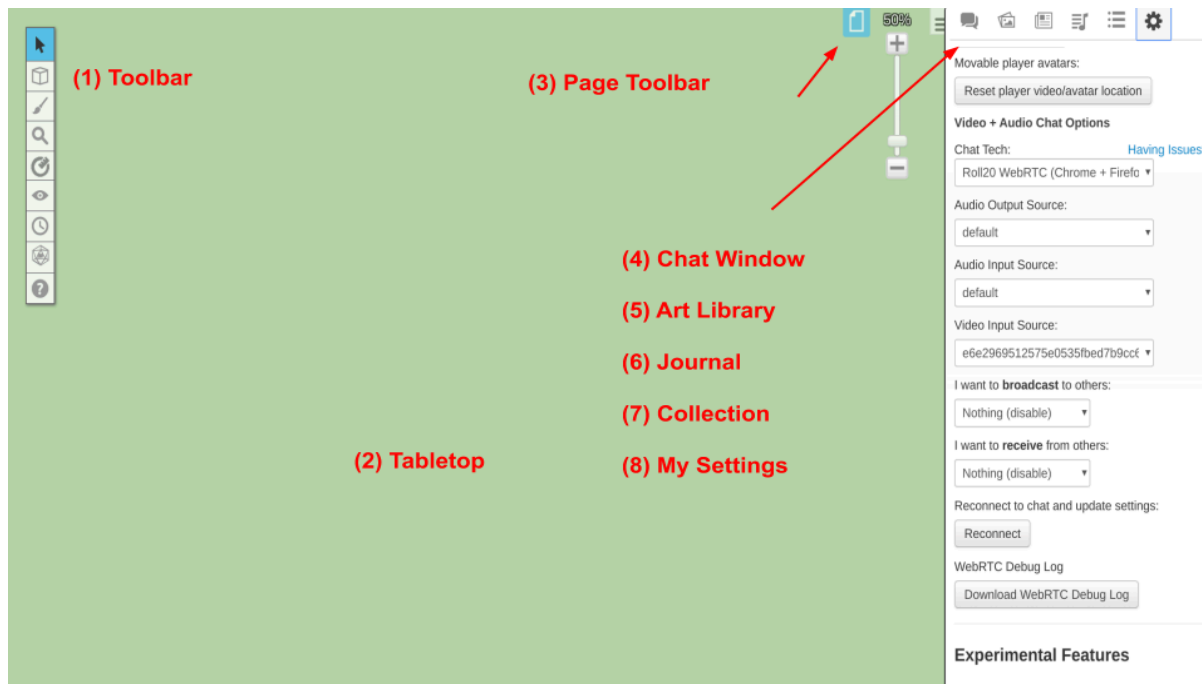


Learning Roll20

Overview

When you first log into Roll20 as a Game Master, you see 8 key game elements:



In brief, here's what these mean:

1. The Toolbar offers the main tools players use to interact with the virtual tabletop, and with game elements added to the tabletop.
2. The large green surface shown here is the virtual tabletop. Playing pieces are added to the game here, and can then be manipulated for game play by the Players and the Game Master. For Warrior, these playing pieces will be elements, units, terrain, and player aids.
3. The Page Toolbar is only visible to Game Masters; that's why, for our purposes, all players will need Game Master permissions. It enables players to move between multiple tabletops. Designed with role playing games in mind, the concept is that a Game Master could design multiple scenes ahead of time, and then move players from scene to scene as their actions take them from one place to another. We want to use this functionality to create multiple miniatures tabletops just like multiple tables at Cold Wars or Historicon.

The remaining features are all in the right hand column of Roll20. This window can be toggled between these features by clicking on the desired feature in the navigation bar at the top.

4. The Chat Window allows text chat between players. It's also where players roll dice.
5. The Art Library lets each player upload graphics that they want in the game.
6. The Journal is a document library that lets the Game Master share notes and pictures with players. We'll be using the Journal to host this and other tutorial material.
7. The Collection provides general Roll20 players aids to customize for particular games. In our case we'll want to use Rollable Tables to construct average dice, and we'll want to use Macros to simplify common dice rolling combinations.
8. My Settings allows control over a number of configurable game play settings.

Each of these features will be explained in more detail.

The Toolbar

The toolbar determines what your cursor is doing on the tabletop. Of the 8 different options on the toolbar, we'll be concerning ourselves with the top 5.



The **Arrow** option at the top of the toolbar lets you toggle between two options:

1. Move/Select - This is the default option. It lets you click on an object on the tabletop, or click and drag an object on the tabletop. Clicking on an object will give you a variety of ways to manipulate or change the object, depending on the type of object. Click and drag lets you slide an object around on the tabletop.

2. **Pan View** - If you think of your view of the tabletop as from a camera suspended above, then Pan View lets you slide the camera around.

The **Cube** option second on the toolbar lets you change the layer of the tabletop with which you are interacting. The tabletop is composed of two layers -- the lower layer is the map layer, and as the name implies this is where terrain and other fixed features of the tabletop should be placed. The upper layer is called the token layer, and this is where moveable pieces of the tabletop should be placed. You can only interact with objects on the layer that you have selected as the active layer. During setup this will often be the map layer. During gameplay it will be the token layer, which prevents you from accidentally moving anything placed on the map layer.

