

## Application No. 586: Thickness gage for instruments

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### Measures continuously the thickness of non-magnetic objects

Guido Brancalion developed a device that measures the thickness of non-magnetic objects. This application is especially helpful for instrument makers so they can check if the wood of a violin or guitar is equally thick in all places. With this device you don't need to take the instrument apart.



### Application:

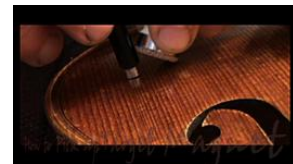
A disc magnet S-06-06-N ([www.supermagnete.fr/eng/S-06-06-N](http://www.supermagnete.fr/eng/S-06-06-N)) is placed on the inside of the instrument.



Then, wrap the pot magnet GTN-16 ([www.supermagnete.fr/eng/GTN-16](http://www.supermagnete.fr/eng/GTN-16)) in a cloth and move it along the outside of the instrument until the two magnets attract each other.



Now, replace the pot magnet with the metal sensor. The Hall sensor measures the magnetic flux density in this spot and calculates the distance between the sensor and the disc magnet on the inside.



YouTube Video: [www.youtube.com/watch?v=xzY6q9DNlcM](http://www.youtube.com/watch?v=xzY6q9DNlcM)

The device measures distances of up to 5 mm with a +/- 0,03 mm deviation. At a larger distance the magnet on the inside won't adhere anymore. For more detailed information refer to the flyer and the technical data (see below).



Flyer  
(English)  
(pdf file)



Technical  
data  
(English)  
(pdf file)



Even the thickness of glass can be measured with this device.

### Articles used

1 x GTN-16: Pot magnet with threaded stud  $\varnothing$  16 mm ([www.supermagnete.fr/eng/GTN-16](http://www.supermagnete.fr/eng/GTN-16))

1 x S-06-06-N: Disc magnet  $\varnothing$  6 mm, height 6 mm ([www.supermagnete.fr/eng/S-06-06-N](http://www.supermagnete.fr/eng/S-06-06-N))

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