



RPG Game Framework

Complete Data-Driven RPG System for Unreal Engine 5

Version 2.0.0

UE 5.6 / 5.7



Navigation System — NEW

Multiplayer Ready

Quick Start — 10 Minutes

1 Enable Plugin

Edit → Plugins → search "RPG Game Framework" → check Enabled → restart editor.

2 Add Components

Open your Character Blueprint → Add Component → search and add any of these 9 components:

- **RPG Stats Component** — HP, Mana, Stamina, 6 primary stats, 16 derived stats
- **RPG Leveling Component** — XP, levels, stat/skill points
- **RPG Inventory Component** — items, gold, weight, stacking
- **RPG Equipment Component** — 16 gear slots, set bonuses, durability
- **RPG Skill Component** — skill trees, cooldowns, 10-slot hotbar
- **RPG Quest Component** — quests, 12 objective types, rewards
- **RPG Dialogue Component** — branching NPC conversations, flags
- **RPG Navigation Component** NEW — minimap, world map, compass, waypoints, fog of war
- **RPG Save Component** — save/load all data (add LAST — auto-discovers others)

3 Create & Assign DataTables

Right-click Content Browser → **Miscellaneous** → **DataTable** → pick the Row Structure → fill in rows → assign to component in Details panel. See the DataTables section for exact column names.

4 Test

In BeginPlay: `Inventory→AddItemByID("HealthPotion", 5)` , `Inventory→AddGold(100)` → Press Play.

💡 Done!

The Save Component auto-discovers all other RPG components. No manual wiring needed.

All DataTables — Complete Reference

Every DataTable with every column. ★ **Required** = you should fill this. Optional = has a default, skip if not needed.

How to Create a DataTable

In Content Browser: **Right-click** → **Miscellaneous** → **DataTable**. In the popup, search the Row Structure name (e.g. type "RPGItemData"). Name your table (e.g. "DT_Items"). Double-click to open and add rows. **Row Name** = unique ID string (e.g. "HealthPotion").

DT_Items — All Items

Row Structure: `FRPGItemData`. Assign to **RPG Inventory Component** → **Item Data Table**.

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>ItemID</code> ★	FName	None	Unique ID — must match Row Name
<code>DisplayName</code> ★	FText	—	Name shown in UI ("Health Potion")
<code>Description</code>	FText	—	Tooltip description
<code>Icon</code>	UTexture2D*	null	Inventory icon
<code>ItemType</code> ★	ERPGItemType	Miscellaneous	Consumable / Equipment / Weapon / Material / QuestItem / Currency / Miscellaneous
<code>Rarity</code>	ERPGItemRarity	Common	Common / Uncommon / Rare / Epic / Legendary / Mythic
<code>MaxStackSize</code>	int32	99	How many per stack (1 = no stacking)
<code>Weight</code>	float	0.1	Weight per unit
<code>BuyPrice</code>	int32	0	Shop buy price
<code>SellPrice</code>	int32	0	Shop sell price

COLUMN	TYPE	DEFAULT	DESCRIPTION
EquipmentSlot	ERPGEquipmentSlot	None	For Equipment/Weapon: Head, Chest, Legs, Feet, MainHand, OffHand, etc.
WeaponType	ERPGWeaponType	None	For Weapons: Sword, Axe, Bow, Staff, etc.
ArmorType	ERPGArmorType	None	For Equipment: Cloth, Leather, Mail, Plate
StatBonuses	FRPGItemStatBonus	all 0	Stats this equipment gives (see sub-struct below)
SetID	FName	None	Equipment set ID (matches DT_SetBonuses)
MaxDurability	int32	100	0 = no durability system
ConsumableEffect	FRPGConsumableEffect	all 0	What happens when consumed (see sub-struct below)
Cooldown	float	0	Cooldown after use (seconds)