The **Paintbrush** option lets players construct objects directly on the tabletop. This gives players a set of tools similar to Microsoft Paint -- draw shapes, draw freeform, add text boxes, etc. Once constructed, these objects can be moved and manipulated in most of the standard ways that game tokens can be handled. The typical use of the paintbrush is to add to the map layer.

The **Magnifying Glass** option controls the zoom of the tabletop view. This defaults to 100%, and can vary from 10% to 200%. Zooming out (towards 10%) is useful for getting a panoramic view of the whole table. Zooming in (towards 200%) is useful for giving more fine-grained control over object manipulation.

The **Ruler** option (the circle with a hash-marked rectangle in it) lets you measure distance on the tabletop. Click on the point you want to measure from, drag to the point you want to measure to, and you'll see a distance in whatever units the tabletop is configured for.

The Tabletop

The tabletop is where the action takes place. Roll20 provides no rules enforcement, but gives players a virtual space in which to move and manipulate the objects that make up a game, and thus act out game play. This is a quick overview of how to select, edit, and move tabletop objects, as well as perform a few other useful actions on the tabletop.

Selecting and Moving Objects

You can select an object on the tabletop in two ways while in Select/Move mode from the Toolbar:

- Clicking on an object will select it (see Figure 1);
- Clicking and dragging an area that includes the object will cause it to be selected (see Figure 2).

With either method you'll know you've succeeded when you see the blue outline with the blue squared dots around the selected object, as shown in Figure 1. Notice also that there's an additional blue "stick" that projects out from the front of the object; we'll use this later.



Figure 1



Figure 2

You can select multiple objects two ways (see Figure 3) while in Select/Move mode from the Toolbar:

- Clicking on an object, and Ctrl-click on other objects you want to select, will cause them all to be selected;
- Click and dragging an area that includes all the objects you want to select will cause them all to be selected.

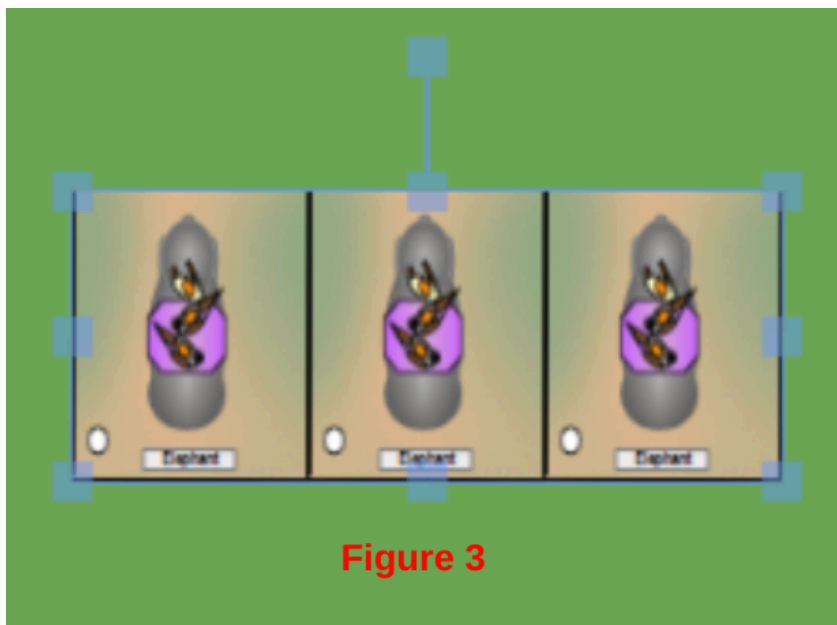
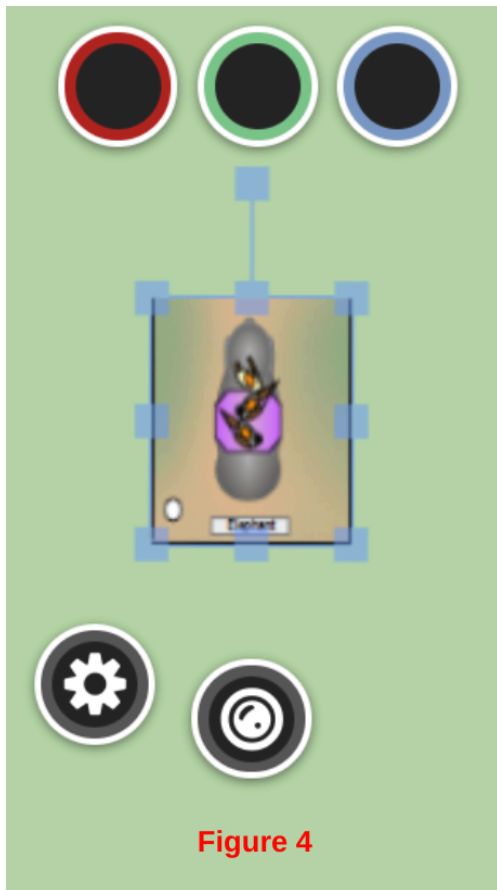


Figure 3

Editing and Customizing Objects

Some manipulations can be performed on either a single selected object or a group of selected objects:

