

To make a good and fun Muse Dash custom chart, please read this carefully.

1. Fill in BPM correctly

a) What is BPM?

BPM is the short form of “number of beats per minute”, it is the tempo of the song. The higher the BPM, the faster the speed. In a custom notechart of a music game, **it is essential to fill in a correct BPM.**

b) How to measure it?

To measure BPM of a song, one may search it on google directly (just type in “the name of the song”+“BPM”). Besides, we can use some software such as *MixMeister BPM Analyzer* to measure it.

Generally, in most of the cases, **the BPM of a song is an integer** between 100 and 250. If the measured BPM has decimal places other than 0.5 (e.g. 180.05 and 134.99), then we correct the measured value to the nearest integer (i.e. 180 and 135). If the measured BPM is below 100 or ends up with 0.5 (e.g. 90.0 and 75.5), we multiply the measured value by 2 (i.e. 180 and 151).

There are also some exceptions (e.g. BPM of “Freedom D↓ve” is 222.22), but in general cases, **the BPM of a song is an integer.**

Some songs has more than one BPM (the tempo of the song is changing), it requires us to measure BPM of different part of the songs separately.

2. Introduction to game scenes and enemies

a) Game scenes

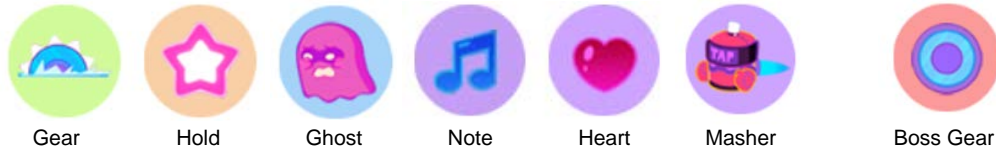
According to the genre (or style) of the song, we can divide the game scenes into 7 types:

- ① **Space Station (scene_01):** It is suitable for the general electronic music, and it is often a "versatile" scene. If the other six scenes are not suitable, you may use this scene.
- ② **Retrocity (scene_02):** It is suitable for vaporwave, one may refer to songs in pack "MUSE RADIO".
- ③ **Castle (scene_03):** It is generally suitable for "dark" , artistic (e.g. composed with a violin) or classical music, which can create a feeling of night.
- ④ **Rainy Night (scene_04):** Generally suitable for jazz, piano, etc.
- ⑤ **Candyland (scene_05):** It is often suitable for cheerful, relaxed, lovely song (or happy core).
- ⑥ **Oriental (scene_06):** Oriental.
- ⑦ **Let's Groove (scene_07):** For songs from the game "Groove Coaster."

It needs to be understood that the scene division is not absolute. Some songs are often suitable for a variety of scenes. As for the choice of scenes, you need to follow your own understanding, as long as it is not particularly abrupt (such as a dark music in Candyland), then there will be no problem.

b) Enemy types

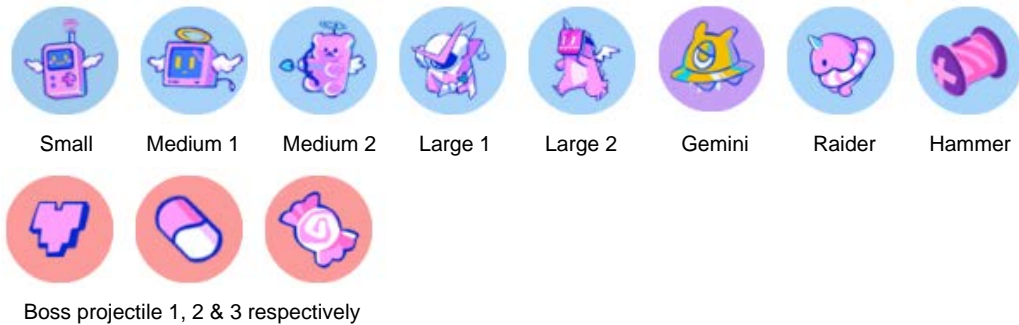
There are totally 18 types of enemies in each scene. Except for the following enemies, each enemy have different appearance in different scenes.



