Example of State Transition To A Different State:

Example of State Transition To The Same State:

Note: state transitions "belong" to the state where the arrow comes from.
Init
View's display reads "0"
Model's "current value" is 0
Model's history is empty.
Current op. is NOOP
Init
View's display reads "0"
Model's "current value" is 0
Model's history is empty.
Current op. is NOOP

Positive Whole
Displayed value is > 0
Displayed value is a whole number.

Positive
Displayed value is > 0

Zero
Displayed value is 0

Negative Whole
Displayed value is < 0
Displayed value is a whole number.

Negative
Displayed value is > 0

Operated without update
Displayed value is unchanged.
Model's current value matches result of all history.

Operated with update
Displayed value matches model's current value.
Init
View's display reads "0"
Model's "current value" is 0
Model's history is empty.
Current op. is NOOP

P
Set display to "0."

1-9
Set display to button pressed.

0, +/-, C, CE, =
Set current op.

Positive Whole
Displayed value is > 0
Displayed value is a whole number.

Positive
Displayed value is > 0

Zero
Displayed value is 0

Negative Whole
Displayed value is < 0
Displayed value is a whole number.

Negative
Displayed value is > 0

Operated without update
Displayed value is unchanged.
Model's current value matches result of all history.

Operated with update
Displayed value matches model's current value.
Init
View's display reads "0"
Model's "current value" is 0
Model's history is empty.
Current op. is NOOP

Positive Whole
Displayed value is > 0
Displayed value is a whole number.

Positive
Displayed value is > 0

0-9
Append value to display.

C
Set display to "0"

+/-
Prepend "." to display.

Zero
Displayed value is 0

Operated without update
Displayed value is unchanged.
Model's current value matches result of all history.

Operated with update
Displayed value matches model's current value.

Append "." to display

Append value to display.

Append "." to display

Append value to display.

C
Set display to "0"

Set display to "0"

C
Set display to "0"

Set display to "0"

Set display to "0"

Set display to "0"

Set display to "0"

Set display to "0"

Set display to "0"

Set display to "0"

Set display to "0"

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Current op. is NOOP

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Displayed value is > 0
Displayed value is a whole number.

Zero
Displayed value is 0

Negative Whole
Displayed value is < 0
Displayed value is a whole number.

Positive
Displayed value is > 0

P
Append value to display.

C
Set display to "0"

+/-
Prepend "-" to display.

Operated without update
Displayed value is unchanged.
Model's current value matches result of all history.

Operated with update
Displayed value matches model's current value.

= Do current operation with displayed value.
Update display to model's current value.
Set operation.

+-,*,/
Do current operation with displayed value.
Set operation.
Init
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Model's "current value" is 0
Model's history is empty.
Current op. is NOOP

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Displayed value is > 0
Displayed value is a whole number.

Positive
Displayed value is > 0

Zero
Displayed value is 0

Negative Whole
Displayed value is < 0
Displayed value is a whole number.

Negative
Displayed value is > 0

Operated without update
Displayed value is unchanged.
Model's current value matches result of all history.

Operated with update
Displayed value matches model's current value.

+/=: Prepend "-" to display.

C
Set display to "0"

0-9
Append value to display.

+=,-,*,/
Do current operation with displayed value.
Set operation.
Init
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Displayed value matches model's current value.

C
Set display to "0"

0-9
Append value to display.

+/-
Prepend "-" to display.

=\,*,/\nDo current operation with displayed value.
Set operation.

P
Do current operation with displayed value.
Update display to model's current value.
Set op. to NOOP.

Set display to "0"
Init

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Model's "current value" is 0
Model's history is empty.
Current op. is NOOP

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Model's "current value" is 0
Model's history is empty.
Current op. is NOOP

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Displayed value is < 0
Displayed value is a whole number.

Operated without update
Displayed value is unchanged.
Model's current value matches result of all history.

Operated with update
Displayed value matches model's current value.
Set op. to NOOP

Zero
Displayed value is 0

C, 0, +/-
Set display to button pressed.

1-9
Set display to button pressed.

+/-
Do current operation with 0.
Update display to model's current value.
Set op. to NOOP

* divisions
Do current operation.
Set op. to NOOP

P
Set display to "0."

+/P
Do current operation with 0.
Set operation.
Init
View's display reads "0"
Model's "current value" is 0
Model's history is empty.
Current op. is NOOP

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Displayed value is > 0

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Displayed value is 0

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Displayed value matches model's current value.

0, C
Set display to "0."

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1-9
Set display to button pressed.

Set current operation.

±±*÷
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