//@version=5

indicator(title="ORB", overlay=true)

// Input options

// openingRangeMinutes = input.int(15, title="Opening Range Period (minutes)", options=[5, 15, 30])

// hack the tradingview issue where int combo boxes no longer display correctly (12/21/2022), but string combo boxes still work

sOpeningRangeMinutes = input.string("15", title="Period (minutes)", options=["5", "15", "30", "0"], tooltip="Set to 0 if you want to use International Overrides")

openingRangeMinutes = str.tonumber(sOpeningRangeMinutes)

//session = input.session("0930-0945", title="Opening Range Session Time", options=["0930-0935", "0930-0945", "0930-1000"])

alertBreakoutsOnly = input.bool(false, "Alert only on ORB breakouts (not price ticks)")

showLabels = input.bool(true, "Show ORB labels", group="Display Lines")

showPreviousDayORBs = input.bool(true, "Show ORB ranges on previous days", group="Display Lines")

showEntries = input.bool(true, "Show potential ORB Breakouts and Retests (BRB)", group="Display Lines")

showPriceTargets= input.bool(true, "Show Default Price Targets (50%, 100%)", group="Display Lines")

showPriceTargetsExtended = input.bool(false, "Show Extended Price Targets (150%, 200%)", group="Display Lines")

showMidPoint = input.bool(false, "Show ORB Mid Point", group="Display Lines")

showFibTargets = false//input.bool(false, "Show Fibonacci Targets (21.2%, 61.8%)", group="Display Lines")

boxBorderSize = 2 // input.int(2, title="Box border size", minval=0, group="Style")

showShadedBox = input.bool(true, "Shade the ORB Range", group="ORB Box")

shadeColor = input.color(color.teal, "Shaded ORB Range Color", group="ORB Box")

orb50Color = input.color(color.purple, "ORB 50 Price Target", group="ORB Box")

orb100Color = input.color(color.blue, "ORB 100 Price Target", group="ORB Box")

orbOtherColor = input.color(color.teal, "All Other ORB Price Targets", group="ORB Box")

sORBStartTime = input.string("0930-0945", title="Time Override", tooltip="Set Period to 0 to apply. Format should be 0930-0945", group="Optional International Overrides")

sTimeZone = input.string("America/New\_York", title="Timezone", options=["America/New\_York", "Europe/Amsterdam", "Europe/Berlin", "Asia/Kolkata", "Asia/Shanghai", "Asia/Tokyo", "Etc/UTC"], group="Optional International Overrides")

session = switch openingRangeMinutes

5 => "0930-0935"

15 => "0930-0945"

30 => "0930-1000"

0 => sORBStartTime

=> "0930-0945"

inputMax = openingRangeMinutes

timeinrange(session) => not na(time(timeframe.period, session + ":23456", sTimeZone)) ? 1 : 0

// t = time(timeframe.period, session + ":23456")

in\_session = timeinrange(session)

hideOpen = timeframe.isintraday and timeframe.multiplier <= inputMax and not in\_session

// Create variables

var orbTitle = "ORB" + str.tostring(openingRangeMinutes)

var orbHighPrice = 0.0

var orbLowPrice = 0.0

var box dailyBox = na

var inBreakout = false

// See if a new calendar day started on the intra-day time frame

newDayStart = dayofmonth != dayofmonth[1] and

timeframe.isintraday

bool isToday = false

if year(timenow) == year(time) and month(timenow) == month(time) and dayofmonth(timenow) == dayofmonth(time) and session.ismarket

isToday := true

// determine ORB15 levels

is\_newbar(res) => ta.change(time(res)) != 0

is\_first = in\_session and not in\_session[1] and session.ismarket

if is\_first

orbHighPrice := high

orbLowPrice := low

inBreakout := false

else

orbHighPrice := orbHighPrice[1]

orbLowPrice := orbLowPrice[1]

if high > orbHighPrice and in\_session

orbHighPrice := high

if low < orbLowPrice and in\_session

orbLowPrice := low

bool drawOrbs = showPreviousDayORBs or (not showPreviousDayORBs and isToday)

// When a new day start, create a new box for that day.

// Else, during the day, update that day's box.

if ( drawOrbs)

if (showShadedBox)

if is\_first

dailyBox := box.new(left=bar\_index, top=orbHighPrice,

right=bar\_index + 1, bottom=orbLowPrice,

border\_width=boxBorderSize)

// If we don't want the boxes to join, the previous box shouldn't

// end on the same bar as the new box starts.

box.set\_right(dailyBox[1], bar\_index[1])

else

box.set\_top(dailyBox, orbHighPrice)

box.set\_rightbottom(dailyBox, right=bar\_index + 1, bottom=orbLowPrice)

box.set\_bgcolor(dailyBox, color.new(shadeColor, 80))

box.set\_border\_color(dailyBox, color.teal)

plot(not in\_session and drawOrbs ? orbHighPrice : na, style=plot.style\_linebr, color=orbHighPrice[1] != orbHighPrice ? na : color.green, title="ORB High", linewidth=2)

plot(not in\_session and drawOrbs ? orbLowPrice : na , style=plot.style\_linebr, color=orbLowPrice[1] != orbLowPrice ? na : color.red, title="ORB Low", linewidth=2)

