

# NEXUS SnD BLUEPRINT

## Version 1.29

### COMPLETE USER MANUAL

High-Precision Supply & Demand Zone Detection for MetaTrader 5

Platform	MetaTrader 5 (MQL5)
Version	1.29
Indicator Buffers	11 (all INDICATOR_DATA — EA readable)
Zone Types	Supply & Demand (Current TF + Optional MTF)
Alerts	Terminal Pop-up + Push Notification (Mobile)

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# 1. Overview

Nexus SnD Blueprint v1.29 is a premium MetaTrader 5 custom indicator that automatically identifies high-probability **Supply** and **Demand** zones directly on your price chart. It is engineered to eliminate chart clutter and deliver clean, actionable trade setups complete with entry, stop-loss, and take-profit levels — all rendered through a modern, intelligent UI.

## 1.1 Key Features

- Automatic Supply & Demand zone detection using leg-out candle logic with ATR confirmation
- Volume confirmation filter to identify institutional-grade imprints
- Multi-Timeframe (MTF) zone overlay — see higher-timeframe context on any chart
- Integrated Trend Filter using a configurable Moving Average (MA)
- Automatic Risk Management: entry, stop-loss, and take-profit levels calculated per zone
- Smart alert system: terminal pop-up alerts and mobile push notifications
- 11 fully exposed indicator buffers (**INDICATOR\_DATA**) for complete Expert Advisor (EA) integration
- Four built-in visual themes plus a fully customizable color palette
- Anti-collision UI label engine — labels are automatically repositioned to prevent overlap
- Chart state restoration on removal — your original chart colors are reinstated when the indicator is detached (new in v1.29)

## 1.2 What's New in Version 1.29

Change	Details
Chart Restore	On indicator removal (OnDeinit), all original chart properties — background color, candle colors, grid, and shift settings — are automatically restored to their pre-indicator state.
All 11 Buffers	All 11 indicator buffers are declared as <b>INDICATOR_DATA</b> (upgraded from v1.27 where buffers 1–10 were <code>INDICATOR_CALCULATIONS</code> and therefore inaccessible to external EAs).
Bug Fixes	supplyDistBuffer and demandDistBuffer now correctly hold the zone's Distal price (previously incorrectly held slPrice). entryTriggerBuffer now correctly outputs 1.0 on zone touch (was never populated in v1.27). Handle validation added to <code>OnInit</code> .

## 1.3 How Zone Detection Works

The indicator identifies a valid Supply or Demand zone through a three-step logic sequence:

Step 1	<b>Leg-Out Detection</b> The indicator scans for a candle whose body ( <code> Open - Close </code> ) exceeds the 14-period ATR multiplied by the configured <b>Leg Out ATR Multiplier</b> . This candle is called the "impulse" or leg-out candle.
Step 2	<b>Base Identification</b> The candle immediately before the leg-out candle becomes the "base" candle. Its High and Low boundaries define the zone's <b>Proximal</b> (near

price) and **Distal** (far price) lines.

### Step 3

**Volume Confirmation (Optional)** The indicator compares the volume of the leg-out candle against the average volume of the two preceding candles multiplied by the **Volume Spike Multiplier**. Only candles exceeding this threshold are accepted.

A **Demand zone** is created when the leg-out candle is bullish (close > open). A **Supply zone** is created when the leg-out candle is bearish (close < open).

**⚠ WARNING:** Zone validity is maintained in real time. A zone is automatically deactivated when price closes beyond its Distal line, indicating a full zone break.

## 2. Installation

### 2.1 File Installation

1. Open MetaTrader 5 and navigate to: File > Open Data Folder
2. Inside the data folder, open: MQL5 > Indicators
3. Copy the file Nexus\_SnD\_Blueprint\_v1.29.mq5 into this folder
4. Return to MetaTrader 5. In the Navigator panel (Ctrl+N), right-click Indicators and select Refresh
5. The indicator will appear as Nexus\_SnD\_Blueprint\_v1.29 under Custom Indicators

### 2.2 Applying to a Chart

6. Double-click the indicator name in the Navigator panel, or drag and drop it onto the desired chart
7. The Input Parameters dialog will open — configure settings as needed (see Section 3)
8. Click OK. The indicator will initialize, apply the selected theme, and begin scanning price history

✓ **TIP:** The indicator automatically adjusts for 4-digit and 5-digit broker pricing. The pip multiplier is set dynamically on initialization — no manual adjustment is needed.

