T3Dmake

Tower Defense Archery Game Kit

Unity Asset Store

Thank you for purchasing the TD Archery GameKit

INTRODUCTION

I really enjoyed playing Tiny Archers on my phone (which is also made with Unity) and decided to make a game kit for this type of games. This kit lets you create tower defense games easier. Aim and shoot to keep the enemies away from your castle. Lots of enemies will try to destroy your castle and they attack from everywhere!
The editors will make customization easier and everything works with mobile devices.

To use the kit, please import everything into your project and go to window – TD Archery GameKit. This window contains all the global settings like aiming sensitivity, characters and special arrows.

Additionally, it's very important to check the *Project settings* – *Time* – *Fixed timestep* setting. Please make sure it's about 0.01 to make the arrow hit more accurate.

PROJECT STRUCTURE

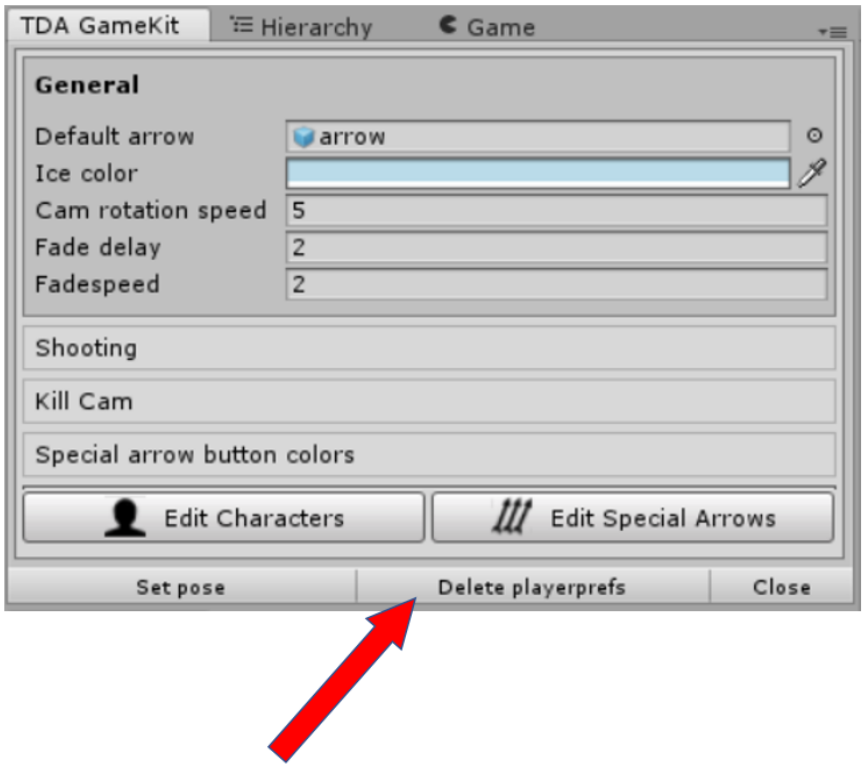
The project contains quite a lot of folders and it might be important to understand the structure. There are 3 main folders; 'Assets', 'Documentation' and 'Editors & game data'. The documentation of course just contains this document. The assets folder is the most important one since it contains everything from models & scripts to sounds. Then there's also the editors & game data folder. You should never delete these things since all windows and custom editors rely on them. If you want, you can take a look at the scripts and resources but you shouldn't change these.

The animators folder contains both the character animators and the UI animators/animations. The font folder probably speaks for itself, the models folder contains all models ranging from enemies to towers and the particles folder contains a few images and materials for particle effects.

The prefabs folder is divided in a lot of subfolders. This is to organize things better. These probably speak for themselves as well. The scenes folder contains a separate levels folder for levels but that's not really necessary. Then there's scripts, sounds, textures and UI. The main folders are the *UI – Enemy images* folder and the *UI – Special arrow images* folder. These contain the images for enemies and arrows that players can see in game.

SAVE & LOAD

Everything in the game kit is saved using Unity's PlayerPrefs. These work on mobile devices and pc and are very handy to use. If you want to reset the game to have the default character and only the first level unlocked, you can open the main GameKit window and in the bottom, you should see a 'delete playerprefs' button.



TDA GAMEKIT WINDOW

In the game kit window, you'll find all general settings:

- The default arrow is the arrow used when no special arrow is selected. Every archer can shoot this arrow.
- The ice color is the color used when freezing enemies.
- The cam rotation speed is the speed at which the main camera rotates towards the enemies. This shouldn't be too slow since it would make the game way harder.
- The fade delay is the time before fading in a UI panel and the fade speed is the speed at which the UI fades. A speed of 2 means the panel would fade twice in one second so the fade effect then takes 0.5 seconds.
- Sensitivity is the aiming sensitivity when dragging your mouse/finger.
- Max aim rotation is the maximum rotation when aiming to prevent the character from aiming for the wrong side of the tower.
- Max line steps is the maximum amount of prediction line steps (the white line when aiming) when it doesn't hit anything. To make the line accurate, it's good to have big colliders in your environment so the line can detect them.
- The kill cam timescale is the timescale when the kill cam is active. For example, 0.2 means the time goes 5x slower than normal speed. The duration is how long the kill cam lasts without tapping the screen and the kill cam chance is the chance of seeing a kill cam when shooting an enemy, where a bigger value will show the kill cam less often.

