

UE Plugin: System Mic Control

This plugin can control microphone devices in the Windows OS (mmsys.cpl) and for VOIP chat (Steam, EOS). It can set volume, mute, boost for microphone and change default microphone device in the system via UE project at runtime.

Supported Unreal Engine versions: 4.24 - 4.27; 5.0 - 5.6;

Supported target platforms: Windows;

Supported development platforms: Windows, Mac, Linux;

Please, check example projects: [ExamplePrjBP](#), [ExamplePrjBP-VOIP](#)

Remark:

Feature VOIP, SystemMicNotification supported for UE: 4.27; 5.0 - 5.6;

C++ Project configuration:

Open file <ProjectName>.Build.cs and add SystemMicControl to

PublicDependencyModuleNames.AddRange();

Open file <ProjectName>.uproject and add

```
"Plugins": [  
    {  
        "Name": "SystemMicControl",  
        "Enabled": true  
    }  
]
```

VOIP implementation:

For cpp/bp use only these methods/nodes:

SystemMicInit, SetVOIPMicDevice, GetVOIPMicDeviceInfo, GetSystemMicActiveDevices.

Make sure,

method/node SystemMicInit called on GameInstance on EventInit and

SetVOIPMicDevice is called only when the player is connected to the session on map.

Optional set define VOIP_EOS_ENABLED, by default VOIP_EOS_ENABLED=1

This define control reduce dependencies for EOS.

Open file <ProjectName>.Target.cs add GlobalDefinitions.Add("VOIP_EOS_ENABLED=0"),

Open file <ProjectName>Editor.Target.cs add bOverrideBuildEnvironment = true then

GlobalDefinitions.Add("VOIP_EOS_ENABLED=0"). That means EOS is disabled.

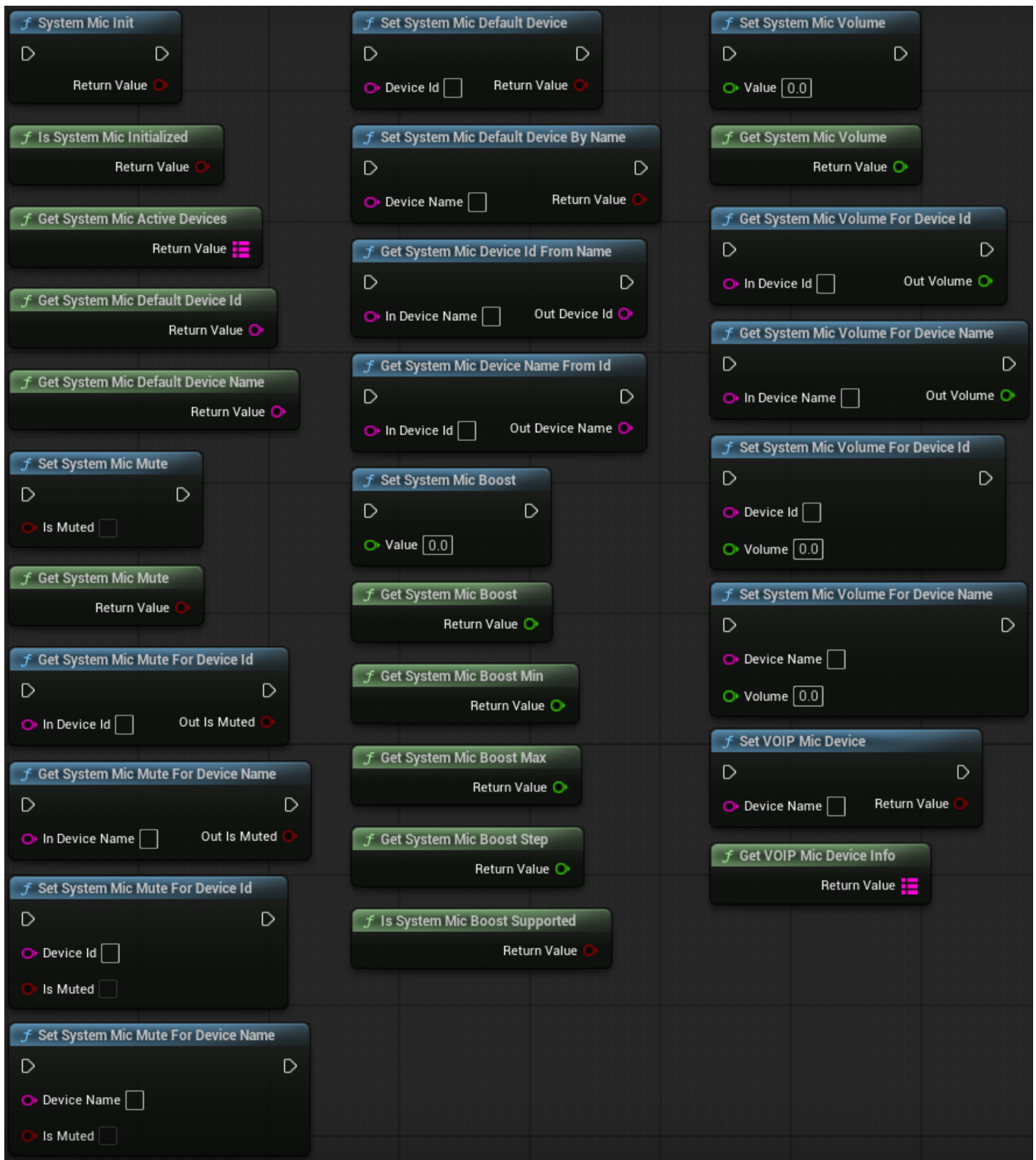
Contacts for questions:

