

# **Scream BankMerge/Build Utility User's Guide**

© 2014 Sony Computer Entertainment Inc.  
All Rights Reserved.  
SCE Confidential

---

# Table of Contents

---

**About This Document ..... 3**

**1 Managing Bank Files with the BankMerge/Build Utility ..... 4**

    Configuring the BankMerge/Build Utility .....5

    Command-Line Options and Examples .....5

    BankMerge/Build Examples .....6

    BankMerge/Build List Files.....7

000004892117

SCE CONFIDENTIAL

---

## About This Document

---

This document describes usage of *BankMerge/Build*, a utility for managing Scream Bank files.

000004892117

# 1 Managing Bank Files with the BankMerge/Build Utility

The BankMerge/Build utility is a command-line tool for merging Bank, distance model, and effect presets files. BankMerge/Build can also be used for converting design-time Bank, distance model, and effect preset files into binary runtime files as part of a build process. The tool takes one or more input files (BANK, DISTMODEL, or BUSSCONFIG), converts or merges them together, and writes the result as one or more output files.

One simple use for BankMerge/Build is to export Banks from the command line, for example, as part of a script build process. This converts BANK files to runtime BNK binary files.

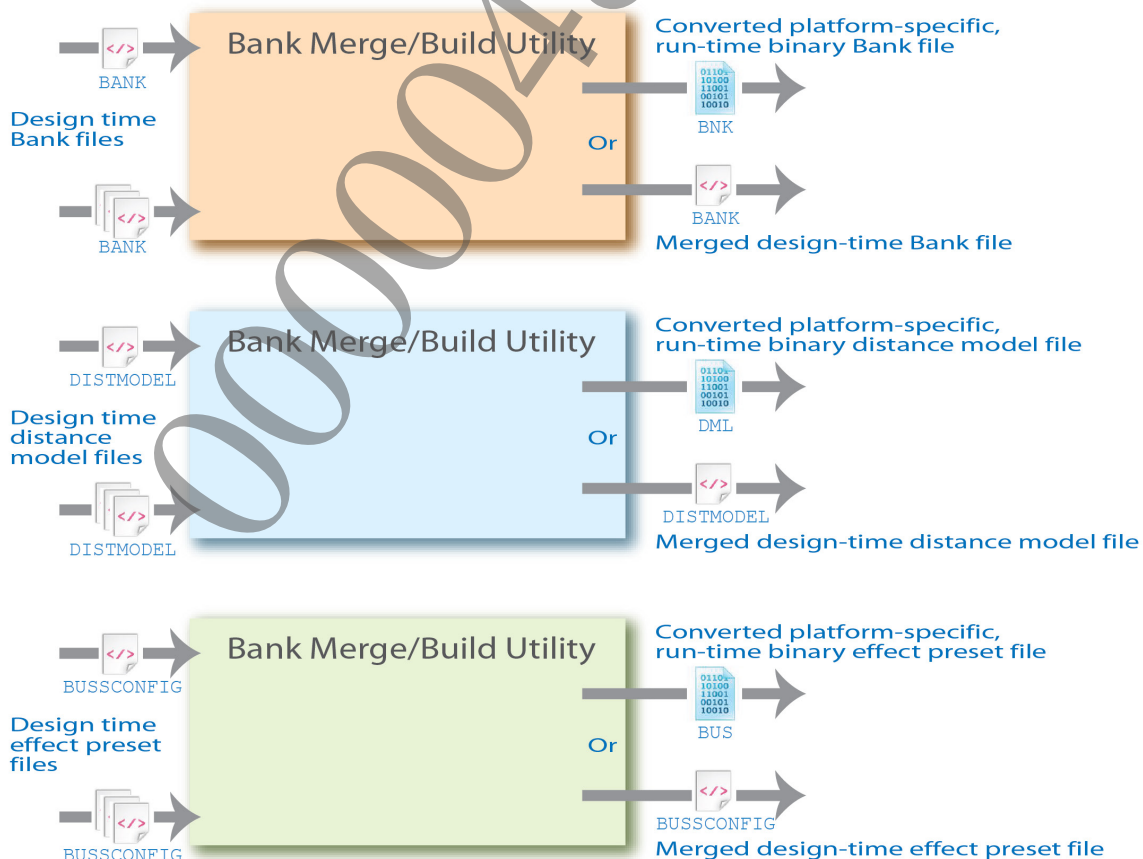
Another use is to build final Banks for the game from several component Banks. For example, you might have a set of small Banks that contain ambient sounds (`jungle.bank` for jungle sounds, `forest.bank` for forest sounds, and so on). You might also have another set of small Banks containing footstep sounds (`snow_footsteps.bank`, `grass_footsteps.bank`, `gravel_footsteps.bank`, and so on). You could then build the final game Banks by combining one of each for a particular level. For example, you could merge `jungle.bank` and `grass_footsteps.bank` for a jungle level where the player walks only on grass.

