

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. Hopefully the info that follows will cover almost all of the aspects needed for a Rocket Arena 2 map, but if you have any questions or ideas, please feel free to e-mail me. I am not a map maker, and have designed these specs from a coder's point of view. If there is something that would be easier for you, with similar functionality, please let me know.

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. I highly recommend that if time permits you create a Multi-Arena map. All the specs that follow pertain to Multi-Arena maps. Single arena maps can be made exactly like normal Q2 deathmatch maps, with "info_player_deathmatch" entities.

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. In addition, at a later date, we may put together some "favorite arena" levels with say 16 copies of one arena on one level for use in tournaments.
- 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 can mix different arena styles on one MA map, or do all in one style. The entities and stuff are the same for all types, only the size and style differ. All of the example maps listed are included in the Final Arena Q1 pak.
 - Open: ArenaX/arenazap style - Big, open areas for fast duels, with or without obstacles.
 - Strategy: Arenrg3a style - 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.
 - Team: Larger DM2/3/6 level style - Designed for teamplay (or LONG 1v1 matches) these arenas are basically full DM maps, with many rooms, and team strategies involved.
- Allow map makers to define default weapons for their arena - As you will see in the specs, you can define the default weapons for use in each arena. You can design an arena as a

Railgun duel or a true Rocket (only) Arena. Also, you can choose to allow the BFG (it is not allowed by default). Server ops can choose to override your defaults if they want.

- Keep observer area, add "Out of Body" mode to fly around - 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/freelying 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.
- Tournament Play - RA2 will be set up for easy tournament play, using all the arenas on a level (or the ones the tourney admin selects).

Multi-Arena Map Specs

- = Required 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" (8-16) - 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.

```
{  
"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). Optionally you can set the “combattarget” field with the weapons you want used in that arena. The weapons are numbered 1 2 3 4 5 6 7 8 9 0 and correspond to the default Quake key bindings (1=blaster, 0=bfg). Separate weapons with a space.

```
{
"classname" "info_player_intermission"
"origin"     "-2884 1296 -512"
"mangle"     "0 0 0"
"arena"      "2"
"message"    "Feel like a Sequel?"
"combattarget" "1 3 5 7"
}
```

- 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 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. They should be in an area that will discourage people from just standing on them and watching (since when they are all covered, and we can’t telefrag, we have to do a nasty work around). Behind a wall or something is usually good.

```
{  
  "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.

And that’s it :) While it may seem like a lot, it is really quite simple. Read over it a couple times and look over the example map, and you should have no trouble.

Stuff to Help You

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

- 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.
- gamex86.dll - Testing mod. Since Rocket Arena 2 is not available to test with, this is a simple mod that will help you test Rocket Arena 2 maps. It allows you to jump to any area, and make sure that all of your entity info is being read correctly. Read the included docs for installation/usage info.
- ra2rg1.bsp - This is the single map that was included in the RA2 Client download. If you have not already looked at it yet, please do so. It is a VERY good illustration of how to implement a central waiting area, as well as 4 top rate arenas. The three large arenas are good examples of what an open arena should play like, and the fourth dm4-looking one is an excellent example of a strategy arena (it is arenrg3a). If you have never designed a Rocket Arena map before, this is a good place to learn.
- The Final Arena Client pak - this is not included, but is available on the Rocket Arena page. This includes 46 single arena maps for Quake1, most of which would fall into the open arena style. A good place to look for ideas for what a Rocket Arena map should be like if you’ve never made one.

If all else fails, feel free to e-mail me, I should be able to get back to you with an answer quickly.

Good luck and Good mapping.

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