

Rectify

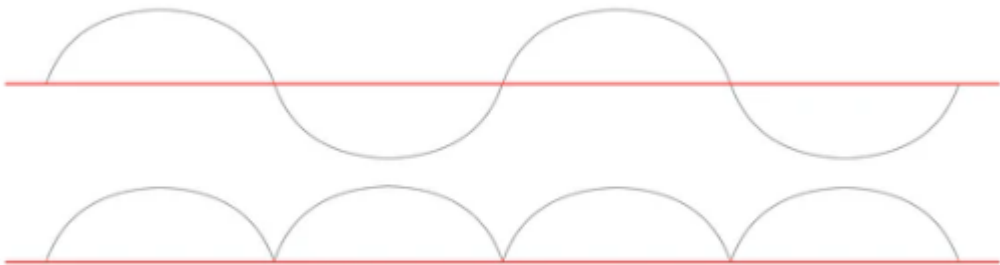
Overview

Rectifying a signal is a simple process that involves taking the absolute value of a bipolar signal to output a unipolar version. The **Rectify** command can be used to compute the absolute value of every element of a signal for use cases that require entirely positive signals.

Visual3D calculates signal rectification using the following formula:

$$x(t_i) = \text{abs}(x(t_i))$$

A visual example of what a rectified signal might look like:



Pipeline Command

The **Rectify** command can be found in the Pipeline Workshop within the Signal Math folder as so:

```
Rectify
! /SIGNAL_TYPES=
! /SIGNAL_FOLDER=ORIGINAL
! /SIGNAL_NAMES=
! /RESULT_TYPES=
! /RESULT_FOLDERS=PROCESSED
! /RESULT_NAME=
! /APPLY_AS_SUFFIX_TO_SIGNAL_NAME=
;
```

Command Parameters

The parameters that can be used to control the command are as follows:

Signal Types	The type of signal to be rectified
Signal Folder	The name of the signal to be rectified
Signal Names	The name of the signal folder

Result Types	The type of the resulting signal
Result Folders	The name of the resulting folder
Result Name	The name of the resulting signal
Apply As Suffix To Signal Name	Add a suffix to the signal name

Command Dialog

The command can be edited via text editor or via a dialog. The details on the command and the dialog are found below:

Command Rectify Dialog

Result Folder

PROCESSED

Result Name

☐ Append Result Name as Suffix

Result Name	Signal Type	Signal Folder	Signal Name
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OK

Cancel

Example: Rectifying Hip Moment Signal

This example shows how the Rectify command can be used on a hip moment signal to show only the absolute value of each component:

```
Rectify
/SIGNAL_TYPES=LINK_MODEL_BASED
! /SIGNAL_FOLDER=ORIGINAL
/SIGNAL_NAMES=LHipMoment
/RESULT_TYPES=LINK_MODEL_BASED
! /RESULT_FOLDERS=PROCESSED
/RESULT_NAME=LHip_Rectified
! /APPLY_AS_SUFFIX_TO_SIGNAL_NAME=
;
```

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