



10

HOW TO USE

3

GETTING STARTED

When you download this product, you get a ZIP file. This is not an addon, so it can't be installed the way an addon would be.

Here's how to set it up once you've downloaded it:

- STEP 1:** Make sure you have downloaded the latest version of Houdini. There's an available free license for Houdini which is the Houdini Apprentice.
- STEP 2:** Extract the zip file and place the folder somewhere convenient.
- STEP 3:** Open Houdini. Go to File>Open>Downloads.
- STEP 4:** Find the Resquake.hipnc file and Select it.
- STEP 5:** Done!

The download contains a .hipnc file.

RESQUAKE: SIMULATING POST-EARTHQUAKE
DAMAGE IN PHILIPPINE HOMES
USING PROCEDURAL MODELING

Table of Contents

Content	#
Getting Started	3
Settings	4
How to Use	10

HOW TO USE

STEP 1: Using the **Scenario Generator Controls** and **House Parameters** (refer from the earlier instruction for basis) you can adjust how you would like the simulation would turn out.

STEP 2: Using the **Save button** you'll cache the project in a local disk storage.

STEP 3: Click the **Play button** on the **Playbar** of the Houdini Software that is found on the lower left of the screen.

STEP 4: **Wait** for the project to process (the processing time will depend on the PC hardware).

STEP 5: **Done!**

SETTINGS

SETTINGS – UNITS OF MEASUREMENTS

1hcn	2.4meters	240 cm	8feet	96 inches
0.91hcn	216 meters	216 cm	7.2 ft	86.4 inches
0.81hcn	192 meters	192 cm	6.4 ft	76.8 inches
0.71hcn	168 meters	168 cm	5.6 ft	67.2 inches
0.61hcn	144 meters	144 cm	4.8 ft	57.6 inches
0.51hcn	12 meters	120 cm	4 ft	48 inches
0.41hcn	0.96 meters	96 cm	3.2 ft	38.4 inches
0.31hcn	0.72 meters	72 cm	2.4 ft	28.8 inches
0.21hcn	0.48 meters	48 cm	1.6 ft	19.2 inches
0.1hcn	0.24 meters	24 cm	0.8 ft	9.6 inches

SETTINGS – SCENARIO GENERATOR CONTROLS

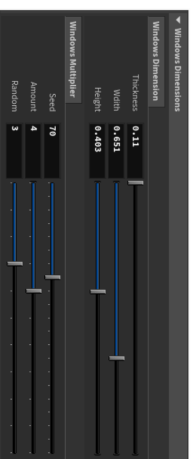
Since the generators and presets are built from the same modular pieces, they share most of the settings that are accessed directly from the modifier.

Here are the parameters:



- **Scenario Randomizer:** This control will randomize the creation of the models. This can control the Floor Number, Generations and Random Seed.
- **Earthquake Magnitude:** This controls the magnitude of earthquake.
- **Save to Disk:** This will apply the post-earthquake damage effects on the random generated models.

SETTINGS – WINDOWS PARAMETERS CONTROLS



The first tab contains the window dimensions, with sizing details provided in Table 8. The windows multiplier functions as a random controller, while the seed parameter governs randomness, including the starting spawn point. The amount parameter specifies the quantity of windows, and the random parameter determines the degree of randomness in window placement.

Refer to page 8 for the units of measurements.

SETTINGS - HOUSE PARAMETERS CONTROLS

Since the generators and presets are built from the same modular pieces, they share most of the settings that are accessed directly from the modifier.

Here are the parameters:



- **Floor Number:** Controls the number of Floor numbers of the desired model.
- **Generations:** Generates the desired number of grids for the model.
- **Random Seed:** Randomizes the growth path of the grids.
- **Roof Checkbox:** Unchecking this will remove the Roof of the house model.



SETTINGS - DOOR PARAMETERS CONTROLS



The parameters for door dimensions encompass a range of values: the thickness varies from 0 to 0.25, the width spans from 0 to 1, and the height extends from 0 to 1. These measurements are detailed in Table 8, which specifies the units used for each dimension in the thesis paper.

Refer to page 8 for the units of measurements.