

Magnification Changers and Revolvers – A Messter Microscope

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In a recent [Micscape article](#) (November 2018), Stefano Barone described his 1941 Zeiss Jena microscope with multiple eyepieces mounted on a rotating turret. His very informative article shows further an image from an 1872 Nachet catalogue near the end, indicating that mounting multiple eyepieces on a microscope is certainly not a new idea. But as he notes, in this case the multiple eyepieces are not on a turret; rather they are designed so that several people can view the same specimen through the microscope at the same time.

But a wonderful example of a revolving eyepiece turret microscope is described in Fritz Schulze's [Micscape article](#) in February 2012. I am now the very happy owner of this microscope, and below are some further photos of this Messter Universal Bacteria Microscope.



Messter microscope.

Interestingly, I also have a children's Lafayette microscope with a dual eyepiece arrangement, not quite a turret, but similar in intent. It is about 8 inches / 18cm tall. The eyepieces are 10x and 15x, while the objectives are 8x, 20x, and 40x. There is a rotating wheel with aperture stops of varying diameter below the stage, and a plano mirror with a 3V flashlight bulb on the reverse side. The two wires for the bulb (unfortunately broken and awaiting repair) connect to two AA batteries in the base. While the optics are not great, they do work reasonably well.



Lafayette Microscope

As Stefano Barone notes in his article, eyepiece turrets are more often seen in telescopes. For the interest of *Micscape* readers, here are some photos of three telescope turrets. The first is a 70mm Eschenbach refractor with a four-eyepiece turret. This is a nice portable spotting scope.

Next, I've placed a Baader four position eyepiece turret onto a 60mm Carton refractor. (In fact, this turret will not reach focus for this scope but it can be placed on any telescope designed for standard 1.25" eyepiece barrels, and with adequate back focus.) This scope is one I take to star parties to allow smaller children to observe and "drive the telescope" (i.e. learn to point it themselves at the moon, major planets, etc.)

Finally, I've included photos of a very intriguing Russian 125mm catadioptric telescope. Apparently, this scope dates from some time in the 1940s to 1960s period. My understanding it that it was intended to be used by a two-person military sniper team, one with the rifle and the other using this scope. (If anyone knows more about this rare telescope, I'd be most interested in hearing from you.)



Left. Three telescopes with multiple eyepiece turrets. Centre. 70mm Eschenbach refractor with a four-eyepiece turret. Right. Baader four position eyepiece turret onto a 60mm Carton refractor.



Russian 125mm catadioptric telescope.

Postscript added December 2018: Yet another interesting microscope with revolving eyepiece turrets was recently sold on eBay. It is a 1920s Leitz stereo (shown below). While not immediately obvious, the inter-pupillary distance is adjusted by rotating both turrets.



Leitz stereo microscope ca. 1920s. Image by the German eBay seller 'tug2003'.

Comments to the author Michael Wolfson welcomed, email – Michael.Wolfson AT uOttawa DOT ca.

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