COLUMN	TYPE	DEFAULT	DESCRIPTION
Requirements	FRPGItemRequirements	all 0	Level/stat requirements to equip
WorldMesh	TSoftObjectPtr<StaticMesh>	null	Mesh for dropped item in world
EquippedMesh	TSoftObjectPtr<SkeletalMesh>	null	Mesh when equipped on character
bCanSell	bool	true	Can be sold to shops
bCanDrop	bool	true	Can be dropped on ground
bCanDestroy	bool	true	Can be destroyed/discarded
bIsUnique	bool	false	Only one can exist in inventory
bBindOnPickup	bool	false	Soulbound on pickup
bBindOnEquip	bool	false	Soulbound when equipped

↳ **FRPGItemStatBonus (inside StatBonuses)**

Expand the StatBonuses row in the DataTable editor to see these fields. Set only what you need — everything defaults to 0.

FIELD	TYPE	DESCRIPTION
Strength	int32	+STR bonus
Dexterity	int32	+DEX bonus
Intelligence	int32	+INT bonus
Vitality	int32	+VIT bonus
Wisdom	int32	+WIS bonus
Luck	int32	+LCK bonus
MaxHealth	float	Flat HP bonus
MaxMana	float	Flat Mana bonus
MaxStamina	float	Flat Stamina bonus
PhysicalDamage	float	Flat phys damage bonus
MagicDamage	float	Flat magic damage bonus
PhysicalDefense	float	Flat phys defense
MagicDefense	float	Flat magic defense
CriticalChance	float	+Crit chance %
CriticalDamage	float	+Crit damage %

FIELD	TYPE	DESCRIPTION
Evasion	float	+Evasion
Accuracy	float	+Accuracy
AttackSpeed	float	+Attack speed

↳ FRPGConsumableEffect (inside ConsumableEffect)

Only for Consumable items. Expand in editor. All defaults to 0 / false.

FIELD	TYPE	DESCRIPTION
HealthRestore	float	HP to restore (e.g. 50)
ManaRestore	float	Mana to restore
StaminaRestore	float	Stamina to restore
bIsPercentage	bool	true = values are % of max (e.g. 0.5 = 50%)
Duration	float	0 = instant, >0 = over time (seconds)
TemporaryStatBonus	FRPGItemStatBonus	Temp buff stats (same struct as above)
XPGain	int64	XP granted on use
ApplyBuffID	FName	Custom buff ID to apply
RemoveDebuffID	FName	Custom debuff ID to remove

↳ FRPGItemRequirements (inside Requirements)

Equipment requirements. All default to 0 (no requirement). Level defaults to 1.

FIELD	TYPE	DESCRIPTION
RequiredLevel	int32	Min character level (default: 1)
RequiredStrength	int32	Min STR needed
RequiredDexterity	int32	Min DEX needed
RequiredIntelligence	int32	Min INT needed
RequiredVitality	int32	Min VIT needed
RequiredWisdom	int32	Min WIS needed

💡 Minimal Item Example

To add a simple Health Potion, you only need: Row Name = "HealthPotion", ItemID = "HealthPotion", DisplayName = "Health Potion", ItemType = Consumable, ConsumableEffect → HealthRestore = 50. Everything else can stay at defaults.

DT_Skills — Skill Definitions

Row Structure: FRPGSkillData . Assign to **RPG Skill Component** → **Skill Data Table**.

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>SkillID</code> ★	FName	None	Unique ID
<code>DisplayName</code> ★	FText	—	Name shown in UI
<code>Description</code>	FText	—	Skill tooltip
<code>Icon</code>	UTexture2D*	null	Skill icon
<code>SkillType</code> ★	ERPGSkillType	Active	Active / Passive / Toggle / Ultimate
<code>TargetType</code>	ERPGSkillTarget	Self	Self / SingleEnemy / SingleAlly / AllEnemies / AoE / Cone / Line / Ground
<code>DamageType</code>	ERPGDamageType	Physical	Physical / Magic / Fire / Ice / Lightning / Poison / Holy / Dark / Pure
<code>Cost</code>	FRPGSkillCost	0	Mana / Stamina / Health cost
<code>DamageScaling</code>	FRPGSkillScaling	—	Damage formula scaling
<code>Cooldown</code>	float	0	Seconds between uses
<code>MaxLevel</code>	int32	1	Max upgradeable level
<code>RequiredCharacterLevel</code>	int32	1	Min level to learn
<code>RequiredSkillIDs</code>	TArray<FName>	empty	Prerequisite skills

