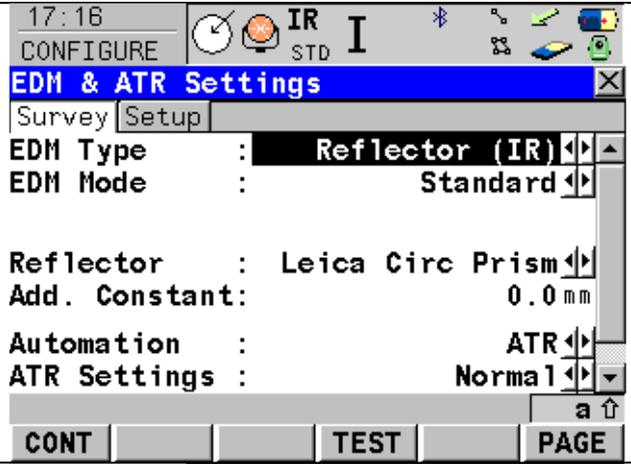
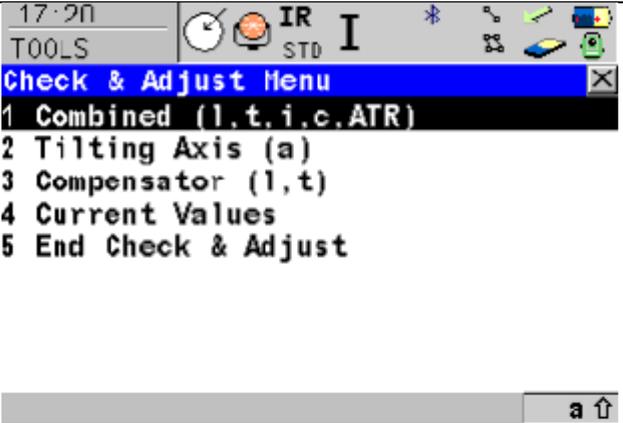
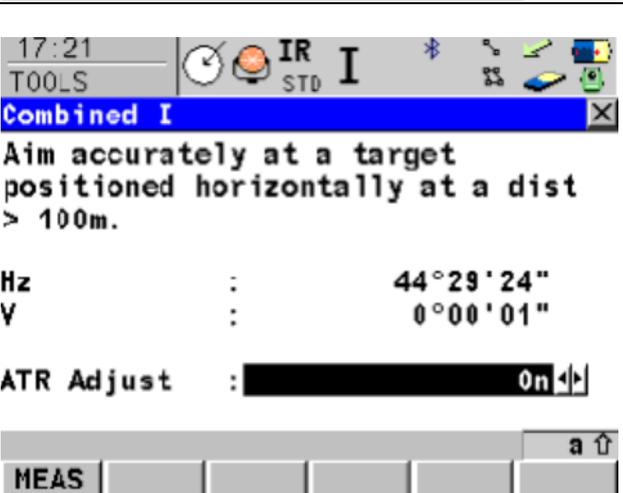
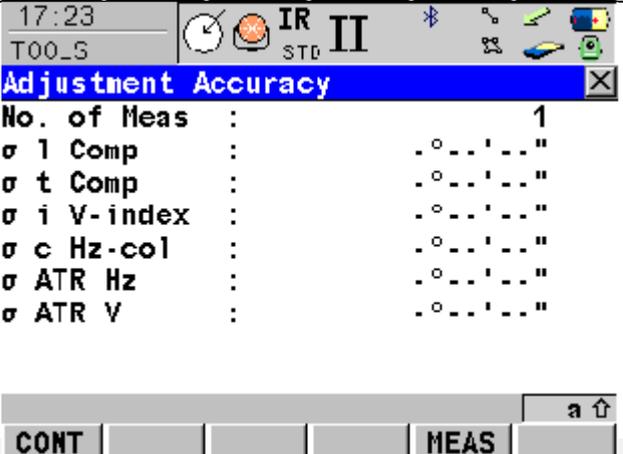


Leica TS12 Check and Adjust

Your Leica Total Station is a precision engineered instrument and having it regularly serviced and calibrated by Leica trained service engineers is the best way to keep it in top condition. However, in-between services it is recommended to run the “Check and Adjust” program to check the horizontal collimation, vertical index and other electronic adjustments.

