

# Localization with Custom Fonts for Distant Worlds 2

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Distant Worlds 2 has built-in support for localization for any language that uses the Latin alphabet, so languages like German, French, Spanish and Italian are quite simple to implement. You just need to put your translated text into some XML and text files.

For other languages with non-Latin alphabets, things are harder because the DW2 font does not support these characters. So languages like Chinese, Japanese, Korean, Russian and Ukrainian have no out-of-the-box support.

So how can these other languages perform localization in DW2?

For languages with non-Latin character sets you need to perform the following steps:

1. translate all of the text in the various XML and text files (as with any Latin language)
2. create a Stride bundle with a font that supports your character set
3. switch the font bundle used in the game to your new custom font bundle

The following pages will walk you through steps 2 and 3: creating the font bundle in Stride and using a command line argument to load the font bundle

## Creating the Font Bundle

You must create a Stride bundle file containing the font.

Download Stride here: <https://www.stride3d.net/download/>

Launch Stride Game Studio and create a new project of type "New game" with an appropriate name, e.g. JapaneseFont.

This project has no special requirements, so accept all the default options in the 'Create a new game' dialog.

For details on creating a new Stride project see the documentation here: <https://doc.stride3d.net/4.1/en/manual/get-started/create-a-project.html>

The default assets in the project are unneeded so can be deleted

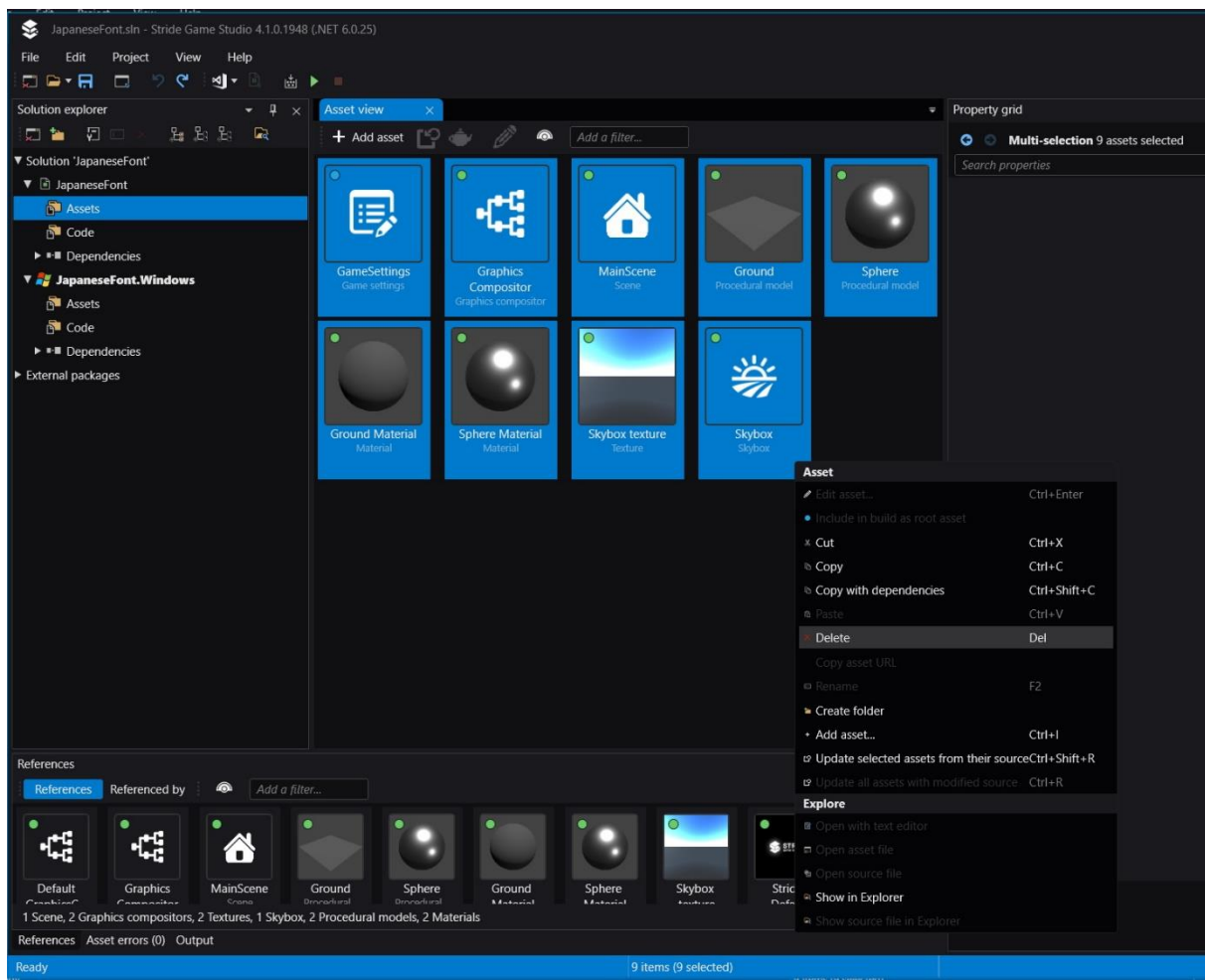


Figure 1. Delete the default assets

## Edit the Stride project package file

You will need to manually edit the Stride project package file to add a BundleName. This ensures that the bundle built from this project has the name that you want, instead of being named default.bundle.

So first save your project, then exit Stride Game Studio.

Next find the Stride project package file by navigating to the following folder:

- [YourProject]\[YourProject].Windows  
(e.g. JapaneseFont\JapaneseFont.Windows)

Find the following file in this folder and open in NotePad:

- [YourProject].Windows.sdpkg  
(e.g. JapaneseFont.Windows.sdpkg)

Edit the file by replacing the following line:

```
Bundles: [ ]
```

...with these lines (using an appropriate Name for the bundle):

```
Bundles:
-   Name: JapaneseFont
    Selectors:
      - !PathSelector
      Paths:
        - Fonts/
```

Save the edited file in NotePad and exit.

Launch Stride Game Studio and reload your project.

## Add Fonts folder

In the Solution explorer, under the Assets node, add a new folder for the fonts.

To do this, right-click on the Assets node and select 'Create folder'. The new folder should be named 'Fonts'.

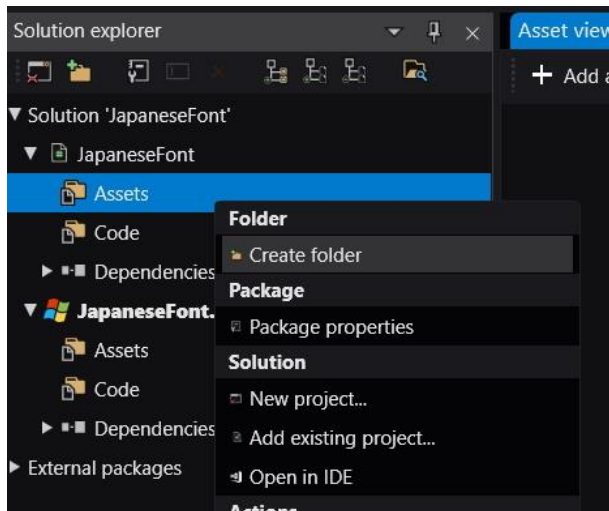


Figure 2. add new folder

The solution should now look like the following with the new 'Fonts' folder:

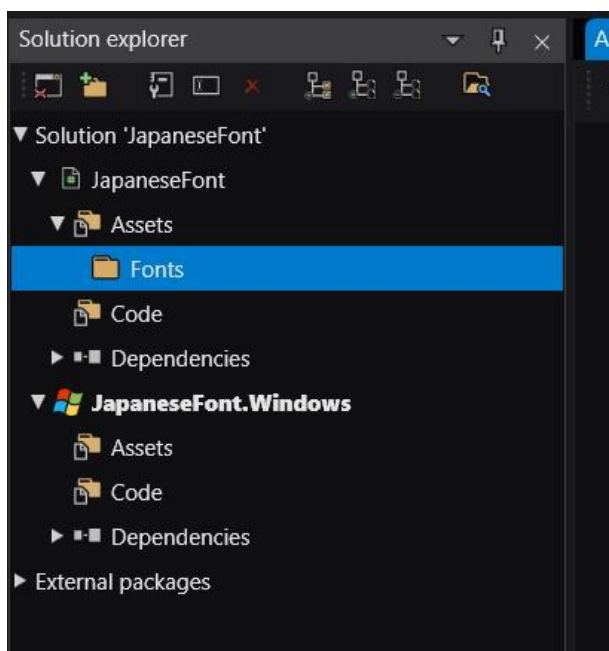


Figure 3. completed Fonts folder

## Add Sprite Fonts

In the Solution explorer, add new font assets inside the Fonts folder.

