

COMMON QUESTIONS & PROBLEMS / AI DESIGNER PRO & AI DESIGNER LITE

AI Designer Pro is a complex tool and there's a lot going on. The massive amount of features means its settings can be very sensitive. We don't want you to misclick or overlook a step and then spend hours wondering where an error is coming from. Hopefully, the solutions in this document will save your time. If not, there's always our contact email: aibotsystem@gmail.com, or www.aibotsystem.com

Is our website down? Our domain host has been giving us strange problems lately that is happening only to our account. Try reloading the page again. Also, email us about website issues at aibotsystem@gmail.com

This doc answers common questions and provides solutions to common problems.

Refer here FIRST whenever you're left scratching your head about something!

Technical Support: We want to respond to all our users quickly and on time – therefore, it slows down our response time for everyone else when we have to answer technical support questions that are already answered in this doc. So if you ask us a question that is already answered here, we might not reply, unless we have no other tech support emails to reply to.

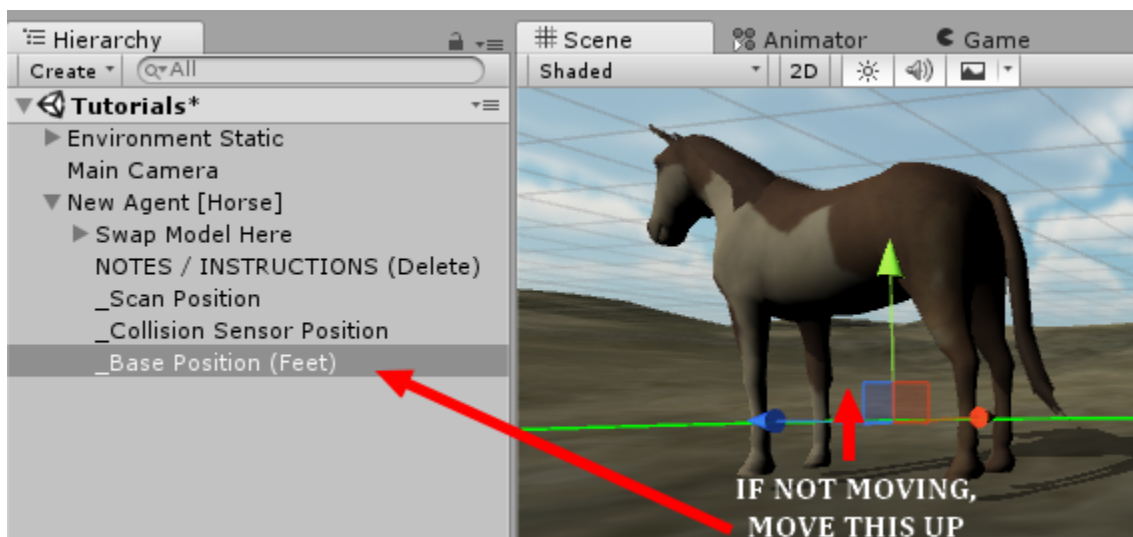
COMMON QUESTIONS

1) Missing files? Corrupted files? Errors when importing? Fail to import?

In the past, we were told by Unity that this can happen if you downloaded the product with a firewall or proxy turned on. If your downloaded package was corrupted, has missing files, or some other strange problem, send us an email with your Unity Asset Store INVOICE # so we can send you a fresh package.

2) My character isn't moving when it's supposed to. I set everything up correctly.

- a) Try adjusting the capsule or other collider. Make sure it's not overlapping ground.
- b) Adjust the “_Base Position”, move it up a bit and don't put it exactly at feet...like this:



3) My scene is really slow! The Profiler is very laggy. What's going on?

Most low FPS situations are caused by unoptimized graphics - models, textures, materials OR, too many messages printed to Console. If you're using 2k-4k textures and have a ton of objects in the scene, your game will run slow and it's not an issue with AI Designer. **Try playing your scene before adding any AI. This includes adding character models with AI removed Does it still run slow?** If not, then let's figure out what part of AI Designer is causing the performance bottleneck.

