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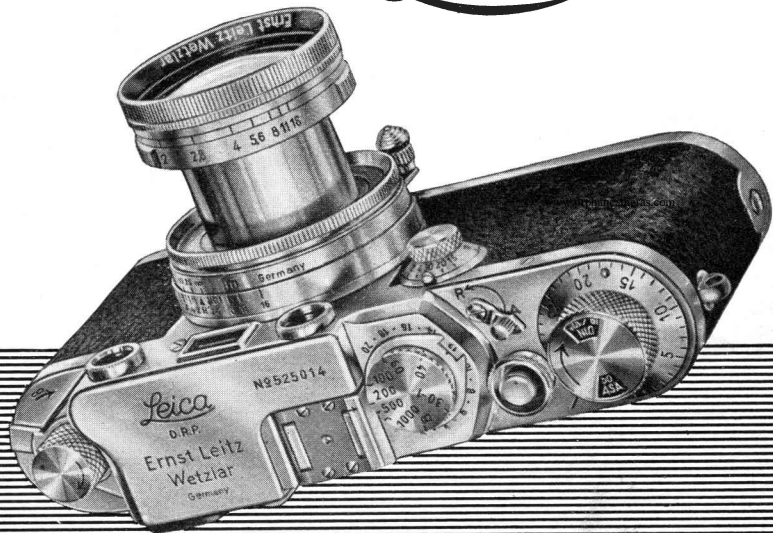
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# SUPPLEMENTARY INSTRUCTIONS

for the synchronized

# *Leica III f*

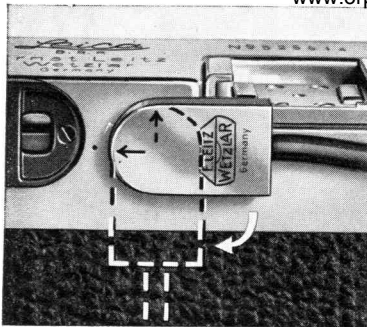


At the base of the shutter speed dial the synchronized LEICA has an independent adjustable **synchro-dial**. This can be set on a scale to any number from 0 to 20.

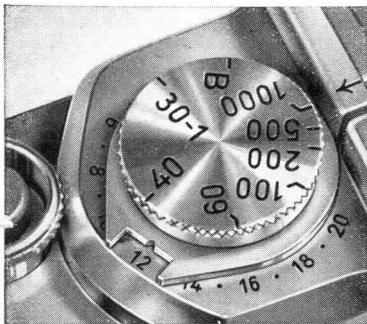
In addition, the camera has a **plug socket** next to the twin viewfinder and rangefinder eyepiece. This takes the connecting cord to the flash holder.

By setting the synchro-dial, the LEICA can be synchronized with the firing moment of any flash bulb or electronic flash.

*The connecting cord to the flash holder will be supplied with a special connector CUMOO fitting also extension cables with plug sockets other than LEITZ.*



Push the camera plug into the socket of the LEICA in a horizontal position; the engraved arrow should point towards the twin eyepiece. When the plug is correctly pushed in, turn it downwards so that the arrow now points to the top. To remove the plug, turn it so that the arrow is horizontal again and points to the twin eyepiece.



The required scale settings of the synchro-dial depend on the type of flash bulb used and on the shutter speed required. They are read off from the following table. (A copy of it is enclosed with every synchronized LEICA and can be slipped into the ever-ready case).

## SETTINGS FOR LEICA SYNCHRONIZATION

Table 1

Shutter Speed	1/30	1/40	1/60	1/100	1/200	1/500	1/1000
General Electric PH 6 (USA) .	70 <b>19.5</b>	70 <b>14</b>	65 <b>10.5</b>	60 <b>7</b>	40 <b>5</b>	25 <b>4</b>	20 <b>3</b>
General Electric PH 31 (USA) .	135 <b>20</b>	135 <b>15</b>	105 <b>10.5</b>	80 <b>7.5</b>	55 <b>5</b>	35 <b>4</b>	20 <b>3</b>
Sylvania Wabash PF 26 (USA)	70 <b>19.5</b>	70 <b>14</b>	65 <b>10.5</b>	60 <b>7</b>	40 <b>5</b>	25 <b>4</b>	20 <b>3</b>
Sylvania Wabash No. 2a (USA)	135 <b>0</b>	135 <b>15</b>	105 <b>10.5</b>	80 <b>7.5</b>	55 <b>5</b>	35 <b>4</b>	20 <b>3</b>
Philips PF 45 (Holland) . . . .	105 <b>20</b>	100 <b>15</b>	85 <b>11</b>	65 <b>7.5</b>	45 <b>5</b>	25 <b>4</b>	20 <b>3</b>
Osram S 2 (Germany) . . . . .	145 <b>19.5</b>	140 <b>14</b>	130 <b>10.5</b>	105 <b>7</b>	75 <b>5</b>	50 <b>4</b>	35 <b>3</b>
West No. 6 A (Japan) . . . . .	95 <b>19.5</b>	90 <b>14</b>	80 <b>10.5</b>	65 <b>7</b>	45 <b>5</b>	30 <b>4</b>	20 <b>3</b>
West No. 31 (Japan) . . . . .	150 <b>20</b>	130 <b>15.5</b>	110 <b>11</b>	90 <b>7.5</b>	65 <b>5</b>	40 <b>4</b>	30 <b>3</b>
Electronic flash . . . . . (up to 5 millise. flash delay)	<b>2</b>						

**Example:** available flash lamp: G. E. 31  
flash-to-subject-distance: 13 feet  
desired shutter speed:  $\frac{1}{80}$  sec.  
$$\frac{\text{guide number}}{\text{flash-to-subject distance}} = \frac{105}{13} = f/8$$
  
Set synchro-dial to **10.5**

Follow the **heavy figures** for setting synchro-dial of the LEICA, according to type of flash lamp and shutter speed.

