ITTO-RYU · FIELD GUIDE

Auto Structure: Setup & Reading Guide

How to set the Market preset and Style for your chart, then read the dashboard, the structure lines, the Fibonacci leg and the liquidity zones of *Auto Market Structure & Liquidity by [Itto-Ryu]*.

Five principles

1. **Set Market first.** It sets the one-year look-back that every rank in the indicator uses: momentum rank, volatility rank and the compress box.
2. **Leave Style on Auto unless slower or faster states are wanted.** Auto follows the chart timeframe. The dashboard's Preset row shows what is in use.
3. **Structure changes only at the Protected level, on a close.** BOS and CHoCH are close-based. A wick beyond a level is a sweep, not a break.
4. **Fibonacci and Bottom-out areas share the structure's leg.** 100% is the Protected level; 0% is the most extreme price since it.
5. **Everything describes the chart now.** Read it on closed bars. It shows the current condition and forecasts no direction.

The four Market presets

Classic
`252 d · default`

Stocks, ETFs and stock indices. The common count of trading days in a year.

Crypto
`365 d`

BTC, ETH and other coins that trade 7 days a week.

FX & Gold
`260 d`

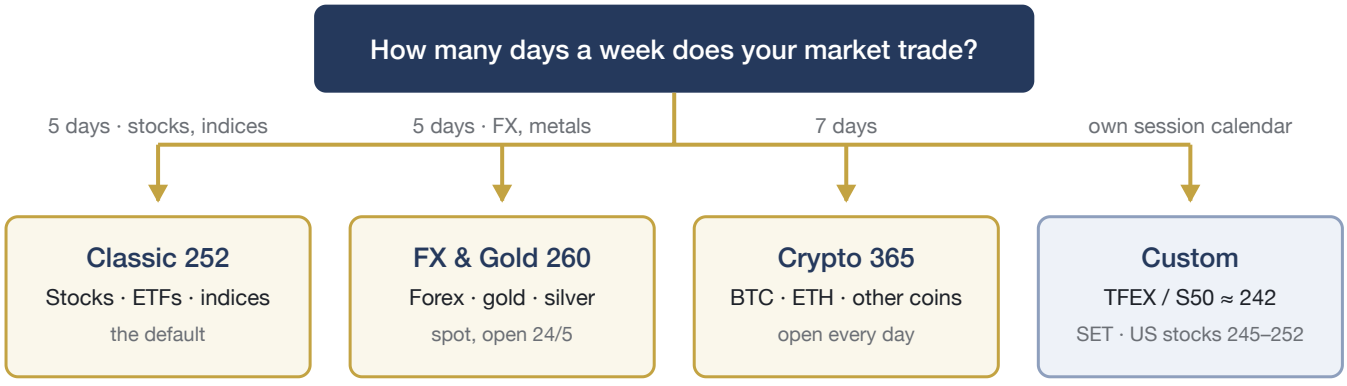
Forex pairs, gold and silver spot: 5 days a week, almost every weekday.

Custom
`your days / yr`

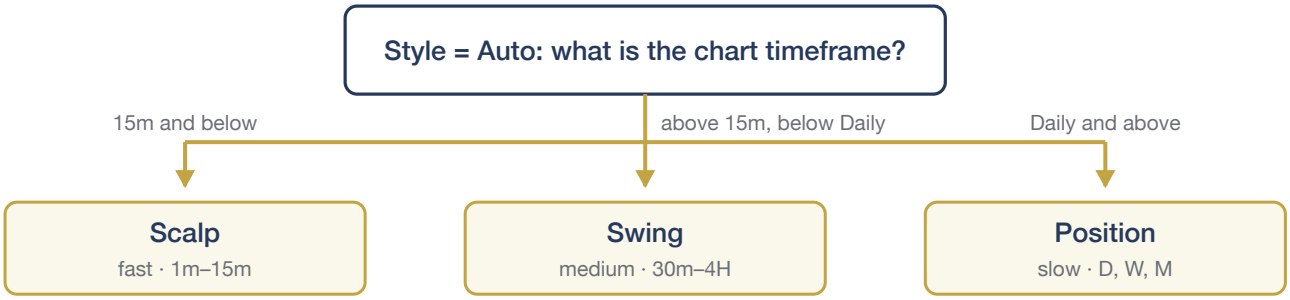
Typed by hand. TFEX / S50 futures ≈242 · SET and US stocks 245–252.

Look-back = bars per day × trading days per year. Bars per day are counted from the chart itself, so one setting works on every intraday timeframe. On Daily the look-back is the trading days themselves; on Weekly it is 52 bars. Only days the market prints a bar count, not calendar days. It is capped at `5,000` bars and never falls below `50`.

