

# 📄 Wotja Pak Maker



Create [Zipped Paks](#) for use in Wotja (AKA "Wotja Pak"). See our free [Pro Paks](#).

Note: [Audio Paks](#) require [Wotja 23+](#); for older Wotja see [Archived Guide](#)

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Wotja in [Pro mode](#) supports use of add-on content that has been zipped - we generically refer to these zip files as "Paks". Paks can include *any kind of supported add-on content*. They can also use folder / sub-folder structures for content organization, too, but see notes below.

We use the zip format for add-on content because it's open (there are many tools that can create zips), it allows content compression, it supports folders for organization, it's a great format for archives (as files in a zip are not overwritten) and it's perfect for distribution!

There are two main kinds of Pak we refer to:

- "**Template Pak**": These generally contain just Wotja [Templates](#), but can include any kind of [supported add-on content](#).
- "**Audio Pak**": As Template Paks, but they ALSO contain a [pak.xml](#) file(s) to let Wotja know how to pitch shift and time stretch any audio samples or loops from them that are used in a mix.

Making Paks is easy and you can put all your zips in a [/zips](#) subfolder in the [Wotja Folder](#), keeping them out of the way of mixes, boxes and playlists.

## 📄 What can I put in a Pak?

**Any content you can select to use in a Wotja mix or for the creation of auto-mixes** and that would otherwise get saved to and/or picked up in the top level [Wotja folder](#).

Use of folders is not supported unless otherwise advised.

**Supported content (see also [filetypes](#)):**

- Wotja Template ([.wotja\\_tp](#))

- Wotja Schema ([.wotja\\_sc](#))
- [WAE Sound Network](#) ([.tg](#))
- [WAE FX Network](#) ([.fxm](#))
- SF2 SoundFont ([.sf2](#))
- Audio Sample ([.wav](#), [.ogg](#))
  - Formats: WAV (8/16/24-bit PCM, 32-bit float) and Ogg; Any kHz
  - See [Audio Pak](#)
- MIDI ([.midi](#))

#### Optional (and not used in a Wotja file):

- License ([.txt](#))

#### **Not supported (should not be included):**

- Wotja ([.wotja](#))
- Wotja Album ([.wotja\\_al](#))
- Wotja Playlist ([.wotja\\_ls](#))

## Pak Types

We note above that a Pak can include **any content you can select to use in a Wotja mix or for the creation of auto-mixes** and that would otherwise get saved to and/or picked up in the top level [Wotja folder](#).

How that content is displayed is governed by the content itself, as noted below. So, mix and match content as you wish!

**IMPORTANT:** Whilst you can just zip your Pak at its top level (a "flat" Pak!), we *strongly* suggest that you use in the zip a path that gives the Pak a unique name thus ensuring that the content in the Pak will have a unique reference. We use [/intermorphic/wotja/paks/pakname/](#) but you might use e.g. [/com/mycompany/myname/pakname/](#).

Note: Wotja does not support use of zipped Paks (i.e. a zipped collection of Paks which are themselves zipped).

## Template Pak

- **Primary Content:**
  - Wotja Templates: [.wotja\\_tp](#) (see also [filetypes](#))

- **Other Content:**
  - Include whatever else you want! For display, see other Pak types.
- **Primary Content Display:**
  - [LHS Pak List](#) in the [Template List](#)
  - RHS list will show the content types above.
  - The Template List is accessed via
    - Music Mode [Cell](#), or;
    - [Schema](#) > Templates > Select Templates button.
- **Folder / Sub Folders:**
  - Templates can be in the root folder of the Pak or can be put in sub-folders if required for content organization.
- **Pak Name:**
  - The name of the zip file is used for LHS Pak display/ordering, i.e. [My Pak 1.zip](#).
- **Pak List Ordering:**
  - Your Paks will show in alphabetical order *below any built-in Template Paks, or other IM Paks*.
- **Tips:**
  - All content items included in each Template Pak will show alphabetically in the *right hand Template list* ("Templates").
  - The right side list is alphabetically ordered and no file extensions are shown so if your Template Pak includes multiple content types be careful to name your content accordingly.
  - If you want to use the Pak name to organize your content you will need to put your content in **separate Paks**, e.g. [My Pak 1.zip](#) and [My Pak 2.zip](#).
  - The folder structure you use in the Template Pak for content organization is not important.