① Space Station (scene_01):



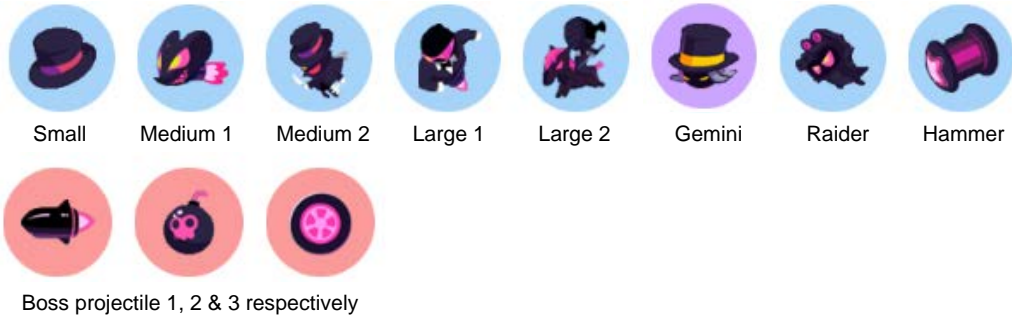
② Retrocity (scene_02):



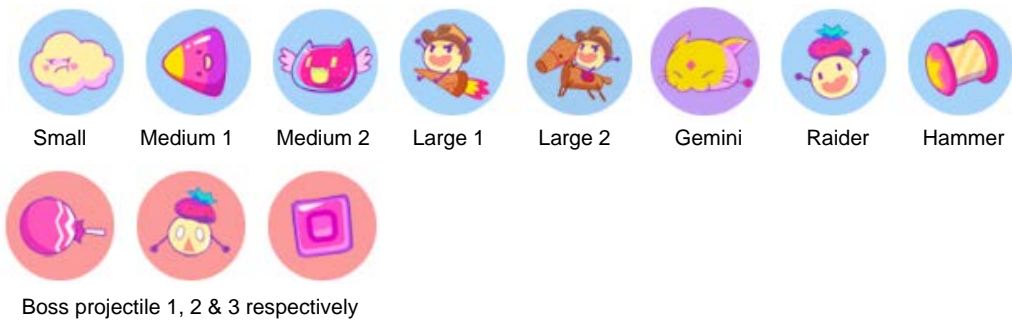
③ Castle (scene_03):



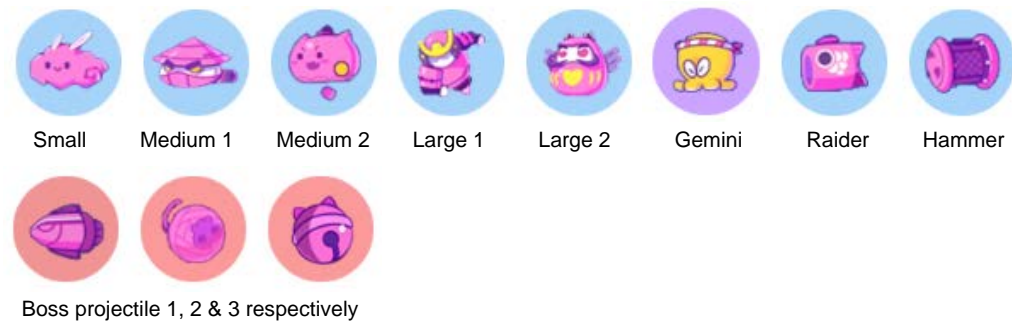
④ **Rainy Night (scene_04):**



⑤ **Candyland (scene_05):**



⑥ **Oriental (scene_06):**



c) Detailed Introduction to all enemy types

“Color matching” is the core of a Muse Dash chart. The so-called “color matching” refers to **the arrangement of different types of enemies** in a Muse Dash chart. There are many ways of arrangement according to the music. However, to make a chart look neat, we have to understand the role of each enemy. Here we use Space Station (scene_01) as an example.

Common enemies: Small, Medium, Large, Gemini

① **Small**



The sound of small enemy is the same as that of medium enemies, but its size is smaller than that of medium enemies. It is mainly adopted on lighter timbre. In a chart, it usually only appears at the **low mood sections** of a song (e.g. the beginning of a song). Generally, it is not arranged with medium enemies.

② **Medium**



Medium enemies is the core of a Muse Dash chart, which can be divided into medium 1 and medium 2 (from top to bottom). Except the boss section, **we use medium enemies in the most part of the chart.**



For these two enemies, there are no obvious difference in usage. **They are usually used alternately to make the game not monotonous.** At most of the time, two medium enemies should switch by sections (e.g. [Adjudicatorz-DanZai](#)). Sometimes, they can switch by upper and lower tracks (e.g. [Invader after 119 combo](#)).

③ **Large**



Large enemies are also called stress notes, which can be divided into large 1 and large 2 (from top to bottom). As the name shows, **they play the role of stressing.** Among them, the sound of large 1 is crisper, and that of large 2 is heavier. This is the main difference between two large enemies.