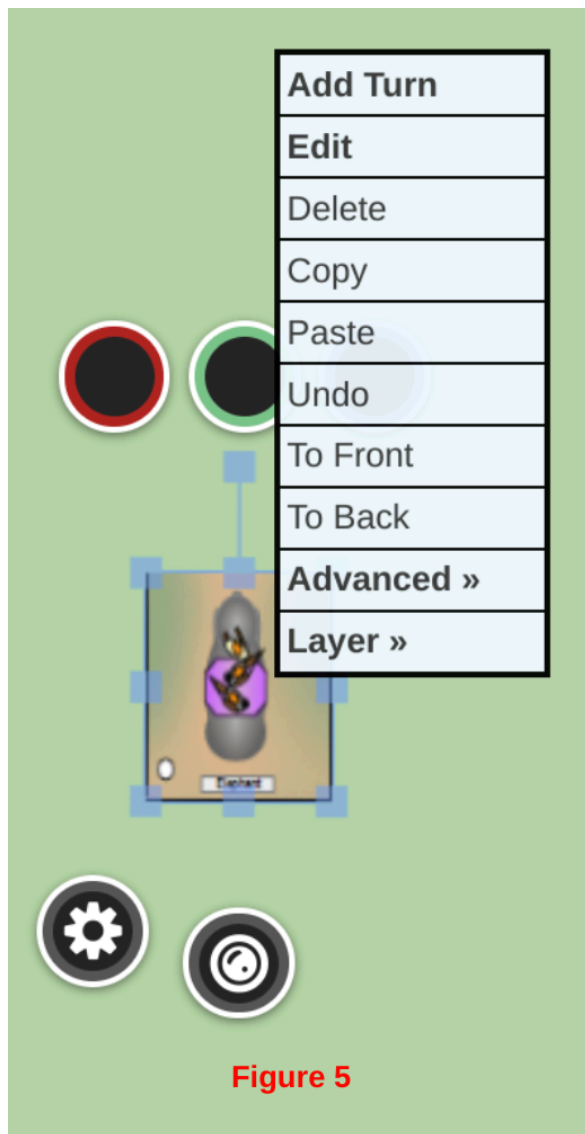
- Clicking and dragging on a selected object or group will slide it across the tabletop, without changing orientation.
- Clicking and dragging on a selected object or group will resize it.
- Clicking the top of the “stick” that protrudes from the front of the object or group (look for the crosshairs) will let you rotate an object around the center of the object. Note that rotating around the center is very different from pivoting around the corner of an object. The former is what Roll20 natively understands. The latter is what we typically do in Warrior, and is not directly supported in Roll20. More on this in another tutorial.



Some manipulations can only be performed on a single selected object. There are three general ways to interact with an object that are displayed when you select it (see Figure 4):

- The status circles;
- The icons disc;
- The gear icon.

Additionally, right clicking on an object brings up a whole other menu of options (see Figure 5). We'll dig into these individually.



The Status Circles

The red, green, and blue circles above an object track numbers. You can click on any one of them and enter or change a number. This is useful in an RPG context for keeping track of hit points, armor class, or roll to hit values. Other types of games often have uses for them as well.

The Icons Disc

The icons disc opens up a palette of icons that players can agree, by convention, signify different states an object might be in (see Figure 6). In an RPG context these might be things

like unconscious, confused, hidden, poisoned, etc. Other types of games often have uses for them as well.

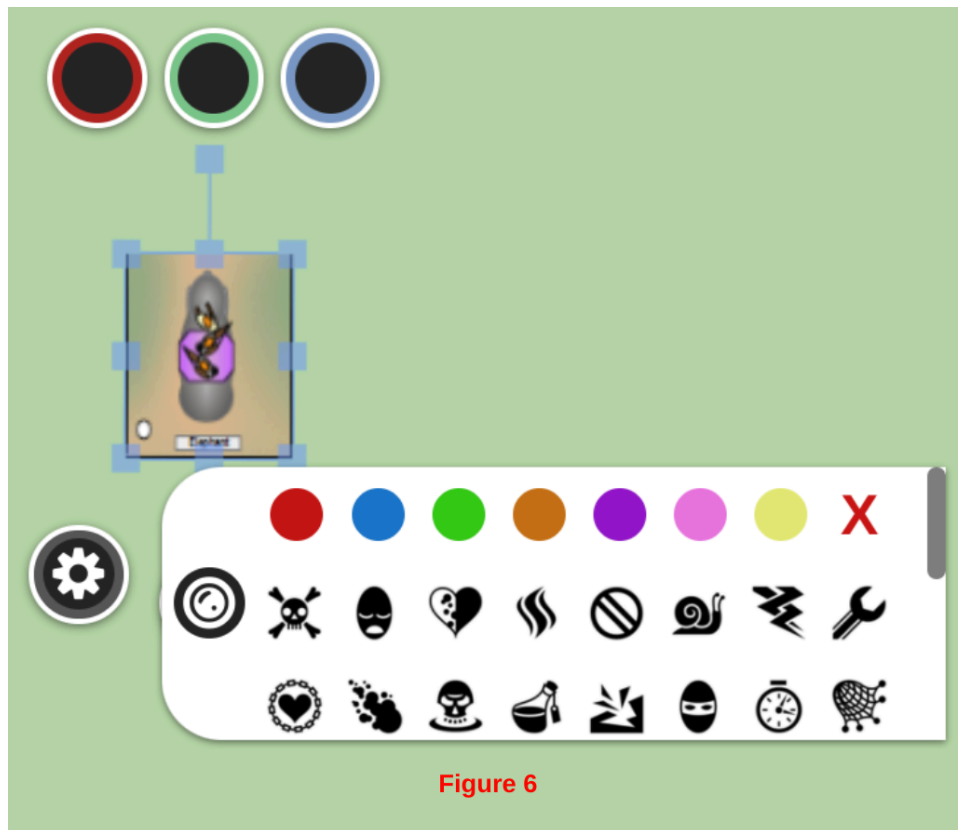


Figure 6

Once an icon has been selected, it shows up as a small overlay on part of the object (see Figure 7). An object can have more than one icon displayed.