You will need a **TrueType font** containing all the characters in your language.

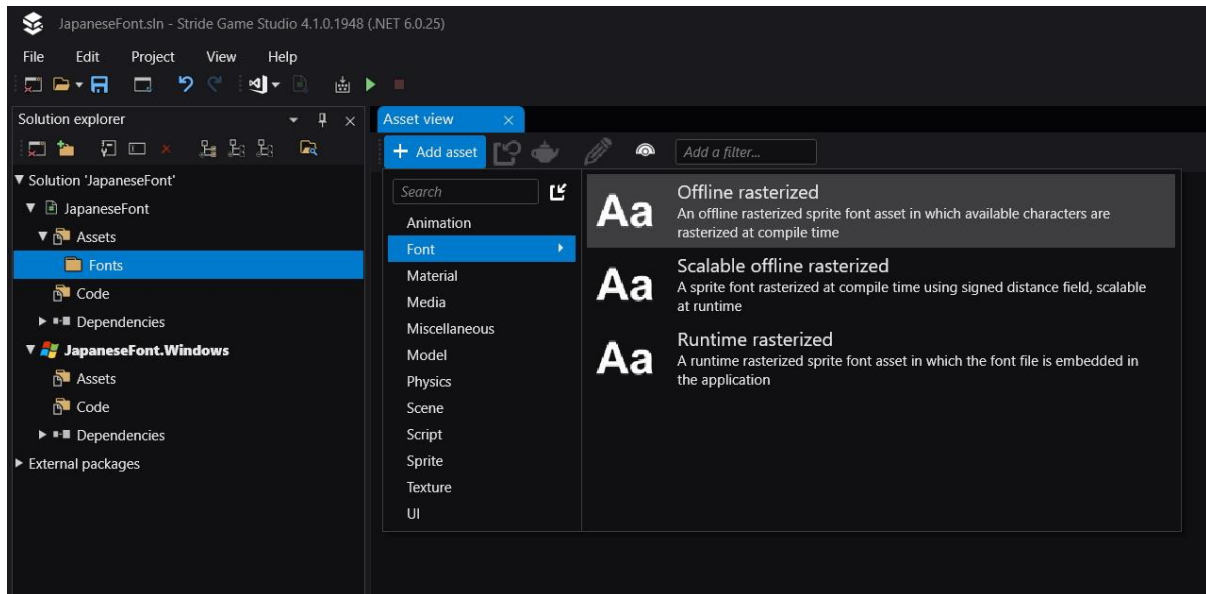


Figure 4. Add Sprite Fonts

When adding the Sprite Font you should select the type 'Offline rasterized'

For details on Sprite Fonts see the documentation here:

<https://doc.stride3d.net/4.1/en/manual/graphics/sprite-fonts.html>

## Setup the Sprite Font Asset

The settings for the Sprite Font should look like the image below.

Note that you need to specify the **Character Regions** for the characters that you want to generate for your language, using the correct Start and End values.