### 2.3 Compilation (If Using .mq5 Source File)

9. Open MetaEditor (press F4 in MetaTrader 5)
10. Open the .mq5 file via File > Open
11. Press F7 or click the Compile button
12. Ensure zero errors in the Errors tab before attaching the indicator to a chart

### 2.4 Removing the Indicator

To remove the indicator from a chart, right-click the chart, select Indicators List, choose Nexus\_SnD\_Blueprint\_v1.29, and click Delete. Starting from v1.29, all original chart settings (colors, grid, shift) are automatically restored upon removal when InpModifyChart is true.

## 3. Input Parameters

All parameters are grouped by function in the indicator's input dialog. Each group is described below.

### 3.1 Core Logic Settings

Parameter	Default	Type	Description
InpMaxBarsBack	1000	int	Maximum number of historical bars to scan for zones on initialization. Higher values load more history but may increase initialization time.
InpBaseLimit	3	int	Reserved for base candle processing. Keep at default (3) unless specifically advised otherwise.
InpLegOutATR	1.5	double	ATR multiplier threshold. A candle body must exceed $ATR \times$ this value to qualify as a leg-out impulse candle. Higher values produce fewer but higher-quality zones.

✓ **TIP:** Increasing InpLegOutATR raises the quality bar for zone detection, resulting in fewer but stronger zones. Decreasing it produces more zones but with lower individual confidence.

### 3.2 Volume Confirmation

Parameter	Default	Type	Description
InpUseVolume	true	bool	Enable or disable volume spike confirmation. When enabled, only candles with volume exceeding the spike threshold are accepted as valid leg-out candles.
InpVolMultiplier	1.2	double	Volume spike threshold multiplier. The leg-out candle's volume must exceed the 2-bar average volume multiplied by this value.
InpVolType	Vol_Tick	ENUM_VOL_TYPE	Select between Tick Volume (default, universally available) or Real Volume (requires broker real volume data).

! **NOTE:** Tick Volume is the number of price changes per bar and is a reliable proxy for institutional activity on most brokers. Real Volume is the actual traded contract volume and is only available from brokers who supply it.

### 3.3 Zone Management

Parameter	Default	Type	Description
<b>InpMaxTouches</b>	1	<code>int</code>	Maximum number of times price can touch a zone's proximal line before the zone is considered weakened. Set to 1 for fresh, untouched zones only.
<b>InpKeepBroken</b>	true	<code>bool</code>	When true, broken zones remain on the chart with a faded appearance (shown in the chart background color). When false, broken zones are deleted entirely from the chart.
<b>InpMinZonePips</b>	50	<code>int</code>	Minimum zone width in pips. Zones narrower than this value are discarded. Helps filter out micro-zones on low-timeframe charts.

### 3.4 Trend Filter

Parameter	Default	Type	Description
<b>InpUseTrendFilter</b>	false	<code>bool</code>	Enable the Moving Average trend filter. When true, only zones aligned with the MA trend direction are drawn — bullish leg-out zones are only drawn when price is above MA, and bearish leg-out zones only when price is below MA.
<b>InpShowMA</b>	false	<code>bool</code>	Toggle the MA line visibility on the chart. The MA is always calculated internally regardless of this setting — only the visual line is toggled.
<b>InpTrendTF</b>	PERIOD_CURRENT	<code>ENUM_TIMEFRAMES</code>	The timeframe used to calculate the trend MA. Can be set to a higher timeframe for multi-timeframe trend analysis independent of the MTF zone feature.
<b>InpMAPeriod</b>	200	<code>int</code>	Period for the trend Moving Average. 200 is the standard institutional benchmark.
<b>InpMAMethod</b>	MODE_SMMA	<code>ENUM_MA_METHOD</code>	MA calculation method: SMMA (Smoothed/Wilder), SMA (Simple), EMA (Exponential), or LWMA (Linear Weighted).