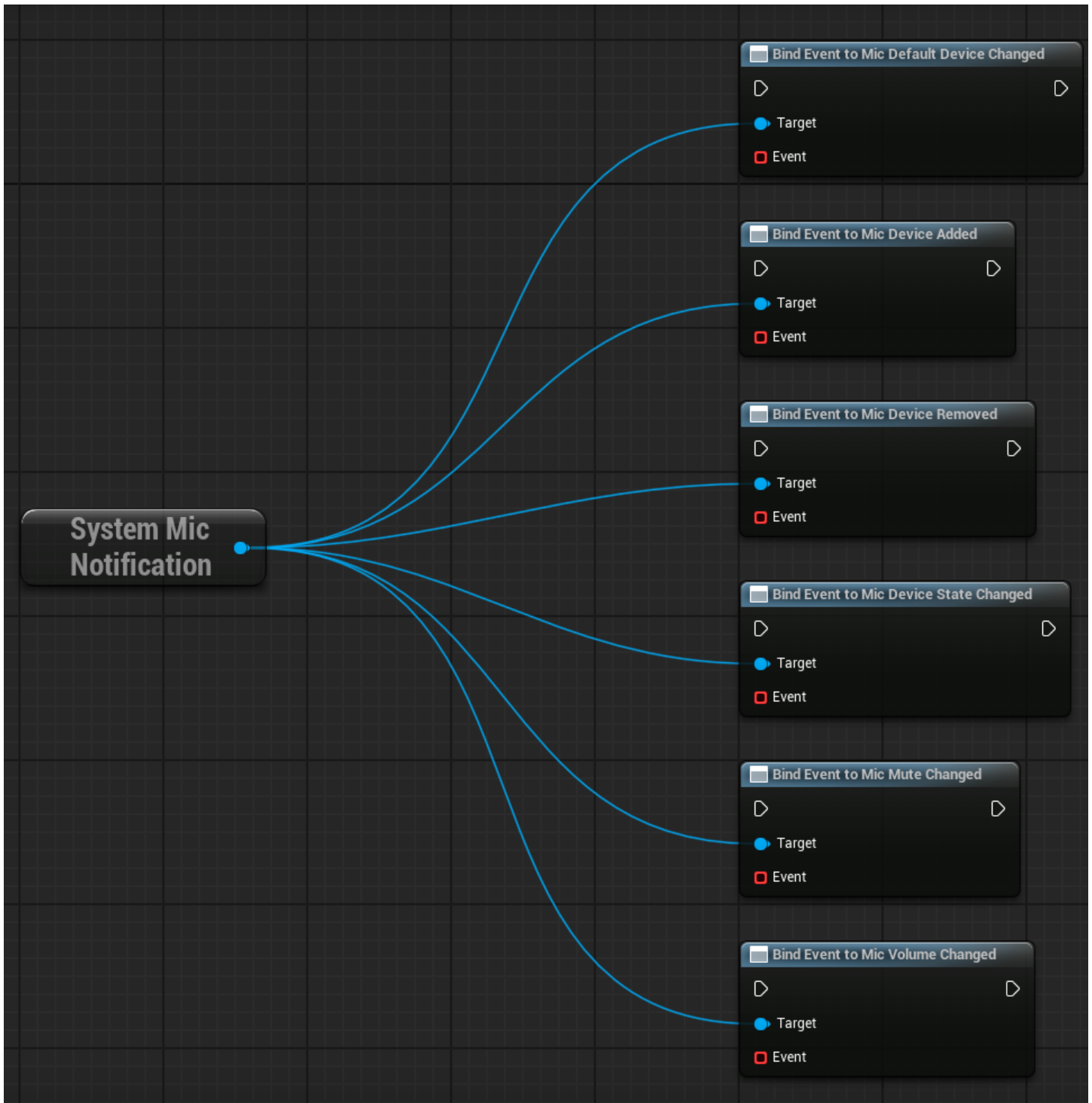
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C++/Blueprints functions:

- `bool Init / SystemMicInit ( );`
- `bool IsInitialized / IsSystemMicInitialized( );`
- `bool SetMicDefaultDevice / SetSystemMicDefaultDevice (const FString& DeviceId);`
- `bool SetMicDefaultDeviceByName / SetSystemMicDefaultDeviceByName(const FString& DeviceName);`
- `FString GetMicDefaultDeviceName / GetSystemMicDefaultDeviceName ( );`
- `FString GetMicDefaultDeviceId / GetSystemMicDefaultDeviceId ( );`
- `void GetMicDeviceIdFromName / GetSystemMicDeviceIdFromName (const FString& InDeviceName, FString& OutDeviceId);`
- `void GetMicDeviceNameFromId / GetSystemMicDeviceNameFromId (const FString& InDeviceId, FString& OutDeviceName);`
- `TMap<FString, FString> GetMicActiveDevices / GetSystemMicActiveDevices ( );`
- `void SetMicVolume / SetSystemMicVolume(float Value);`
- `void SetMicVolumeForDeviceId / SetSystemMicVolumeForDeviceId (const FString& DeviceId, float Volume);`
- `void SetMicVolumeForDeviceName / SetSystemMicVolumeForDeviceName (const FString& DeviceName, float Volume);`
- `float GetMicVolume / GetSystemMicVolume ( );`
- `void GetMicVolumeForDeviceId / GetSystemMicVolumeForDeviceId (const FString& InDeviceId, float& OutVolume);`
- `void GetMicVolumeForDeviceName / GetSystemMicVolumeForDeviceName (const FString& InDeviceName, float& OutVolume);`
- `void SetMicBoost / SetSystemMicBoost (float Value);`
- `float GetMicBoost / GetSystemMicBoost ( );`
- `float GetMicBoostMin / GetSystemMicBoostMin ( );`
- `float GetMicBoostMax / GetSystemMicBoostMax ( );`
- `float GetMicBoostStep / GetSystemMicBoostStep ( );`
- `bool IsMicBoostSupported / IsSystemMicBoostSupported ( );`
- `void SetMicMute / SetSystemMicMute (bool IsMuted);`
- `void SetMicMuteForDeviceId / SetSystemMicMuteForDeviceId (const FString& DeviceId, bool IsMuted);`
- `void SetMicMuteForDeviceName / SetSystemMicMuteForDeviceName (const FString& DeviceName, bool IsMuted);`
- `void SetMicMuteForDevices / SetSystemMicMuteForDevices (const FString& ExcludeDeviceId, bool IsMuted);`
- `bool GetMicMute / GetSystemMicMute ( );`
- `void GetMicMuteForDeviceId / GetSystemMicMuteForDeviceId (const FString& InDeviceId, bool& bOutMuted);`
- `void GetMicMuteForDeviceName / GetSystemMicMuteForDeviceName (const FString& InDeviceName, bool& bOutMuted);`
- `bool SetVOIPMicDevice (const FString& DeviceName); // supported for Steam, EOS`
- `TMap<FString, FString> GetVOIPMicDeviceInfo( ); // always contain only 1 element`