DT_SkillTrees — Skill Tree Layouts

Row Structure: `FRPGSkillTreeData` . Assign to **RPG Skill Component** → **Skill Tree Data Table**.

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>TreeID</code> ★	FName	None	Unique tree ID ("CombatTree")
<code>TreeName</code> ★	FText	—	Display name ("Combat")
<code>Description</code>	FText	—	Tree description
<code>Icon</code>	UTexture2D*	null	Tree icon
<code>AllowedClassIDs</code>	TArray<FName>	empty	Which classes can access (empty = all)
<code>Nodes</code> ★	TArray<FRPGSkillTreeNode>	empty	Skill nodes in this tree

↳ FRPGSkillTreeNode (each entry in Nodes array)

FIELD	TYPE	DESCRIPTION
<code>SkillID</code> ★	FName	Must match a row in DT_Skills
<code>Position</code>	FVector2D	X/Y for UI layout
<code>PrerequisiteSkillIDs</code>	TArray<FName>	Skills that must be unlocked first
<code>RequiredPointsInTree</code>	int32	Min skill points spent in this tree

DT_Quests — Quest Definitions

Row Structure: `FRPGQuestData` . Assign to **RPG Quest Component** → **Quest Data Table**.

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>QuestID</code> ★	FName	None	Unique quest ID
<code>DisplayName</code> ★	FText	—	Quest name in journal
<code>Description</code>	FText	—	Quest description
<code>QuestType</code>	ERPGQuestType	—	Main / Side / Daily / etc.
<code>Objectives</code> ★	TArray<FRPGQuestObjective>	empty	Quest objectives
<code>Rewards</code>	FRPGQuestReward	—	XP, Gold, Items
<code>RequiredLevel</code>	int32	0	Level requirement
<code>RequiredCompletedQuests</code>	TArray<FName>	empty	Prerequisite quests
<code>TimeLimit</code>	float	0	0 = no time limit
<code>bCanAbandon</code>	bool	true	Player can abandon
<code>bAutoComplete</code>	bool	true	Complete when all objectives done

DT_Dialogues — Dialogue Trees

Row Structure: `FRPGDialogueData` . Assign to **RPG Dialogue Component** → **Dialogue Data Table**.

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>DialogueID</code> ★	FName	None	Unique ID
<code>DialogueName</code>	FText	—	Editor reference name
<code>NPCID</code> ★	FName	None	Which NPC this dialogue belongs to
<code>StartNodeID</code> ★	FName	None	First node in conversation
<code>Nodes</code> ★	TArray<FRPGDialogueNode>	empty	All dialogue nodes
<code>Priority</code>	int32	0	Higher = checked first
<code>StartConditions</code>	TArray<FRPGDialogueCondition>	empty	Conditions to start dialogue
<code>bOneTimeOnly</code>	bool	false	Can only play once
<code>bMarkAsSeen</code>	bool	true	Mark as seen after playing
<code>bIsCinematic</code>	bool	false	Disable player control
<code>bCanSkip</code>	bool	true	Player can skip

DT_StatsConfig — Stat Scaling (Optional)

Row Structure: `FRPGPrimaryStatConfig` . Assign to **RPG Stats Component** → **Stats Config Table**.

 **This table is optional**

Without it, hardcoded defaults apply: $VIT \times 10 \rightarrow \text{HP}$, $INT \times 5 + WIS \times 5 \rightarrow \text{Mana}$, $STR \times 1 \rightarrow \text{PhysDmg}$, etc. Create this table to customize exactly how each stat scales.

