**SETTING UP ROOMS WITH GATES INSIDE THEM BUT WITH NO OTHER ALTERNATIVE STATE/EVENT**

**STEP1. SETTING UP THE EVENT SETS/EVENT RESETS/EVENT PART/WEAPON REQUIRED FOR A ROOM WITH NO ALTERNATIVE OTHER STATES.**

1A: Open the file called ‘Hex edit charts.docx’ and look at ‘Hex edit chart A’ for now.

1B: At the moment you are only needing to worry about the yellow highlights on this chart. I have on the hex edit hex editor in numerous highlighted numbers, the room id for a vanilla room 792FD which is the room you first enter in game after landing in the ship room on a vanilla rom. I have deleted the third state to make it less confusing and will act like a room with just a standard state and a gate event with no other alternative states or events.

The same method will be used every time you do a room with a gate with a standard state and a gate event only and no other alternative states/events.

Now all you need to do on this step is place your marker at the address where the first yellow highlighted byte is.

1C: The asm file provided has by default bank $B8 set aside for this step but can be changed to a different bank if preferred inside the asm file. If you have changed the bank $B8 to a different bank, then you need to change accordingly the bank $B8 mentioned in this step.

Now without changing the position of your marked byte in step 1B, just change the bank and bank only, in this case as the default bank ($B8) is an even number you will need to take 8 off the 3rd number on the long word pc address. In the ‘Hex edit chart A’ you will see that the first yellow highlighted byte is at address 07--930F.

In this blue, red and green address the green numbers do NOT change at all.

The Red number is conditional, if you have changed bank $B8 and you have changed the bank to an odd number, then please leave the red number as it already is (9). Otherwise, if you have changed the bank number and have changed it to a bank that is an even number OR you have NOT bothered to change the bank, then you need to subtract $8 off this red number and in the address example given, it would be a ‘1’, $9 minus $8 = $1.

The blue number will need to be the bank in PC address and by default ($B8), the blue number will be ‘$1C’.

Now using the method using the default bank $B8, the address conclusion you would need to have come up with is ‘1C--130F. Now using the same method, go to that address (1C--130F).

Highlight the first $8 bytes.

1D: Now go back to 07-930F.

1E: Now place your marker on the second yellow highlighted byte which is the first byte from where the gate event points to regarding the last pointer from this event header.

1F: Please repeat step ‘1C’ (Only) but using the address of 2nd yellow highlighted byte and then move to next step ‘1G’.

1G: Now go to one of the two 8 bytes you have already highlighted in bank (by default) $B8, the first, 2nd and third word ($02 bytes per word) are where we are focusing on now. The 1st and 3rd words determine the event that gets used for your gate in question and the 2nd word gets used as the event to reset which is aligned with the 3rd word as well as the 1st word being aligned with the 3rd word. Now open up the excel document called ‘1st - 2nd and 3rd of 4 words’ to help learn what values to put down on the 1st, 2nd and the 3rd word on the highlighted 8 bytes.

So, all you have to do is choose which gate event you are going to use for your new gate then select that event in the excel file in the grey column. Now select the entire row that event is in.

The number in the light blue column inside selected row in the excel file is the number you put on the first word (Highlighted in light blue too) of the 8 highlighted bytes in bank (by default) $B8. You need to reverse the bytes shown in the excel file into the hex editor.

The number in the pink column inside selected row in the excel file is the number you put on the second word (Highlighted in pink too) of the 8 highlighted bytes in bank (by default) $B8. You need to reverse the bytes shown in the excel file into the hex editor.

The number in the yellow column inside selected row in the excel file is the number you put on the third word (Highlighted in yellow too) of the 8 highlighted bytes in bank (by default) $B8. You need to reverse the bytes shown in the excel file into the hex editor.

1H: Now we need to tell the game with the 4th word of the 8 highlighted bytes which weapon is needed to open the gate you are wanting the gate to open with, normally in a vanilla rom, the gate control knob PLM will do this but this patch requires you to put it here on the 4th word of these 8 highlighted words. However, you still need to select a low value on the gate control knob plm as that will give you the correct graphics tile to use for your required weapon.

Now open up the excel document called ‘4th of 4 words’ to help learn what values to put down on the 4th word on the highlighted 8 bytes.

So, all you have to do is choose which weapon you want to use for your new gate to open or close with, then select required weapon in the excel file in the grey column. Now select the entire row that required weapon is in.

The number in the orange column inside selected row in the excel file is the number you should put on the 4th word (Highlighted in orange too) of the 8 highlighted bytes in bank (by default) $B8. You need to reverse the bytes shown in the excel file into the hex editor.

1I: Now the last part to this step is to copy the $08 bytes you now have on the 8 highlighted tiles you’ve been working on and paste them onto the other 8 highlighted tiles you highlighted as these two lots of $08 bytes both need to be exactly the same as each other.

NOTE:

Any room that doesn’t have a gate inside them, the coinciding bytes contained in any no gate room do NOT need to be modified at all with the data inside bank (by default) $B8 concerning gates.

Also, unless you know what you are doing, I wouldn’t use Bank (by default) $B8 for anything else but for the purpose of these gates to avoid overwriting areas where one day you might be wanting to put data there used for these gates.