Checklist:

- 1) Check how many messages are in the Console. If 100-999+, this is causing the issue. You can turn off the Print to Console actions in the AI Brains if that's what you enabled.
- 2) Turn off "Emit Noise" (this is not sound effects, but noise data sent to nearby AI to alert them). Go to your AI's Movement Controller and find the "Emit Noise" setting. Turn it off. Emitting movement noise is extremely CPU intensive. Remember, this isn't playing sounds – it's emitting non-audible data sent to nearby AI to detect enemies without sight. You most likely won't need this unless you're making a stealth game.
- 3) How many agents are in your scene? Try starting at a low number, testing it, and slowly increasing it until you hit a significant FPS drop. AI Designer was performance-tested on mid-tier computers from 2014 and 15-30 agents fighting simultaneously have been no issue. If you have 15+ agents and experience major lag, then both your character models and AI settings need to be further optimized.
- 4) Is your character model very realistic? High poly? 4K textures? You should add an LOD system to it to tone down the graphics. Also, consider not using all 4K textures unless you're certain your players' computers can handle it.
- 5) How many components are on your AI? Lower the amount of features you use. The reason we split up all the components (jump controller is separate from brain, separate from movement, etc.) is so you only use what you need.
- 6) The Unity Profiler can actually slows down the game A LOT, because it has to calculate performance and print it all to a fancy graph. Close the Profiler and run the scene again – things should be a lot smoother.

4) What is 'Culling System'? / How do I use Culling?

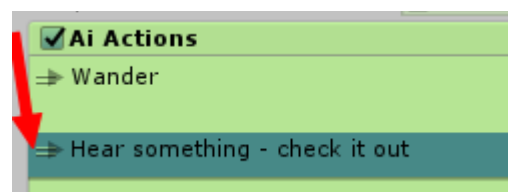
The culling system allows each AI character to turn itself off, or hide its renderers (graphics) when it gets too far from your Main Camera (a camera in your scene tagged as Main Camera). This lets you place more AI agents in a scene and still have nice FPS. To use this, pick the AI you want this on, and go to Components → AI Designer Pro → Performance & Culling

5) Why do my bots have a 'Performance Cache'?

It's an optimization tool used by the AI engine for better performance. Never remove this as AI will break if done so.

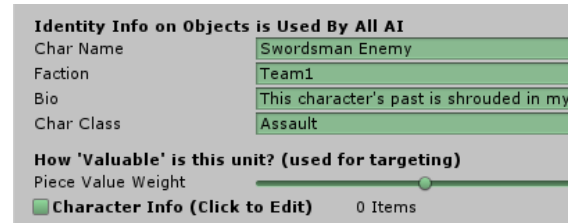
6) How to delete an action in Brain?

First, select the action. You can select it by clicking it a bit off to the left side (see image). Next you can either Right-Click it and click Delete. Or, click the – minus button on the bottom right.



7) Where to set a bot's faction?

On the IDENTITY component. If your AI or player doesn't have one, add one from Components Menu → Identity → Add Identity



8) Where to set friendly/enemy factions for the AI to attack?

On the AWARENESS component there's 2 slots where you can insert Faction names for Enemy/Friendlies. The AI will attack the faction tags in the Enemy list.

9) "NavMesh" errors? "Agent must be placed on NavMesh..." errors?

On the Movement Controller, you selected "Standard" pathfinding, which requires your scene to have a Baked NavMesh (see Unity docs). If you don't want to bake a NavMesh, use "Simple" pathfinding, but the AI will have difficulty navigating complex rooms.

10) Why can't my AI find its way around my room / map?

Most likely you're picked "Simple" pathfinding on the Movement Controller. If you have many obstacles or walls in your scene, the "Simple" pathfinding will have trouble finding its way out. **Switch to "Standard" pathfinding. You'll need to bake the scene's NavMesh before playing.**

11) My AI isn't shooting any bullets; I have everything set up and the shoot animation is playing.

Most likely your scene is missing an Object Pool. Without an Object Pool, or if the bullet type isn't added to the Pool, then no bullets will be fired. Please go to AI Designer / Prefabs and drag the "Object Pool" prefab into your scene. Then, add the bullet type to the Object Pool. So if your AI shoots a "Blue Bullet" object, insert that prefab type (not a prefab in your scene) to the Object Pool.

12) My AI runs in circles nonstop.