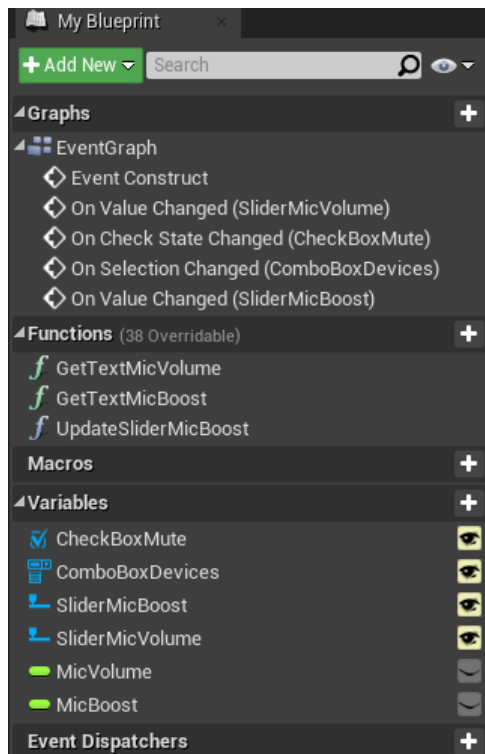


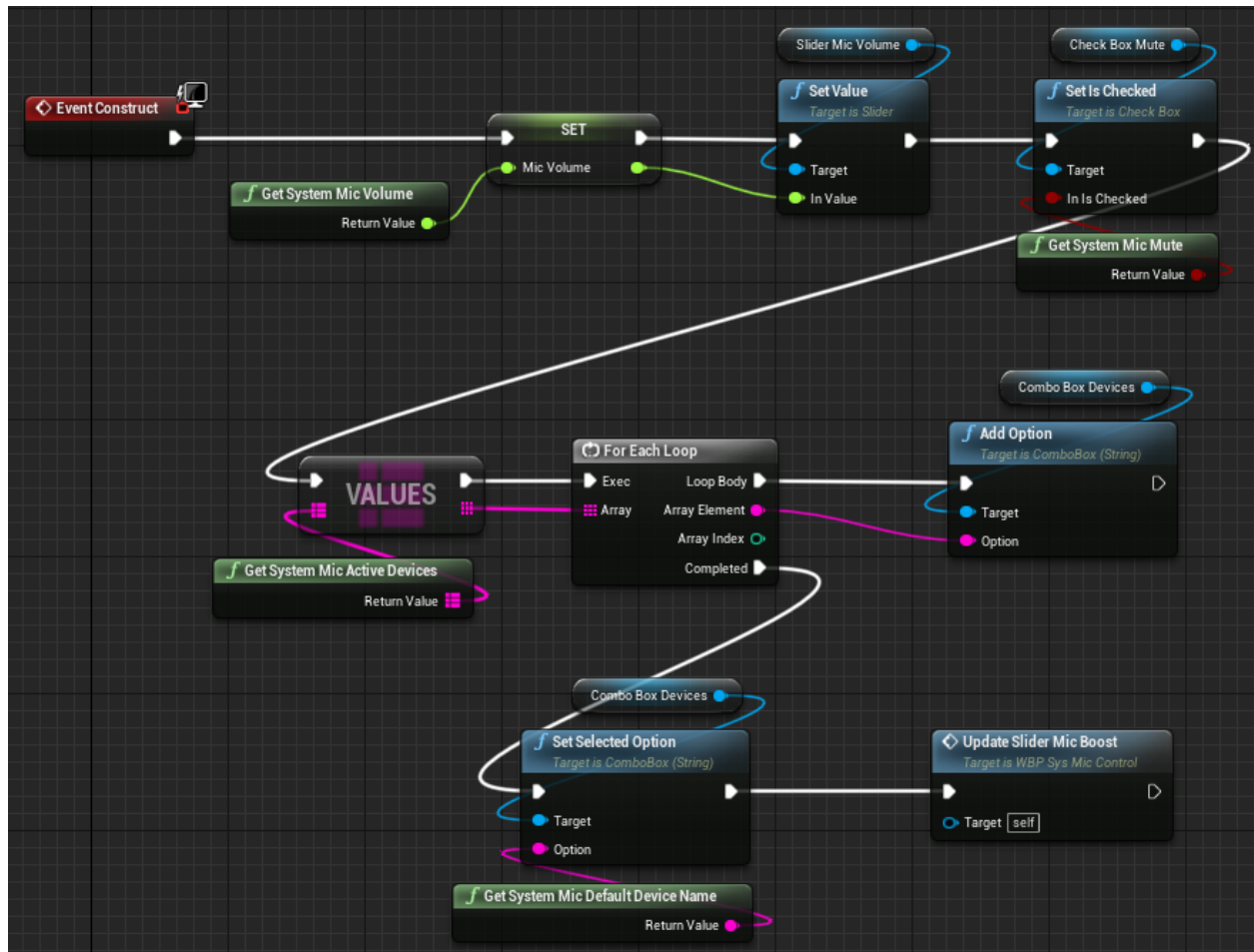
Please, check example projects: [ExamplePrjBP](#), [ExamplePrjBP-VOIP](#)