**STEP2. SETTING UP GATE EVENT STATE FOR ROOMS WITH A GATE INSIDE IT FOR A ROOM WITH NO ALTERNATIVE OTHER STATES.**

2A: Open up ‘Hex edit charts.docx’ and look at ‘Hex edit chart A’.

2B: Look at the word in purple ($E5E6) on the ‘Hex edit chart A’, this is obviously the standard pointer, any data after it for the first $1A bytes are the pointers/bytes for this state of course. Now inside this state you must have a gate control knob with a ‘closed’ gate (PLM C82A) attached to it, you use your PLMs for this obviously.

2C: Now look at the green word on the ‘Hex edit chart A’, this is the gate event state pointer that is needed to display an opened gate. You need to have chosen the event already in step 1 that you need to use for the new gate (from $00, $01, $02, $03….$FF – it will be the event in the grey column when you highlighted the chosen row on the excel file called ‘1st-2nd and 3rd of 4 words.xlsx’ file) and the event you chose shall be placed on the ‘light grey’ byte shown on the ‘Hex edit chart A’ that is the byte after the green word. The word after the light grey byte is the pointer to this state’s pointers/bytes and is where you place the gate control knob plm and the ‘opened’ gate (PLM C826) attached to it using your PLMs again of course.

NOTE!!!!

Unless you have a reason for it, PLM pointers should be the only difference between standard state and the gate event state with the closed gate PLM in the standard state being the only difference with the Opened gate PLM in the gate event state regarding PLMs.

This has not been illustrated inside neither my ‘hex edit charts.docx’ (Chart A) nor my ‘Hex Edit Chart with an other state-s.docx’ chart but just ignore it, just change the PLM Pointer.

**STEP3. SETTING UP THE BTS TILES AND IT’S PROPERTY FOR A ROOM WITH EITHER AN ALTERNATIVE OTHER STATE/S OR WITHOUT AN ALTERNATIVE OTHER STATE.**

**3A:** If you are putting in a wave beam gate, go to step ‘3B’, Otherwise read on.

Open up the png file in charts folder called ‘Non wave beam gates props&bts.png’.

Please follow the gate facing right for a right gate (picture at top) and the same scenario with the left (picture at bottom). You’ll notice 2 BTS’s in interest here, BTS 10 and BTS 11, both will need to be a ‘crumble block’ property. Place the BTS 11/crumble blocks near the gate in picture exactly where placed in picture, you will want some other BTS 11/crumble blocks on the same side of gate but you should place them at least $13 tiles from the gate \*\*\*\*but if you have a door that is placed inside of this range, you should place the bts 11/crumble blocks next to the door as illustrated in pictures under the ‘DOOR INSIDE RANGE’ section inside the ‘Non wave beam gates props&bts.png’ file so that on entry of room Samus will be touching these tiles. The same applies for BTS 10/crumble blocks as mentioned above starting from ‘\*\*\*\*’ but of course with BTS 10 instead and on the other side of gate as illustrated in picture. You can place a BTS 10/crumble block slightly closer to the gate with at least $11 tiles from the gate and of course keeping in mind the same scenario as bts/crumble blocks with a door inside this range.

Go to step ‘3C’.

3B:Step 3B is for wave beam gates ONLY.

Open up the png file in charts folder called ‘Wave beam gates props&bts.png’.

Read and understand step ‘3A’ above. The only differences here for a wave beam gate are:

\*There is an additional BTS of 12 (It is still a crumble block), place the BTS 12/crumble block exactly as shown on the picture with the BTS 12/crumble blocks placed exactly where pictured including both the BTS 12/crumble blocks near the gate and the ones further away.

\*Still keeping in mind the same scenario as the door inside range, you must however place a BTS 12/crumble block instead of a BTS 10/crumble block.

3C: In this step I will explain what these 3 crumble block tiles (10, 11 & 12) actually

do but there is nothing you need to do on this step.

BTS 10 >> By Samus touching BTS 10 causes her gun not to be able to open the gate on the opposite side to the switch which prevents Samus from getting locked on the wrong side of the gate. By walking directly inside of an opened gate will also act exactly like BTS 10 which is why there is no BTS 10 required near the gate, by being directly inside this opened gate also prevents Samus from the gate closing on her and reopening again causing the gate to reload on door entry with a closed gate even though it was left reopened because of this. So Samus can’t open the gate while directly inside the gate and there are no issues with this.

By placing a BTS of 10 further away from other side of gate to switch will prevent Samus from being able to close a gate that is already opened before she is able to touch directly inside the opened gate.

BTS 11 >> By Samus touching BTS 11 near to the gate will allow her to open the gate again on the switch side of gate after coming back in from under the gate. The BTS 11 further away from the same side of gate will ensure she will be able to open the gate from a distance before she is able to touch the one near the gate.

BTS 12 >> By Samus touching BTS 12 will allow Samus to open a gate that is a wave beam gate even though she is on the other side of the switch side to gate since wave beams can shoot through the gate. One set is placed near the gate on other side of gate to switch while the other set is placed directly beside the BTS 10 tile further away from the other side of gate to switch but is placed the tile closer to the gate.