ARCHER SETUP

To set up a new archer there are two steps. First, we need to create the archer and then we also need to add it to the list.

To create the archer, please use these steps:

- Import your character.
- Make it humanoid. If you want to use your own animations, just keep them. If you want the default animations, you can uncheck *import animation*. Make sure your bow is set to generic and has animations as well. You can also use the default bow.
- Drag your character into the scene and copy/paste the player archer script from another archer prefab.
- If your character doesn't have a bow already, please add the bow to its hand bone. Also make sure it has an arrow in its right hand. For the arrow rotation/position you can copy the arrow rotation and position from the default archer prefabs. If you want your character in a certain pose, you can go to the TDA GameKit window and use the set pose option. This allows you to change the saved pose (for example open an animation and set it to the frame of the pose you want) and then paste that pose on your character. You can also paste a t pose.
- Now, in the player archer script replace the bow, idle arrow, spine, animator and chest. Also assign the animator controller. You can use the default one and if you have your own animations, please copy one of the archer animators and add your own animations to it.
- Then add the audiosources and assign them to the player archer script. Also copy/paste the line renderer.

- Now name it and add your character to the prefabs.

Then create the ragdoll like this:

- Add a new archer model to the scene (of course it must look the same as the other one) with the bow.
- Instead of parenting the bow to its hand, please parent the bow to the main empty object. Give it a collider and a rigidbody so it will fall to the ground.
- Remove the bow and character animators.
- Now please go to *Game Object – 3D object -Ragdoll* and add all bones. Click create to generate the ragdoll.
- Also add the ragdoll to your prefabs.

To add the new character to the list, please open the TDA GameKit window and click ‘edit characters’**. In this list click the green plus icon to add a new one:**

- Assign your character and ragdoll prefabs.
- Choose a name for your character and set a price to unlock it.
- Now type a description and open the main menu to check your character.

ENEMY SETUP

To create a new enemy, please follow these steps:

- Import your enemy model and set it to humanoid. If you want to use your own animations, it should at least have a head shot, idle, leg hit, running and walking animation. The head shot can just be one frame and the other animations must be loop-able.
- Drag the model into the scene. Again, you can use the set pose tool to change the pose and make the setup easier.
- Now please copy the healthbar and legs collider objects from one of the other enemies and keep their names the same.
- Create your own animator by copying one of the existing ones to use your own animations or select a default animator controller for your character.
- Copy/paste the enemy script and change the healthbar, healthbar fill and leg objects.
- Copy/paste the rigidbody.
- Now, if you fold out one of the default enemies, you'll see a box collider on the chest bone and one on the head_end bone. Please copy/paste these on your enemy bones.
- Please make sure that you add the names of the bones that contain these colliders to the list of names in the arrow prefabs

Then drag the new enemy into your prefabs folder and setup your ragdoll like this:

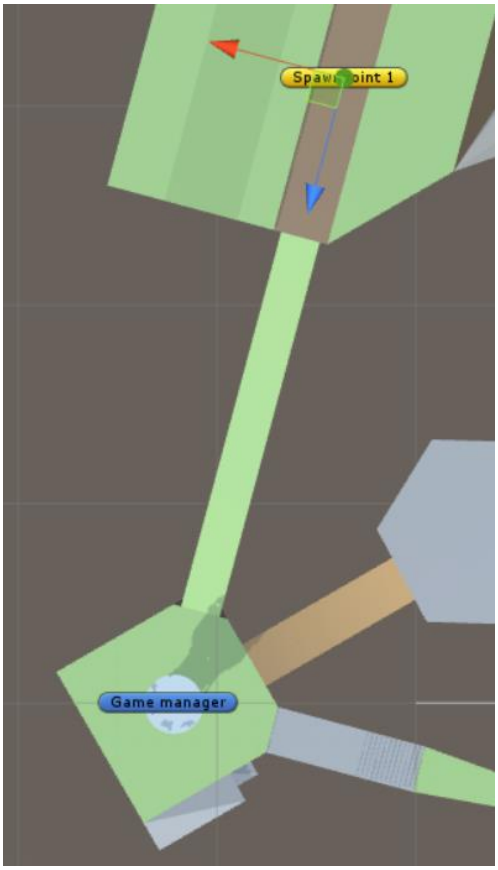
- Add the enemy model to your scene.
- Remove the animator.
- Generate the ragdoll.

- Add the ragdoll script to the root object of your ragdoll and assign the bones. For the random rotation, you can use something around 10 and for the lifetime something like 7 seconds.
- Now add the ragdoll to your prefabs and on your new enemy, select it in the ragdoll field.

Before actually adding your enemies to the spawner, please first set up your spawnpoints.

