
NHSE

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This is a user-created (i.e. unofficial) guide for using NHSE and covers both basic (e.g. inventory editing, villager injection) and advanced (e.g. field editor) topics.

It should be noted that this is *not* an all-inclusive guide. Many things (such as the number of bells in your wallet) are clearly labeled in main menus and should not require instructions to change. The NHSE wiki also has some great information for basic editing. Instead, this is aimed more at less-intuitive aspects of NHSE, including editors that don't have explanations in the guide and information about what various fields or flags mean.

CHAPTER 1

NHSE Useful Links

Below you can find links to the NHSE application as well as various reference docs. These links are external and will redirect you to a different website.

- NHSE: [download](#), [source](#), [wiki](#)
- Injecting Villagers: [thread](#) (includes .nhv and .nhvh files)
- Item Database: [VillagerDB](#) (useful for item data)
- ACNH Data Spreadsheet: [Google sheet](#) (useful for item data)
- ACNH Item Data: [Item and DIY IDs](#) (useful for DIY IDs)

This section covers basic item editing in NHSE - namely editing items in your inventory and in storage.

For information on editing the items on your map, check out the Field Item Editor guide.

2.1 The Item Editor

The item editor has several fields:

1. **Item Name** - this is an unlabeled dropdown, but is self explanatory
2. **Item Name 2** - this is an unlabeled dropdown, but is self explanatory
 - This dropdown will only appear if **Item Name** is set to certain values
 - Known values with the second drop down include: DIY Recipe, Fossil, Message Bottle
3. **Count** - the item count has two distinct meanings:
 - For **stackable** items (materials, Nook Miles Tickets, ...) the count is the stack size **minus one**
 - This means that for a stack of 10 NMTs, you would set count to 9. For 1 item, you would set count to 0
 - If you try to set count higher than it can go for a certain item (e.g. 99 NMTs) then in-game you will only have 1
 - For **non-stackable items with variations** (furniture, clothing, ...) the count is the index of the variations
 - NHSE may or may not tell you what variety corresponding to the count value
 - You can use either VillagerDB or the ACNH Data Spreadsheet to figure out which variation is which count value
4. **Uses** - the number of times the item has been used
 - This field should *only* be used for breakable tools
5. **Flag0** - the first flag for the item

- For the purposes of basic item editing, this should be left as 0
- 6. **Flag1** - the second flag for the item
 - For the purposes of basic item editing, this should be left as 0
 - This option may disappear after selecting an item name
- 7. **Wrapped** - indicates whether or not the item is wrapped
 - This checkbox only appears after selecting certain items
- 8. **Wrapping Type** - indicates how the item is wrapped (present, paper, or delivery)
 - This dropdown only appears after **Wrapped** is checked
 - The meaning of 'delivery' is not currently known
- 9. **Wrapping Color** - indicates the color of the wrapping paper
 - This dropdown only appears if **Wrapped** is checked and **Wrapping Type** is set to 'WrappingPaper'
- 10. **Show Item Name** - *presumably* shows the item name before it is unwrapped
 - Needs confirmation/testing
 - This dropdown only appears if **Wrapped** is checked

2.2 Editing Your Inventory / Storage

To edit your **Inventory**, click the **Edit Items** button in the **Players** tab.

To edit your **Storage**, click the **Edit Player...** button in the **Players** tab, and then click **Edit Storage**.

Right-clicking an item slot in either your storage or inventory will give you three options:

1. **View** - this will load the details of the item (name, count, etc.) into the item editor pane on the right#
2. **Set** - this will set the item data for the item slot to the data in the item editor pane on the right#
3. **Delete** - this will clear the item data for the item slot

There are also keyboard/mouse shortcuts so that you don't have to right-click the item slots:

1. **View** - Ctrl + click
2. **Set** - Shift + click
3. **Delete** - Alt + click
4. **Clone** - Ctrl + Alt + click
 - Cloning will copy the item that you Ctrl + Alt + click into all item slots

2.3 Common Item Stack Amounts

Below are some common / desired items and their maximum in-game stack value. Remember, in NHSE, count should be the **amount minus 1** - so if you want a full stack of Nook Miles Tickets, set the count to 9.