COLUMN	TYPE	DEFAULT	DESCRIPTION
StatType ★	ERPGPrimaryStat	Strength	Which stat: Strength / Dexterity / Intelligence / Vitality / Wisdom / Luck
DisplayName	FText	—	Name shown in UI
Description	FText	—	Tooltip for stat
BaseValue	int32	10	Starting value
MinValue	int32	1	Minimum allowed
MaxValue	int32	999	Maximum allowed
Icon	UTexture2D*	null	Stat icon for UI
MaxHealthPerPoint	float	0	HP gained per 1 point in this stat
MaxManaPerPoint	float	0	Mana per point
MaxStaminaPerPoint	float	0	Stamina per point
PhysicalDamagePerPoint	float	0	PhysDmg per point
MagicDamagePerPoint	float	0	MagicDmg per point
PhysicalDefensePerPoint	float	0	PhysDef per point
MagicDefensePerPoint	float	0	MagicDef per point

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>CritChancePerPoint</code>	float	0	Crit % per point
<code>CritDamagePerPoint</code>	float	0	Crit damage % per point
<code>EvasionPerPoint</code>	float	0	Evasion per point
<code>AccuracyPerPoint</code>	float	0	Accuracy per point

💡 **Example: Vitality Row**

Row Name = "Vitality", StatType = Vitality, BaseValue = 10, MaxHealthPerPoint = 10.0, MaxStaminaPerPoint = 5.0, PhysicalDefensePerPoint = 0.5

DT_Classes — Character Classes (Optional)

Row Structure: `FRPGCharacterClassData` . Assign to **RPG Stats Component** → **Class Data Table**.

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>ClassID</code> ★	FName	None	Unique ID ("Warrior")
<code>ClassName</code>	FText	—	Display name
<code>Description</code>	FText	—	Class description
<code>Icon</code>	UTexture2D*	null	Class icon
<code>BaseStrength</code>	int32	10	Starting STR
<code>BaseDexterity</code>	int32	10	Starting DEX
<code>BaseIntelligence</code>	int32	10	Starting INT
<code>BaseVitality</code>	int32	10	Starting VIT
<code>BaseWisdom</code>	int32	10	Starting WIS
<code>BaseLuck</code>	int32	10	Starting LCK
<code>StrengthGrowth</code>	float	1.0	STR gained per level
<code>DexterityGrowth</code>	float	1.0	DEX per level
<code>IntelligenceGrowth</code>	float	1.0	INT per level
<code>VitalityGrowth</code>	float	1.0	VIT per level
<code>WisdomGrowth</code>	float	1.0	WIS per level

COLUMN	TYPE	DEFAULT	DESCRIPTION
LuckGrowth	float	1.0	LCK per level
StartingSkillIDs	TArray<FName>	empty	Skills unlocked at start
AllowedWeaponTypes	TArray<FName>	empty	Weapon types this class can equip
AllowedArmorTypes	TArray<FName>	empty	Armor types this class can equip

DT_LevelData — XP Per Level (Optional)

Row Structure: FRPGLevelData . Assign to Leveling Component.

COLUMN	TYPE	DEFAULT	DESCRIPTION
<code>Level</code> ★	int32	1	Level number
<code>XPRequired</code> ★	int64	0	XP needed for this level
<code>TotalXPToLevel</code>	int64	0	Cumulative XP
<code>StatPointsAwarded</code>	int32	5	Stat points given
<code>SkillPointsAwarded</code>	int32	1	Skill points given
<code>UnlockedSkillIDs</code>	TArray<FName>	empty	Auto-unlock skills at this level
<code>UnlockedQuestIDs</code>	TArray<FName>	empty	Quests that become available
<code>HealthBonus</code>	float	0	Flat HP bonus at this level
<code>ManaBonus</code>	float	0	Flat Mana bonus
<code>StaminaBonus</code>	float	0	Flat Stamina bonus

DT_SetBonuses — Equipment Set Bonuses (Optional)

Row Structure: `FRPGSetBonusData`. Assign to Equipment Component.