In terms of specific usage, large enemies can be used to **emphasize some melodies** (e.g. [就是不听话 after 342 combo](#)) as well as **heavy drumming**. Sometimes, Large 1 and 2 are used alternately under two repeated melodies to form a **symmetrical**

configuration (e.g. [Disorder 374 – 460 combo](#)). Because of large 2's heavier timbre, it is usually used less frequently than large 1, and more often used at the beginning or the end of a section.

It should be noted that large enemies should not be placed too close to other enemies, otherwise it is ugly and hard to read.

④ **Gemini**



Gemini should be used in pairs. It is also used for stressing, which is similar to large enemies. Another function of it is to inform players that a new section has begun (just place it at the beginning of a section). Noted that Gemini is more emphatic than large enemies.

Special enemies: Raider & Hammer, Note & Heart, Ghost, Gear

The usage of special enemies is more complex than that of common enemies, which is usually overused.

① **Raider & Hammer**



Raider and hammer (from top to bottom) are special enemies. The differences between these are not only the sound, but also the direction of entering the screen. Raider comes from below screen, while hammer comes from upper screen. Since it is relatively hard to read for players, we don't use it so frequently and heavily.



Here are some common uses of raiders and hammers:

- i. For transition between two parts (appear in the end of a **section**). e.g. [Lueur de la nuit 200 combo](#), [Lueur de la nuit 287 combo](#), [Say! Fanfare! 73 combo](#) and [Say! Fanfare! 234 combo](#).
- ii. For expressing special sound (if there's a pattern). e.g. [Lueur de la nuit 238 combo](#), [ALiVE after 106 combo](#) and [NO ONE YES MAN after 29 combo](#).
- iii. For emphasizing a special sound (patterns aren't necessary). e.g. (with no patterns) [Say! Fanfare! 57 combo](#) and [Say! Fanfare! 267 combo](#). e.g. (with a pattern, used less often as most of the cases we can use large instead) [わがまま Ver.B](#) and all hammers in [Xodus](#).

iv. For progression. e.g. [「妖怪録、我し来にけり。」 after 463 combo](#) and [弊社御社 after 406 combo](#).

v. For creating a “featured” arrangement. e.g. [聖者の息吹 46 – 50 combo](#) and [Re: End of a Dream 355 – 373 combo](#).

The above 5 categories can be overlapped. Sometimes raiders and hammers can be regarded as **symmetrical enemies**.

② Note & Heart



Note is like small enemy, it is mainly adopted on lighter timbre, and usually only appears at the **low mood sections** of a song, usually at the start, middle or the end of a song (e.g. [Brave My Soul at the start](#), [Variant Cross at the middle](#) and [Dr. Techro at the end](#)).

Sometimes, it is used to represent a special tone which is not in a low mood section (e.g. [One Way Street after 540 combo](#), [雪降り、メリクリ after 419 combo](#) and [Dr. Techro after 575 combo](#)).

We seldom use Note in grid 24 or 32 in a bms editor as it's so *ugly*, you may use hold note to replace them instead.



For heart, there are exactly two hearts in every official Muse Dash chart, and they are placed around 1/3 and 2/3 of the song. If it is used lonely, it functions as the note. It can be placed on top of enemies (only for small, medium, large, ghost, hammer & raiders) by converting that particular enemy into a “hidden note” in a bms editor.

③ Ghost



Ghost is usually adopted on very light and not very obvious tone.

It can also be adopted on the sound other than the sound track you are focusing. This would be explained in **section 3 a)**.

④ Gear (not to be confused with Boss Gear)

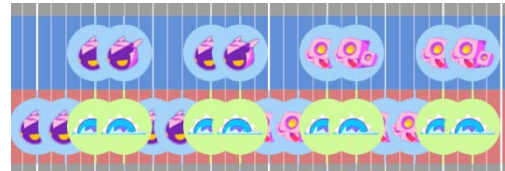
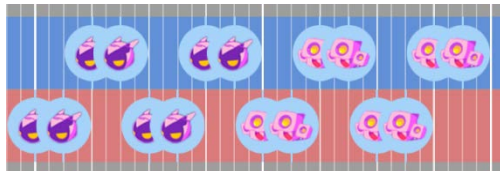


Gear can be only placed on the ground / lower track (i.e. A5 in bms). It comes from the right edge of the screen.

