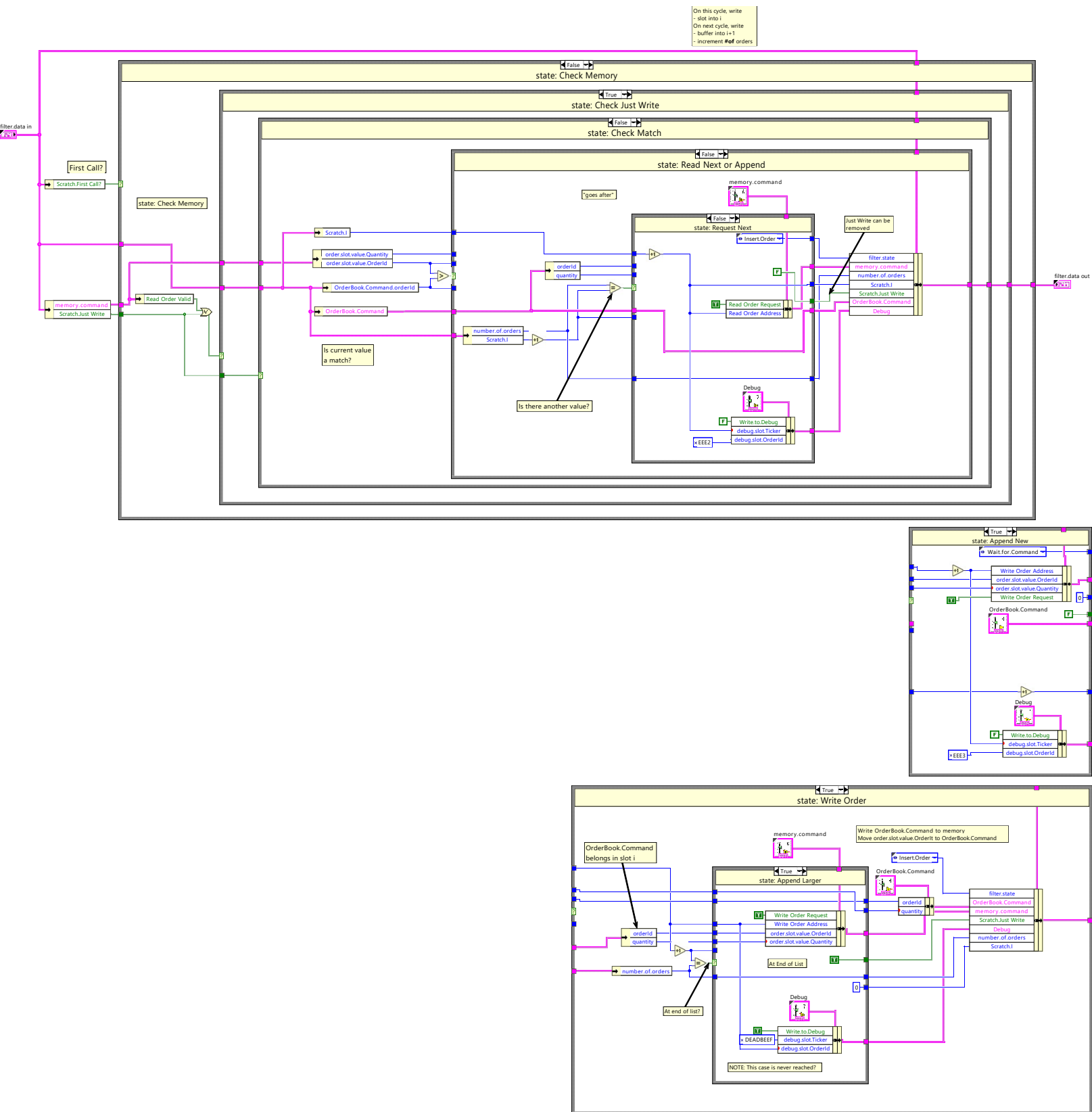filter.insert.order.vi:5190001
D:\work\fpganow\Market.Data.Filter\fpga\filter.insert.order.vi
Last modified on 3/20/2024 at 10:17 PM
Printed on 4/29/2024 at 8:08 PM

