you have a SmartMedia card in the slot. If you remove the SmartMedia card, yes, the sounds are still in the EXT bank and are playable. But the Voices are in RAM (they are backed up on the card). If you lose the card, the Voices are in limbo now. If you power down - the EXT bank is emptied.

The SmartMedia card is like a floppy disk, but a floppy disk that can automatically load itself into RAM when inserted. You are working on a word processor and you put a floppy disk in the drive (ok, so it doesn't auto load) but... you *manually* load your document in – it loads into RAM, volatile RAM. Your word processor program may be set to auto save every 10 minutes. Your document will still be there and readable if you remove the floppy disk, right? – of course. But your document is not backed up since you last removed the disk. The document is in limbo. If you were to power down now the document would disappear – RAM would be emptied.

Always backup your EXT voices with an ALL (.s2a) or ALL_Voice (.s2v) type file. Forget you even know about .s2e files ("...these are not the 'Droids you are looking for...").

(.s2v) Voice – this is a Voice file. From this file type you can load all Voices or an individual Voice. Voice files save/load the INT and EXT banks. (This is also a file type that can be opened by the S80 Voice Editor program). You can load any Voice to any location with this file type. Spend a few minutes moving the cursor around in the load screen – check out all your options. You will see that you can direct any Voice on the card to any location in the S80 INT / EXT or point all [EXT] Voices on the card to all INT locations in the S80, etc. This file format is the recommended way to save and load sounds to and from your EXT bank. This file type does not save Performances.

Tip: Create a (.s2a) ALL file that you constantly work on. Name it something like WIP.s2a (work in progress). When you update something and

you like it, simply resave the file. This way it is a record of your latest work. Once you have sorted out your favorite PLG boards and your favorite Voices and Performances create auto load files and keep them in the root directory of the SmartMedia card. Then simply RENAME your work in progress file:

Autoload.s2a – This will load your INT, EXT, PLG1 and PLG2 Voices, your INT and EXT Performances/Master Keyboard setups and song Chain.

When you have really dug in and have made your own PLG150 series sounds with the editors you can bulk that data back to the board automatically by naming the .s2b bulk files:

Autold1.s2b – this file will load any custom RAM Voice data for the PLG board in slot 1

Autold2.s2b – this file will load any custom RAM Voice data for the PLG board in slot 2

If at anytime you send the wrong Voice data to a PLG board you will receive a TYPE MISMATCH error message when you attempt to call up the sound. This error means the Voice data in that PLG bank did not find the correct board in the slot. Point the data at the other slot. The cool thing is as you become a power user the S80 will assist you and load your Voices, your Performances and your custom data automatically on power up. You can carry your SmartMedia card to your friend's house and power his S80 up with your card in the slot and it becomes *your* S80...momentarily, of course.

Do not change the extensions of any of the file types.

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