

#WWDC19

# User Preset Support for Audio Units

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# Presets

Provide a fine-tuned set of parameter values

Capture a snapshot of the state of the Audio Unit's parameters

Loading a preset restores the Audio Unit to the same state

# User Presets for Audio Unit Extensions

We already support factory presets:

```
open var factoryPresets: [AUAudioUnitPreset]? { get }
```

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```
open var factoryPresets: [AUAudioUnitPreset]? { get }
```

Provided by the Audio Unit Developer

Immutable, built into the Audio Unit

# User Presets for Audio Unit Extensions

NEW

```
open var userPresets: [AUAudioUnitPreset]? { get }
```

# User Presets for Audio Unit Extensions

NEW

```
open var userPresets: [AUAudioUnitPreset]? { get }
```

Created and managed by the user

Mutable

# New API

NEW

```
open var supportsUserPresets: Bool { get }
```

# New API

NEW

```
open var supportsUserPresets: Bool { get }
```

Set by the Audio Unit to opt-in

Checked by the host to verify support



# New API

NEW

```
open func saveUserPreset(_ userPreset: AUAudioUnitPreset) throws
open func deleteUserPreset(_ userPreset: AUAudioUnitPreset) throws
```

# New API

NEW

```
open func saveUserPreset(_ userPreset: AUAudioUnitPreset) throws
open func deleteUserPreset(_ userPreset: AUAudioUnitPreset) throws
```

Have default implementations in `AUAudioUnit`

Can be overridden to implement custom logic

# New API



NEW

```
open func presetState(for userPreset: AUAudioUnitPreset) throws -> [String : Any]
```

# New API



NEW

```
open func presetState(for userPreset: AUAudioUnitPreset) throws -> [String : Any]
```

Implemented in the superclass, but can be overridden

Returns the contents of a user preset

Can be assigned to `fullStateForDocument`

# New API

NEW

```
open var isLoadingInProgress: Bool { get }
```

# New API

NEW

```
open var isLoadingInProgress: Bool { get }
```

Returns true if the audio unit is loaded in-process

Loading in process is only available on macOS

***Demo***

# Summary

We now support user presets for Audio Units in addition to factoryPresets

The Audio Unit has to opt in

The methods have default implementations in the super class, but can be overridden



# More Information

[developer.apple.com/wwdc19/509](https://developer.apple.com/wwdc19/509)

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