Table 1: Max Item Stacks

Item(s)	Max Stack
Nook Miles Tickets	10
Wood (all)	30
Gold Nuggets	30
Iron Nuggets	30
Pearls	30
Cherry Blossom Petals	10
Eggs (all)	30
Fish Bait	10
Fruit (all)	10
Heart Crystals	30
Maple Leafs	10
Mushrooms (all)	10
Ornaments	30
Pine Cones	30
Rusted Parts	10
Snowflakes (all)	10
Star Fragments (all)	10

Villager Editor Basics

This section covers basic villager editing in NHSE - namely changing the villagers and their houses.

3.1 The Villager Editor

The villager editor has several fields for each villager:

1. **Villager Index** - this is a 0-based index to determine which villager you're editing This only goes up to 9 (for 10 villagers)
2. **Species** - the species of this villager. A table detailing the species IDs can be found below
3. **Variant** - the actual villager of the selected species. This field is what distinguishes e.g. Bob from Lolly from Raymond
 - Trying to set this to an undefined/non-existent villager is neither tested nor recommended
 - You will see the name of the selected villager labeled to the right of the **Species** field
4. **Personality** - the personality of the villager
 - It is recommended that if you edit your villager, you also make their personality match what is expected in-game
 - Personality types can be found at either VillagerDB or the ACNH Data Spreadsheet
5. **Catchphrase** - the villager's catchphrase (e.g. "mochi" for Genji, "foxtrot" for Audie)
 - Clicking the **Original** button will fill in the villager's default catchphrase
 - A blank entry in this field is the same as having a default catchphrase
6. **Moving Out** - whether or not the villager is currently in boxes
 - Checking this box will show another dialog box regarding another flag to set - you should only follow the instructions if you actually want the villager to move out of your island. If you just want to have them in boxes to give to others, the checkbox alone is enough

3.2 The Villager House Editor

The villager house editor can be found by clicking on the **Edit House** button in the **Villagers** tab.

Like the villager editor, there are several fields per villager that you can edit. Ones of potential use are listed below:

1. **<Wall|Roof|Door|OrderWall|OrderRoof|OrderDoor>UniqueID** - this determines the pattern used for the house
 - It is recommended (but not required) that you set these values to match the villager's correct house
 - If you are distributing this villager to others, please make sure it has the correct house!
2. **NPC1** - this is the **Villager Index** from the main villager editor corresponding to this list entry
 - e.g. if you have Raymond as villager index 0, then the 'Raymond's House' list item will have NPC1 set to 0

3.3 “Perfect” Villager Injection

The below is adapted from the [GBATemp tutorial on villager injection](#). The linked thread has an attachment which contains perfect, untouched villager and villager house files ready for you to use in NHSE. It is **strongly** recommended that you download this file pack to use for villager injection.

Following these steps with the above files will result in a clean, stock villager with the correct house:

1. Select the villager you wish to replace using the **Villager Index** field
2. Click **Load Villager**
3. Browse for and select the `.nhv` file for the villager you wish to injection
4. You will get a warning about the villager not originating from your data - click **Yes** to update the values
 - This will make the villager act as though they are from your island and not from the person who created the villager files
5. Save your save file in NHSE
6. Click **Edit House**. The villager should already be selected
7. Click **Load**
8. Browse for and select the `.nhvh` file for the villager you injected
9. Click **Save**
10. Save your save file in NHSE

3.4 Villager Species IDs

The below table maps the villager species ID number to the “friendly” animal name (e.g. anteater, cat)

Table 1: Villager Species ID Mapping

Species ID	Species Name
0	Anteater
1	Bear

Continued on next page

Table 1 – continued from previous page

Species ID	Species Name
2	Bird
3	Bull
4	Cat
5	Cub
6	Chicken
7	Cow
8	Crocodile
9	Deer
10	Dog
11	Duck
12	Elephant
13	Frog
14	Goat
15	Gorilla
16	Hamster
17	Hippo
18	Horse
19	Koala
20	Kangaroo
21	Lion
22	Monkey
23	Mouse
24	Octopus
25	Ostrich
26	Eagle
27	Penguin
28	Pig
29	Rabbit
30	Rhino
31	Sheep
32	Squirrel
33	Tiger
34	Wolf

Map (Field Item) Editor

This section covers topics related to map editing in NHSE. This includes:

- Field items (adding/removing)
- Building manipulation (adding/moving/removing)
- Bridge/incline manipulation (adding/moving/removing)
- Terrain manipulation

To access the Field Item Editor, in the main NHSE window, go to the **Map** tab, click on **Edit Map...** and then click on **Edit Field Items**.