## **Audio Pak ([Wotja 23+](#))**

- **Primary Content:**
  - Audio samples: [.wav](#) / [.ogg](#) (see also [filetypes](#))
  - Formats: WAV (8/16/24-bit PCM, 32-bit float) and Ogg; any kHz.
  - *Note:* Be aware that Wotja needs to load into memory (RAM) *ALL* audio samples that are used in a mix.
  - *Tip:* The higher the quality of the samples you use (which does make them larger, however), the better the results you will get from time stretching or pitch shifting.
  - **IMPORTANT:** If you want any of your audio samples to be time stretched or pitch shifted to fit the Wotja mix tempo and root then your Pak **must also include a pak.xml**

file. Without a pak.xml file then audio samples can still be added to a mix, but none will be time stretched or pitch shifted (e.g. for foley samples).

- **pak.xml file**

- **TIP:** To see an example of a `pak.xml` that includes Sample Overrides, [download this Pak](#) [↓](#), unzip it and then open its `pak.xml` file.
- The `pak.xml` file is where you specify the "default" tempo and root of audio samples in the Pak
  - e.g. `<pak tempo="90" root="D"></pak>`
- *Sample Overrides:*
  - You can provide in the `pak.xml` overrides for individual audio samples in the top level folder (or sub-folders) that may be different to the default Pak values.
  - These must be placed between the `<pak>` and `</pak>` tags (see example below).
  - *Tip:* **Where the pak.xml default values are NOT "?"** then you only need to include the sample values that you want to override, e.g.
    - `<sample file="myfile.wav" tempo="64" root="A#"/>` overrides both sample tempo & root
    - `<sample file="myfile.wav" tempo="80" />` overrides just the sample tempo (root as pak.xml)
    - `<sample file="myfile.wav" root="F" />` overrides just the sample root (pitch as pak.xml)
    - `<sample file="myfolder/myfile.wav" tempo="64" root="A#"/>` shows use of sample folders
  - If it better suits your content organisation a `pak.xml` file can be included for each sub-folder that includes audio samples, e.g. for audio samples in "My Pak/Folder1/" then "Folder1" could include a `pak.xml` that is concerned only with the audio samples in that folder.
- ?:
  - **Important:** Whenever "?" is used, you MUST provide a pair of values, i.e. `tempo="?" root="?"`.
  - "?" is a special value for tempo or root which is used for sounds that you *do not want* to be time stretched or pitch shifted when added to a mix (e.g. foley sounds), e.g.
    - e.g. `<pak tempo="?" root="?"></pak>`
      - **Any sample overrides must then specify values for *both* tempo and root.**
      - `<sample file="myfile.wav" tempo="?" root="?" />`
- *Optional Text:*
  - You may optionally include any other text you wish to e.g. `source="creatorName"` or `year="2017"` etc. but that text does not affect the operation of the Pak and it MUST

go at the end of the initial "pak" tag (see below).

- Example (copy text and paste into a text file that you rename as pak.xml)

```
<pak tempo="90" root="D"
source="creatorName"
year="2017"
>
  <sample file="myfile.ogg" tempo="81" root="C"/>
  <sample file="myfile.wav" tempo="64" root="A#"/>
  <sample file="shift-root-only.wav" tempo="?" root="A#"/>
  <sample file="shift-tempo-only.wav" tempo="92" root="?"/>
  <sample file="foley/myfoley.wav" tempo="?" root="?"/>
</pak>
```

- **Other Content:**
  - Include whatever else you want! For display, see other Pak types.
- **Primary Content Display:**
  - As [Template Pak](#).
- **Folder / Sub Folders:**
  - Audio samples can be in the root folder of the Pak or can be put in sub-folders if required:
    - See [pak.xml](#) and "[Sample overrides](#)".
- **Pak Name:**
  - As [Template Pak](#).
- **Pak List Ordering:**
  - As [Template Pak](#).
- **Tips:**
  - As [Template Pak](#).

## MIDI Pak

- **Primary Content:**
  - MIDI files: `.midi`
- **Other Content:**
  - Include whatever else you want! For display, see other Pak types.
- **Primary Content Display:**
  - As [Template Pak](#).
- **Folder / Sub Folders:**
  - MIDI files can be in the root folder of the Pak or can be put in sub-folders if required for content organisation.
- **Pak Name:**

- As [Template Pak](#).
- **Pak List Ordering:**
  - As [Template Pak](#).
- **Tips:**
  - As [Template Pak](#).