// plot PT for ORB - 50% retracement

orbRange = orbHighPrice - orbLowPrice

plot(not in\_session and showPriceTargets and showMidPoint and drawOrbs ? orbLowPrice + (orbRange \* 0.5): na , style=plot.style\_linebr, color=orbLowPrice[1] != orbLowPrice ? na : color.gray, title="ORB Mid Point", linewidth=1)

plot(not in\_session and showPriceTargets and drawOrbs ? orbHighPrice + (orbRange \* 0.5) : na, style=plot.style\_linebr, color=orb50Color, title="ORB High PT 0.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs ? orbHighPrice + (orbRange \* 1.0): na , style=plot.style\_linebr, color=orb100Color, title="ORB High PT 1.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 1.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 1.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 2.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 2.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 2.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 2.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 3.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 3.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 3.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 3.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 4.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 4.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 4.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 4.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbHighPrice + (orbRange \* 5.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB High PT 5.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs ? orbLowPrice + (orbRange \* -0.5): na , style=plot.style\_linebr, color=orb50Color, title="ORB Low PT 0.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs ? orbLowPrice + (orbRange \* -1.0): na , style=plot.style\_linebr, color=orb100Color, title="ORB Low PT 1.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -1.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 1.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -2.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 2.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -2.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 2.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -3.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 3.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -3.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 3.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -4.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 4.0", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -4.5): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 4.5", linewidth=2)

plot(not in\_session and showPriceTargets and drawOrbs and showPriceTargetsExtended ? orbLowPrice + (orbRange \* -5.0): na , style=plot.style\_linebr, color=orbOtherColor, title="ORB Low PT 5.0", linewidth=2)

// fib levels

plot(not in\_session and showFibTargets ? orbHighPrice + (orbRange \* 0.272): na , style=plot.style\_linebr, color=orb50Color, title="ORB 27.2%", linewidth=2)

plot(not in\_session and showFibTargets ? orbHighPrice + (orbRange \* 0.618): na , style=plot.style\_linebr, color=orb100Color, title="ORB 61.8%", linewidth=2)

plot(not in\_session and showFibTargets ? orbLowPrice + (orbRange \* -0.272): na , style=plot.style\_linebr, color=orb50Color, title="ORB 27.2%", linewidth=2)

plot(not in\_session and showFibTargets ? orbLowPrice + (orbRange \* -0.618): na , style=plot.style\_linebr, color=orb100Color, title="ORB 61.8%", linewidth=2)

drawPriceTargetLabel(fromPrice, level, name, col) =>

if showLabels

var pt = label.new(bar\_index, fromPrice + (orbRange \* level), style=label.style\_label\_lower\_left, text=orbTitle + " " + name, color=col, textcolor=color.white)

label.set\_xy(pt, bar\_index + 2, fromPrice + (orbRange \* level))

drawPriceTargetLabel(orbHighPrice, 0, "HIGH", color.green)

drawPriceTargetLabel(orbLowPrice, 0, "LOW", color.red)

if (not in\_session and showPriceTargets and isToday and session.ismarket and drawOrbs )

drawPriceTargetLabel(orbHighPrice, 0.5, "PT 50%", orb50Color)

drawPriceTargetLabel(orbHighPrice, 1.0, "PT 100%", orb100Color)

drawPriceTargetLabel(orbLowPrice, -0.5, "PT 50%", orb50Color)

drawPriceTargetLabel(orbLowPrice, -1.0, "PT 100%", orb100Color)

if showPriceTargetsExtended

drawPriceTargetLabel(orbHighPrice, 1.5, "PT 150%", orbOtherColor)

drawPriceTargetLabel(orbHighPrice, 2.0, "PT 200%", orbOtherColor)

drawPriceTargetLabel(orbHighPrice, 2.5, "PT 250%", orbOtherColor)

drawPriceTargetLabel(orbHighPrice, 3.0, "PT 300%", orbOtherColor)

drawPriceTargetLabel(orbHighPrice, 3.5, "PT 350%", orbOtherColor)

drawPriceTargetLabel(orbHighPrice, 4.0, "PT 400%", orbOtherColor)

drawPriceTargetLabel(orbHighPrice, 4.5, "PT 450%", orbOtherColor)

drawPriceTargetLabel(orbHighPrice, 5.0, "PT 500%",orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -1.5, "PT 150%", orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -2.0, "PT 200%", orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -2.5, "PT 250%", orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -3.0, "PT 300%", orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -3.5, "PT 350%", orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -4.0, "PT 400%", orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -4.5, "PT 450%", orbOtherColor)