This can be the result of 2 config issues:

1) Movement Controller Speed + Rotation: If MaxSpeed is too high and Rotation Speed is too low, the AI will almost always overshoot its intended position, then turn back and overshoot it again, resulting in an endless loop. But if the MaxSpeed is too low and Rotation Speed too high, then the AI might rotate farther than it intended, and veer off course. Don't use extreme values for either. For normal humanoid walking speed, a MaxSpeed of 2-3 and Rotation Speed of 0.8-2 should be fine. For fast jets, a MaxSpeed can be up to 300 with a rotation speed of around 6 (see the Aerial Racing demo). For vehicles, a MaxSpeed of 40-80 and Rotation of 2-4 should be fine.

2) Movement Controller Stop Distance: Your stop distance is either too low or too high. For normal humanoids, the stop distance can be around 1.5 – 3. For fast objects like vehicles, set this a bit higher, like 5. If the stop distance is too high, the AI may stop suddenly before reaching the target. If your scene has many narrow walls or hallways, make stop distance smaller or AI may stop on the other side of an intended destination.

2) Waypoints out of reach. Waypoints are usually used by the Patrol Controller. Please check the Y-position of each waypoint and adjust. Make sure the AI can reach. Y-position must be a little bit above ground level.

13) Where to enable Melee / Ranged attacks?

Melee & Ranged attacks are enabled/disabled on the TARGETING Controller. Melee and Ranged attack RANGES are also set on the TARGETING Controller. But you set up Melee and Ranged Attack

parameters on their specific controllers. So you might have Melee/Shooting set up on individual components, but to actually allow the AI to use Melee or Ranged attacks, you need to tweak the Targeting Controller. The reason the melee/ranged on/off are on the TARGETING Controller instead of individual Melee/Ranged attack components is because the Targeting Controller requires the Melee and Shoot range you specify in order to decide who to target.

14) How to use Hit-scan/Raycast shooting? What does that even mean?

Hit-scan shooting is only available in the Pro version of AI Designer. It is only found on the Ranged Attack ADV controller and lets you switch between Projectile-based or Hit-scan. Hit-scan and raycast shooting mean the same – they instantly hit a target and deal damage. This differs from Projectile-based shooting where a bullet object actually has to spend time flying across the scene which may or may not hit something. Hit-scan is good for snipers and fast weaponry. Projectile-based is good for slower blaster fire, arrows, rockets, cannons, etc.

15) Why is my Melee attack not working?

The melee system is dependent on your Mechanim animations for swinging motions. If a melee weapon or arm can't swing out to hit something, nothing will be hit.

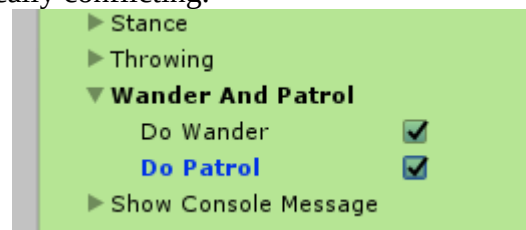
Make sure checklist:

- 1) Make sure your Melee animation is set up in Mechanim
- 2) You created an Effects Builder effect that has the name of your Melee animation inserted into it. Make sure you check both Mechanim Animator “Enable” and “Play Animation State”.
- 3) Your melee weapon is inserted as a child to the bone rig (usually the hand bone). That way, when the attack animation plays, the attached weapon swings with the hand. If you're not using a weapon (e.g. character's fists), then go to #4.
- 4) The attached weapon must be dragged into the “Melee Weapon Model” slot of the Melee Attack Basic Controller. If you're not using an attached weapon (e.g. character's fists), then find his right or left hand bone and drag that into the Melee Weapon Model.
- 5) Make sure your melee weapon model has a “Melee Weapon” component attached. If not, go to Components Menu → AI Designer → Damage Senders → Send Melee Damage.

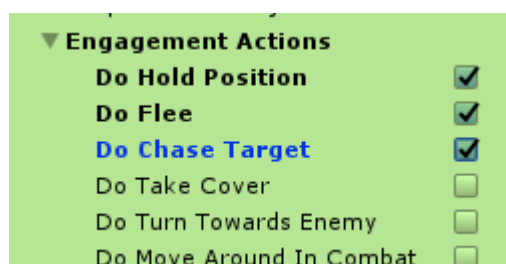
16) Why is my Brain Action acting strange?