## Synth Preset Pak

- **Primary Content:**
  - Synth Preset: `.tg`
- **Primary Content Display:**
  - Sound (Synth) Preset Paks are displayed/used via:
    - [SFX Editor](#) > [Synth Preset List](#), or;
    - [Schema](#) > WAE Network Presets > Synth Presets (TTM Templates) button.
- **Pak Folder Structure:**
  - Must be the following:
    - `/sounds/GroupName/PresetName`
  - "sounds" must be lower case
    - e.g. `/sounds/Bells/Bells1`.
- **Tips:**
  - The Sound Preset list is sorted alphabetically so the GroupName you choose determines where in the list you will see it.
  - The Pak file name is not important, i.e. `Any name.zip`.

## FX Preset Pak

- **Primary Content:**
  - FX Preset: `.fxm`
- **Primary Content Display:**
  - Sound (FX) Preset Paks are displayed/used via:
    - [SFX Editor](#) > [Sound Preset List](#), or;
    - [Schema](#) > WAE Network Presets > FX Presets (Mix FX) button.
- **Pak Folder Structure:**
  - Must be the following:
    - `/fx/GroupName/PresetName`
  - "fx" must be lower case
    - e.g. `/fx/GroupName/PresetName`.
- **Tips:**
  - The FX Preset list is sorted alphabetically so the GroupName you choose determines where in the list you will see it.

- The Pak file name is not important, i.e. `Any name.zip`.

## Schema Pak

- **Primary Content:**
  - Schema: `.wotja_sc`
- **Primary Content Display:**
  - Schema Paks are displayed/used via:
    - [Schemas](#) > [Schema File Select button](#).
- **Pak Folder Structure:**
  - Must be the following:
    - `/AnyOldName/SchemaGroupName/SchemaName`
  - "AnyOldName" is required in the path but is not used
    - It can use any case e.g. `/anyOldname/My Group/My Schema 1`.
- **Tips:**
  - The Schema list is sorted alphabetically, but it first displays any custom Schema found in any non built-in Schema Groups so the "SchemaGroupName" (your Schema are listed alphabetically in that).
  - The Pak file name is not important, i.e. `Any name.zip`.

## SF2 Soundfont Pak

- **Primary Content:**
  - SF2 Soundfont: `.sf2`
- **Primary Content Display:**
  - Soundfont SF2 Paks are displayed/used via:
    - WAE [Wavetable Unit](#).
    - They are shown in the left side of the Wavetable Unit and are sorted *alphabetically* according to the SF2 name (*not* the Pak zip name).
    - They will be displayed *below the last of the included SF2 (i.e. IM NT3-MT7)* and *below MDB if installed*.
- **Pak Folder Structure:**
  - SF2 Paks do not require a special folder structure but you might still wish to use one if you want to retain the structure of the content grouping on your Mac/PC (perhaps you have licenced a loop or SF2 collection from a 3rd party and you don't want to change the organisation of it).
    - e.g. say have the following collection of SF2 files on your PC/Mac:
      - `mySF2Collection1/drones/drone1.sf2`
      - `mySF2Collection1/pads/ambient.sf2`
      - `mySF2Collection1/synths/buzzer.sf2`

- You can zip the Pak like that BUT, as noted above, the SF2 will display in the left side list in alphabetical order irrespective of folder/subfolder structure or naming, e.g. in the order of "ambient.sf2, buzzer.sf2, drone1.sf2"
- **Tips:**
  - The Pak file name is not important, i.e. *Any name.zip*.
  - Tip: If you want to create your own SF2 files then you may wish to check out [Polyphontics](#), [Polyphone](#) or even [Awave Studio](#).

## Zipping your Pak

**IMPORTANT:** Whilst you can just zip your Pak at its top level (a "flat" Pak!), we *strongly* suggest that you use in the zip a path that gives the Pak a unique name thus ensuring that the content in the Pak will have a unique reference. We use `/intermorphic/wotja/paks/pakname/` but you might use e.g. `/com/mycompany/myname/pakname/`.

macOS and Windows 10 have in-built zipping capability:

- **macOS:** Right click on the folder (e.g. "fred") and select "Compress 'fred'".
- **Windows:** Right click on the folder (e.g. "fred") and select "Send to" then "Compressed (zipped) folder".

If you prefer you can use your preferred Zip file utility to create your Zip.

## Pak Installation

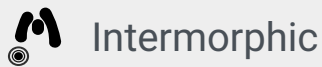
Once you have created your Pak then:

- Copy or move it to the [Wotja Folder](#); if you wish you can put all your Pak zips in a `/zips` subfolder under that.
- Restart Wotja and your Paks should be ready and available for use!

Note: If you create, save and share mixes that reference the content in your Paks then, provided the recipient also has your Pak installed in the Wotja Folder, they should play exactly as intended!

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