SPAWNER

The spawner spawns the enemies that battle the player. For the spawner to work, please first set up your spawnpoints. You can create new levels by copying levels and replacing the environment. The amount of spawnpoints of course depends on the number of roads in your level. At the end of each road, you should create one spawnpoint by dragging and dropping the spawnpoint prefab into your level. If you want to use range warnings, you should also copy/paste one range warning for each spawnpoint and rotate it accordingly. Please position the new spawnpoints just above the ground and rotate them towards the tower so it looks like this:



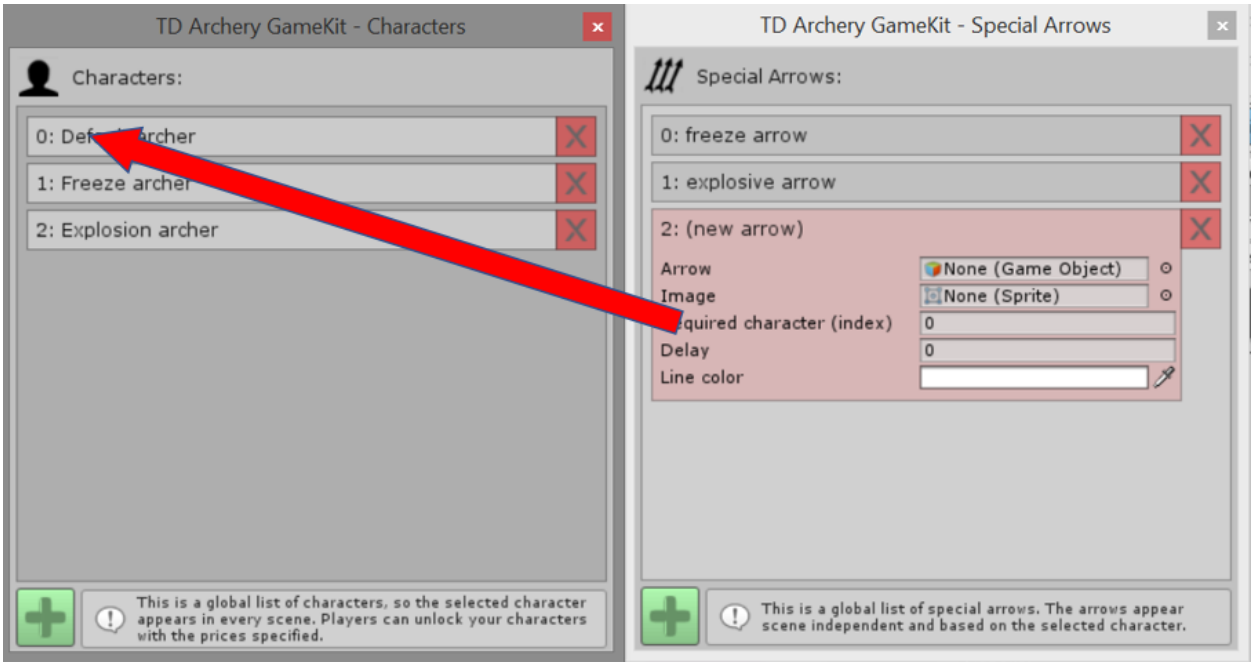
Then open the game manager and go to the spawnpoints tab. Here you can click the plus icon and add your spawnpoints and range warnings or disable range warnings with the button below the plus.

Now that you've set up your spawners, you can go to the enemies tab to add enemies, select the spawnpoints were they should be spawned, choose the delay after each enemy and if you want, reorder your enemies.

By checking the checkbox next to the yellow dropdown, you can let the new enemy popup appear. So, you should check this if this is the first time in the entire game that this enemy is spawned. Please note that the small image should be round with a transparent background.

SPECIAL ARROWS

When unlocking new characters you can also unlock new arrows automatically. The best way to setup different special arrows is to copy the default one, add your new functionality to it and go to the TDA GameKit window. If you click ‘edit special arrows’ you can add your new arrow here by clicking the plus icon. Please add your new prefab, create a round image for your arrow and choose which character is required to use the arrow. The delay is how long it takes the arrow to load after it’s been shot and the line color is the color of the prediction line just before shooting this arrow.



UNITY ADS

If you have ads enabled in your project, you can use the button in the main menu to show a rewarded add and reward the player with some coins. For this to work, you can enable ads in the service panel, go to the main menu scene and click the main menu manager.

You should see this appear:

Please enter your ads game id and specify the amount of coins players get by watching an ad. Also, while testing ads, you should have test mode enabled in the ads panel.

UNLOCKING NEW LEVELS

Of course, if you add new levels, players should be able to unlock them and open them. To do this, first add your level to the build settings. Then in the main menu add a level button (the first 12 have been added already so you won't need to add new buttons for those) and on the button object specify the scene in the *onclick* function. This should be the build index of your level.

Then in the level itself, please go to the game manager and set the next level button index. This is the index of the button that leads to the level after this level in the main menu list of level buttons.

CONCLUSION

I hope this game kit will be useful and you enjoy it. I've tried to give a clear explanation of the kit and if you're interested, all the code is commented. For any questions or suggestions, just contact me via:

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