Note: It is recommended that you toggle on the ‘Snap to nearest Acre on Click’ option in the Field Item Editor.

4.1 Field Item Editing

Field items are items (dropped, placed, planetd, etc.) on your island map. The item editing functions can be found in the **Items** tab in the Field Item Editor.

You can use the field item editor to do several item-related tasks, including:

- Add or remove a particular item to or from a particular tile on the map
- Bulk spawn items or DIYs
- Bulk removal from current acre or whole map
- Water all of your flowers

It is suggested that you read the *Item Editor Basics* documentation before continuing.

4.1.1 Per-Tile Item Editing

Item editing on a per-tile basis functions very similarly to the inventory/storage editing functionality. You will see the item editor on the right. You should make sure that the **Tile Editor Mode** option is set to **Items**.

To **load** the item on a particular tile into the item editor, **left-click** the tile on the map preview.

To **clear** the item on a particular tile, **alt + left-click** the tile on the map preview.

To **set** the item on a particular tile to the item specified in the editor, **shift + left-click** the tile on the map preview.

Alternatively, you can right-click the tile and choose **View** (load), **Set**, or **Reset** (clear).

4.1.2 Bulk Item Spawning

NHSE includes a basic bulk spawner that you can use to bulk-add items to your map. To access the bulk spawner, click on the **Remove Items...** button, and then click on the **Spawn...** option at the bottom.

The options available in the bulk spawner are as follows:

- **Spawn Type** (dropdown 1)
 - **ItemFromEditor** - bulk spawn the item currently loaded into the item editor
 - **SequentialDIY** - bulk spawn DIY recipes in sequential internal ID order
- **Spawn Layout** (dropdown 2)
 - **Square** - bulk spawns the item(s) in a square(ish) shape on the map
 - **Horizontal** - bulk spawns the item(s) in 2 rows on the map
- **X/Y** - the X/Y coordinate of the first item to spawn (upper-left coner for square layouts)
- **Count**
 - For **ItemFromEditor** spawn type, this is how many tiles to place the item/stack on
 - For **SequentialDIY** spawn type, this is how many of each DIY to generate
- **Start/Stop** (SequentialDIY only)
 - The (inclusive) start and end ID of the DIYs you wish to spawn
 - * To spawn all DIYs, use the default of 0 to 9999; non-existent DIYs will not spawn
 - * You can find resources with the DIY item IDs on the [NHSE Useful Links](#) page

4.1.3 Bulk Item Removal

NHSE provides functionality to bulk-remove items of a specific type (furniture, flowers, etc.) or of all types from your map.

To access the bulk removal options, click on the **Remove Items...** button, and choose the type of item you wish to clear from the map. By default this will only remove items from the visible portion of the map. To remove the selected item type from the *whole* map, hold the **Shift** key while clicking the item type in the button dropdown.

4.1.4 Flower Watering

NHSE provides functionality to automatically water all of the flowers on your map.

To access the flower waterer, click on the **Remove Items...** button and choose **Water Flowers**. By default this will only water flowers on the visible portion of the map. To water flows on the *whole* map, hold the **Shift** key while clicking the **Water Flowers** option in the button dropdown.

4.2 Building Manipulation

The list of buildings on your island, including the building options, is found on the **Buildings** tab of the Field Item Editor. You will see a list of the buildings and the map coordinates where they are placed. Choosing a building from the list will load the properties into the fields below (the Building Editor).

Buildings include actual buildings (resident services, Nook's Cranny, houses, etc.) as well as bridges and inclines. For more information on using the Field Item Editor for bridges/inclines, see the next section.