Choosing the Market



Choosing the Style



The preset lengths (bars)

Style	Momentum short	Momentum long	Efficiency Ratio	Pivot left/right	Swing look-back	Breakout window	Breakout hold	Min state hold
Scalp	3	10	8	3	10	6	2	1
Swing	5	20	10	5	20	10	3	2
Position	8	30	14	8	30	15	4	3
Custom	Your own values in ⑥ **Advanced** (defaults 5 / 20 / 10 / 5 / 20 / 10 / 3 / 2)							

Longer lengths and holds give slower, steadier states. Picking a Style by hand overrides Auto, for example **Position on a 1H chart** for states that change less often, or **Scalp on 30m** for quicker ones. Swing size (default `2.0 × ATR`) is separate from Style and controls the structure swings.

Check it on the chart



Example screenshot (XAUUSD 1D, Market = FX & Gold, Style = Auto). Dashboard top right; Protected High, Fibonacci lines with the gold 61.8%, Bottom-out Stable and Confirm areas, a compress box, a pullback zone and liquidity zones. The last row, Preset, reads “FX & Gold (260 d) · Position (auto · 1D)”: the quick check that Market and Style are as intended. On intraday charts it also shows the counted bars per day.

Reading the dashboard

Row	What it shows
Header	“AUTO STRUCTURE · v4.1”. The header colour follows the group: green for TREND up, orange-red for TREND down, blue for READY, amber for WAIT.
Group · State	The group with its kanji mark (流 TREND, 構 READY, 待 WAIT) and one of 12 states, e.g. 構 READY · 静 Compressed. Decided on the last closed bar.
Reason	The numbers behind the state: the slower momentum `mL` in ATR with its one-year rank, the Efficiency Ratio (`ER`, 0 = noisy path, 1 = straight path) and the volatility rank.
Next 10 bars	“range ≈ a – b (80%)”: a typical 10-bar high-to-low span in price, from `2.07` to `5.71 × ATR(14)`, shown as an 80% band. It gives width, not direction.
HTF	The next higher timeframe (15m and below → 1H, up to 1H → 4H, up to 4H → D, D → W, above → M), from its last closed bar. ✓ same direction as the chart · ⚠ opposite direction · grey = flat, or no trend on the chart.
Move (live)	The same numbers as Reason on the forming bar. They can change until the bar closes.
Structure	“Bullish” or “Bearish”, the last two swing highs (HH or LH), the last two swing lows (HL or LL) and the Protected level.
Levels	While a trend is held: Pullback Floor or Ceiling and the Protected level. Otherwise: Swing High and Low.
Preset	Market (bars per day × trading days) · Style, with “auto” and the chart timeframe when Style = Auto.

The 12 states in 3 groups

流 TREND

昇 Up / 降 Down
Clean, strong momentum in one direction.

破 Breakout Up / Breakdown
A close out of a compress box with a clean move.

横 Sideways Up / Down
Moderate momentum on a clean path: a weak trend.

構 READY

押 Pullback Up / Down
Inside a held trend, price has moved back into the pullback zone.

静 Compressed
The volatility rank is in its lowest 10% of the year.

待 WAIT

揉 Chop
No clean path, and momentum is not strong.

乱 Volatile
Very high volatility without a clean path.

中 Neutral
Everything else; often early in a turn.

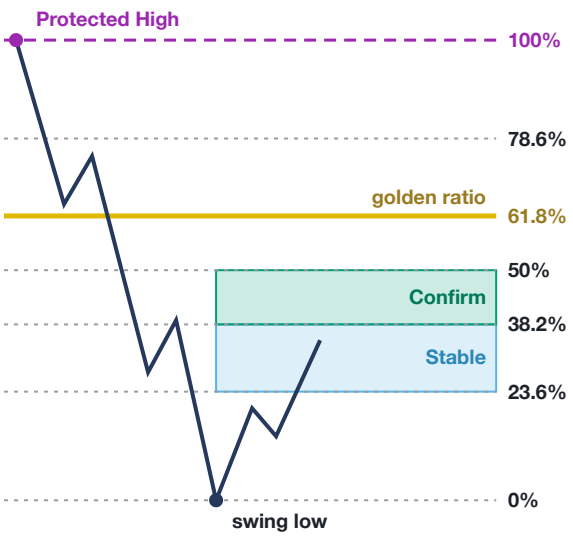
States hold for a minimum number of bars and use separate on and off thresholds, so they do not flicker. A state name describes the current condition; it is not a trade signal.

