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## Structure

# vDSP.Biquad

A single- or double-precision biquadratic filter.

iOS 13.0+ | iPadOS 13.0+ | Mac Catalyst | macOS 10.15+ | tvOS 13.0+ | visionOS | watchOS 6.0+

```
struct Biquad<T> where T : vDSP_FloatingPointBiquadFilterable
```

## Overview

### Note

The vDSP biquadratic filters work in place. That is, the source and destination pointers may point to the same memory.

## Topics

### Initializers

```
init?(coefficients: [Double], channelCount: vDSP_Length, sectionCount: vDSP_Length, ofType: T.Type)
```

Creates a new single-channel or multichannel cascaded biquad IIR structure.

### Instance methods

```
func apply<U>(input: U) -> [T]
```

Applies a single- or double-precision single-channel or multichannel biquad IIR filter, returning the filtered signal.

```
func apply<U, V>(input: U, output: inout V)
```

Applies a single- or double-precision single-channel or multichannel biquad IIR filter, overwriting the supplied output vector.

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## See Also

### Biquadratic IIR Filters

- { } Equalizing audio with discrete cosine transforms (DCTs)  
Change the frequency response of an audio signal by manipulating frequency-domain data.