### 3.5 Alerts & Notifications

Parameter	Default	Type	Description
<b>InpAlertNewZone</b>	true	<code>bool</code>	Send a terminal pop-up alert when a new Supply or Demand zone is detected in real time. Does not fire

Parameter	Default	Type	Description
			on historical zones loaded at startup.
<code>InpAlertEntry</code>	true	bool	Send a terminal pop-up alert when price touches the proximal line of any active zone. Smart Filter: fires only once per zone per approach — it will not repeat on the same zone touch.
<code>InpPushNotify</code>	true	bool	Send a MetaTrader 5 push notification to your linked mobile device when either an alert condition (new zone or zone entry) is triggered.

**⚠ WARNING:** Push notifications require MetaTrader 5 to be running with an active internet connection, and your mobile device must be linked via Tools > Options > Notifications. See Section 6 for complete setup instructions.

### 3.6 Multi-Timeframe (MTF)

Parameter	Default	Type	Description
<code>InpUseMTF</code>	false	bool	Enable Multi-Timeframe zone overlay. When active, zones detected on the higher timeframe are drawn on the current chart as dashed outlines.
<code>InpMTFTimeframe</code>	PERIOD_H4	ENUM_TIMEFRAMES	The higher timeframe from which MTF zones are sourced. Must be strictly higher than the current chart timeframe.
<code>InpShowTFLabels</code>	true	bool	Show a text label inside each MTF zone indicating its source timeframe (e.g., 'H4 DEMAND' or 'H4 SUPPLY').

**! NOTE:** MTF zones are displayed as dashed outlines (STYLE\_DASHDOT) to visually distinguish them from the filled rectangles of the current timeframe zones. MTF zones do not feed into the EA integration buffers.

### 3.7 Visual & UI Customization

Parameter	Default	Type	Description
<code>InpTheme</code>	Theme_Midnight	ENUM_THEMES	Select the visual theme applied to the chart and zone colors. Options: Midnight (black background), Classic (dark slate), Institutional (white), or Custom.
<code>InpModifyChart</code>	true	bool	Allow the indicator to modify chart properties: background color, candle colors, grid visibility, and chart shift. When false, chart appearance is unchanged and colors default to custom.
<code>InpChartShift</code>	true	bool	Enable the MetaTrader 5 chart shift

Parameter	Default	Type	Description
			feature, which adds blank space on the right side of the chart for forward visibility.
<b>InpChartShiftSize</b>	8.0	double	Chart shift size as a percentage of the total chart width. Effective range: 5.0 to 20.0.
<b>InpShowEntryLabels</b>	true	bool	Show floating entry level labels (BUY LIMIT / SELL LIMIT) pinned to the proximal line of each zone.
<b>InpShowSLLabels</b>	true	bool	Show floating stop-loss level labels and dotted red SL price lines on the chart.
<b>InpShowTPLabels</b>	true	bool	Show floating take-profit level labels and dotted green TP price lines on the chart.

### 3.8 Risk Management — Buy (Demand)

Parameter	Default	Type	Description
<b>InpSLOffsetPipsBuy</b>	5.0	double	Additional pip buffer subtracted below the Distal line of each Demand zone to calculate the final stop-loss price. This buffer accounts for spread and slippage.
<b>InpTargetRRBuy</b>	2.0	double	Risk-to-reward ratio for Buy setups. A value of 2.0 places the take-profit at 2× the risk distance above the entry proximal price.

### 3.9 Risk Management — Sell (Supply)

Parameter	Default	Type	Description
<b>InpSLOffsetPipsSell</b>	5.0	double	Additional pip buffer added above the Distal line of each Supply zone to calculate the final stop-loss price.
<b>InpTargetRRSell</b>	2.0	double	Risk-to-reward ratio for Sell setups. A value of 2.0 places the take-profit at 2× the risk distance below the entry proximal price.

### 3.10 Custom Chart Colors (Theme: Custom Only)

These color settings are active only when InpTheme is set to Theme\_Custom. They have no effect under any other theme.

Parameter	Default	Type	Description
<b>InpSupplyColor</b>	clrLightCoral	color	Zone rectangle fill color for Supply zones.
<b>InpDemandColor</b>	clrDodgerBlue	color	Zone rectangle fill color for Demand zones.