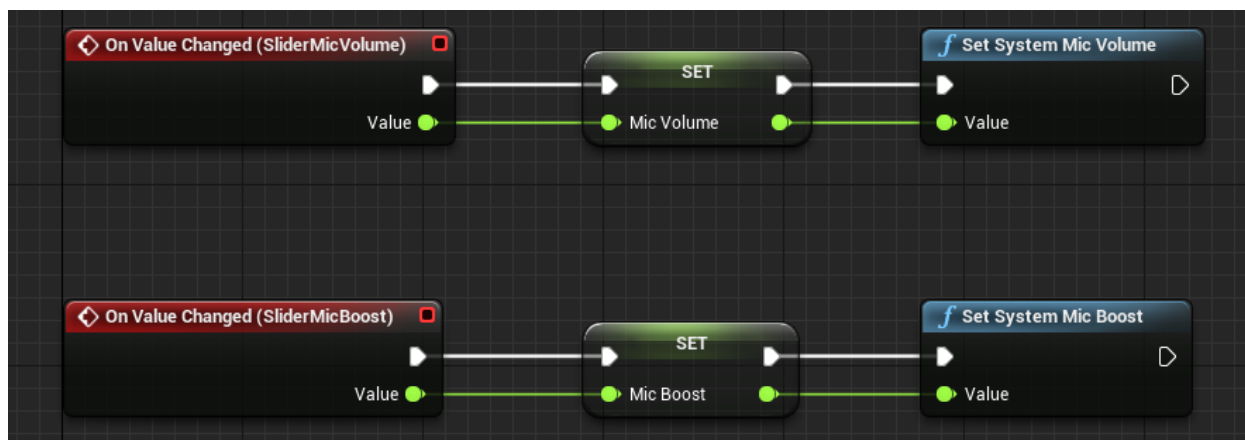
First Setup:

1. Create a blank UE4/5 project (blueprint or c++) and add blueprint widget to viewport;
2. Open widget blueprint and add two Sliders, one CheckBox, one ComboBox;