COLUMN	TYPE	DEFAULT	DESCRIPTION
SetID ★	FName	None	Must match SetID on items in DT_Items
SetName	FText	—	Display name ("Dragon Armor")
SetItemIDs	TArray<FName>	empty	All item IDs in the set
PieceBonuses	TMap<int32, FRPGItemStatBonus>	empty	Key = piece count → Value = stat bonus. Example: 2→{+50HP}, 4→{+100HP, +20Def}
PieceAbilities	TMap<int32, FName>	empty	Key = piece count → Value = ability ID unlocked

Summary — Which Tables Go Where

COMPONENT	PROPERTY NAME (DETAILS PANEL)	DATATABLE	ROW STRUCTURE	REQUIRED?
RPG Inventory	Item Data Table	DT_Items	FRPGItemData	★ Yes
RPG Skill	Skill Data Table	DT_Skills	FRPGSkillData	★ Yes
RPG Skill	Skill Tree Data Table	DT_SkillTrees	FRPGSkillTreeData	Optional
RPG Quest	Quest Data Table	DT_Requests	FRPGQuestData	★ Yes
RPG Dialogue	Dialogue Data Table	DT_Dialogues	FRPGDialogueData	★ Yes
RPG Stats	Stats Config Table	DT_StatsConfig	FRPGPrimaryStatConfig	Optional
RPG Stats	Class Data Table	DT_Classes	FRPGCharacterClassData	Optional
RPG Leveling	Level Data Table	DT_LevelData	FRPGLevelData	Optional

COMPONENT	PROPERTY NAME (DETAILS PANEL)	DATATABLE	ROW STRUCTURE	REQUIRED?
RPG Equipment	Set Bonus Data Table	DT_SetBonuses	FRPGSetBonusData	Optional



Stats System

6 primary stats (STR, DEX, INT, VIT, WIS, LCK) → 16 derived stats → 3 resources (HP/MP/Stamina) with regeneration.

Key Functions

GetPrimaryStat , AllocateStatPoint , ModifyHealth/Mana/Stamina , ApplyDamage , ApplyHealing ,
 RollCritical , AddStatModifier , RemoveModifiersBySource , GetDerivedStat , GetHealthPercent ,
 SetHealthToMax , ResetAllocatedStats

Events

OnStatChanged , OnDerivedStatChanged , OnHealthChanged , OnManaChanged , OnStaminaChanged ,
 OnResourceChanged , OnDeath , OnStatsRecalculated

Leveling System

Key Functions

AddXP , AddXPWithBonus , GetCurrentLevel , GetCurrentXP , GetXPForNextLevel ,
GetXPProgressPercent , GetUnspentStatPoints , GetUnspentSkillPoints , SpendStatPoint ,
SpendSkillPoint , RefundAllStatPoints

Events

OnXP Gained (Amount, Source), OnLevelUp (FRPGLevelUpEvent), OnLevelChanged ,
OnStatPointsChanged , OnSkillPointsChanged

Inventory System

Key Functions

AddItemByID , RemoveItem , HasItem , GetItemCount , GetItemInSlot , GetItemData ,
GetAllSlots , UseItem , AddGold , RemoveGold , GetGold , SwapSlots , SplitStack ,
SortInventory , IsInventoryFull

Events

OnItemAdded , OnItemRemoved , OnItemUsed , OnGoldChanged , OnInventoryFull ,
OnInventoryChanged

Equipment System

Key Functions

EquipItem , UnequipItem , CanEquipItem , GetEquippedItem , GetTotalEquipmentStats ,
GetTotalWeaponDamage , GetTotalArmorValue , MeetsRequirements , GetRequirementFailReason ,
GetSetPieceCount