Parameter	Default	Type	Description
<b>InpCustomBg</b>	clrDimGray	color	Chart background color.
<b>InpColorBull</b>	clrCyan	color	Bullish candle body and wick color.
<b>InpColorBear</b>	clrMagenta	color	Bearish candle body and wick color.



## 4. Reading the Chart

### 4.1 Zone Rectangles

Each detected zone is drawn as a filled, colored rectangle spanning from the base candle's time to the current bar. The rectangle covers the full price range between the Proximal and Distal lines.

Element	Appearance	Meaning
Demand Zone	Solid blue rectangle	Area of institutional buying interest. Price is expected to bounce upward from this zone.
Supply Zone	Solid red/coral rectangle	Area of institutional selling interest. Price is expected to reverse downward from this zone.
Broken Zone	Faded (background color)	Zone invalidated by a close beyond the Distal line. Retained for historical reference when InpKeepBroken is true.
MTF Zone	Dashed outline	Higher-timeframe zone overlaid on current chart. Labeled with source timeframe (e.g., 'H4 DEMAND').

### 4.2 Floating UI Labels

The indicator's anti-collision label engine places floating badge labels on the right side of the chart, anchored to each zone's price level. Labels are automatically repositioned to prevent overlap, even when multiple zones cluster near the same price.

- **BUY LIMIT [N]** (blue badge): Entry price for Demand zone N, displayed at the Proximal line level.
- **SELL LIMIT [N]** (red badge): Entry price for Supply zone N, displayed at the Proximal line level.
- **STOP LOSS BUY [N] / STOP LOSS SELL [N]** (dark red badge): Calculated stop-loss price for zone N.
- **TAKE PROFIT BUY [N] / TAKE PROFIT SELL [N]** (green badge): Calculated take-profit price for zone N.

The number suffix [N] ranks zones by proximity to the current price — **[1]** is always the closest active zone to the current market price.

### 4.3 Price Lines

- **Dotted Red Line (\_SLLine)**: Marks the exact stop-loss price level for the corresponding zone.
- **Dotted Green Line (\_TPLine)**: Marks the exact take-profit price level for the corresponding zone.
- **Goldenrod Solid Line (MA)**: The Trend Filter Moving Average, shown only when InpShowMA is set to true.

### 4.4 Visual Themes

Theme	Background	Supply	Demand	Best For
Midnight	Black	Light Coral	Dodger Blue	Night trading, dark environments
Classic	Dark Slate Gray	Rosy Brown	Cadet Blue	General use
Institutional	White / Ghost White	Tomato Red	Deep Sky Blue	Daytime, printing, presentations
Custom	User-defined	User-defined	User-defined	Full color control

## 5. Indicator Buffers & EA Integration

Nexus SnD Blueprint v1.29 exposes **11 indicator buffers**, all declared as **INDICATOR\_DATA**. This means every buffer is directly readable by external Expert Advisors (EAs) or custom indicators using the standard `CopyBuffer()` function — no special access is required.

