

Introduction

Hello. If you are reading this you are probably either making, or considering making, a map for Rocket Arena 2. Let me start by saying that Rocket Arena 2 is going light years ahead of Rocket Arena 1 in terms of scale, flexibility, and features. We are moving to allow map makers much more freedom, not only in designing their maps, but in dictating how they are played. As such, these specs may change over the course of development. Much of the information in here is from the original beta specs, and so may see a bit weird, but all the info is still correct. Other things have been updated based on feedback from the mappers and players. Please don't e-mail me telling me that XYZ map in the RA2 pak doesn't meet one of the requirements, since those requirements have since changed.

Rocket Arena 2 Features

While Rocket Arena will allow single arena maps (maps with only one fighting area, like Rocket Arena 1 maps), our main emphasis will be on Multi-Arena maps. Multi-Arena maps will allow for larger servers, lower wait times, and bigger individual arenas. All maps in official releases will be Multi-Arena maps, and will include at least one pickup arena. All the specs that follow pertain to Multi-Arena maps.

First, let me give an overview of some of the new features in Rocket Arena 2, and how they will effect map design.

- Up to 256 arenas per level - While I don't expect you to have 256 arenas, you might consider 4-8. Also, if you get a good single arena idea, you can put multiple copies of the same arena on one Multi-Arena level, so that if one gets full, people can go to the others.
- Unlimited players per team - Rocket Arena 2 will have a heavy emphasis on team/clan play. Keep in mind that often more than 2 people will be running around. It is still OK to make arenas small for only 2 people, just don't do it with all of them.
- Different arena types - due to the wide variety of interests and playing styles, we have decided to go ahead and define 3 arena "styles." You should mix different arena styles on one MA map, so that there will be something for everyone. The entities and stuff are the same for all types, only the size and style differ. The included examples are from ra2map1, which includes an excellent mix of arena types.
 - Open: Big, open areas for fast duels, with or without obstacles. (Railgun Stadium)
 - Strategy: While not a full blown DM map, this is larger than a single room, and allows for more strategy in fighting. Beware of making levels that are too positional, where a player can camp the high ground and control the level. (Funkadooda's Revenge 2 and Edge of Insanity in ra2map2)
 - Team: Designed for teamplay and pickup games (or LONG 1v1 matches) these arenas are basically full DM maps, with many rooms, and team strategies involved (Warehouse, or any of the q2 DM levels)
- Keep observer area, add other spectator modes - For most arenas you will want to put in an observer area like those in Rocket Arena 1. Spectators will also have the option of using a trackcam/freeflying mode. On levels too large for a feasible Spectator area, you can omit it and all observers will go into fly mode.

- non-players in Observer area - Players can now enter the observer area without getting in line, allowing them to watch a match without playing. They can then use a menu item to get in line at any time.
- Separate arenas based on ping - While you do not have to worry about this, it is another advantage of having multiple arenas.

General Requirements and Info

- All maps must have one DM sized pickup arena. You may either create a new, original arena, or use another previously published DM map created by yourself or someone else (with their permission). The zip includes a tool to help you integrate an exiting map into a new RA2 one.
- You should have at least 2-3 other arenas, with a mixture of small and medium sizes.
- In general, arenas should be easy to navigate. The best maps are those that you can run through blind-folded (or at least backwards). Watch out for small corridors or difficult jumps. Use big areas when possible, but watch the r_speeds !
- Arenas should be well “connected” (within themselves, not too others!). By this I mean that the gameplay should not be linear. It should flow from one area to another and back via multiple pathways. It should be difficult to camp any one area and dominate the arena. Use teleporters to enhance this, but don’t make the scheme too confusing. A well connected map is a strategic map.
- Pickup/DM arenas should be large enough to accommodate 8-16 players, but should not be too slow when only 2 are left. You need sound cues and open areas to help accomplish this. Unless a person is camping, you should be able to track them down within 15 or 20 seconds, just by running around the level. If chases seem to go on forever, you need to work on the previous point.