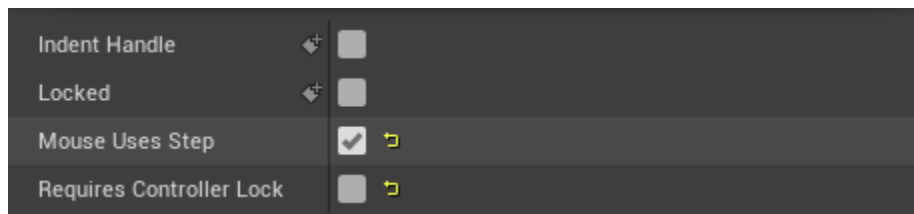




3. For Sliders: **SliderMicVolume**, **SliderMicBoost** add event On Value Changed;



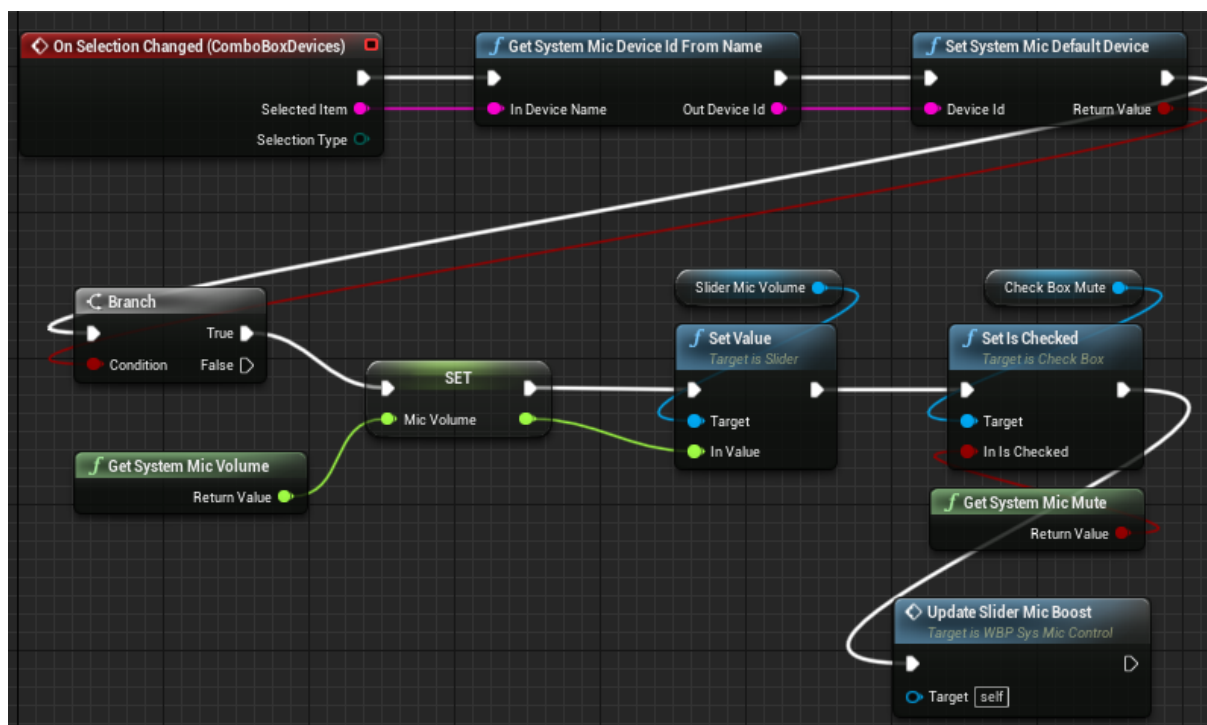
For **SliderMicBoost** Set Mouse Uses Step: true, Requires Controller Lock: false