**Note:** When you specify multiple input Bank files, the Bank attributes (Bank ID, memory allocation options, and so on) are taken from the first Bank. If you need more detailed control of those attributes, use a List File.

Duplicate and unused Waveforms are removed from the final Bank before it is written in any format.

BankMerge/Build input and output, with respect to Bank, distance model, and effect preset files, is shown in Figure 1.

**Figure 1 BankMerge/Build Input and Output**



## Configuring the BankMerge/Build Utility

The Scream Tool installer does not add the path to the utilities (`BankMerge.exe` and `BankReverseMerge.exe`) to the Windows Path environment variable. Consequently, when you invoke `BankMerge` from the command line for the first time, the prompt may return a message indicating that `BankMerge` "... is not recognized as an internal or external command...". To resolve this issue you must manually add to the Windows Path environment variable the path to the Scream Tool installation directory (on your system). To do this on Windows 7:

- (1) Access the Control Panel from the Start menu, and double-click the System control panel.
- (2) In the System control panel, click Advanced System Settings (in the left margin). The System Properties dialog appears.
- (3) Click the Environment Variables button. The Environment Variables dialog appears.
- (4) Under System Variables, select the Path variable, and click the Edit button. The Edit System Variable dialog appears.
- (5) Append the path to the Scream Tool installation directory to the end of the Path variable's current value. The default installation directory is:

`C:\Program Files (x86)\SCE\Common\Scream Tool`

Be sure to use a semi-colon separator.

For example, if the current value of your Path variable ends with something like:

`...;C:\Program Files (x86)\Common Files\Adobe\AGL`

You first add a semi-colon, then add your Scream Tool path, producing something like:

`...;C:\Program Files (x86)\Common Files\Adobe\AGL; C:\Program Files (x86)\SCE\Common\Scream Tool\`

- (6) Click through the OK buttons to exit the Edit System Variable, Environment Variables, then System Properties dialogs.

## Command-Line Options and Examples

The following are the `BankMerge/Build` command-line options.

**Table 1 BankMerge/Build Command-Line Options**

Command(s)	Description
<code>-o &lt;file&gt;</code> <code>-bank &lt;file&gt;</code>	<p>Specifies an output design-time Bank file (BANK), an output design-time distance model file (DISTMODEL), or an output design-time effect preset file (BUSSCONFIG) — all of which are compatible with the latest version of Scream Tool.</p> <p><b>Note:</b> To output a distance model or effect preset file you must specify the corresponding DISTMODEL or BUSSCONFIG extension, otherwise a BANK file is assumed.</p>
<code>-b &lt;file&gt;</code> <code>-binary &lt;file&gt;</code>	<p>Specifies an output binary Bank file (BNK), an output binary distance model file (DML), or an output binary effect preset file (BUS) — all of which are compatible with the latest version of the Scream Runtime.</p> <p><b>Note:</b> To output a distance model or effect preset file you must specify the corresponding DML or BUS extension, otherwise a BNK file is assumed. If you do not specify the target platform with the <code>-p</code> option, export is assumed to be for the PlayStation®Vita platform.</p>
<code>-p &lt;platform&gt;</code> <code>-platform &lt;platform&gt;</code>	<p>Specifies the target platform. The platform can be <code>vita</code> (or PSP2) for the PlayStation®Vita platform, <code>ps4</code> (or ORBIS) for the PlayStation®4 platform, or <code>win</code> for a Windows test environment. Defaults to <code>vita</code>.</p>