On this cycle, write
- slot into i
On next cycle, write
- buffer into i+1
- increment **#of** orders

filter.data in

First Call?
Scratch.First Call?

state: Check Memory

state: Check Memory

state: Check Just Write

state: Check Match

state: Read Next or Append

"goes after"

memory.command

Scratch.I

order.slot.value.Quantity
order.slot.value.OrderId

OrderBook.Command.orderId

OrderBook.Command

memory.command
Scratch.Just Write

Read Order Valid

Is current value
a match?

orderId
quantity

number.of.orders
Scratch.I

Is there another value?

state: Request Next

Insert.Order

Read Order Request
Read Order Address

Just Write can be
removed

filter.state
memory.command
number.of.orders
Scratch.I
Scratch.Just Write
OrderBook.Command
Debug

filter.data out

Debug

Write.to.Debug
debug.slot.Ticker
debug.slot.OrderId

× EEE2

state: Append New

Wait.for.Command

Write Order Address
order.slot.value.OrderId
order.slot.value.Quantity
Write Order Request

0

OrderBook.Command

Debug

Write.to.Debug
debug.slot.Ticker
debug.slot.OrderId

× EEE3

state: Write Order

OrderBook.Command
belongs in slot i

memory.command

Write OrderBook.Command to memory
Move order.slot.value.OrderIt to OrderBook.Command

state: Append Larger

orderId
quantity

Write Order Request
Write Order Address
order.slot.value.OrderId
order.slot.value.Quantity

Insert.Order

OrderBook.Command

orderId
quantity

filter.state
OrderBook.Command
memory.command
Scratch.Just Write
Debug
number.of.orders
Scratch.I

number.of.orders

At End of List

0

At end of list?