Events

OnItemEquipped , OnItemUnequipped , OnEquipmentChanged , OnSetBonusChanged

🌟 Skills System

Key Functions

UnlockSkill , LevelUpSkill , UseSkill , UseSkillFromHotkey , CanUseSkill ,
GetSkillUseFailReason , IsSkillOnCooldown , GetSkillCooldownRemaining , AssignSkillToHotkey ,
GetSkillInHotkey , GetAvailableSkills

Events

OnSkillUnlocked , OnSkillLevelUp , OnSkillUsed , OnSkillCooldownStarted , OnSkillCooldownEnded

Quest System

Key Functions

`AcceptQuest` , `AbandonQuest` , `CompleteQuest` , `AddObjectiveProgress` , `OnEnemyKilled` ,
`OnItemCollected` , `OnLocationReached` , `TrackQuest` , `GetActiveQuests` , `GetCompletedQuests` ,
`GetFailedQuests` , `GetQuestData` , `IsQuestCompleted`

Events

`OnQuestAccepted` , `OnQuestCompleted` , `OnQuestFailed` , `OnObjectiveProgress` ,
`OnObjectiveCompleted`

Quest ↔ Navigation

When `bAutoTrackQuests = true` on Navigation Component, quest objectives with `bShowOnMap = true` and valid `MarkerLocation` auto-appear on minimap, world map, and compass.

Dialogue System

Key Functions

StartDialogue , StartDialogueWithNPC , SelectResponse , AdvanceDialogue , GetCurrentNode ,
GetAvailableResponses , SetFlag , HasFlag , EndDialogue , HasDialogueAvailable ,
GetBestDialogueForNPC

Events

OnDialogueStarted , OnDialogueEnded , OnDialogueNodeChanged , OnResponseSelected , OnFlagSet



Navigation System

NEW in v2.0

Complete navigation backend: minimap, world map, markers, waypoints, compass, POI discovery, fog of war, path trail.

Configuration

PROPERTY	DEFAULT	DESCRIPTION
bEnableMinimap	true	SceneCapture2D minimap
MinimapCaptureHeight	5000	Camera height above player
MinimapCaptureSize	8000	Ortho width (world units)
MinimapResolution	512	Render target resolution
bRotateMinimapWithPlayer	true	Player always faces up
bEnableCompass	true	Compass data
CompassAngleRange	180°	Visible angle range
MaxWaypoints	5	Max player waypoints
bEnablePOIDiscovery	true	Auto-discover POIs
bEnableFogOfWar	true	Fog of war
FogCellSize	500	World units per cell
FogRevealRadius	3000	Player vision radius
FogTextureResolution	256	Fog texture resolution
bEnablePathTrail	false	NavMesh path to tracked marker

PROPERTY	DEFAULT	DESCRIPTION
bAutoTrackQuests	true	Auto-create markers from quests

Key Functions

Markers: AddMarker , AddActorMarker , RemoveMarker , RemoveMarkersByType , SetTrackedMarker , GetAllMarkers , GetMinimapMarkers , GetWorldMapMarkers

Waypoints: PlaceWaypoint , RemoveWaypoint , ClearAllWaypoints

Compass: GetCompassMarkers , GetPlayerYaw

POI: RegisterPOIAtActor , RegisterPOI , DiscoverPOI , SetPOIState , GetDiscoveredPOIs

World Map: WorldToMapUV , MapUVToWorld , GetPlayerMapPosition , GetCurrentZoneID , GetZoneInfo

Fog: GetFogOfWarTexture , IsLocationExplored , GetExplorationPercent , RevealArea , RevealAll

Minimap: GetMinimapRenderTarget , GetMinimapRotation , SetMinimapZoom

Path: GetPathTrailPoints , HasPathToTrackedMarker

Events

OnMarkerAdded , OnMarkerRemoved , OnTrackedMarkerChanged , OnPOIDiscovered , OnPOIStateChanged , OnZoneChanged , OnFogOfWarUpdated , OnPathTrailUpdated

How-To Guides (Blueprint)

How to: Add a Simple Item to DataTable

1 Create the DataTable

Content Browser → Right-click → Miscellaneous → DataTable. In the popup, search `RPGItemData` and select it. Name it `DT_Items`.

