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What Is the Bitcoin Rainbow Chart?

A color-banded map of Bitcoin's long-term price — useful as a mood ring, dangerous as a crystal ball.

Alain AI Lab Research · Published July 3, 2026 · 8 min read

The Bitcoin Rainbow Chart is one of the most shared images in crypto, a long-term price chart overlaid with nine colored bands running from cool blue at the bottom to hot red at the top. Cool bands whisper “accumulate,” hot bands scream “sell,” and the whole thing looks reassuringly scientific. It is best understood as a **sentiment overlay**, a visual heuristic—a rule of thumb, not a rule—that translates where price sits today into an emotional label. It is not a valuation model, not an on-chain metric, and—its own creators insist—not a predictor. This report explains what the chart actually plots, where it came from, and why treating its colors as instructions has cost people money.

AT A GLANCE

9

color bands, fire-sale blue to bubble red

Log

regression fit through price and time only

~2014

original hand-drawn version appears

2022

price fell below the lowest band

01 The picture: nine bands from fire sale to bubble

Strip away the styling and the Rainbow Chart is a single line—Bitcoin’s price over its whole history—drawn on a logarithmic scale, an axis where each step upward multiplies the value rather than adding to it. Layered over that line are nine parallel bands, each with a deliberately emotional label. Read bottom to top, the standard labels run roughly as follows. Treat the wording as approximate; different versions tweak the phrasing, though the order and spirit are consistent.

Basically a Fire Sale	<i>deep value · extreme fear</i>
BUY!	<i>cheap</i>
Accumulate	<i>still undervalued</i>
Still Cheap	<i>below trend</i>
HODL	<i>fair-ish value · the middle</i>
Is This a Bubble?	<i>getting warm</i>
FOMO Intensifies	<i>greed building</i>
Sell. Seriously, SELL!	<i>overheated</i>
Maximum Bubble Territory	<i>euphoria · historic tops</i>

The genius of the design is its readability. Anyone can glance at where the price dot sits and get an instant, wordless read on market mood. The danger is exactly the same thing: the labels are commands (“BUY!”, “SELL!”) dressed as observations, and a chart that tells you what to do is a chart worth interrogating before you obey it.

02 The math: a logarithmic regression, and nothing more

The modern Rainbow Chart is built from a **logarithmic regression**, a best-fit curve drawn through the logarithm of Bitcoin’s historical price. In plainer terms: you take the long, jagged price history, smooth a single trend line through the middle of it, then draw parallel bands a fixed distance above and below that line. The colored ribbons are simply that central trend plus-or-minus set widths. That is the entire engine.

The logarithmic scale matters because Bitcoin has traveled many *orders of magnitude*—factors of ten—from cents to tens of thousands of dollars. On a normal linear axis, where equal steps mean equal dollars, the early years would be an invisible flat worm and only the recent past would be legible. On a log axis, where equal steps mean equal *multiples*, a move from \$1 to \$10 occupies the same vertical space as \$10,000 to \$100,000. Only on that compressed canvas do the bands look like tidy parallel rails instead of a chaotic scribble.

Crucially, this is a **price-and-time model**. It ingests nothing but the historical price series. It does not read the blockchain, does not count coins, does not measure supply issuance. That makes it fundamentally different from the metrics it is often shelved beside, such as [the MVRV Z-Score](#), which compares market value to the aggregate price coins last moved at, or [the Stock-to-Flow model](#), which anchors to scarcity and the halving. The Rainbow Chart knows only where price has been.

03 An honest history, because the usual story is wrong

The Rainbow Chart is almost always credited to one person, and that is almost always incorrect. The real lineage is a three-way collaboration stitched together over years. A Reddit user posting as **azop** is generally credited with the original rainbow-banded image around 2014—a semi-joke, hand-drawn overlay, never meant as a serious tool. Separately, a BitcoinTalk forum user known as **Trolololo** built the logarithmic regression model that supplies the underlying math. The version most people share today was assembled at Blockchaincenter, commonly attributed to a contributor named Holger around 2019, which married Trolololo's regression to azop's colored-band presentation. A recalibrated version followed in late 2022 after reality embarrassed the original.

None of this is pedantry. When a chart is passed around as the work of a lone visionary, it borrows an authority it never earned. Knowing that its colored bands began as a Reddit in-joke, and that its curve was fitted after the fact by a pseudonymous forum poster, keeps the tool in its proper place: a clever community artifact, not an institutional-grade instrument.

04 The core flaw: it describes, it does not predict

Here is the deepest problem, and the one most users never notice. The regression at the heart of the chart is **refit as new data arrives**. Every fresh price point nudges the best-fit curve, which drags the whole rainbow with it. That means the bands are not a fixed forecast laid down in advance and then tested against the future—they are a description of the past that quietly rearranges itself to keep hugging whatever price has done.

A model that adjusts to always fit history cannot really be “wrong” in hindsight, and a model that cannot be wrong cannot be trusted to be right. This is **curve-fitting**, the practice of drawing a line to match existing data with no underlying theory forcing it to hold. There is no economic mechanism inside the Rainbow Chart—no reason rooted in supply, demand, adoption, or cost of production—that says price *must* respect these bands. It is a shape traced around what already happened. Retrofitting a curve to the past and admiring how well it fits is not evidence of predictive power; it is the appearance of it.