You probably have multiple actions selected, that are logically conflicting.

For example, this is wrong and may result in strangeness: Why? Because Wander means moving without a purpose. Patrol means moving along a pre-defined route. The two functions cannot work simultaneously.



Another example: This is also wrong, because you cannot Hold position (stay in same spot), but also Flee and Chase a target all at the same time:



17) Why does editor preview play slow?

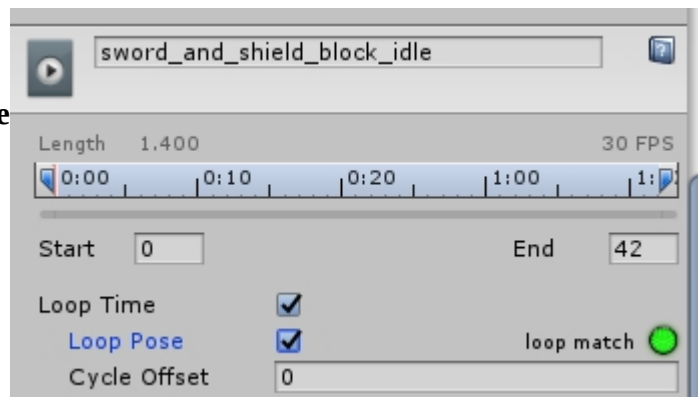
If your game is playing slow in the Editor, but not the Build, then try closing the Profiler window. Also, check if another Third-Party asset with a complex editor window isn't slowing things down.

18) How to setup wheels on vehicle AI? How to make them spin?

On the Movement Controller, there's a section near the bottom for Vehicle wheels. First, make sure your vehicle's wheels are SEPARATE models attached to the car. That way, they can spin individually. Then, drag each wheel into the Movement Controller's wheel slots.

19) Why do my Idle/Move animations stop?

Custom animations for Idle / Walk / Run / any movement **needs to be set to Loop / Loop Pose** or else they'll only play once.

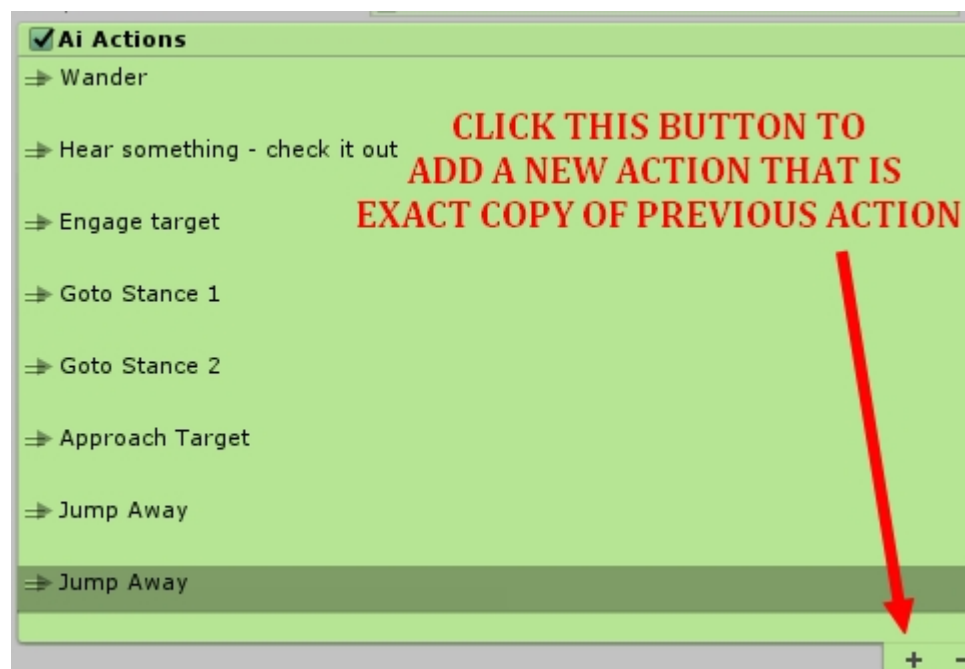


20) How to duplicate an existing bot quickly?