2 Add a Row

Double-click `DT_Items` to open. Click **Add** at the top. Set **Row Name** to `HealthPotion`.

3 Fill Required Fields Only

Set `ItemID` = `HealthPotion`, `DisplayName` = "Health Potion", `ItemType` = **Consumable**.

4 Set the Consumable Effect

Expand `ConsumableEffect` → set `HealthRestore` = `50`. Leave everything else at defaults.

5 Assign to Component

Select your RPG Inventory Component in the character → Details panel → **Item Data Table** → pick `DT_Items` .

💡 That's it!

Now `AddItemByID("HealthPotion", 5)` works. For equipment items, also fill `EquipmentSlot` and `StatBonuses` . For weapons, set `WeaponType` too.

How to: Add Equipment (Iron Sword)

1 In DT_Items, add row "IronSword"

`ItemID` = IronSword, `DisplayName` = "Iron Sword", `ItemType` = **Weapon**

2 Set equipment fields

`EquipmentSlot` = **MainHand**, `WeaponType` = **Sword**

3 Set stat bonuses

Expand `StatBonuses` → `PhysicalDamage` = 15, `Strength` = 3

4 Optionally set requirements

Expand `Requirements` → `RequiredLevel` = 5. Player below level 5 can't equip it.

How to: Build Health/Mana/Stamina Bars

WBP_ResourceBars – Event Construct

- ① Get Stats Component → Bind to `OnResourceChanged`
 - ② Switch on Resource enum → Update matching Progress Bar: `CurrentValue / MaxValue`
- Result: Real-time HP/MP/SP bars

How to: Equip from Inventory

Double-click inventory slot

- ① `InventoryComponent→GetItemInSlot(Index)`
- ② `EquipmentComponent→CanEquipItem(Item)` → false? → show fail reason
- ③ `EquipmentComponent→EquipItem(Item)` → old item auto-returns to inventory

How to: NPC Quest Giver

BP_QuestNPC – On Interact

- ① `QuestComponent→IsQuestCompleted(QuestID)` ? → turn-in dialogue
- ② Not active? → show offer → "Accept" → `AcceptQuest(QuestID)`
- ③ Kill objectives: enemy death → `OnEnemyKilled("GoblinID")`

How to: Save / Load

Save System

F5 → `SaveComponent→QuickSave()`

F9 → `SaveComponent→QuickLoad()`

Full: `SaveGame("Slot_01")` , `LoadGame("Slot_01")` , `GetAllSaveSlots()`

All 9 components persist automatically – Stats, Leveling, Inventory, Equipment, Skills, Quests, Dialogue, Navigation, Save