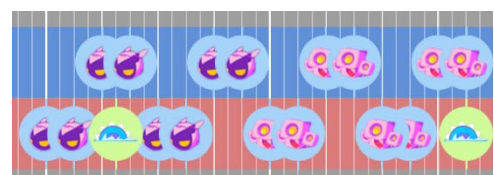
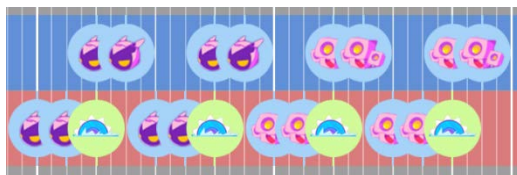
There are 3 functions:

- i. Placed in a low mood section so the chart won't be too empty (e.g. [Oriens at the end](#), [Amnesia after 265 combo](#), [Goodrage after 498 combo](#) and [Adjudicatorz-DanZai- after 364 combo](#))
- ii. Blocking the road, placing directly under enemies from upper track

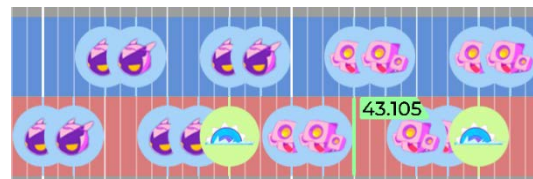
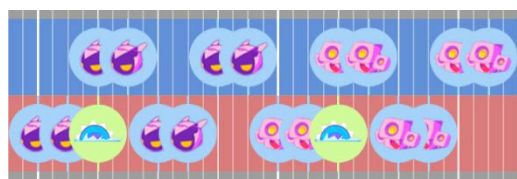
Too empty / too full:



Too ugly:



Good:



- iii. Enhancing visual effects (e.g. [Chrome VOX after 516 combo](#), [Marry me](#), [Nightmare after 149 combo](#), [雪降り、メリクリ after 417 combo](#) and for boss gears [INFINITY after 569 combo](#))

Other enemies: Hold, Masher

① **Hold**



In bms, hold should either be used in pairs (one for start and one for end), or be stretched to a certain length. It is generally adopted on long tone.

② **Masher**



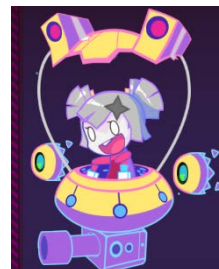
Masher is usually used for a melody / drum with a very dense rhythm that is not suitable for inserting other kind of enemies. It usually appears in the build-up section. It should either be used in pairs (one for start and one for end), or be stretched to a certain length.

Boss

The boss usually comes in when the music reaches the climax. So don't let the boss in at the start of the music.

① **Boss Phases**

The boss has three phases: no phase (left pic), phase 1 (middle pic), phase 2 (right pic).



The boss will automatically change her phases if you give her enough time for animation.

② **Boss projectile (the core of the boss section)**



There are 3 kind of projectiles. Projectile 1 belongs to phase 1, projectile 2 & 3 belong to phase 2. Therefore, don't mix projectiles in different phases, or the boss will dance (i.e. changing phases unnaturally)!!!!



Boss projectiles play the same role as medium enemies. You can use phase 1 (i.e. projectile 1) in the first half of the boss section, then use phase 2 (i.e. projectile 2 & 3) in the second half. **Just remember to give the boss enough time to change her phases.**



For projectile 2 & 3, you can switch it just like two medium enemies.

③ **Boss Gear**



The boss can throw boss gears in both phase 1 and 2. It can be placed on the sky and on the ground. It functions the same as common gear. Besides, boss gears can form a “featured” arrangement like in [Dr. Techro](#), [Plumage](#) and [Skyward](#), but **it's not recommended to use in a normal chart**.

④ **Boss Melee**

There are two boss melees, 1 & 2. In both actions, the boss rushes to the character, but boss melee 1 takes a longer buffering time. The character just needs to hit the boss once.

It is generally be used to stress the tone.

⑤ **Boss Masher 1 & 2**

In both actions, the boss rushes to the character, the character needs to punch the boss (like masher). For the “Boss Masher 2” action, the boss will be punched out of the screen while the “Boss Masher 1” action won't.

Note that the 4 boss actions above can be used when the boss is in no phase only (after throwing projectiles, the boss will automatically change to no phase if you give her enough time for animation), or the boss will flash.

Moreover, the boss won't automatically leave (except “Boss Masher 2”), unless you add a “Boss Exit”.