### 5.1 Buffer Index Reference

#	Buffer Name	Type	Description & EA Usage
0	<code>plotMABuffer</code>	INDICATOR_DATA (MA Line — visible)	Trend Filter Moving Average values. Plotted as a Goldenrod line when <code>InpShowMA</code> is true. Index [0] = current bar value. Use to compare price against MA for trend direction.
1	<code>trendSignalBuffer</code>	INDICATOR_DATA (hidden)	Trend direction signal per bar. Values: +1.0 = price above MA (bullish bias), -1.0 = price below MA (bearish bias), 0.0 = price at MA. Use in EA to filter trade direction.
2	<code>supplyProxBuffer</code>	INDICATOR_DATA (hidden)	Proximal (near) price level of the nearest active Supply zone for each bar. This is the entry/limit sell price. Returns 0.0 if no active Supply zone exists.
3	<code>supplyDistBuffer</code>	INDICATOR_DATA (hidden)	Distal (far) price level of the nearest active Supply zone — the upper boundary of the zone. Note: this is the raw Distal line, not the SL price. To get the stop-loss, read <code>supplyTPBuffer</code> or calculate: <code>Distal + SL offset</code> .
4	<code>demandProxBuffer</code>	INDICATOR_DATA (hidden)	Proximal (near) price level of the nearest active Demand zone for each bar. This is the entry/limit buy price. Returns 0.0 if no active Demand zone exists.
5	<code>demandDistBuffer</code>	INDICATOR_DATA (hidden)	Distal (far) price level of the nearest active Demand zone — the lower boundary of the zone. Note: this is the raw Distal line, not the SL price.
6	<code>entryTriggerBuffer</code>	INDICATOR_DATA (hidden)	Entry trigger flag. Set to 1.0 on <code>bar[0]</code> when price touches the proximal line of any active zone (demand or supply). Resets to 0.0 each bar. Use as a real-time execution signal in your EA's <code>OnTick()</code> .
7	<code>supplyTPBuffer</code>	INDICATOR_DATA (hidden)	Calculated take-profit price for the nearest active Supply zone. Formula: <code>Proximal - ( Proximal - SL  × InpTargetRRSell)</code> . Use directly as the TP for a sell limit order.
8	<code>demandTPBuffer</code>	INDICATOR_DATA (hidden)	Calculated take-profit price for the nearest active Demand zone. Formula: <code>Proximal + ( Proximal - SL  × InpTargetRRBuy)</code> . Use directly as the TP for a buy limit order.
9	<code>maBuffer</code>	INDICATOR_DATA (hidden)	Raw Moving Average values as computed by <code>iMA()</code> with the configured period, method, and timeframe. Identical in value to <code>plotMABuffer</code> .

#	Buffer Name	Type	Description & EA Usage
			Exposed for EA use in volatility or trend calculations.
10	atrBuffer	INDICATOR_DATA (hidden)	14-period ATR values used internally for leg-out candle detection. Exposed for EA use — for example, to implement ATR-based position sizing, dynamic SL offsets, or volatility filters.

## 5.2 Understanding Proximal vs. Distal

Term	Demand Zone	Supply Zone
Proximal	Upper edge of the base candle (High). Price approaches this first when returning to the zone from below.	Lower edge of the base candle (Low). Price approaches this first when returning to the zone from above.
Distal	Lower edge of the base candle (Low). The zone is broken if price closes below this level.	Upper edge of the base candle (High). The zone is broken if price closes above this level.

## 5.3 Reading Buffers from an Expert Advisor

To access the indicator's buffers from your EA, use `iCustom()` to obtain a handle, then `CopyBuffer()` to retrieve values. Below is a complete example:

```
// — EA Integration Example —
int indHandle;

int OnInit() {
    indHandle = iCustom(_Symbol, _Period,
        "Nexus_SnD_Blueprint_v1.29",
        1000, 3, 1.5, // Group 1: Core Logic
        true, 1.2, 0, // Group 2: Volume
        1, true, 50, // Group 3: Zone Management
        false, false, 0, 200, 3, // Group 4: Trend Filter
        true, true, true, // Group 5: Alerts
        false, 1, true, // Group 6: MTF
        0, true, true, 8.0, // Group 7: Visual
        true, true, true, // Group 7: Label toggles
        5.0, 2.0, // Group 8: Buy Risk Management
        5.0, 2.0, // Group 9: Sell Risk Management
        0xFF7F7F, 0x1E90FF, // Group 10: Custom colors
        0x696969, 0x00FFFF, 0xFF00FF
    );
    if(indHandle == INVALID_HANDLE) return(INIT_FAILED);
    return(INIT_SUCCEEDED);
}

void OnTick() {
    double trendSig[1], entryTrig[1];
    double demandEntry[1], demandSL[1], demandTP[1];
    double supplyEntry[1], supplySL[1], supplyTP[1];
    double atrVal[1];

    CopyBuffer(indHandle, 1, 0, 1, trendSig); // +1/-1/0
```

```

CopyBuffer(indHandle, 6, 0, 1, entryTrig); // 1.0 on touch
CopyBuffer(indHandle, 4, 0, 1, demandEntry); // Demand proximal
CopyBuffer(indHandle, 5, 0, 1, demandSL); // Demand distal (raw)
CopyBuffer(indHandle, 8, 0, 1, demandTP); // Demand TP
CopyBuffer(indHandle, 2, 0, 1, supplyEntry); // Supply proximal
CopyBuffer(indHandle, 3, 0, 1, supplySL); // Supply distal (raw)
CopyBuffer(indHandle, 7, 0, 1, supplyTP); // Supply TP
CopyBuffer(indHandle, 10, 0, 1, atrVal); // ATR(14)

// — Example: Place Buy Limit at Demand Zone —————
if(demandEntry[0] > 0 && trendSig[0] > 0 && entryTrig[0] == 1.0) {
    double entry = demandEntry[0];
    double sl = demandEntry[0] - (5 * _Point * 10); // offset below distal
    double tp = demandTP[0];
    // ... place order logic here
}
}

