



Perpetual Magnetic Calendar



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Summary

Crafted with WOW guaranteed effect

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I present to you my **Perpetual Magnetic Calendar**, perfect for adding a touch of design to your home or office.

The calendar consists of a wheel that houses the months of the year and the days of the week, supported by a pedestal.

The transverse axis has the days of the month imprinted on it, while three markers complete the calendar to always identify the exact day!

The marker for the days of the month should be moved every day by sliding it to the corresponding number.

The other two markers are magnetic, ensuring a WOW effect for those who consult it. In particular, the magnetic marker for the days of the week may seem ordinary, but the one for the month of the year will surprise you by remaining suspended in mid-air!

Printing:

It is recommended to use preset profiles, **making sure to use high resolution for the parts with texts**.

The pieces are not huge, so you can use a resolution of **0.16mm** (0.12 even better) for the whole wheel and the axis where the text is located.

You can also use adaptive resolution and set a high one only for the top part where the text is, it's up to you.

Colored text

You need to change at least one color for the texts otherwise you won't see them. With AMS it's simple and you can use multiple colors to print the wheel texts. if you don't have an AMS, just add a pause when the texts starts and simply change the filament till the end of the print.

Inserting Magnets:

For the marker of the month and the days of the week, insert the magnet **during printing with a bit of glue**.

Pay attention to the orientation of the magnets! The two markers must have the magnet's orientation **opposite** to the one you will insert in the holes, so they attract each other.

Before you insert the magnet **put a bit of glue and wait** so the magnet won't get attracted by the nozzle when you restart the print.

Month Marker: Printed with the sphere facing upward. At **level 106**, insert a pause to place the magnet. The magnet should be oriented with **the TOP side opposite** to the side of the magnets in the month holes.

Days of the Week Marker: Printed with the base of the half-sphere on the plate. At **level 20**, insert a pause to place the magnet. The magnet should be oriented with **the BOTTOM side opposite** to the side of the magnets in the holes for the days of the week.

By the way, presets profile has everything set up yet.

BOM and Assembly:

- 21 magnets 5mm x 2mm (diameter x thickness) eg: <https://t.ly/i8UwR>
- about 10 cm of sewing thread

Assembly is simple and intuitive, **making sure to respect the orientation of the magnets!**

The magnets must have the connecting side opposite to that of the respective marker to attract each other. Use a bit of glue for the magnets on the wheel.

I would suggest to have the markers ready before you glue the rest of the magnets on the wheel so you can know the correct orientation using them.

For the axis of the days of the month, glue may not be necessary, but it can be used to securely attach it to the wheel.

Finally, the most challenging task: tying the sewing thread.

This step can be a bit tricky as you need to determine the perfect length for all the months.

Technically, this length is consistently about 82mm (from the axis hole to the wheel).

Begin by tying one end of the thread to the month marker and inserting the other end into the small hole on the axis.

Now, thread the other end into the hole on the back support without tying it and wrap the thread around the support twice to have it in place but still adjustable.

Verify that the length is correct by adjusting the marker into the month slots and pay careful attention to the thread length so that the magnets attract each other without touching.

Once satisfied, secure the thread with a finger and apply a drop of glue to fix it in place.

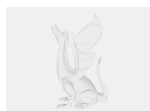
The WOW effect is guaranteed!

A happy 2024 to all makers!

UPDATE 03 Jan 2024

Added files to use only 6x3mm magnets

Model files



calendar.3mf



wheel.stl

☐ At least two colors



axis.stl

☐ At least two colors



weekday-marker.stl

☐ This need magnet during printing



month-marker.stl

☐ This need magnet during printing



day-marker.stl



pedestal.stl



month-marker-magnets-6x3.stl



weekday-marker-magnets-6x3.stl



wheel-magnets-6x3.stl

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