4.2.1 Building Editor Fields

The following is a summary of the fields in the building editor and their purpose:

- **Building Type** - the type of building. This is what distinguishes e.g. the museum from Nook's Cranny from a villager's house. A mapping of the building IDs can be found at the end of this section.
- **X/Y** - the map coordinate of the building. The origin (0, 0) of the map is the upper-left corner; that is, increasing Y will move the building towards the bottom of the map, and increasing X will move the building towards the right of the map
- **Angle** - the angle the building is placed at
 - This is only relevant for bridges and inclines; for actual buildings, it should be set to 0
- **Bit** - purpose unknown, recommended to leave at 0
- **Type** - the building subtype
 - This is only relevant for bridges and inclines, and determines what style of bridge/incline it is. For actual buildings, it should be set to 0
 - Note that the same kind of bridge can have multiple subtypes; this is because bridges generally have a slightly different design based on how many tiles the bridge spans (4 v.s. 5)
- **TypeArg** - purpose unknown, recommended to leave at 0
- **UniqueID** - purpose unknown, recommended to leave at 0

4.2.2 Adding a Building

To add a building to your map, select one of the empty building slots in the list. An empty building slot will appear as **000, 000 - None**.

Once you have the empty slot selected, fill in the building editor fields with the information for your new building.

It is not currently known if there are side effects to having e.g. multiple Nook's Crannys, multiple campsites, etc.

4.2.3 Modifying a Building

To modify a building, select the building you wish to modify from the list. This will populate the building editor with the existing data for that building. Then just edit the fields you want. It is recommended that you only modify the placement of buildings, since incorrect values for angle/subtype may glitch the building.

4.2.4 Removing a Building

To remove a building, select the building you wish to remove from the list. This will populate the building editor with the existing data for that building. Set *all* of the fields in the building editor to 0 for this building. You will see the description in the list change to **000, 000 - None** which indicates a successful removal.

Currently there is no way to mass-remove buildings in NHSE.

4.2.5 Building Types

Below is a table that maps the building type ID to the description of the building

Table 1: Building Type Descriptions

Building Type ID	Description
0	None
1 - 8	Player 1 - Player 8 house
9 - 18	Vilalger 1 - Villager 10 house
19	Nook's Cranny
20	Resident Services Building
21	Museum
22	Airport
23	Resident Services Tent
24	Able Sisters
25	Campsite
26	Bridge
27	Incline
28	Redd's Boat
29	Harv's Studio
30+	Unused

4.3 Bridge and Incline Manipulation

Bridges and inclines are considered buildings in-game and can be edited in the same manner. It is strongly recommended that you read through the previous section (Building Manipulation) for some background info.

Bridges have a building type of **26** while inclines have a building type of **27**. Bridges and inclines also have an **angle** (the orientation they are placed) as well as a **subtype** (the type of bridge/incline). It is important to note that since bridges may span either 4 or 5 grid squares, individual bridge types have multiple subtypes (e.g. the iron bridge can have a type of either 25 (4-tile bridge) or 40 (5-tile bridge)).

Lists for the bridge/incline subtypes and the orientation mapping are included at the end of this section.

4.3.1 Bridge and Incline ID Mappings

Below are tables that map the subtype/angle value for bridges and inclines to a description of the bridge/incline it will generate. **This information may be incomplete/incorrect.**

Table 2: Incline Subtypes and Descriptions

Incline Type ID	Description
WIP	WIP

Table 3: Incline Angles and Descriptions

Incline Angle ID	Description
WIP	WIP

Table 4: Bridge Subtypes and Descriptions

Bridge Type ID	Description
WIP	WIP

Table 5: Bridge Angles and Descriptions

Bridge Angle ID	Description
WIP	WIP

4.4 Terrain Manipulation

NHSE allows you to modify the terrain of your island, to a certain extent. It is strongly recommended that you read the [NHSE wiki](#) to get a sense of what is editable (most island squares) and what is not (beach/ocean squares, airport dock, etc.)

It is very possible when editing the terrain that you will end up with glitched tiles. Some of these may be graphical glitches only (e.g. a sharp edge at the end of a river mouth) and others may impact playability (e.g. tiles that cannot be walked over).

Because terraforming via NHSE is not likely to be significantly quicker than terraforming in-game and has a high chance of causing glitches of some sort, this section will only cover a few common tasks.

4.4.1 Flattening Your Island