Figure 7

The Gear Icon

The Gear Icon opens up a window that allows you to edit some of the visible features of an object (see Figure 8).

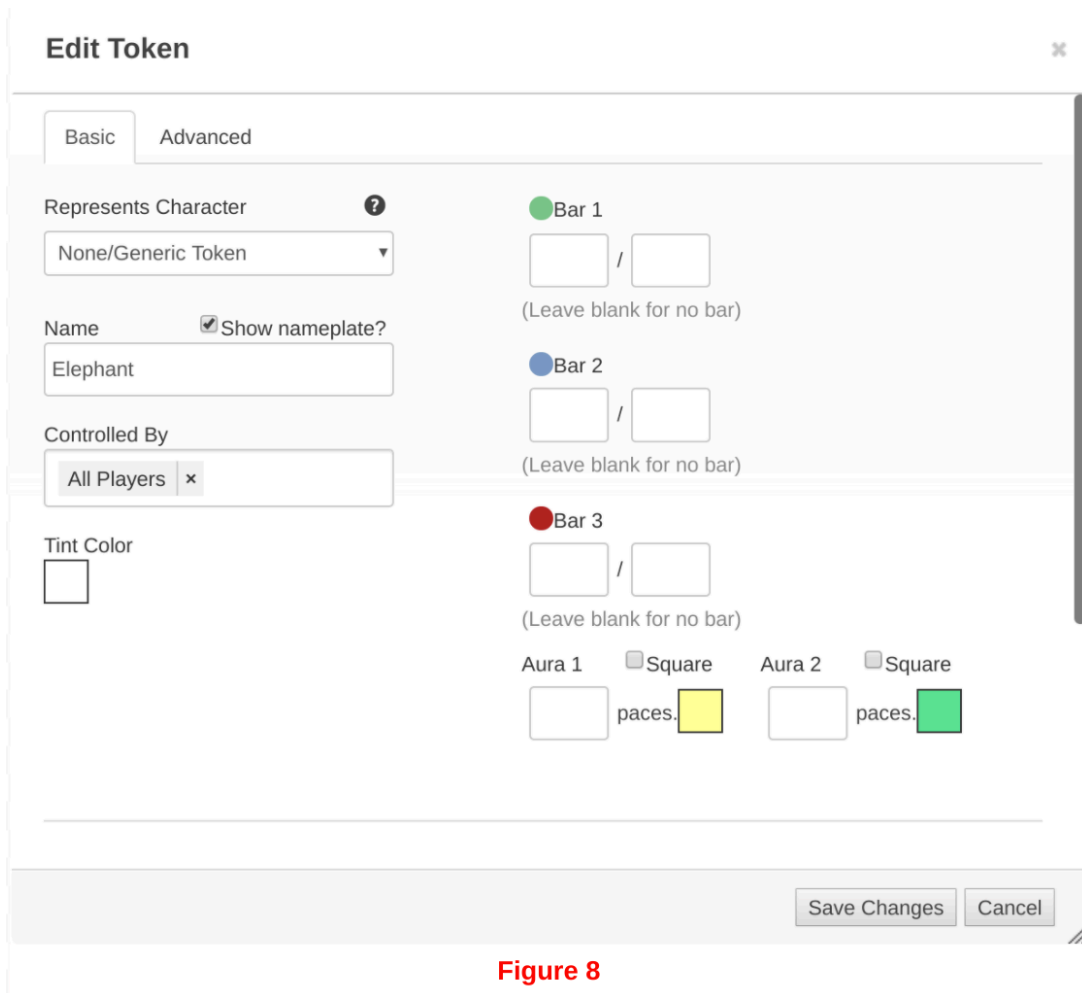


Figure 8

Notably, an object can be given a name, and that name will be visible on the tabletop if you check the box next to “Show nameplate”. You can also set who can control (i.e. move or edit) the object. Options are:

- All players;
- A named player only;
- The GM.

The nameplate will only be visible to players who control the object.

It is also possible to have up to three status bars that display numerical information about the object. We’ll talk about these more in another tutorial, but the general intent is to show status relative to some maximum or minimum, as in “8 out of 30 hits points”.

The Right Click Menu

Right clicking on an object brings up an additional menu of options (Figure 5). We'll use most of these:

- Delete - Removes the object from the tabletop. This can also be accomplished by hitting the backspace or delete key when the object is selected.
- Copy - Makes a copy of the object, including any edits you've made to the object.
- Paste - Pastes a copy of the object onto the tabletop.
- Undo - Reverts the last move or edit you made with the object.
- Advanced - The only thing we'll use on this sub-menu is Resize, which lets you change the dimensions of an object, as measured in pixels.
- Layer - This sub-menu lets you move objects between the token layer and the map layer.

The Page Toolbar

We are going to totally co-opt the Page Toolbar for Warrior, and that will be covered in another tutorial. For now we're going to do a quick tour of the Page Toolbar as Roll20 intended it to be used.