Multi-Arena Map Specs

- Feature (Quantity) - Info - Example
- Central waiting area (1) - where users initially spawn and select the arena to join.
 - “worldspawn” (1) - Set the message, sky, and other options as usual. You must add a new field called “arena” with a value of the number of arenas in your level (if you have 4 arenas, set it to 4).


```
"classname"    "worldspawn"
"message"      "Rocket Arena 2 Demo"
"arena"        "4"
```
 - “misc_teleporter_dest” (8-10) - This is where players spawn when connecting to a server or returning from an arena. You must add a new field called “arena” with a value of “0”. Target and Targetname do NOT need any specific value, but you may need to set them to something for the map to compile correctly.


```
{
"classname"    "misc_teleporter_dest"
"target"       "none"
```

```

"arena"      "0"
"origin"     "-64 832 96"
"angle"      "0"
}

```

- “misc_teleporter” (number of arenas) - For each arena you need a teleporter that will send the player there. As before, you need to add a new field called “arena”. Its value should be the number of the arena that the teleporter should send the player to. Target does NOT need any specific value (players will be sent to the appropriate place regardless).

```

{
  "classname"  "misc_teleporter"
  "target"     "blah1"
  "arena"      "1"
  "origin"     "-448 448 96"
  "angle"      "0"
}

```

- “trigger_multiple” (number of arenas) - Around each misc_teleporter, you need to place a trigger_multiple entity brush that will send info about that arena to the client when they approach the teleporter. Set “delay” to “0”. Set “wait” to “2”. Set the message to anything. Set “sounds” to 2. Add the “arena” field and set it to the arena number.

```

"classname"  "trigger_multiple"
"delay"      "0"
"wait"       "2"
"message"    "test123"
"health"     "0"
"sounds"     "2"
"arena"      "1"

```

- Arenas (number of arenas) - the actual fighting arenas. You can design them as you see fit, keeping in mind the type of arena you are creating (open, strategy, team). They should be physically separate from each other and the central waiting area.

- “info_player_deathmatch” (6-8, depending on the number of players that you think will play on your arena at a time) - This is where players will spawn when the match begins. You need to add the “arena” field and set its value to the arena number.

```

{
  "classname"  "info_player_deathmatch"
  "arena"      "1"
  "origin"     "-128 -128 -896"
  "angle"      "0"
}

```

- “info_player_intermission” (1) - In addition to providing an intermission point, this is where you set options for each arena. Add the “arena” field and set it to the arena number. Add a “message” field and set it to the name for that arena (each arena can have an individual name).

```
{
  "classname"    "info_player_intermission"
  "origin"       "-2884 1296 -512"
  "mangle"       "0 0 0"
  "arena"        "2"
  "message"      "Feel like a Sequel?"
}
```

- Observer Areas (number of arenas) - Observers in this area should be able to see all or almost all of the arena. You can have several observation areas linked by teleporters or wind tunnels if you prefer. They should be “glassed” in using clip and skip textures. Observers should not be a distraction to people in the arena.

- “misc_teleporter_dest” (5-6) - This is where players sent to the observation area will be sent.

```
{
  "classname"    "misc_teleporter_dest"
  "arena"        "1"
  "targetname"   "blah1"
  "origin"       "-128 -128 -320"
  "angle"        "0"
}
```

- Important Final Note - during testing we realized that because a non-specified field defaults to 0, you will have to set an “arena” value of “-1” on all non-RA2 specific misc_teleporter_dest entities. Otherwise these will be interpreted as spawn points for the central waiting area. **THIS IS VERY IMPORTANT!** If you have any teleporters in your DM arena you **MUST** set the “arena” flag to “-1” or people will spawn there when trying to go to the central waiting area.

Stuff to Help You

Here are several things to help you design and test Rocket Arena 2 maps.

- ra2demo.map - Example map. This is an example of a 4 arena Multi-Arena map. It has all the correct entity information and makes an excellent reference. It is VERY simple, but allows you to see how everything should be laid out.
- glass.txt - describes how to make clear and one-way glass
- mapmove.exe - This will shift an entire level by X Y Z units. It also prints out the final min/max values of the level when done. Remember that all levels must stay within -4096 to 4096 in each direction. The syntax is:

mapmove.exe <in.map> <out.map> <x shift> <y shift> <z shift>

For example: to just see the size of a map: mapmove mine.map blah.tmp 0 0 0

To shift a map up 2048 units: mapmove mine.map mynew.map 0 0 2048

Good luck and good mapping!

-David ‘crt’ Wright