

# hold

Retain current graph in figure

## Syntax

```
hold on  
hold off  
hold all  
hold  
hold(axes_handle,...)
```

## Description

The `hold` function determines whether new graphics objects are added to the graph or replace objects in the graph.

`hold on` retains the current plot and certain axes properties so that subsequent graphing commands add to the existing graph.

`hold off` resets axes properties to their defaults before drawing new plots. `hold off` is the default.

`hold all` holds the plot and the current line color and line style so that subsequent plotting commands do not reset the [ColorOrder](#) and [LineStyleOrder](#) property values to the beginning of the list. Plotting commands continue cycling through the predefined colors and linestyles from where the last plot stopped in the list.

`hold` toggles the `hold` state between adding to the graph and replacing the graph.

`hold(axes_handle,...)` applies the `hold` to the axes identified by the handle `axes_handle`.

## Remarks

Test the `hold` state using the [ishold](#) function.

Although the `hold` state is `on`, some axes properties change to accommodate additional graphics objects. For example, the axes' limits increase when the data requires them to do so.

The `hold` function sets the `NextPlot` property of the current figure and the

current axes. If several axes objects exist in a figure window, each axes has its own `hold` state. `hold` also creates an axes if one does not exist.

`hold on` sets the `NextPlot` property of the current figure and axes to `add`.

`hold off` sets the `NextPlot` property of the current axes to `replace`.

`hold` toggles the `NextPlot` property between the `add` and `replace` states.

## See Also

[axis](#), [cla](#), [ishold](#), [newplot](#)

The [NextPlot](#) property of axes and figure graphics objects

[Basic Plots and Graphs](#) for related functions

◀ [histc](#)

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