In an RPG context, the GM has a number of possible scenes that players may engage with, depending on the decisions they make, and wants to be ready to place the players in the relevant scene when they make that decision. Roll20 gives the GM the ability to create pages that map out these scenes, and then move players between pages to place them in different scenes (see Figure 1).

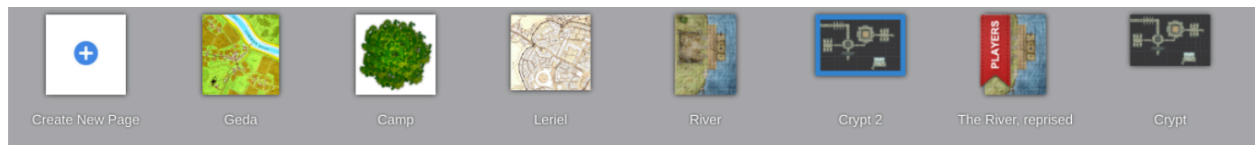


Figure 1

The GM and Players can have different pages loaded onto their respective tabletops, and the GM has control over this. The GM can load a page onto the GM's table top simply by clicking on that page in the Page Toolbar. The GM can load a page onto all players' tabletop by dragging the red banner that says "Players" to the tabletop that the GM wants the players to see.

From the Tabletop, anyone with GM privileges will see the blue Page Toolbar icon in the upper right of the tabletop, and can pull down the Page Toolbar by clicking on that icon. Clicking on the blue icon again will slide the Page Toolbar back up and out of view.

In the Page Toolbar new pages can be created by clicking on the "Create New Page" tile to the far left of the Page Toolbar. Hovering over a page reveals a blue box with a gear icon to the left of that page, and clicking on that gear opens the Page Settings screen as shown in Figure 2.

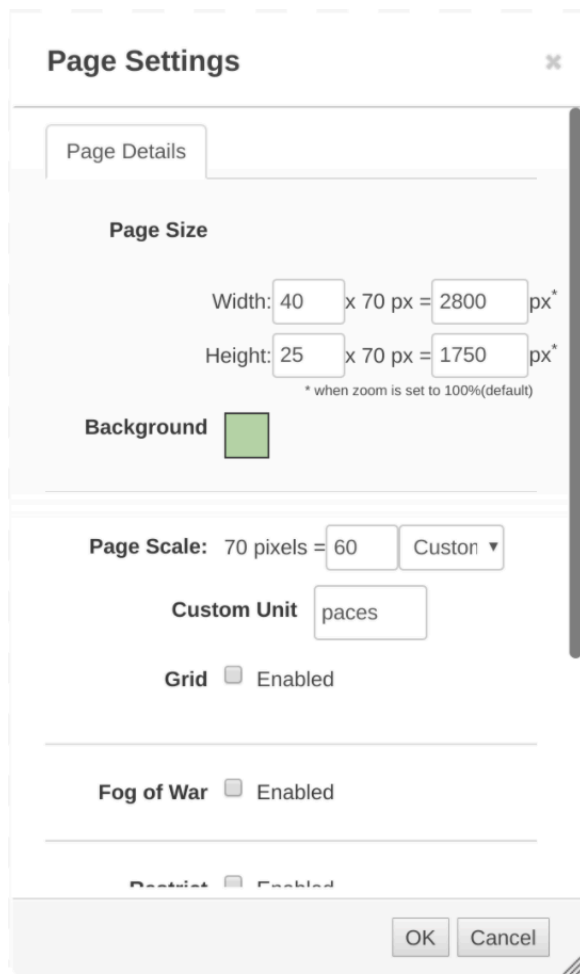


Figure 2

Page Settings lets us configure three aspects of the Tabletop -- page size, background, scale, and grid. Under the hood, Roll20 is based on a grid of 70 pixel by 70 pixel squares. While that 70 pixel square can't be changed, you have a lot of control over what you configure on top of that:

- Page Size lets you set the dimensions of the tabletop.
- Background lets you set a background color; the default is white, but you have a palette of 66 colors to choose from.
- Page Scale lets you set what a pixel means in game terms. Roll20 defaults to 70 pixels equaling 5 feet, which works well in underground RPG settings. There's a menu of units to select from, ranging from centimeters up to miles, but if none of those suit your purposes, you can choose "custom" and enter your own unit of measure.
- Grid can be either enabled or disabled. If enabled, then the grid will be visible on the tabletop, and objects on the tabletop will snap to the nearest square on the grid. Without grid enabled, the grid won't be displayed, and will be placed free form on the tabletop.

The settings you see in Figure 2 show a page configured for a standard Warrior 1600 game tabletop, predicated on one grid square equaling one element's width. We'll talk more about these choices and other configuration options in another tutorial.

The Chat Window

The Chat Window provides text-based, real-time communication between players, or between players and Game Master. It also provides a mechanism for rolling dice, and for invoking macros.

Text Communication

Simply typing in the text entry box at the bottom of the chat window will broadcast a message that the GM and all players can see.

If you want a message to be visible to only one player, you can "whisper". Any message that begins with "/w" is a whisper. To whisper to the GM you'd type "/w gm" followed by your message. To whisper to a particular player type "/w " and begin typing their screen name. Roll20 will attempt to autocomplete, offering choices of all matching names, and you simply click on the name you want (see Figure 1) and then continue typing your message.