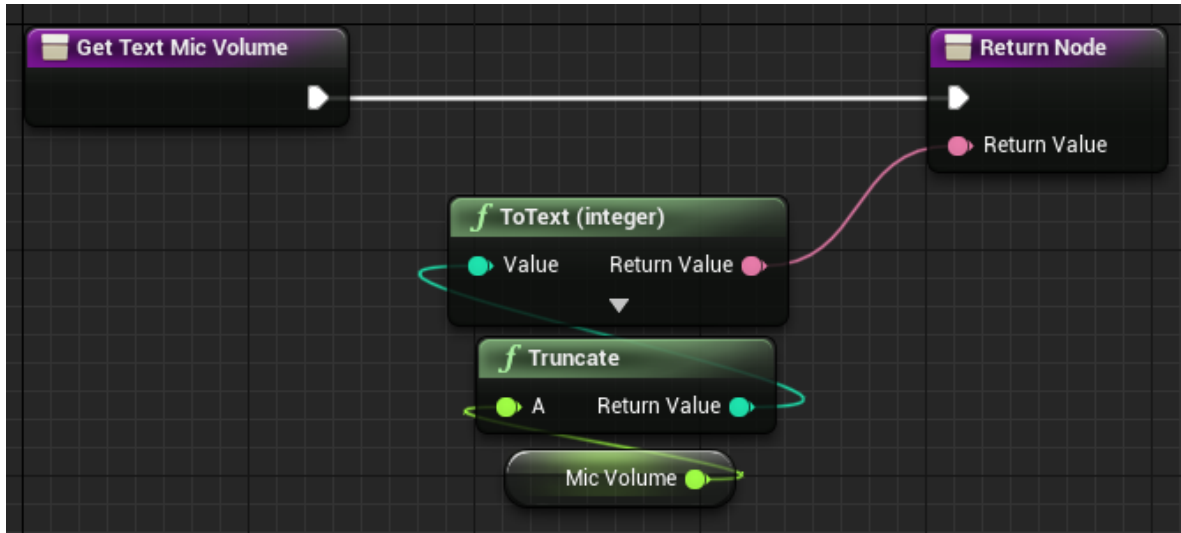
4. For CheckBox add event On Check State Changed;



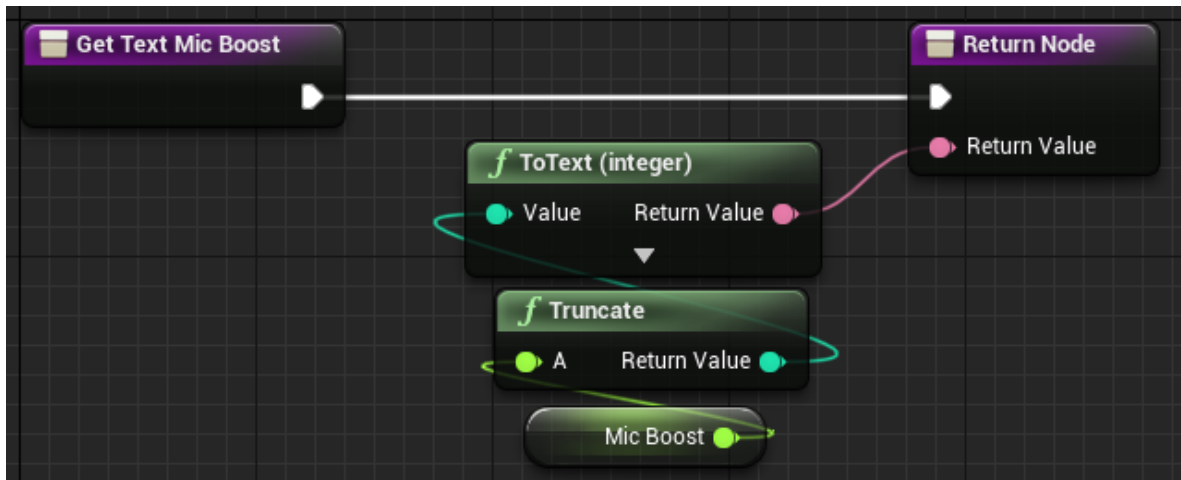
5. For ComboBox add event On Selection Changed;