It is worth resisting one particular temptation here: pointing to how tightly the curve hugs history—a high statistical goodness-of-fit—as if that proves the model works. It proves only that the line was drawn to match the data it was drawn from. A curve fitted to the past will always fit the past well; that is what fitting means. Genuine validation would require the bands, fixed in advance, to correctly frame prices they had never seen—and the repeated recalibrations show they have not managed that.

The tell: if a chart can be quietly recalibrated so that it “always worked,” it is documenting history, not forecasting the future. Impressive backward fit is the easiest illusion in markets to manufacture.

05 Diminishing returns — and the floor that broke

Two observations undercut the chart’s reliability further. The first is **diminishing returns**: across cycles, Bitcoin’s peaks have tended to top out in progressively cooler bands. The blow-off of one era reaches “Maximum Bubble Territory,” while a later, larger-dollar peak stalls a band or two lower. If the ceiling keeps descending relative to the rainbow, the top labels lose their meaning—an asset can make a genuine cycle high without ever lighting up the red band the chart tells you to fear.

The second is more damning. A common myth holds that price “always stays inside the rainbow.” It does not. In 2022, Bitcoin fell **below the lowest band entirely**, puncturing the “Basically a Fire Sale” floor and forcing the recalibration mentioned earlier. Reports through mid-2026 describe price slipping beneath the lower band again during a deep-value stretch some commentators labeled a “dead zone.” The bands are soft boundaries that the market has broken more than once. Anyone who bought purely because “it can’t go lower than blue” learned that it very much can.

06 Why price-only tools blur where on-chain tools sharpen

The Rainbow Chart’s price-only nature is its clearest limitation when set against blockchain-based metrics. Because it sees nothing but price and time, it cannot tell you *who* is buying, whether long-term holders are accumulating or capitulating, or how much of the supply is sitting in profit or loss. It reacts to the price move; it cannot explain it.

Consider a concrete case: two different market bottoms can share an identical price band on the rainbow while looking nothing alike underneath. In one, coins are quietly moving from panicked short-term traders into the wallets of long-term holders—a healthy, accumulative floor. In the other, the same holders are the ones capitulating and dumping into weak demand. The Rainbow Chart paints both the same soothing shade of blue, because the only variable it can see is the number on the price axis. The blockchain distinguishes them; the rainbow cannot.

On-chain valuation tools were built precisely to see inside that black box, and reading the Rainbow Chart alongside [a broader cycle map that blends several independent indicators](#) is far more defensible than trusting a single fitted curve. When a price-only sentiment overlay and an on-chain valuation signal disagree, the disagreement itself is information—a prompt to ask why the color says one thing while the blockchain says another, rather than a reason to pick the prettier chart.

07 The power-law cousin, kept in its box

The Rainbow Chart is sometimes conflated with the **Bitcoin power law**, a related idea proposing that price grows along a mathematical power-law relationship—a curve where one quantity scales as a fixed power of another—

against time. The two are cousins in that both fit a long-term trend to price on log scales, and both carry the same original sin of retrofitting. The power law is an active, contested research topic; some proponents point to recent academic attention, while critics repeat the curve-fitting objection. We flag it here only so readers do not mistake one for the other. Neither the Rainbow Chart nor the power law should be treated as settled science, and this report makes no claim about where that debate lands.

08 How to use it honestly

None of this makes the Rainbow Chart useless—it makes it narrow. Used honestly, it is a **rough long-term sentiment gauge** and a discipline aid. When price sits deep in the cool bands, broad fear is usually high and long-horizon accumulation has historically been rewarded; when it climbs into the hot bands, euphoria is usually running and caution has usually paid. As a nudge to keep buying steadily through the cold and to trim enthusiasm in the heat—a dollar-cost-averaging discipline, where you invest fixed amounts on a schedule regardless of price—it can be a helpful emotional counterweight.

What it is not is a timing tool or an entry-and-exit system, and its own makers say so, wrapping it in explicit “for entertainment” and “you cannot predict the price of Bitcoin with a rainbow” disclaimers. The correct posture is to read its color as one soft input among many, pair it with independent on-chain and macro signals, and never let a band label make a decision for you. A mood ring can tell you the room feels warm. It cannot tell you when to leave.

“I have set my bow in the cloud, and it shall be a sign of the covenant between me and the earth.”

GENESIS 9:13

METHODOLOGY & SOURCES

This explainer synthesizes the publicly documented construction and history of the Bitcoin Rainbow Chart, including the Blockchaincenter presentation, the Trolololo logarithmic-regression lineage, and the azop-origin community record, cross-checked against multiple independent commentaries.

Band labels are reproduced in the commonly published order and wording; minor phrasing varies by version. Historical claims—including the below-band breaks and cycle-peak behavior—reflect widely reported market events. Attribution is presented as a collaborative lineage rather than a single author because the sole-creator story is not supported. Nothing here is investment advice.

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