drawPriceTargetLabel(orbLowPrice, -5.0, "PT 500%", orbOtherColor)

if showMidPoint

drawPriceTargetLabel(orbLowPrice, 0.5, "MIDPOINT", color.gray)

if (not in\_session and showFibTargets and isToday and session.ismarket and drawOrbs )

drawPriceTargetLabel(orbHighPrice, 0.272, "FIB 27.2%", orb50Color)

drawPriceTargetLabel(orbHighPrice, 0.618, "FIB 61.8%", orb100Color)

drawPriceTargetLabel(orbLowPrice, -0.272, "FIB 27.2%", orb50Color)

drawPriceTargetLabel(orbLowPrice, -0.618, "FIB 61.8%", orb100Color)

// candle crossed orb level, next candle stayed above it, current candle also stayed above it, and had volume in there

//volumeSMA = ta.sma(volume, 20)

//bool volumeSpiked = volume[2] > volumeSMA[2] or volume[1] > volumeSMA[1] or volume > volumeSMA

bool highCrossBO = (low[2] < orbHighPrice and close[2] > orbHighPrice and low[1] > orbHighPrice and close[1] > orbHighPrice and close > low[1] and low > orbHighPrice) and session.ismarket

bool lowCrossBO = (high[2] > orbLowPrice and close[2] < orbLowPrice and high[1] < orbLowPrice and close[1] < orbLowPrice and close < high[1] and high < orbLowPrice) and session.ismarket

bool highCross = (not alertBreakoutsOnly and ta.cross(close, orbHighPrice)) or (alertBreakoutsOnly and highCrossBO)

bool lowCross = (not alertBreakoutsOnly and ta.cross(close, orbLowPrice)) or (alertBreakoutsOnly and lowCrossBO)

bool isRetestOrbHigh = close[1] > orbHighPrice and low <= orbHighPrice and close >= orbHighPrice

bool isRetestOrbLow = close[1] < orbLowPrice and high >= orbLowPrice and close <= orbLowPrice

bool failedRetest = inBreakout and ((close[1] > orbHighPrice and close < orbHighPrice) or (close[1] < orbLowPrice and close > orbLowPrice))

// show entries

if (showEntries and session.ismarket)

if (highCrossBO)

lbl = label.new(bar\_index, na)

label.set\_color(lbl, color.green)

label.set\_textcolor(lbl, color.green)

label.set\_text(lbl, "Breakout\n Wait for Retest")

label.set\_yloc( lbl,yloc.abovebar)

label.set\_style(lbl, label.style\_triangledown)

label.set\_size(lbl, size.tiny)

inBreakout := true

if (lowCrossBO)

lbl = label.new(bar\_index, na)

label.set\_color(lbl, color.green)

label.set\_textcolor(lbl, color.green)

label.set\_text(lbl, "Breakout,\n Wait for Retest")

label.set\_yloc( lbl,yloc.belowbar)

label.set\_style(lbl, label.style\_triangleup)

label.set\_size(lbl, size.tiny)

inBreakout := true

if inBreakout and (isRetestOrbHigh or isRetestOrbLow)

// we have our breakout and retest

lbl = label.new(bar\_index, na)

label.set\_color(lbl, color.green)

label.set\_textcolor(lbl, color.white)

label.set\_text(lbl, "Retest")

label.set\_yloc( lbl,yloc.abovebar)

label.set\_style(lbl, label.style\_label\_down)

label.set\_size(lbl, size.tiny)

inBreakout := false

if inBreakout and failedRetest

// we have failed the retest

lbl = label.new(bar\_index, na)

label.set\_color(lbl, color.red)

label.set\_textcolor(lbl, color.white)

label.set\_text(lbl, "Failed Retest")

label.set\_yloc( lbl,yloc.abovebar)

label.set\_style(lbl, label.style\_label\_down)

label.set\_size(lbl, size.tiny)

inBreakout := false

// show alerts

alertcondition(not in\_session and session.ismarket and (highCross or lowCross), title="ORB Level Cross", message="Price crossing ORB Level")

alertcondition(not in\_session and session.ismarket and alertBreakoutsOnly and (highCrossBO or lowCrossBO), title="ORB Breakout", message="Price Breaking out of ORB Level, Look for Retest")

if (not in\_session and isToday and session.ismarket)

if (not alertBreakoutsOnly)

if highCross

alert("Price crossing ORB High Level", alert.freq\_once\_per\_bar)

if lowCross

alert("Price crossing ORB Low Level", alert.freq\_once\_per\_bar)

if (alertBreakoutsOnly)

if highCrossBO

alert("Price breaking out of ORB High Level, Look for Retest", alert.freq\_once\_per\_bar)

if lowCrossBO

alert("Price breaking out of ORB Low Level, Look for Retest", alert.freq\_once\_per\_bar)