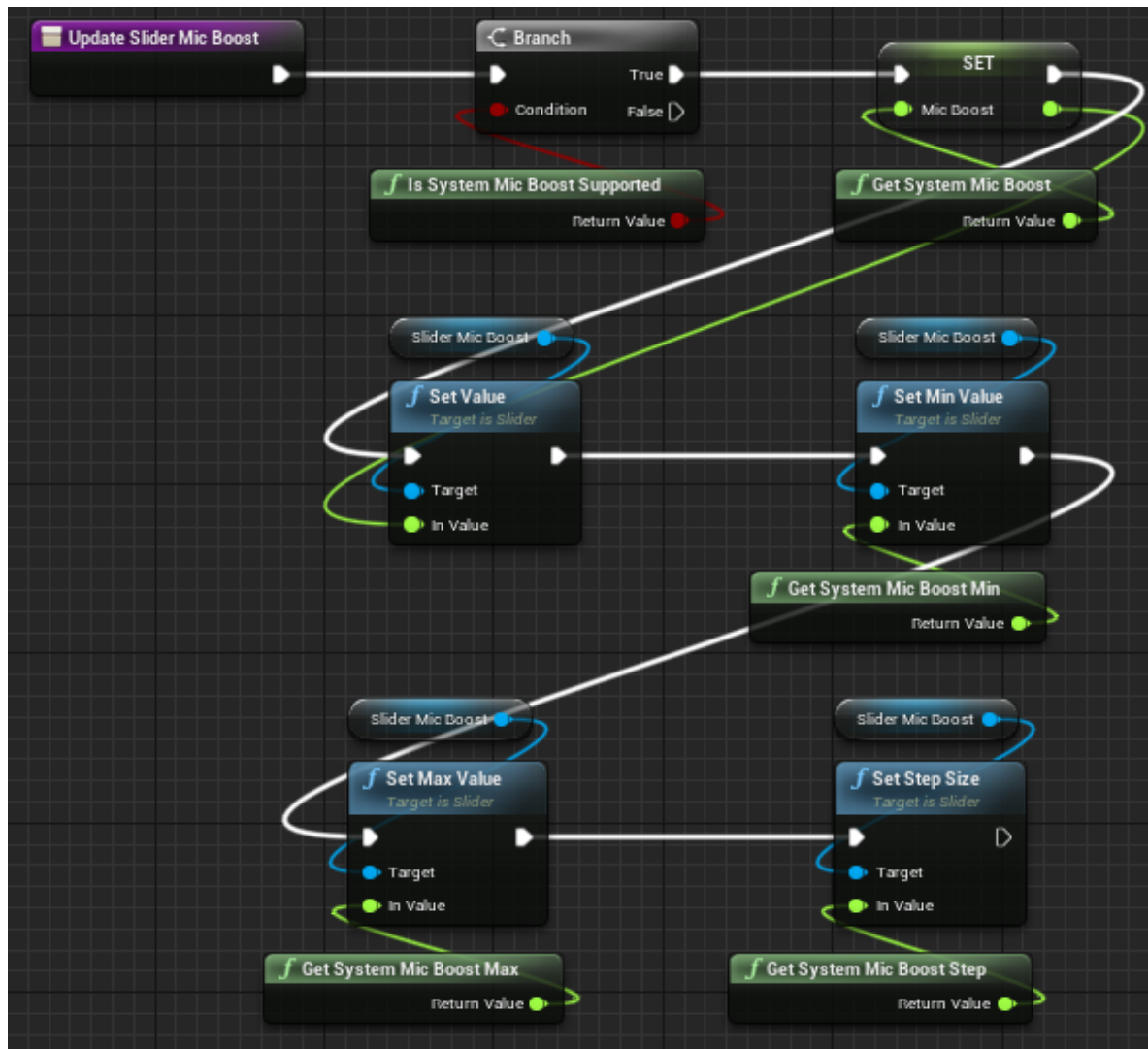
6. For TextBlock **MicVolume** add Bind for field Text function **GetTextMicVolume**;



7. For TextBlock **MicBoostVolume** add Bind for field Text function **GetTextMicBoost**;



8. Create function ***UpdateSliderMicBoost***



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