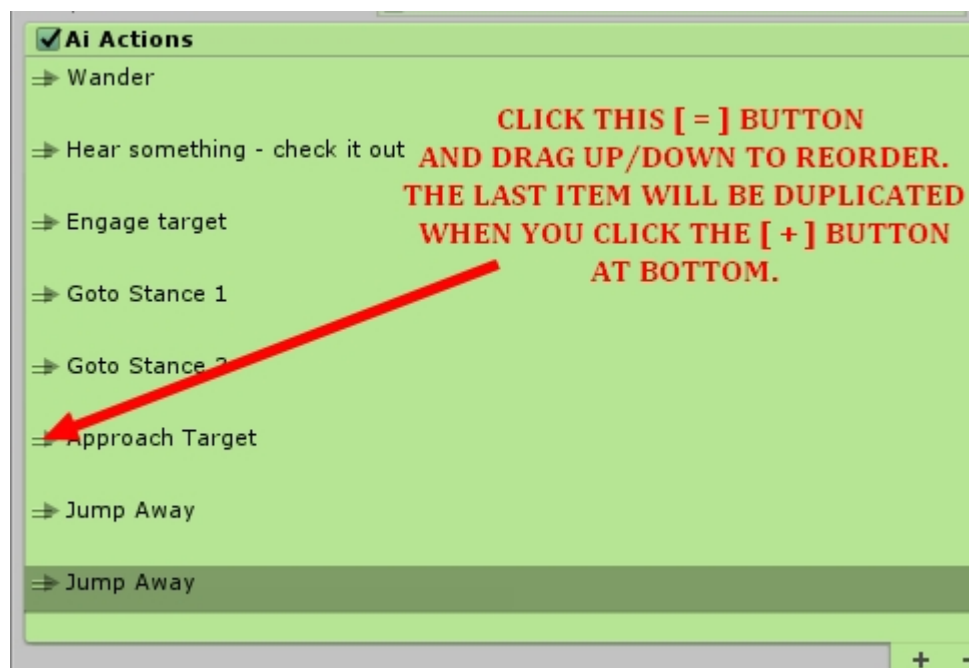
So you spent a lot of time tweaking a bot and want to create a similar one without having to setup everything again. Easy:

- 1) Duplicate the AI character in scene
- 2) Open up "Swap Model Here" and drop in your new character model (raw, nothing attached)
- 3) You may want to un-child any attached weapons on the original model's bones
- 4) Delete the previous model
- 5) On the main AI prefab, find the Animator and swap out the Avatar to match the new model's
- 6) Tweak the Capsule collider settings to fit the new model.
- 7) Rename and drag your new AI character into your /Assets/ folder to make a new prefab out of it

21) How to duplicate Brain Actions? Duplicate flags?



22) How to reorder actions?



23) Stuck at waypoint / run in circles / fix?

This can be a config issue in the Movement Controller. Go there and set Rotation to a higher number, like 5 or 12. Another cause of this is a low stop distance – set it higher.

This can also be an issue with the Y-position (height) of your Patrol waypoints, if you're using them. They must not be out of reach and Y-position must be a little bit above ground level.

24) AI isn't rotating to target or player?

Check capsule collider - most movement errors are due to this, especially on a new AI in the scene. The collider must fit the AI's model. None of the collider must be overlapping ground or the AI will neither move nor rotate, or simply act strangely.

25) How do I spawn an explosion effect when a bot dies?

Use the Effects Builder for most stuff like this.

- 1) Go to Effects Builder, add an effect, name it "Death"
- 2) Under "Spawn Objects", insert your explosion effect prefab
- 3) Now go to the AI's Health component.
- 4) Find where it says "On Death", here type in the effect name you picked earlier, "Death"
- 5) You're done. Now whenever the AI is killed, it will trigger the effect on the Effects Builder.

26) Why isn't my AI performing actions? I have it set up in the Brain but it's not doing anything?

You most likely need to add the associated Controller. For example, if you selected "Do Wander" as the action in the Brain, but you don't have a "Wander Controller" attached, then it will not do anything. Make sure your AI has the proper Controller attached.

(See Components Menu → AI Designer → Controllers)

Question not answered? Email us at aibotsystem@gmail.com

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