

Time of day items

A *time of day item* in date strings specifies the time on a given day. Here are some examples, all of which represent the same time:

20:02:00.000000

20:02

8:02pm

20:02-0500 # In EST (U.S. Eastern Standard



More generally, the time of day may be given as

‘hour:minute:second’, where *hour* is a number between 0 and 23, *minute* is a number between 0 and 59, and *second* is a number between 0 and 59 possibly followed by *‘.’* or *‘,’* and a fraction containing one or more digits. Alternatively, *‘:second’* can be omitted, in which case it is taken to be zero. On the rare hosts that support leap seconds, *second* may be 60.

If the time is followed by *‘am’* or *‘pm’* (or *‘a.m.’* or *‘p.m.’*), *hour* is restricted to run from 1 to 12, and *‘:minute’* may be omitted (taken to be zero). *‘am’* indicates the first half of the day, *‘pm’* indicates the second half of the day. In this notation, 12 is the predecessor of 1: midnight is *‘12am’* while noon is *‘12pm’*. (This is the zero-oriented interpretation of *‘12am’* and *‘12pm’*, as opposed to the old tradition derived from Latin which uses *‘12m’* for noon and *‘12pm’* for midnight.)

The time may alternatively be followed by a time zone correction, expressed as *‘shhmm’*, where *s* is *‘+’* or *‘-’*, *hh* is a number of zone

hours and *mm* is a number of zone minutes. The zone minutes term, *mm*, may be omitted, in which case the one- or two-digit correction is interpreted as a number of hours. You can also separate *hh* from *mm* with a colon. When a time zone correction is given this way, it forces interpretation of the time relative to Coordinated Universal Time (UTC), overriding any previous specification for the time zone or the local time zone. For example, ‘+0530’ and ‘+05:30’ both stand for the time zone 5.5 hours ahead of UTC (e.g., India). This is the best way to specify a time zone correction by fractional parts of an hour. The maximum zone correction is 24 hours.

Either ‘am’/‘pm’ or a time zone correction may be specified, but not both.