Drawings on the chart

Drawing		Meaning
	BOS / CHoCH	Dashed line from the broken swing to the break bar. **BOS** = a close beyond the last swing with the structure; **CHoCH** = a close beyond the Protected level, so the structure turns. The last 12 are kept.
	Protected Low / High	The level that must hold. In a Bullish structure, the lowest low since the broken swing high; in a Bearish one, the highest high since the broken swing low. A close beyond it is a CHoCH.
	Fib lines	Grey dotted lines at 0 / 23.6 / 38.2 / 50 / 78.6 / 100%. 0% is labelled “(swing high)” or “(swing low)”; 100% “(protected low)” or “(protected high)”.
	Fib 61.8% (golden ratio)	A solid gold line on the same leg.
	Bottom-out Stable	Light-blue area, 23.6–38.2% of the down leg measured up from the low. Bearish structure only.
	Bottom-out Confirm	Green area, 38.2–50% of the down leg. Bearish structure only.
✓	**✓ on an area label**	The last close is above the top of that area. It can change until the bar closes.
	Compress box	Grey dashed box, drawn while the volatility rank is in its lowest 10%.
	Breakout / Breakdown	Lines at the top and bottom of the live compress box. A close beyond one with a clean move sets the Breakout Up or Breakdown state.
	Pullback zone + Floor / Ceiling	Amber box where a pullback is normal for the chosen depth, with a solid Floor (uptrend) or Ceiling (downtrend). Shown while the state machine holds a trend; a close beyond the Floor or Ceiling ends it.
	Swing High / Low, Mid	Highest high and lowest low of the swing look-back (dashed) and their midpoint (dotted). Shown in WAIT and Sideways states.
	Liquidity zones, ×2	Purple zones (0.25 × ATR) just beyond the last three unswept swing highs and lows. Pivots at nearly the same price merge into one darker zone marked “×2”.
◆	**Sweep**	A wick beyond a liquidity level with a close back inside. The zone is removed; a close beyond it removes the zone as taken.
	Fib extension	1.272 / 1.618 / 2.0 / 2.618 from the last two pivots. **Off by default**; reference geometry only, untested.

Colours shown are the defaults from ⑤ Colors. Swings are confirmed only after a 2 × ATR reversal, so lines and zones then appear drawn back to the swing bar.

Fibonacci & Bottom-out reading



Bearish structure · leg measured up from the low

- **The leg.** 100% is the Protected level; 0% is the most extreme price since it. In a Bearish structure that is the Protected High down to the swing low.
- ✓ **Stable** = the last close is above 38.2% of the leg.
- ✓ **Confirm** = the last close is above 50% of the leg.
- **The structure itself changes only at the Protected High**, on a close above it (CHoCH). A ✓ does not change the structure.
- **The leg moves.** 0% follows each new extreme, and the whole leg re-anchors after every BOS or CHoCH.

> These are fixed Fibonacci conventions, not tested signals. They describe how much of the down leg has been retraced; they do not predict a bottom.

Settings to adjust

Setting	Default	Effect
Swing size (× ATR) ③ Levels on chart	`2.0`	Higher = fewer, larger swings and a slower structure. Lower = more detail.
Pullback method ② Pullback	ATR	**ATR**: distance from the trend extreme in ATR. **Fibonacci**: retracement of the trend's last leg between pivots (not the Protected-level leg of the Fibonacci drawing).
Pullback depth	Mid	Zone start–end, then Floor / Ceiling, for each method: **Shallow** ATR `0.3`–`1.0`, `1.5` · Fib `23.6`–`38.2%`, `61.8%` **Mid** ATR `0.5`–`1.5`, `2.0` · Fib `38.2`–`61.8%`, `78.6%` **Deep** ATR `1.0`–`2.0`, `3.0` · Fib `50`–`78.6%`, `100%` **Custom**: your own values in ⑥ Advanced
Color candles by ⑤ Colors	Off	Off keeps the chart's own candles. **Structure**: green from a break up until a CHoCH down, red from a break down until a CHoCH up, grey before the first break. **State**: TREND / READY / WAIT colours.
Fibonacci extension	Off	Auto / Up / Down draw 1.272–2.618 from the last two pivots. Reference geometry only.
Highlight ATR/Fib confluence	Off	Shades where the ATR and Fibonacci pullback zones overlap.

Common mistakes

- **Reading a Bottom-out ✓ or the golden ratio as a signal.** They are geometry on the current leg, not tested signals.
- **Reading the forming bar as final.** The state, BOS / CHoCH and sweeps are all decided on closed bars.
- **Expecting fixed Fibonacci levels.** The 0% level follows new extremes, and the leg moves to a new anchor after each BOS or CHoCH.
- **Mixing up the two Fibonacci uses.** The retracement drawing is anchored to the Protected level; the “Fibonacci” pullback method measures the trend's last leg between pivots, so its levels can differ.
- **Using too little history.** The ranks need about one year of bars; the dashboard shows “warming up” until then.
- **Using non-standard chart types.** Heikin Ashi, Renko, Range, Point & Figure and Kagi charts distort the closes the rules depend on.

Alerts

Alert dialog	Conditions
Listed conditions	Group → TREND · Group → READY · Group → WAIT · Breakout Up · Breakdown · BOS · CHoCH. Message example: “Auto Structure: CHoCH on XAUUSD 1D”.
“Any alert() function call”	Pullback started · Floor / Ceiling crossed · Flip crossed (the last opposite pivot of the held trend) · Liquidity sweep, each as a JSON message.

All alerts fire once per bar close. An alert says that something happened; the chart is still read by eye.

The one-line summary

> Set **Market** first and leave **Style** on Auto · read the group and state, then the Structure row and its **Protected level** · the structure changes only on a close beyond that level · Fibonacci and Bottom-out areas describe how much of the leg is retraced, not where price goes next · read everything on closed bars.