```

**⚠ WARNING:** Always pass all input parameters to `iCustom()` in the exact same order they appear in the indicator's input declaration. Omitting any parameter causes misalignment and incorrect buffer reads.

## 5.4 Buffer Value Interpretation

Buffer State	Interpretation
Buffer value = 0.0	No active zone of that type exists for that bar.
trendSignalBuffer[0] = +1.0	Price is above MA → bullish bias. Use to allow Buy-only setups.
trendSignalBuffer[0] = -1.0	Price is below MA → bearish bias. Use to allow Sell-only setups.
demandProxBuffer[0] > 0	Active Demand zone present. This price is the buy entry level.
supplyProxBuffer[0] > 0	Active Supply zone present. This price is the sell entry level.
demandDistBuffer[0]	Raw Distal line (lower boundary) of the nearest Demand zone.
supplyDistBuffer[0]	Raw Distal line (upper boundary) of the nearest Supply zone.
demandTPBuffer[0]	Fully calculated take-profit price for the Demand zone.
supplyTPBuffer[0]	Fully calculated take-profit price for the Supply zone.
entryTriggerBuffer[0] = 1.0	Price has touched an active zone's proximal on the current live bar.
atrBuffer[0]	Current ATR(14) value. Use for volatility-based position sizing.

## 6. Push Notifications — Mobile Setup

Nexus SnD Blueprint can deliver real-time alerts directly to your smartphone via the MetaTrader 5 mobile application. Push notifications are triggered by two events: detection of a new zone and price entry into an existing zone.

### 6.1 Notification Message Formats

When `InpPushNotify` is set to true, the indicator sends messages in these formats:

- **New Zone:** "Nexus SnD Blueprint: New BUY (Demand) Zone Formed at [price]"
- **Zone Entry:** "Nexus SnD Blueprint: Price Hit SELL (Supply) Zone at [price]"

**NOTE:** Push notifications for new zones are only sent when the zone forms on a live (real-time) bar. Historical zones detected on initialization do not trigger notifications.

### 6.2 Desktop MetaTrader 5 Setup

- Open MetaTrader 5 on your desktop
- Go to Tools > Options (or press Ctrl+O)
- Click the Notifications tab
- Check the box labeled Enable Push Notifications
- Enter your MetaQuotes ID in the MetaQuotes ID field (see Section 6.3)
- Click Test to verify the connection — a test notification should appear on your phone
- Click OK to save

### 6.3 Finding Your MetaQuotes ID (Mobile App)

- Install MetaTrader 5 from the App Store (iOS) or Google Play (Android)
- Open the app and navigate to Settings (gear icon)
- Tap Messages or Notifications
- Your MetaQuotes ID is displayed — it is a string in the format XXXX-XXXX
- Copy this ID and paste it into the MetaQuotes ID field in the desktop Options dialog

### 6.4 Alert Type Summary

Parameter	Alert Type	Trigger Condition	Notes
<code>InpAlertNewZone</code>	Terminal Pop-up	New zone detected on live bar	Does not fire on historical bars at startup.
<code>InpAlertEntry</code>	Terminal Pop-up	Price touches zone proximal	Smart filter: fires once per zone approach only.
<code>InpPushNotify</code>	Mobile Push	New zone OR zone entry	Requires MetaQuotes ID linked to mobile app.

**⚠ WARNING:** Push notifications require a continuous internet connection on the PC running MetaTrader 5. They will not be delivered if MetaTrader 5 is closed or offline.

