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Report Interpretation Guide

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1. Introduction

This guide explains how to read and interpret the various reports generated by the Contest Log Analyzer. The goal is not just to understand the numbers, but to turn them into actionable insights that can help you improve your scores in future contests. All examples in this guide are from the 2024 CQ WW DX CW Contest, comparing the logs from K1LZ, K3LR, and KC1XX.

2. Text Reports

Text reports provide detailed, granular data in a plain-text format. They are best for deep-dive analysis and finding specific details.

Score Report (`score_report`)

This is a comprehensive, single-log summary of your final score, broken down by band. It provides the most important top-level metrics for your operation.

Example Output

How to Interpret This Report

- **AVG (Average Points per QSO)**: This is a crucial metric. An AVG close to 3.0 indicates a strong focus on high-value inter-continental QSOs. An AVG closer to 1.0 or 2.0 suggests more contacts within your own continent.
- **Multiplier Totals**: For contests like CQ WW, multipliers are counted on each band. The `TOTAL` row shows the *sum* of multipliers from each band, not the number of unique multipliers.

QSO Summary (`summary`)

This report provides a high-level comparative overview of the total QSO counts and operating styles for all analyzed logs.

Example Output

How to Interpret This Report

This report is the quickest way to understand fundamental differences in operating strategy. In this example, all three stations have a very similar Run-to-S&P ratio (roughly 2:1), indicating a shared, effective strategy focused on calling CQ ("Running") as much as possible.

Rate Sheet (`rate_sheet` & `rate_sheet_comparison`)

The `rate_sheet` provides an hour-by-hour breakdown of QSO rates for a single log, while the `rate_sheet_comparison` places this data side-by-side for multiple logs.

Example Output (Comparison)

How to Interpret This Report

Use this report to analyze strategic differences in band selection and pacing. At `0000Z`, K1LZ focused heavily on 40M, while K3LR was already making significant numbers on 10M, indicating a different approach to chasing band openings.

QSO Comparison Summary (`qso_comparison`)

This powerful pairwise report breaks down how two logs compare on each band, focusing on which QSOs were **unique** to each station and which were **common** to both.

Example Output (10 Meter Band)

How to Interpret This Report

The Unique columns reveal the real strategy. K3LR's 878 unique QSOs came primarily from "Running" (745 QSOs). This means K3LR's high rate on 10M was effective at attracting stations that K1LZ never logged. A high number of "Unique S&P" QSOs would indicate that one operator was more effective at searching for and finding rare stations that the other missed. This analysis is key to understanding *how* an advantage was gained—whether through a more effective "Run" frequency or superior "S&P" skill.

Missed Multipliers (`missed_multipliers`)

This report is essential for identifying the most costly unworked stations. It lists every multiplier that was worked by at least one person in the group but missed by at least one other, showing who worked it and how.

Example Output (10 Meter Band Snippet)

How to Interpret This Report

The text `(Run)`, `(S&P)`, or `(Both)` shows how the station logged that multiplier. This is critical information. If your competitor worked a rare multiplier via `(S&P)`, it means they found it by tuning the band. If they got it via `(Run)`, it means that multiplier *called them*.

3. Plots and Charts

Plots and charts provide a high-level, visual summary of performance.

QSO Rate Plot (`qso_rate_plots`)

This plot shows the cumulative QSO total over the course of the contest. It's the best way to visualize the overall "horse race."

How to Interpret This Plot

- **Slope of the Line**: A steeper slope indicates a higher QSO rate. You can see periods where one station pulls ahead or another catches up.
- **Plateaus**: Flat sections of the graph indicate off-times or periods of very low activity.
- **Inset Table**: The table provides a convenient summary of the final QSO totals and the Run/S&P/Unknown breakdown for each station.

Cumulative Difference Plot (`cumulative_difference_plots`)

This plot presents rate information as a cumulative difference, which shows trends and momentum shifts more clearly than traditional rate graphs. It is one of the most powerful analysis tools in the package for visualizing the flow of a competition between two logs.

How to Interpret This Plot

This plot shows **K3LR minus KC1XX**.

- **Top Panel (Overall Diff)**: This shows the total QSO difference. When the line is above zero, K3LR is ahead. When it drops below zero, KC1XX has taken the lead. The slope reveals who is winning at any given time.
- **Middle Panel (Run Diff)**: This isolates the difference in **Run** QSOs. K3LR's initial lead was built on a superior run rate, but the downward trend shows KC1XX consistently out-ran K3LR after the first few hours.
- **Bottom Panel (S&P+Unk Diff)**: This isolates the difference in **S&P** QSOs. The upward trend shows K3LR was significantly more effective at Search & Pounce.
- **Strategic Insight**: This plot tells a clear story. K3LR's S&P strategy was superior, but it was not enough to overcome the deficit from KC1XX's more powerful run rate in the second half of the contest.

QSO Breakdown Chart (`qso_breakdown_chart`)

This chart provides a visual companion to the `qso_comparison` text report, breaking down the unique and common QSOs on each band.

How to Interpret This Chart

This chart is unique to this analyzer and reveals where each station gained its advantage.

- **Gray Bar (Common)**: This represents the base of QSOs that both stations worked.
- **Colored Bars (Unique)**: The stacked, colored bars on either side show the QSOs that were unique to that station, broken down by Run, S&P, and Unknown.
- **Strategic Insight**: On 20 meters, the high "Common" bar shows both stations worked a similar pool of stations. However, both added a significant number of **Unique Run** QSOs (the large red segments), reinforcing that they were successfully running different sets of stations.

Point Contribution Breakdown (`chart_point_contribution`)

This chart shows where your points came from. For CQ WW, points are awarded based on the continent of the station worked.

How to Interpret This Chart

- **Pie Chart**: The slices show the proportion of total points that came from each point value. In CQ WW, 3-point inter-continental QSOs are the most valuable.
- **Table**: The table below the chart provides the exact counts for each point category and the final average points per QSO.