

SECTION 1 (first image)

1. Volume Gate (VG)

Rule:

$$C_u \geq VG$$

Meaning:

C_u = Current candle volume

VG = Volume Gate (a minimum required volume level)

This means:

You only allow trades if the current candle volume is NOT weak.

It filters out:

Low-liquidity periods

Fake breakouts

Dead sessions

2. Volume Boom

$$Vol_{C_u} \geq 2 \times \sum_{i=1}^{10} Vol_{C_{u-i}}$$

Meaning:

- $Vol(C_u)$ = volume of the current candle
- (C_{u-i}) = previous candles
- Last 10 candles are summed
- Current volume must be at least 2× larger

This confirms:

A real explosion of participation (breakout confirmation).

This avoids:

- Entering on weak manipulations
- False momentum
- Low-interest price moves

3. VTR (Volatility True Range)

Calculate:

- $VTR(3, 12)$
- $VTR(10, 1)$
- $VTR(11, 2)$

Step 1 — You must first compute True Range (TR):

$$TR = \max(High - Low, |High - Close_{prev}|, |Low - Close_{prev}|)$$

This measures real volatility per candle.

Step 2 — VTR Formula:

$$VTR = m \times \frac{1}{l} \sum_{i=0}^{l-1} TR_{C_u-i}$$

Where:

- l = lookback length
- m = multiplier

It's basically:

A scaled moving average of volatility

So VTR is a dynamic volatility threshold, not fixed.

4. Determine Condition / Bias

Bullish Condition:

$$VTR_1 > Price_{C_u} \wedge VTR_2 > Price_{C_u} \wedge VTR_3 > Price_{C_u}$$

Meaning:

All volatility layers agree that price is strong upward.

Bearish Condition:

$$VTR_1 < Price_{C_u} \wedge VTR_2 < Price_{C_u} \wedge VTR_3 < Price_{C_u}$$

Meaning:

All volatility layers confirm downside pressure.

No Trade:

If signals conflict, No trade allowed (mixed signals)

What This System Really Is

Layer	Purpose
Volume Gate	Blocks weak market
Volume Boom	Confirms real participation
VTR Stack	Confirms volatility direction
Bias Logic	Prevents random trades

In Simple Words

This system only trades when:

- ✓ The market is active
- ✓ The volume explodes
- ✓ Volatility agrees on direction
- ✓ No mixed signals exist

This is exactly the type of logic used in:

Institutional breakout filters
Smart money confirmation systems
Anti-fakeout scalping models

SECTION 2 (*second image*)

5. Reinsure synergy of DMag & VTR

This means:

You only trade when VOLATILITY (VTR) and TREND STRENGTH (DMag/ADX) agree.

So:

- VTR = *Is the market moving fast enough?*
- DMag = *Is the move strong and directional enough?*

This prevents:

- High volatility but no direction (chop)
- Direction without strength (weak trend)

5.1 Calculate +DM, -DM and TR (Wilder Method, 14 periods)

These formulas are exactly from J. Welles Wilder's ADX system.

Directional Movement

+DM

$$+DM = High_{C_u} - High_{C_{u-1}} \text{ if } (High_{increase} > Low_{decrease})$$

-DM

$$-DM = Low_{C_{u-1}} - Low_{C_u} \text{ if } (Low_{decrease} > High_{increase})$$

Only one of them can be non-zero at a time.

This tells you:

- +DM → bullish pressure
- -DM → bearish pressure

True Range (TR)

Same as before:

$$TR = \max(High - Low, |High - Close_{prev}|, |Low - Close_{prev}|)$$

Wilder Smoothing (14 candles)

Instead of normal EMA/SMA, Wilder uses:

$$Smoothed = \frac{(Prev \times 13) + Current}{14}$$

You apply this to:

- +DM
- -DM
- TR

This makes it:

- Slower
- More stable
- Less noisy

5.2 Compute +DI and -DI

$$+DI = 100 \times \frac{+DM_{smooth}}{TR_{smooth}}$$

$$-DI = 100 \times \frac{-DM_{smooth}}{TR_{smooth}}$$

Interpretation:

- $+DI > -DI \rightarrow$ bullish dominance
- $-DI > +DI \rightarrow$ bearish dominance

This is direction, not strength yet.