## 7. Recommended Settings by Use Case

### 7.1 Scalping (M1 – M15)

InpMaxBarsBack	500
InpLegOutATR	1.2 (more sensitive — captures smaller impulses)
InpMinZonePips	10 – 20
InpUseVolume	true
InpUseTrendFilter	true (align with M30 or H1 MA)
InpTargetRRBuy/Sell	1.5

### 7.2 Intraday Trading (H1 – H4)

InpMaxBarsBack	1000 (default)
InpLegOutATR	1.5 (default)
InpMinZonePips	50 (default)
InpUseVolume	true, InpVolMultiplier: 1.2
InpUseMTF	true, InpMTFTimeframe: H4 or D1
InpTargetRRBuy/Sell	2.0 (default)

### 7.3 Swing Trading (D1 – W1)

InpMaxBarsBack	1000 – 2000
InpLegOutATR	1.8 – 2.0 (stricter impulse qualification)
InpMinZonePips	100 – 200
InpUseVolume	true
InpUseTrendFilter	true, InpMAPeriod: 200
InpTargetRRBuy/Sell	3.0+

### 7.4 Fully Automated EA

Alerts	Set InpAlertNewZone, InpAlertEntry, InpPushNotify all to false — the EA manages its own execution logic
Entry signal	Read buffer [6] (entryTriggerBuffer): 1.0 means price is touching a zone proximal on the current bar
Entry price	Read buffer [4] (demandProxBuffer) for Buy, buffer [2]

	(supplyProxBuffer) for Sell
Stop-loss price	Calculate from buffer [5] (demandDistBuffer) minus SL offset for Buy; buffer [3] (supplyDistBuffer) plus SL offset for Sell
Take-profit price	Read buffer [8] (demandTPBuffer) for Buy, buffer [7] (supplyTPBuffer) for Sell
Trend filter	Read buffer [1] (trendSignalBuffer): +1.0 for Buy-only, -1.0 for Sell-only
Position sizing	Use buffer [10] (atrBuffer) for ATR-based lot size calculation



## 8. Troubleshooting

Problem	Solution
No zones appear on chart	Increase <code>InpMaxBarsBack</code> , reduce <code>InpLegOutATR</code> , or decrease <code>InpMinZonePips</code> . Ensure sufficient bar history is loaded (scroll left in the chart to preload data).
Push notifications not received	Verify your MetaQuotes ID under Tools > Options > Notifications. Ensure MetaTrader 5 has internet access. Set <code>InpPushNotify</code> to true. Click Test in the Options dialog to confirm connection.
EA buffers return 0.0 for all values	Ensure the <code>iCustom()</code> parameter list matches the indicator input order exactly. Verify the indicator filename string is correct (case-sensitive). Check that <code>indHandle != INVALID_HANDLE</code> on startup.
Chart colors not changing	Set <code>InpModifyChart</code> to true. If using the Custom theme, verify custom color inputs are set.
Chart colors not restoring after removal	This feature is available from v1.29 onward. Ensure <code>InpModifyChart</code> is true — restoration only runs when chart modification was originally enabled.
MTF zones not appearing	Set <code>InpUseMTF</code> to true and verify <code>InpMTFTimeframe</code> is strictly higher than the current chart timeframe. Scroll left to preload higher-timeframe bar data.
Labels overlapping or mispositioned	The anti-collision engine repositions labels automatically on <code>CHARTEVENT_CHART_CHANGE</code> . Resize or scroll the chart to trigger a redraw.
Indicator causes MetaTrader 5 slowdown	Reduce <code>InpMaxBarsBack</code> . Disable MTF ( <code>InpUseMTF: false</code> ). Reduce the number of charts the indicator is applied to simultaneously.
Compilation error in MetaEditor	Ensure you are using a compatible MQL5 build (MetaTrader 5 build 3000+). Check that all 11 <code>SetIndexBuffer()</code> calls match the declared buffer variables exactly.