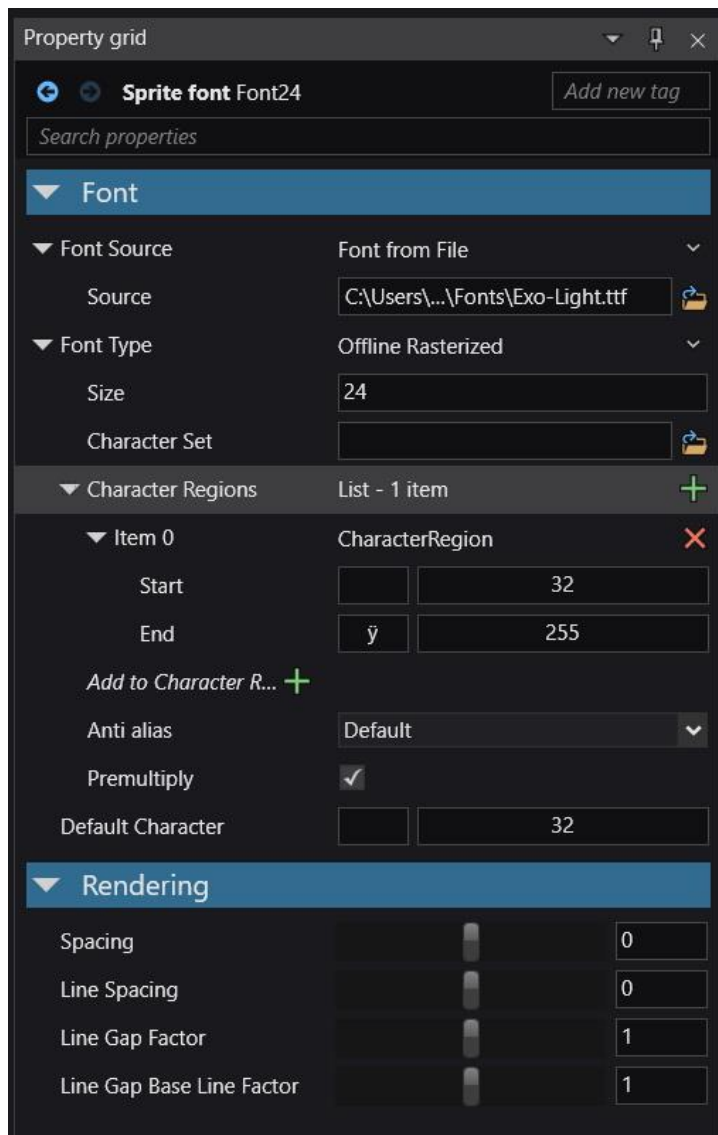


Figure 5. Sprite Font settings

You may find it helpful to refer to the Unicode character code charts here:

<https://www.unicode.org/charts/>

## Add Sprite Fonts for each Size

You will need to add individual Sprite Font assets for each size. You will also need separate assets for both normal and bold versions of your font.

Each Sprite Font asset must be named “Font” followed by the size and whether it is bold. For example:

- Font20, Font20Bold
- Font22, Font22Bold
- etc...

The font sizes range from 4 through 48, so you should end up with 42 Sprite Font assets in the Fonts folder, looking something like below:

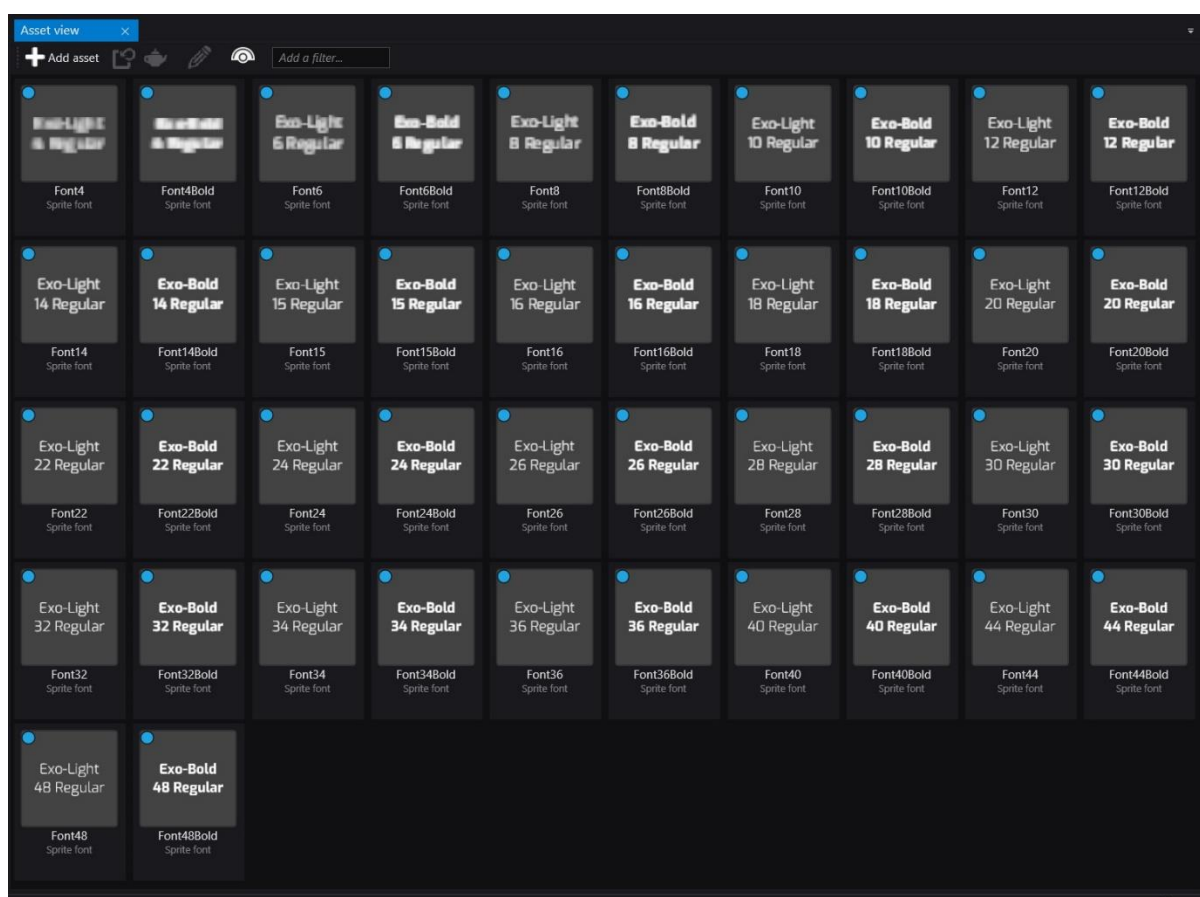


Figure 6. full set of Sprite Fonts for all sizes and normal/bold

Once you have added all of the font sizes, select all of the assets, right-click for a popup menu and select the option ‘Include in build as root asset’.

All of the font assets should then have a blue or green dot in the top-left corner. This ensures that they are included when you generate the bundle.

## Build the Project to generate the Bundle files

When you have added all of the Sprite Font assets you can build the project:

- Project menu, Build project option
- Or press F6

The Output window shows the results of the build process. All text in the Output window should be green and the final line should read “Generate bundles: Done”

You can then find the generated font bundle files to be used in the game.

Navigate to the following folder:

- [YourProject]\Bin\Windows\Debug\win-x64\data\db\bundles  
(e.g. JapaneseFont\Bin\Windows\Debug\win-x64\data\db\bundles)

Copy all of the bundle files that start with the bundle name you specified when manually editing the package file earlier (e.g. JapaneseFont\*.bundle).

These files contain the fonts for your language. You will copy these into the game folders when you distribute your localization mod.

Note that you do NOT want any files that start with “default”, e.g. default.bundle

|                                                                                                                                          |                   |             |          |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|----------|
|  default.618860d35b208aa24efcf92505eed3aa.bundle      | 6/12/2024 7:47 pm | BUNDLE File | 2,166 KB |
|  default.bundle                                       | 6/12/2024 7:47 pm | BUNDLE File | 84 KB    |
|  JapaneseFont.2a10d0ec46bdb3b3389dcd0dc80ec6b3.bundle | 6/12/2024 7:47 pm | BUNDLE File | 70 KB    |
|  JapaneseFont.bundle                                  | 6/12/2024 7:47 pm | BUNDLE File | 1 KB     |

Figure 7. the completed font bundle files

To use these new font bundle files, copy them into the following folder under the root game folder:

- data\db\bundles  
e.g. when installed from Steam:  
C:\Program Files (x86)\Steam\steamapps\common\Distant Worlds  
2\data\db\bundles

## Load your Font Bundle in the game

Once you have generated the font bundle files for your language you then need to tell the game how to load them.

Your font will replace the default font in the game.

### Using the '--font' command line argument

Distant Worlds 2 has a built-in command line argument that you can use to switch the font bundle. This feature is present in Distant Worlds 2, version 1.2.8.0 onwards.

The command line argument is named **font**. The sole parameter for this is the name of the font bundle.

**Note that the font bundle files must be present in the data\db\bundles subfolder.**

Below is an example of how to use this:

```
DistantWorlds2.exe --font JapaneseFont
```

## Create a Shortcut

An easy way to package this is with a Windows shortcut.

Find the Distant Worlds 2 game folder. When installed from Steam this is usually located at:

- C:\Program Files (x86)\Steam\steamapps\common\Distant Worlds 2\

In the folder find and select the game executable named **DistantWorlds2.exe**

Right-click on DistantWorlds2.exe and select '**Create shortcut**' from the popup menu.

Right-click the new shortcut and select '**Properties**' from the popup menu.

In the Properties window find the **Target** textbox and add the following text after the existing path:

- --font YourFontBundleName  
e.g. --font JapaneseFont

Your complete Target path should now look something like the following:

- "C:\Program Files (x86)\Steam\steamapps\common\Distant Worlds 2\DistantWorlds2.exe" --font JapaneseFont

Click OK to apply your changes and close the window.

You can now double-click your new shortcut to automatically launch Distant Worlds 2 with your custom font.