How to: Minimap NEW

WBP_Minimap – Circular Minimap

- ① Image widget → bind brush to `GetMinimapRenderTarget()`

② Tick: Rotate Image by `GetMinimapRotation()`

③ `GetMinimapMarkers()` → place icons at `MinimapPosition × WidgetRadius`

How to: Enemy Markers on Minimap NEW

BP_Enemy – BeginPlay

① `NavigationComp→AddActorMarker(Self, "Goblin", Enemy, Red)` → store MarkerID

② On death → `RemoveMarker(StoredMarkerID)`

Quick Reference — Enums

ENUM	VALUES
ERPGPrimaryStat	Strength, Dexterity, Intelligence, Vitality, Wisdom, Luck
ERPGDerivedStat	MaxHealth, MaxMana, MaxStamina, PhysicalDamage, MagicDamage, PhysicalDefense, MagicDefense, CriticalChance, CriticalDamage, Evasion, Accuracy, AttackSpeed, MovementSpeed, HealthRegen, ManaRegen, StaminaRegen
ERPGItemType	Consumable, Equipment, Weapon, Material, QuestItem, Currency, Miscellaneous
ERPGItemRarity	Common, Uncommon, Rare, Epic, Legendary, Mythic
ERPGEquipmentSlot	None, Head, Chest, Hands, Legs, Feet, Shoulders, Back, MainHand, OffHand, TwoHand, Ring1, Ring2, Necklace, Trinket1, Trinket2
ERPGWeaponType	None, Sword, Axe, Mace, Dagger, Spear, Bow, Crossbow, Staff, Wand, Shield, Greatsword, Greataxe, Scythe
ERPGArmorType	None, Cloth, Leather, Mail, Plate
ERPGSkillType	Active, Passive, Toggle, Ultimate
ERPGSkillTarget	Self, SingleEnemy, SingleAlly, AllEnemies, AllAllies, AreaOfEffect, Cone, Line, Ground
ERPGDamageType	Physical, Magic, Fire, Ice, Lightning, Poison, Holy, Dark, Pure

ENUM	VALUES
ERPGQuestState	Locked, Available, Active, Completed, Failed, Abandoned
ERPGObjectiveType	Kill, Collect, Deliver, TalkTo, Escort, Explore, Interact, Reach, Survive, Craft, UseSkill, Custom
ERPGMarkerType NEW	Player, Waypoint, QuestObjective, QuestTurnIn, NPC, Enemy, Shop, Chest, SavePoint, Teleporter, AreaEntrance, PartyMember, Custom
ERPGPOIState NEW	Hidden, Discovered, Visited, Completed

Troubleshooting

Can't add items to DataTable / DataTable empty

1. Did you pick the correct **Row Structure** when creating the DataTable? For items it must be `FRPGItemData` — search "RPGItemData" in the popup
2. After adding a row, set the **Row Name** (top-left of each row) — this is the lookup key
3. Make sure `ItemID` matches the Row Name exactly (case-sensitive)
4. Assign the DataTable to the correct component slot in Details panel

Item not appearing in inventory after AddItemByID

1. Is Item Data Table assigned on Inventory Component?
2. Does the ItemID string match the Row Name exactly? (case-sensitive!)
3. Is inventory full? Check `IsInventoryFull()`
4. Check return value of `AddItemByID` — false means it failed

Stats Config / Skill Tree / Class tables show "None"

These are **optional** DataTables. The plugin works without them using hardcoded defaults. To create them:

1. **Stats Config:** Create DataTable with row `FRPGPrimaryStatConfig` → assign to Stats Component → Stats Config Table
2. **Skill Trees:** Create DataTable with row `FRPGSkillTreeData` → assign to Skill Component → Skill Tree Data Table
3. **Classes:** Create DataTable with row `FRPGCharacterClassData` → assign to Stats Component → Class Data Table

Minimap shows black NEW

1. `bEnableMinimap = true` ?
2. `MinimapCaptureHeight` — too low = inside geometry
3. `GetMinimapRenderTarget()` returns valid reference?
4. Image widget brush bound to the render target?

Quest markers not showing NEW

1. `bAutoTrackQuests = true` ?
2. Quest Component on same actor as Navigation Component?
3. Quest objective has `bShowOnMap = true` AND `MarkerLocation ≠ (0,0,0)` ?

Equipment stats not applying

1. Stats Component on same actor as Equipment Component?
2. Item's `StatBonuses` filled in DataTable? (expand the struct)

💡 Debug Tips

Use Print String to verify values. Bind to component events and print when they fire. Check Output Log for warnings. For DataTable issues: open DT in editor and verify your row data is correct.

Support

Email: support@adrenalinegames.pl | Discord: **Adrenaline Games**

RPG Game Framework v2.0.0 — 9 Components, 11000+ lines of C++

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