## 9. Technical Reference

### 9.1 Indicator Properties

Parameter	Default	Type	Description
<code>indicator_chart_window</code>	—	Property	The indicator draws directly on the main price chart window (not a sub-window).
<code>indicator_buffers</code>	11	Property	Total number of data buffers allocated. All 11 are <code>INDICATOR_DATA</code> .
<code>indicator_plots</code>	11	Property	11 plots declared — 1 visual (MA line), 10 hidden ( <code>DRAW_NONE</code> ). Required to match <code>indicator_buffers</code> when all are <code>INDICATOR_DATA</code> .
<code>ATR Period</code>	14	Fixed	The ATR calculation uses a fixed 14-period setting. This cannot be changed without modifying the source code.

Parameter	Default	Type	Description
Zone Prefix	VSnd_	Convention	All chart objects created by this indicator use the prefix 'VSnd_' for clean, complete removal on deinitialization.

## 9.2 Zone Lifecycle

State	Description
<b>CREATED</b>	Leg-out candle passes all active filters (ATR threshold, volume confirmation, trend direction, minimum pip size). Zone is added to the activeZones[] array and drawn on the chart.
<b>ACTIVE</b>	Zone is valid. Entry, SL, and TP labels are visible. Buffer values for this zone are populated for EA reading.
<b>TOUCHED</b>	Price reaches the proximal line on bar[0]. An alert fires once (Smart Filter prevents repeating). entryTriggerBuffer[0] is set to 1.0. The entryAlertTriggered flag is permanently set for this zone.
<b>BROKEN</b>	Price closes beyond the Distal line. Zone is deactivated (active = false). If InpKeepBroken is true, the rectangle fades to background color. All labels and price lines are removed. Buffer values for this zone reset to 0.0.

## 9.3 SL & TP Calculation Formula

Formula	Value
Buy SL (Demand)	Demand Distal - (InpSLOffsetPipsBuy × pipMultiplier)
Sell SL (Supply)	Supply Distal + (InpSLOffsetPipsSell × pipMultiplier)
Buy TP (Demand)	Demand Proximal + ( Proximal - Buy SL  × InpTargetRRBuy)
Sell TP (Supply)	Supply Proximal - ( Proximal - Sell SL  × InpTargetRRSell)

## 9.4 Pip Multiplier Logic

The indicator automatically detects broker pricing precision on initialization:

- **5-digit or 3-digit pricing** (Digits == 5 or 3): pipMultiplier = 10 × \_Point
- **4-digit or 2-digit pricing** (Digits == 4 or 2): pipMultiplier = \_Point

This ensures InpMinZonePips and SL offset values behave consistently across all symbols and brokers.

## 9.5 Chart Object Naming Convention

Object Name Pattern	Description
VSnd_Dem_[datetime]	Demand zone filled rectangle
VSnd_Sup_[datetime]	Supply zone filled rectangle

Object Name Pattern	Description
VSnD_MTF_D_[datetime]	Multi-Timeframe Demand zone (dashed outline)
VSnD_MTF_S_[datetime]	Multi-Timeframe Supply zone (dashed outline)
[zone]_SLLine	Red dotted horizontal stop-loss price line
[zone]_TPLine	Green dotted horizontal take-profit price line
[zone]_EntryBG / _EntryTxt	Floating entry badge — background rectangle + text label
[zone]_SLBG / _SLTxt	Floating stop-loss badge
[zone]_TPBG / _TPTxt	Floating take-profit badge
[zone]_LBL	MTF zone text label (timeframe identifier)

## 9.6 Version History

Ver.	Changes
1.29	Chart state restoration on OnDeinit. All 11 buffers confirmed INDICATOR_DATA. Confirmed entryTriggerBuffer fix and supplyDist/demandDist distal fix from v1.28.
1.28	All 11 buffers converted to INDICATOR_DATA (previously buffers 1–10 were INDICATOR_CALCULATIONS and unreadable by EAs). entryTriggerBuffer populated with 1.0 on zone touch. supplyDistBuffer / demandDistBuffer corrected to hold Distal price (not slPrice). Handle validation added to OnInit.
1.27	User-friendly input UI with inline comments. Input groups reorganized. All code text translated to English.

## 10. Disclaimer & License

**⚠ WARNING:** This indicator is provided for educational and informational purposes only. Past performance in identifying historical Supply and Demand zones does not guarantee future trading profitability. Trading financial instruments involves significant risk of loss and is not appropriate for all investors. Always apply proper risk management.

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- **Current Version:** 1.29

— End of User Manual —

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