To calculate suitable lens stop divide the guide numbers (in small type) by the flash-to-subject-distance (in feet). Aperture values thus ascertained are correct for film speed 40 B. S. & A. S. A. (arith. index) or 32 Weston ratings.

Doubling of the speed index denotes a doubling of the film speed and requires to stop down the lens by one stop and vice versa. For other speed index figures see table ②.

Table 2

Film Speed System	Open up the lens by			Standard Stop	Stop down the lens by	
	3 Stops	2 Stops	1 Stop		1 Stop	2 Stops
<b>B. S. &amp; A. S. A. Arith. Index</b>	5	10	20	40	80	160
<b>Weston</b>	4	8	16	32	64	125
<b>B. S. &amp; A. S. A. Log. Index</b>	18°	21°	24°	27°	30°	33°
<b>B. S. &amp; A. S. A. Speed</b>	020	040	080	0160	0320	0640
<b>H. &amp; D. British</b>	200	400	800	1600	3000	6000
<b>G. E.</b>	6	12	24	48	100	200
<b>Europ. Scheiner and Kodak Speed</b>	19°	22°	25°	28°	31°	34°
<b>American Scheiner</b>	14°	17°	20°	23°	26°	29°
<b>Weston Scheiner</b>	15°	18°	21°	24°	27°	30°
<b>Ilford Group</b>	B	C	D	E	F	G
<b>DIN</b>	$\frac{8^{\circ}}{10}$	$\frac{11^{\circ}}{10}$	$\frac{14^{\circ}}{10}$	$\frac{17^{\circ}}{10}$	$\frac{20^{\circ}}{10}$	$\frac{23^{\circ}}{10}$

From: Exposure, The Fundamentals of Camera Technique by W. F. Berg (published by Focal Press, London 1950)

Table ① lists the flash bulbs particularly suitable for use with focal plane shutters, as well as the setting for electronic flash. In addition, a number of flash bulbs listed in the following table are also of some use. These are, however, primarily designed to be used with between-lens shutters; they emit a short flash and so may produce uneven illumination at the flanks of the negative.

The values in the tables are based on data and flash graphs supplied by the makers of the various flash bulbs. To make the best use of the light available, somewhat increased negative development times are advisable. This is especially important with electronic flash exposures.

Shutter Speed	1/30	1/40	1/60	1/100
G. E. PH/50 (USA.) . . . . .	190	180	165	140
Sylvania Wabash No. 3 (USA.) . . .	190 <b>21</b>	180 <b>15</b>	165 <b>11</b>	140 <b>7.5</b>
Philips PF 110 (Dutch) . . . . .	190	180	165	140
Osram S 1 (German) . . . . .	105 <b>15.5</b>	95 <b>10.5</b>	85 <b>8</b>	70 <b>5.5</b>
G. E. PH/11 (USA.) . . . . .	105	100	90	
G. E. PH/22 (USA.) . . . . .	150	145	125	
Sylvania Wabash No. 0 (USA.) . . .	85	80	75	
Sylvania Wabash No. 2 (USA.) . . .	155	145	125	
Sylvania Press 25 (USA.) . . . . .	90 <b>16</b>	85 <b>11.5</b>	75 <b>9</b>	
Sylvania Press 40 (USA.) . . . . .	105	95	85	
Philips PF 14 (Dutch) . . . . .	75	70	60	
Philips PF 25 (Dutch) . . . . .	105	95	85	
Philips PF 56 (Dutch) . . . . .	145	135	115	
Sylvania Press 40 (Brit.) . . . . .	125 <b>18</b>	115 <b>13</b>	105 <b>10</b>	
G. E. PH/5 (USA.) . . . . .	75 <b>16</b>	70 <b>11.5</b>		
Osram F 0 (German) . . . . .	75 <b>6.5</b>	60 <b>4</b>		
Osram F 1 (German) . . . . .	105 <b>11.5</b>	85 <b>8</b>		
Osram F 2 (German) . . . . .	140 <b>15</b>	130 <b>10.5</b>		

Table ③



The film marker on the winding knob of the synchronized LEICA is set to the speed of the film in the camera. This is best done immediately after loading, when setting the film counter to zero. The film marker shows the film speed in ASA and Weston ratings.

To set the film marker, lift the milled edge of the winding knob. For black and white film turn it in the direction of the engraved arrow and let it drop into place at the correct setting. The lettering will then be in white on black. For colour film lift the milled edge and turn as far as required against the direction of the arrow. The letters ASA and Weston are then in white on red, which shows that the camera is loaded with colour film. The speed figure itself is always white on black.