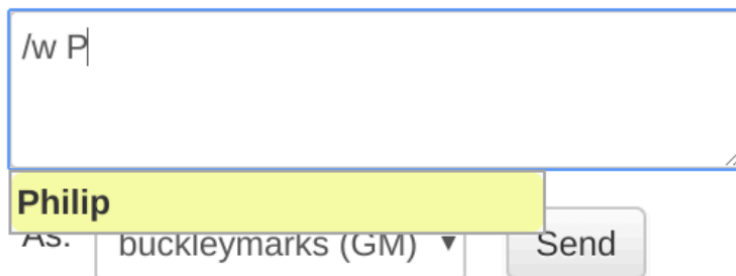


Figure 1

Rolling Dice

A die roll can be invoked as a text chat entry. There are other ways to invoke a die roll, which we'll cover under "Macros" later on, but the chat commands are a basic, serviceable way to roll dice.

Any chat that begins with "/r" will be interpreted as a die roll, and the results of the die roll will be displayed in the chat window, along with the player name of the dice roller. The die rolling commands support many types of dice, support multiple numbers of dice, and support modifiers. Here are some representative examples:

- /r 1d6 - rolls one six-sided die
- /r 2d8 - rolls two eight-sided dice; the output will display each die roll and the sum of the dice.
- /r 1d20 + 2 - rolls a twenty-sided die, and adds 2 to the result.

Some die rolling combinations can be tedious to type out. Fortunately, the Chat Window has a history function, so the Up arrow on your keyboard will take you back through your past entries. You can then re-submit an entry you've scrolled back to just by hitting Enter.

Several types of dice are not covered by these basic capabilities. Some game systems have dice with letters rather than numbers on the sides, or even images. In Warrior we use average dice, in which not all outcomes are equally likely. Roll20 supports these dice rolling use cases with something called "Rollable Tables", which we'll cover later when we talk about Collections.

Macros

When we discuss Collections we'll cover Macros in detail. For present purposes, know that any macro you have defined can be invoked in the Chat Window by preceding the name of the macro with the "#" sign. For example, if you defined a macro called "mgc-swd" for your magic sword, and that macro rolled both a To Hit die and a damage die, you could invoke that in the Chat Window by typing "#mgc-swd".

For our purposes in Warrior, there are several common dice rolling combinations that can be simplified by defining and invoking macros. More on that later.

The Art Library

The Art Library enables digital art made outside of Roll20, such as player and NPC tokens, monsters, maps, and terrain, to be made available for use within Roll20. These fall into three categories:

- Premium Assets available to paid subscribers to Roll20;
- From the Web assets that, as far as Roll20 can tell, are available online under an Open Content license; these are available to all Roll20 users;
- Uploaded assets which a player or GM has uploaded directly.

Art Libraries are individual. In other words, a GM cannot share their library with players, and players cannot share libraries with each other. However, assets in the Art Library can be dragged from the library onto the tabletop (see Figure 1), and once on the tabletop a GM can give control of them to anyone.

By default, uploaded assets appear in the Recent Uploads section of My Library. Just click on My Library and scroll down until you see Recent Uploads. You can copy assets from Recent Uploads to My Library, or to a specific folder within My Library by right-clicking on the asset and selecting the desired choice from the pop-up menu (see Figure 2).

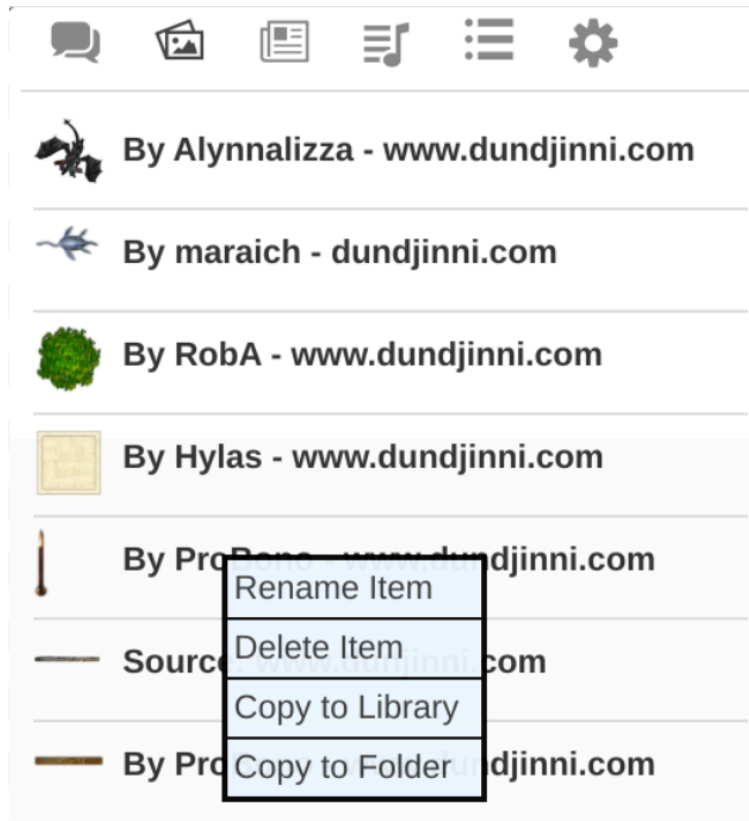


Figure 2

Figure 3 shows an example of a set of expandable folders in a library. Note, as also shown in Figure 3, that you can upload assets by clicking on the Upload button underneath My Library, and you can add new folders by clicking on the Add button underneath My Library.