5.3 Compute DX (Directional Index)

$$DX = 100 \times \frac{|+DI - (-DI)|}{+DI + -DI}$$

This gives:

- How strong the directional difference is
- Ranges from 0 to 100

High DX = strong dominance

Low DX = sideways market

5.4 Smooth DX \rightarrow Get DMag (Your custom ADX)

$$DMag_{14} = \frac{1}{14} \sum_{i=0}^{13} DX_{Cu-i}$$

This is literally:

ADX(14)

You just renamed it as DMag

So:

- DMag = trend strength
- $+DI / -DI$ = trend direction

6. Final DMag Trade Filter

$DMag > 20 \wedge DMag > DMag[1]$

This means:

1. Trend is strong enough (not sideways)
2. Trend strength is increasing

This avoids:

- Late entries
- Fading trends
- Range markets

7. Place trade setting SL and NO TP

This is very important:

You are running a **trend-following, volatility-driven system**, not a scalping system.

Meaning:

Exit is handled by:

- Opposite signal
- Volatility contraction
- Trailing SL
- Not by fixed take profit.

This is how professional CTA-style systems work.

What This Section Really Does

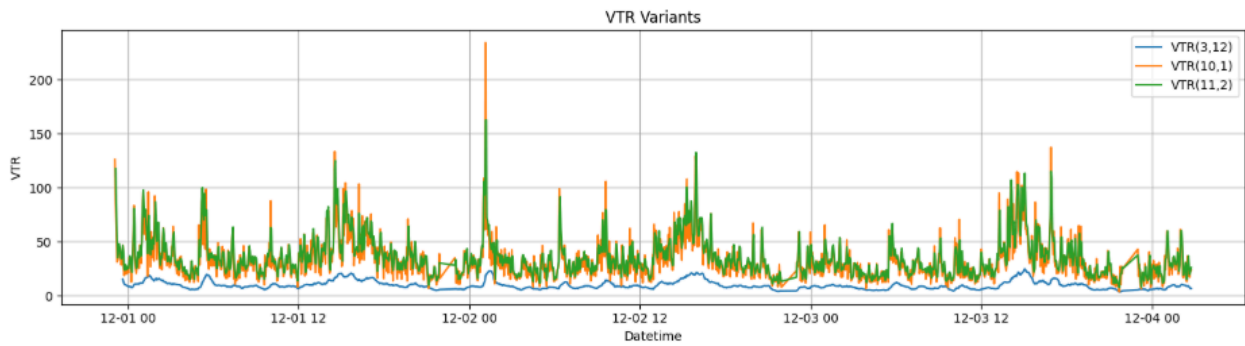
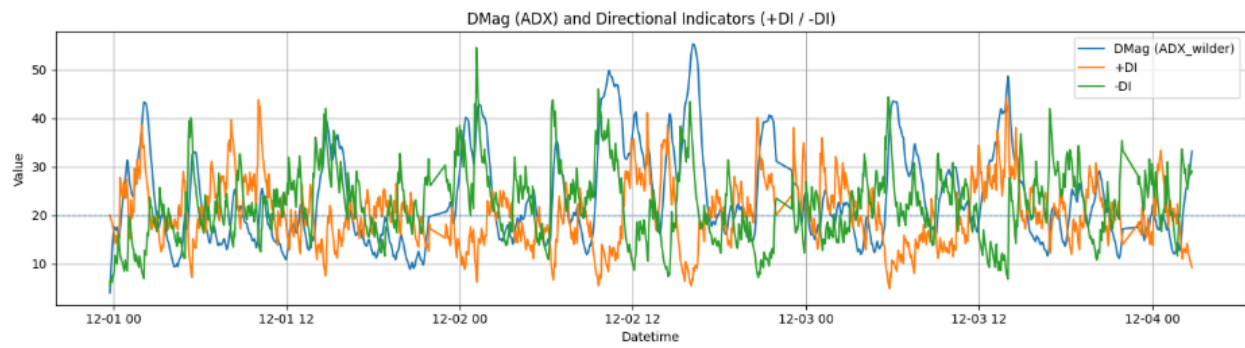
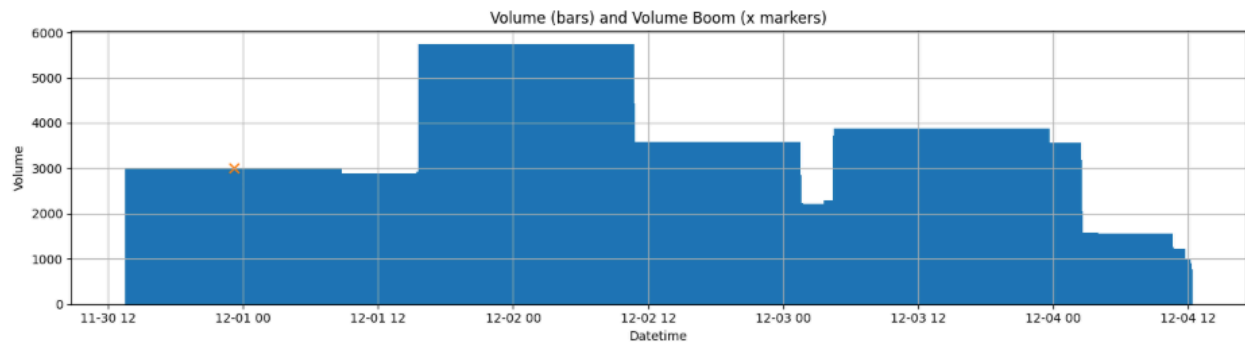
This block ensures that:

Filter	What It Blocks
DMag > 20	Sideways chop
DMag rising	Weak dying trends
+DI / -DI	Wrong direction
VTR synergy	Fake volatility

So the full system now requires:

- Real volume
- Real volatility
- Real trend strength
- Directional alignment
- No mixed signals

That is institutional-grade filtering logic.



Checklist Summary

1. Volume Gate : x,

- a. $Cu \geq VG$,

2. Volume Boom,

- a. $Vol(Cu)$ = volume of the current candle (at time t)

$$Vol_{Cu} \geq 2 \times \sum_{i=1}^{10} Vol_{Cu-i}$$

3. Calculate $VTR(3,12)$ $VTR(10,1)$ $VTR(11,2)$,

$$VTR_{Cu} = m \times \frac{1}{l} \sum_{i=0}^{l-1} TR_{Cu-i}$$

3.1 To calculate VTR you need to calculate $TR(Cu-i)$,

$$TR_{Cu} = \max(High_{Cu} - Low_{Cu'}, |High_{Cu} - Close_{Cu-1}|, |Low_{Cu} - Close_{Cu-1}|)$$

4. Determine Condition/Bias,

Bullish Condition: $VTR_1 > Price_{Cu} \wedge VTR_2 > Price_{Cu} \wedge VTR_3 > Price_{Cu}$

Bearish Condition: $VTR_1 < Price_{Cu} \wedge VTR_2 < Price_{Cu} \wedge VTR_3 < Price_{Cu}$

No Trade Condition: *Otherwise (mixed signals)*

5. Reinsure synergy of $DMag$ & VTR ,

- a. $+DM_{Cu} = \max(High_{Cu} - High_{Cu-1}, 0)$ if $High_{Cu} - High_{Cu-1} > Low_{Cu-1} - Low_{Cu}$, else 0

- b. $-DM_{Cu} = \max(Low_{Cu-1} - Low_{Cu}, 0)$ if $Low_{Cu-1} - Low_{Cu} > High_{Cu} - High_{Cu-1}$, else 0

5.1 Smooth/Calculate $+DM(Cu)$ and $-DM(Cu)$ and $TR(Cu)$ over 14 periods/candles using wilders method,

$$+DM_l^{(init)} = \sum_{i=0}^{l-1} +DM_{Cu-1}, \quad -DM_l^{(init)} = \sum_{i=0}^{l-1} -DM_{Cu-1}, \quad TR_l^{(init)} = \sum_{i=0}^{l-1} TR_{Cu-1}$$

5.2 Find the $+DI$ & $-DI$,

$$+DI_{Cu} = 100 \times \frac{+DM_l}{TR_l}, \quad -DI_{Cu} = 100 \times \frac{-DM_l}{TR_l},$$

5.3 Find DX ,

$$DX_{Cu} = 100 \times \frac{|(+DI_{Cu}) - (-DI_{Cu})|}{(+DI_{Cu}) + (-DI_{Cu})}$$

5.4 Use Wilder's method to smooth DX over 14 periods to get $DMag$,

$$DMag_{14} = \frac{1}{14} \sum_{i=0}^{13} DX_{Cu-i}$$

6. $DMag > 20 \wedge DMag > DMag[1]$,

7. Place a Dot corresponding to the signal,

7. Place trade setting SL and NO TP,