Command(s)	Description
-c <file>	Specifies an output C header (.h) file containing a list of all the Sounds in the merged Bank.
-t <file> -text <file>	Specifies an output text (.txt) file containing a list of all the Sounds in the merged Bank.
-s <file> -summary <file>	Specifies an XML summary (.summary) file containing metadata about the merged Bank. This includes, for each Sound, the source Bank for that Sound, and that Sound's index in the source Bank.
-syn <synth> -synth <synth>	Specifies the target synthesizer for the exported binary BNK file. Optional values are NGS for the NGS synthesizer running on the PlayStation®Vita platform, and NGS2 for the NGS2 synthesizer running on the PlayStation®4 platform. Defaults to NGS.
-l <file> -list <file>	Specifies a list file that supplies other options for the merge. See the <a href="#">BankMerge/Build List Files</a> section below.
-n -stripnames	If this option is supplied, names are stripped from any output binary BNK files.
-i -timestamp	If this option is supplied, the time of the last modification of input and output files is compared. If any input file is newer than any output file, the tool does not run. This can save time if you are running BankMerge many times as part of a batch file.  <b>Note:</b> if you use a different input file with the same output file, BankMerge won't run if the input file is older than the output file. For example, if you enter: <pre>BankMerge.exe input1.bank -b output.bnk BankMerge.exe input2.bank -b output.bnk -i</pre> If input2.bank's modification date is earlier than that of output.bnk, BankMerge does not run the second time. It does not know that output.bnk was originally exported from input1.bank.
-streamlist	Produces a list of Streams used in a Bank.
-x -expand	Produces binary Bank files (BNK) with the additional (advanced packet) data required to enable tuning while live connected to a running instance of a game using the ScreamsServer library.
-v -verbose	Specifies verbose output, indicating what operations are taking place.
-h -H -help -?	Prints a short help message.

**Note:** BankMerge/Build checks the input file types for compatibility, and returns an error if it finds a mix of Bank, distance model, or effect preset file names in the command line.

## BankMerge/Build Examples

Here are some examples of BankMerge/Build commands and results.

- Command:** BankMerge input1.bank input2.bank -bank output.bank  
**Result:** Writes output.bank, which contains all the Sounds from both input Banks
- Command:** BankMerge input1.bank input2.bank -bank output.bank -binary output.bnk -platform vita -c output.h  
**Result:** Merges input1.bank and input2.bank together. The resulting bank is then written out as output.bank, exported as the vita binary output.bnk, and exported as the header file output.h

- **Command:** `BankMerge myPresets.bussconfig -binary myPresets.bus -platform ps4`  
**Result:** Takes design-time presets file `myPresets.bussconfig` and produces a binary effect presets file for the PlayStation®4 platform.

## BankMerge/Build List Files

**Note:** List Files are applicable to operations on Bank (BANK or BNK) files only. That is, you cannot use list files for operations on distance model or effect preset files.

For more control over a merge or build process, you can specify options in a List File. When you run BankMerge/Build and provide a List File, all the options are first parsed from the command line, and then the List File is parsed. So, for example, if you specify one input file on the command line and another input file in the List File, both input files are merged together as if you had specified them both on the command line or both in the List File.

### List File Tags

Table 2 describes the List File tags.

**Table 2 List File Tags**

List File Tag	Description
[input]	Specifies input files (BANK, one per line) that are merged (along with any input files specified on the command line).
[output]	Specifies output files (one per line). They can be BANK or BNK files. The file type is determined by the file extension. If one of the files is a BNK file, the target platform should be specified on the command line with the <code>-platform</code> option.
[exclude]	Specifies a list of Sound names (one per line) to exclude from the merged Bank. Note that Sounds listed here are not actually excluded if they are referenced by a Start Child, Stop Child, or Branch to Child Grain in a Sound that is itself not excluded.
[include]	Specifies a list of Sound names (one per line) to include in the merged Bank. If any Sounds are listed here, all other Sounds are excluded. Note that the [exclude] section is processed first, so if a Sound is listed in both sections, it is not included in the merged Bank. Also, Sounds not listed here are not excluded if they are referenced by a Start Child, Stop Child, or Branch to Child Grain in a Sound that is included. The Sounds in the merged Bank arrange in the same order as they appear in this list.
[bank name]	Specifies the Bank name, overriding the name of the first input Bank.
[bank id]	Specifies the Bank ID, overriding the ID of the first input Bank.

### List File Syntax

The List File syntax is as follows:

- Blank lines and lines beginning with # are ignored.
- Each section is indicated with a tag in square brackets, such as [input]. The tag is not case-sensitive, so [input] and [INPUT] are equivalent. If you list a tag more than once, only the first one is processed.
- File names can be absolute (such as `C:\audio\explosions.bank`) or relative (such as `explosions.bank`). Relative paths are considered relative to the location of the List File.
- White space at the beginning or end of lines is ignored.

SCE CONFIDENTIAL

---

**List File Sample**

Here is a sample List File:

```
[input]
c:\audio\explosions.bank
c:\audio\beeps.bank
```

```
[output]
output.bank
output.bnk
```

```
[bank name]
MyBank
```

```
[bank id]
MBNK
```

000004892117