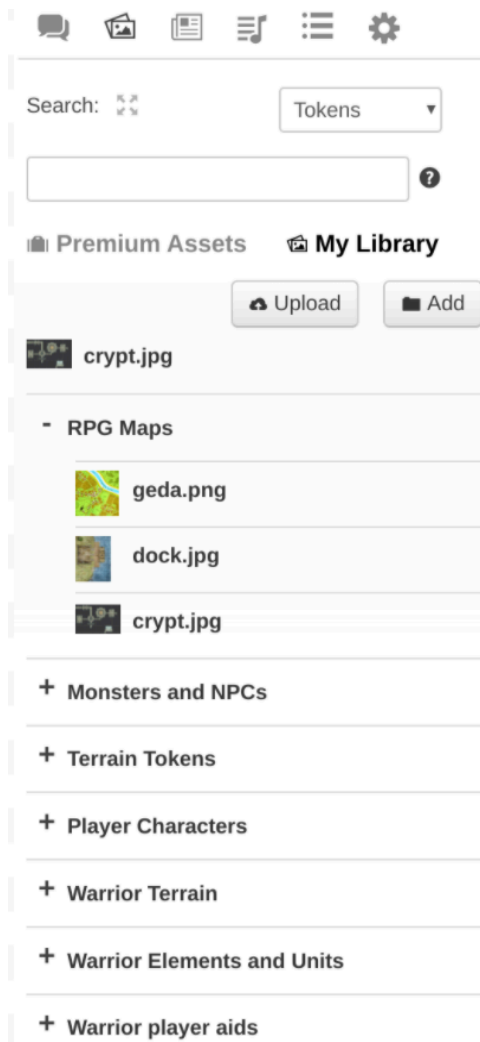


Figure 3

The Journal

The Journal allows a GM to share documents with players. Documents are either a Handout or a Character. The GM can also create folders in which to store documents, and there are two default folders that the Journal starts with; one called -- wait for it -- Handouts, and the other called Characters.

The GM controls who can see, and who can edit individual documents. This can be one or more players, or all players, or just the GM.

In Warrior we're using the Journal to store this and other tutorials, as well as general freely available information and player aids about Warrior.

The Collection

The Collection provides three customizable aids to game mechanics: macros, decks, and rollable tables. Macros are specific to a particular player; there is no way for a GM to create a macro that is shared to all players, so each player will need to create their own macros. Decks are shared to all players, but with visibility settings that can be customized. Entries on a rollable table are available to all players.

Macros

Let's suppose your cleric needs to roll 2D10 to attempt to turn undead, and if successful needs to roll 2D6 to determine the number of undead turned. This can be accomplished in the chat window by entering two die rolls:

/r 2d10

/r 2d6

Simple enough, but a lot of typing for a single action. Alternatively we can create a macro named "turn" by clicking on the Add button and filling in the form with the name and commands as shown in Figure 1.

Edit Macro

Name(Don't include the # or spaces in the name)

turn

Actions(One command/roll per line)

/r 2d10
/r 2d6

Type @ to insert variables from Characters
Type # to insert other macros

Test Macro

☒ Show as Token Action?

Save Changes Cancel

Figure 1

Now the whole macro can be invoked in the Chat window by typing “#turn”. Our newly created macro also shows up in the Macro section of Collections (see Figure 2). Note that the checkboxes for “Show macro quick bar” and “In Bar” have been selected. These options put a gray rectangle next to a player’s name on the tabletop, and put a button for any selected macro in that rectangle (see Figure 3). This creates an additional way to invoke a macro at the click of a button.