Debug

Write.to.Debug
debug.slot.Ticker
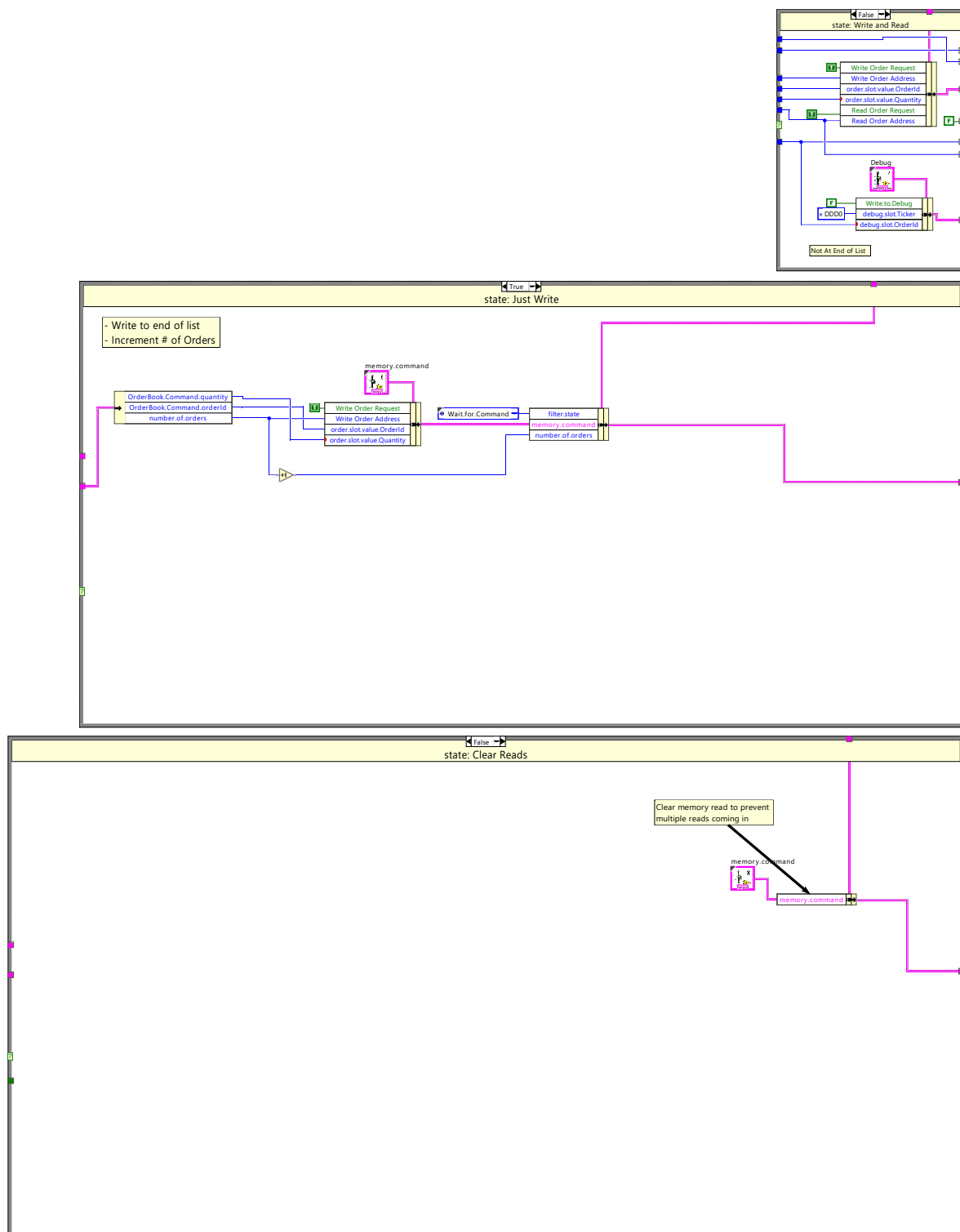debug.slot.OrderId

× DEADBEEF

NOTE: This case is never reached?

filter.insert.order.vi:5190001
D:\work\fpganow\Market.Data.Filter\fpga\filter.insert.order.vi
Last modified on 3/20/2024 at 10:17 PM
Printed on 4/29/2024 at 8:08 PM

False

state: Write and Read

Write Order Request
Write Order Address
order.slot.value.OrderId
order.slot.value.Quantity
Read Order Request
Read Order Address

Debug

Write.to.Debug
debug.slot.Ticker
debug.slot.OrderId

x DDD0

Not At End of List

True

state: Just Write

- Write to end of list
- Increment # of Orders

memory.command

OrderBook.Command.quantity
OrderBook.Command.orderId
number.of.orders

Write Order Request
Write Order Address
order.slot.value.OrderId
order.slot.value.Quantity

Wait.for.Command

filter.state
memory.command
number.of.orders

False

state: Clear Reads

Clear memory read to prevent
multiple reads coming in

memory.command

memory.command

filter.insert.order.vi:5190001
D:\work\fpganow\Market.Data.Filter\fpga\filter.insert.order.vi
Last modified on 3/20/2024 at 10:17 PM
Printed on 4/29/2024 at 8:08 PM

state: First Call

state: Existing Orders == 0

Are there any existing Orders?

No Orders exist - Just insert

memory.command

order.slot

number.of.orders

OrderBook.Command.orderId — OrderId
OrderBook.Command.quantity — Quantity

order.slot.value

Write Order Request
Write Order Address

Wait.for.Command

filter.state
number.of.orders
memory.command

state: Existing Orders > 0

Request 1st Order

memory.command

Insert.Order

Read Order Request
Read Order Address

filter.state
Scratch.I
Scratch.First Call?
Scratch.Just Write
memory.command