

Perpetual Calendar Instructions

A perpetual calendar is a device that can be used to calculate the day of the week for a given date. This slide-rule-type model consists of six specially designed rulers bundled together by two straps.

Basic Operation Examples

These examples are arranged in logical order. Each example illustrates a feature of the perpetual calendar and requires a complete understanding of all previous examples.

First, let's put the perpetual calendar in its standard arrangement. Press the perpetual calendar from both ends to center all the rulers. Notice that each ruler is identified by a letter on both of its ends. Find ruler A. Hold the perpetual calendar so that ruler A is right side up. Make sure that the remainder of the rulers follow in alphabetical order around to the bottom. If they do not, rearrange them now. (Slide rulers completely out to rearrange or reorient them.) Also, make sure that each of rulers B, C, D, and E has a red indicator (rectangular pointer) along the middle of its top side. If it does not, reorient it now. Finally, make sure that ruler F has a black indicator along the middle of its top side. If it does not, reorient it now. To now ensure that the perpetual calendar is in its standard arrangement confirm that (1) the rulers are in alphabetical order from top to bottom and (2) only red and black indicators are visible.

Now, let's determine the calendar for May of 3797. Beginning with the perpetual calendar in its standard arrangement, slide ruler B to align the indicator on its top side with the "3" on ruler A. (In fact, it was probably already aligned.) Next slide ruler C to align its indicator with the "7" on ruler B. (Be careful not to disturb ruler B. This one was probably already aligned also.) Now slide ruler D to the right to align its indicator with the "9". And then slide ruler E to the left to align its indicator with the "7". (Always ignore indications that are not between the straps.) You have now selected the year 3797. Slide the next ruler (ruler F) to align its indicator with the month of May (probably already aligned). Now notice how the days of the month on ruler F align with the days of the week on the top side of ruler A. This is the calendar for May of 3797. Notice that the 10th is a Wednesday. Please note that the perpetual calendar is easy to operate laying flat on a table.

Next, let's determine the calendar for September of 1997. Notice (on ruler A) that you must choose either "OS 1" or "NS 1". The Old Style Calendar (OS) is used before the year 1582. After the year 1582, the New Style Calendar (NS) is used. For the year 1997 you will, of course, use "NS 1" (for New Style). Proceed as before. You should conclude that September 23, 1997 is a Tuesday.

Now, let's determine the calendar for April of 1912. Notice, as you select the "2", that it is blue. *The indicators that select the year must always match the color of the indication they select.* So reorient ruler E to use the blue indicator. April 14 is a Sunday.

Next, try October 12, 1492 (a Friday); don't forget to use "OS 1" and match the color of each digit of the year. Also, try April 7, 30 (AD) (another Friday); notice that you must enter the year in 4 digits ("0030").

Finally, let's find the last Thursday in February for the year 1900. (Don't forget to match the color of both "0"s.) Notice as you select February, that it is green. Additionally notice that the "28" on ruler F is also green. This correspondence shows that February (of this year) has only 28 days. (According to the calendar reform of 1582, 1900 is *not* a leap year.) You should conclude that the last Thursday in February is the 22nd.

(over please)

Basic Operation Guidelines

The examples thus far have fully illustrated the basic operation of the perpetual calendar. The following guidelines will help you avoid mistakes and confusion.

- To make sure that the perpetual calendar is set for a specific month, confirm that ...
- the rulers are in order from top to bottom (notice the letter designations on the ends of the rulers),
 - all indicators (rectangular pointers) are completely visible between the straps,
 - the thousands part of the year (and style (NS/OS) if necessary) (on ruler A) is selected with an indicator of matching color,
 - the hundreds, tens, and ones digits of the year (on rulers B, C, and D respectively) are each selected with an indicator of matching color, and
 - the month (on ruler E) is selected with the black indicator on ruler F.

Please be aware that ...

- All years are assumed AD.
- the calendar reform of 1582 omitted October 5 through October 14 of that year (October 15, 1582 (NS) directly follows October 4, 1582 (OS)),
- the color of each month on ruler E corresponds to the number of days in that month on ruler F.

Basic Operation Practice Problems

The date is formatted as follows: year, month, day.

1457AUG13	SAT	1929OCT29	TUE
1066SEP25	MON	2000SEP17	SUN
1564FEB15	TUE	1765MAY19	SUN
1972DEC13	WED	1999FEB16	TUE
325JUN23	WED	1953MAY28	THU
1931AUG17	MON	2000NOV17	FRI
1961APR11	TUE	1977AUG10	WED
1944JUN6	TUE	1997AUG29	FRI
2000DEC25	MON	2017AUG22	TUE
526MAY19	TUE	1556JAN23	THU

Specifications

- weight: < 0.5 ounces
- size: ~ 8.23 cubic inches (packing space)
base: regular hexagon (~ $57/64$ inch on each side)
length: ~ $3^{15}/16$ inches (collapsed)
- range: 1 BC (0 AD) through 3999 AD (1460972 days)
Julian Calendar (OS): 1 BC (0 AD) through 1999 AD
Gregorian Calendar (NS): 1000 AD through 3999 AD
- basic operation response time: < 35 seconds
within the same month: 0
within the same year: < 2 seconds

Contact Information

Please contact us with questions or suggestions, or for any reason you wish. We would like to be able to contact you if an output error is ever found. We are thankful for your interest and hope that you benefit from the use of your perpetual calendar.

Sean Barton
sean.barton@moonstick.com
www.moonstick.com/contact

Moonstick Co.
www.moonstick.com
507 E. Jefferson St.
Quincy, FL 32351-2505
United States