Usually we use small / medium enemies in boss section when we want to

- i. make time for boss melee/mash (e.g. [Power Attack after 746 combo](#))
- ii. make time for boss to change phases (e.g. [Power Attack after 520 combo](#))
- iii. make a distinction between parts (e.g. [Conflict after 32 combo](#))
- iv. emphasize some tones (e.g. [Lights of Muse 600 – 602 combo](#))
- v. take 2 sound track simultaneously (e.g. [medium for melodies and projectiles for drums](#))
- vi. create beauty (e.g. [Blah after 750 combo](#))

3. Advanced knowledge on custom chart

a) Which sound track should I choose?

There are lots of sound tracks in every song. For example, in the song "Zen Zen Zense", there are vocals, melodies and drums.

In a Muse Dash chart, **we try to divide a song into several parts**, and **each part will only focus on exactly one track**. For instance, we only adopt enemies on melodies in the first part, and don't care about drums. Then, we only adopt enemies on vocal in the second part, and don't care about drums and melodies. **Don't be greedy that choose every track, it will be a mess.**

If you want to choose two tracks in one part, here the special enemy, ghost takes the role.

b) Speed of enemy flow

There are a total of 3 speeds (1 is the lowest, 3 is the highest). In most cases, **we only use ONE speed in the whole chart**. The choice of flow speed greatly depends on "song's BPM" and "song type". Generally, 3-speed is used for high BPM (BPM > 150) or cheerful music, while 1-speed or 2-speed is used for low BPM music.

In fact, to make the chart more suitable for the song, we can occasionally adjust the flow rate of a certain section of the chart (e.g. in a globally 3-speed chart, we can adjust the low mood section to 1-speed or 2-speed).

Except for boss actions, all other enemies have 3 speeds.

c) Direction of enemies entering the screen

There are a total 3 directions: ← from right edge, ↙ from below screen, ↘ from above screen.

Only small and medium have 3 directions. Only masher has 2 directions ↘ and ←. Others have only one direction ←.

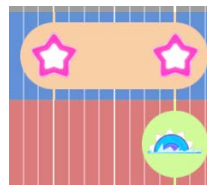
We use different directions to express different emotions. Use the upper track (i.e. A4 in bms) as an example, speed of ↖ > speed of ↗ > speed of ←. So in the build-up stage before the climax, we tend to use ↖ in the upper track and ↗ in the lower track.

To make the charts tidier, **we only change the direction of enemy entries by sections** (e.g. [Adjudicatorz-DanZai- 11 – 138 combo](#)), or **change the direction according to which track the enemies are in** (e.g. [Adjudicatorz-DanZai- 139 – 290 combo](#) and [tiny lady after 56 combo](#)).

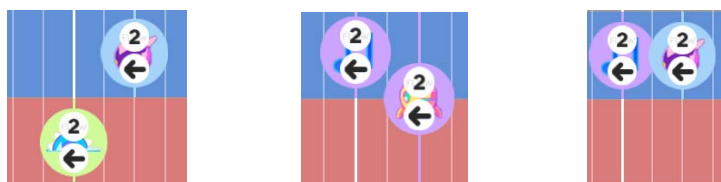
The masher has two directions. When it is placed in A4 in bms, the direction is ↗. When in A5, the direction is ←. ↗ is faster than ← visually.

d) Some facts

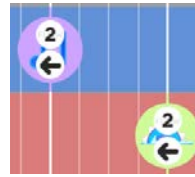
- Raider and Large 1 have the same sound. Boss Melee and Large 2 have the same sound.
- After finishing “Hold”, the character will drop on the ground at once. So, **don't put any gears when the hold note ends.**



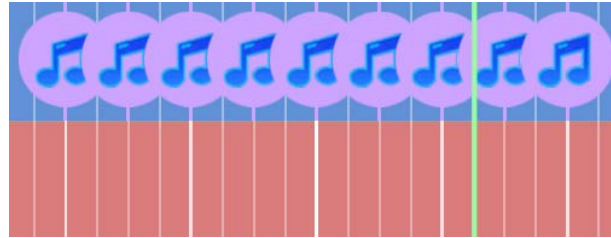
- After punching mashers or boss, the character will drop on the ground at once. (Although the character is in the air visually)
- After hitting the Gemini, the character will drop on the ground at once. (Although the character are in the air visually)
- When the character is pressing “Hold” in a track, she cannot catch any Note and Heart in the other track. (So don't write this in bms)
- If the song's BPM is high enough, don't use following arrangements:



- When using following arrangements, please ensure the character won't land on gears:



- Don't put too many Notes on sky that the character cannot catch all of them within single jump (wrong demonstration):



At last, if you want to make a fun chart, learn more in official charts (try to watch more charts)!

By ATK and Vignette

2021.6.16