

Writes one of two Universal ASCII Lightning Formats (UALF). Currently versions 0 and 1 are supported. Use the optional *VER* parameter to specify which version of UALF to output. Omitting *VER* causes *dff_ascii* to use UALF version 0.

Each UALF record consists of a series of numeric fields, separated by Tab characters (0x09), and each record delimited by Carriage Return (0x0D) and Linefeed (0x0A) characters. UALF records are of varying width, since no leading-zero characters or spaces are used in the records.

The fields of each UALF version are described below beginning with *UALF version 0*.

1. The first field is a positive integer denoting the version number. Whenever fields are added or changed in the UALF format, this number will be incremented allowing client applications to determine if they are capable of reading the given UALF record.

The second through eighth fields specify the time, converted to the user's local time zone, set by the TZ environment variable or GMT by default.

- ✓2. Year, including the century.
- ✓3. Month, with January as 1 and December as 12.
- ✓4. Day of the month, 1 to 31.
- ✓5. Hour, 0 to 23.
- ✓6. Minute, 0 to 59.
- ✓7. Second, 0 to 60.
- ✓8. Nanosecond, 0 to 999999999.
- ✓9. Latitude of the calculated location in decimal degrees, to 4 decimal places, -90.0 to 90.0.

- ✓ 10. Longitude of the calculated location in decimal degrees, to 4 decimal places, -180.0 to 180.0.
- ✓ 11. Estimated peak current in kiloamps, -9999 to 9999.
- ✓ 12. Multiplicity for flash data (1 to 99) or 0 for strokes:
plotting
- 13. Number of sensors participating in the solution, 2 to 99.
- 14. Degrees of freedom when optimizing location, 0 to 99.

The next 3 parameters specify an error ellipse measuring a 50th percentile confidence region around the given latitude/longitude location.

- 15. This field represents the ellipse angle as a clockwise bearing from 0 degrees North, 0 to 180.0 degrees.
- 16. Ellipse semi-major axis length in kilometers, 0 to 50.0km.
- 17. Ellipse semi-minor axis length in kilometers, 0 to 50.0km.
- 18. Chi-squared value from location optimization, 0 to 999.99.
- 19. Risetime of the waveform in microseconds, 0 to 99.9.
- 20. Peak-to-zero time of the waveform in microseconds, 0 to 999.9.
- 21. Maximum rate-of-rise of the waveform in kA/usec, 0 to 999.9.
- ✓ 22. Cloud indicator, 1 if Cloud-to-cloud discharge, 0 for Cloud-to-ground.
- 23. Angle indicator, 1 if sensor angle data used to compute position, 0 otherwise.
- 24. Signal indicator, 1 if sensor signal data used to compute position, 0 otherwise.
- 25. Timing indicator, 1 if sensor timing data used to compute position, 0 otherwise.

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