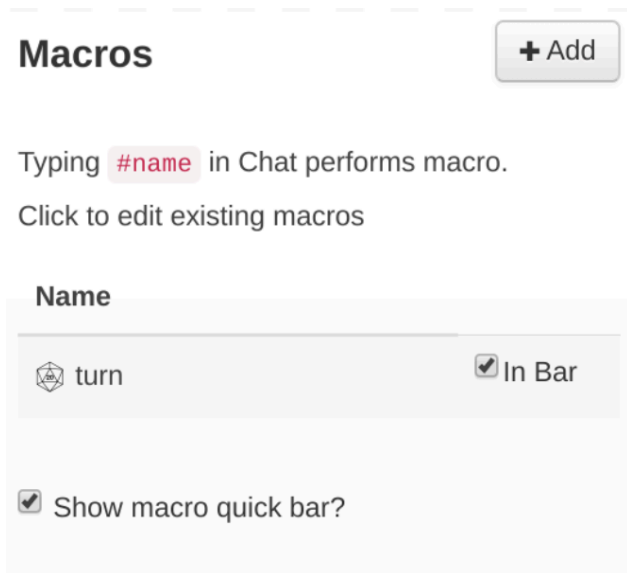


Figure 2

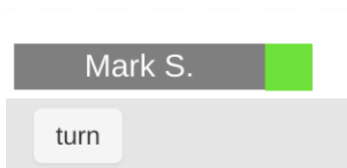


Figure 3

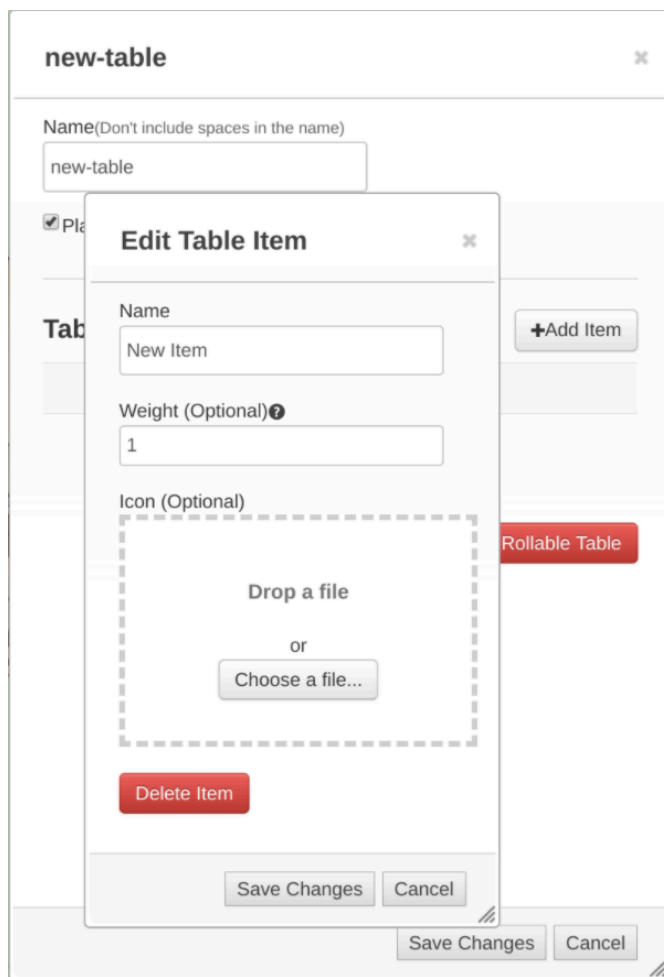
Decks

Creating a deck enables players to use Roll20 for the many games that involve card deck mechanics. In principle a deck could substitute for a non-standard die. For example, an average die could be an infinite deck of cards made up of the numbers 2, 3, 3, 4, 4, and 5. The mechanics for using decks in Roll20 are cumbersome for our purposes, and so we won't be discussing Decks further.

Rollable Tables

Many games, especially RPGs, involve custom dice with text or images on the face of a die or, as in *Warrior*, results that occur on more than one face of a die. For these use cases, you can use Roll20's Rollable Tables.

Under the Collection, under the Rollable Tables section, if you click on the Add button it will bring up a new table window, as shown in Figure 1. This will let you edit the name of the table. If you then click on the Add Item button, this will bring up the Edit Table Item window (also shown in Figure 1).



The image shows two overlapping windows from the Roll20 Rollable Tables interface. The background window is titled 'new-table' and contains a text input field for 'Name (Don't include spaces in the name)' with the value 'new-table'. Below this is a checkbox labeled 'Plz' which is checked. To the right of the input field is a '+Add Item' button. The foreground window is titled 'Edit Table Item' and contains three input fields: 'Name' with the value 'New Item', 'Weight (Optional)' with the value '1', and 'Icon (Optional)' which is a dashed box containing the text 'Drop a file or Choose a file...'. Below the icon field is a red 'Delete Item' button. At the bottom of the 'Edit Table Item' window are 'Save Changes' and 'Cancel' buttons. The background window also has 'Save Changes' and 'Cancel' buttons at the bottom right. A red 'Rollable Table' button is visible on the right side of the background window.

Figure 1

Under name, you can enter either text or numbers. Optionally you can associate an image with that table item. Crucially, you can assign a weight to a table item, which determines how likely that table item is to be selected compared to other table items. More on this in another tutorial.

Unlike macros, which are specific to a player, rollable tables are shared; any player can invoke a rollable table. The syntax is a little cumbersome. If you have a rollable table for average dice named “avg-die”, then you would use the following command:

```
/r 1t[avg-die]
```

Let’s explain the command elements so it’s easier to remember:

- “/r” - tells Roll20 that you want to roll something;
- “1t” - tells Roll20 that you want a rollable table, not a standard die;
- “[avg-die]” - Tells Roll20 the name of the rollable table from which you’d like a random result.

Remember, you have two ways you can avoid having to type out this cumbersome command every time:

- Scroll back in your chat history until you find your last use of this command;
- Create a macro.

My Settings

For the most part, the defaults in My Settings will work just fine. There are three settings worth adjusting.

Under Chat Avatars, there’s a setting for “Player video/avatar size”. To minimize how much space this avatar takes up on the tabletop, you’ll probably want to set this to “Names Only”.

Under Video + Audio Chat options, you’ll want to update this to “Roll20WebRTC (Chrome + Firefox)”, as shown in Figure 1. The older WebRTC client for Roll20 has poor audio quality.

Video + Audio Chat Options

Chat Tech: [Having Issues?](#)
Roll20 WebRTC (Chrome + Firefo ▾)

Audio Output Source:
audio-0 ▾

Audio Input Source:
▾

Video Input Source:
▾

I want to **broadcast** to others:
Nothing (disable) ▾

I want to **receive** from others:
Nothing (disable) ▾

Reconnect to chat and update settings:
Reconnect

Figure 1

Likely you'll be better off using a purpose-built application for audio and video chat. This isn't really Roll20's strength, and there is only one audio channel for all current activity in the account. Dedicated gaming chat services like Discord offer higher quality audio, and individual voice channels on demand. If you're using another application for audio/video, you'll want to disable Roll20's audio and video to avoid feedback problems. You can accomplish this by switching to "Nothing" under the Broadcast and the Receive settings.