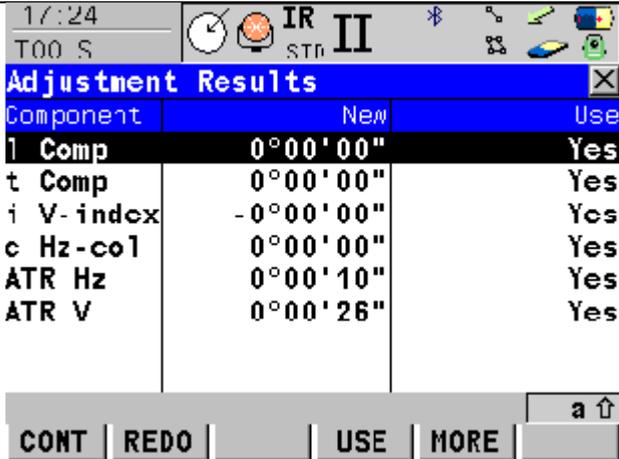
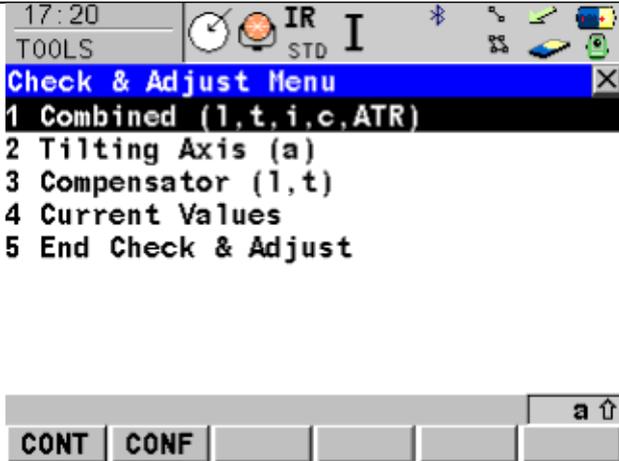
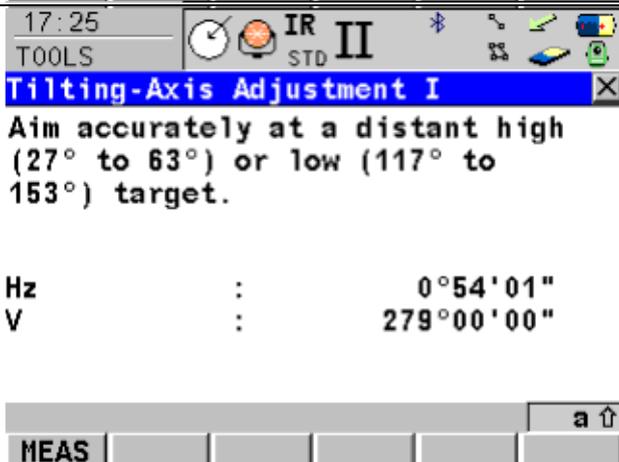
Step	Action	Screen Display
1	For the first step you will need to position a Leica Round prism approximately 100+m away from your total station at roughly the same height as your total station. (you can use a retro sticker but you will not be able to adjust the ATR)	
2	Level the instrument and give it 15 minutes to adjust to the temperature outside. In the meantime, go into your EDM and ATR settings (Config\Instrument Settings\EDM and ATR settings) and make sure you've selected the Leica Round Prism, the Measure mode as Single and that your target aiming is set to Manual. OK those settings.	 <p>The screenshot shows the 'EDM & ATR Settings' menu. The 'EDM Type' is set to 'Reflector (IR)' and 'EDM Mode' is 'Standard'. The 'Reflector' is set to 'Leica Circ Prism' with an 'Add. Constant' of '0.0 mm'. 'Automation' is set to 'ATR' and 'ATR Settings' is 'Normal'. Navigation buttons 'CONT', 'TEST', and 'PAGE' are visible at the bottom.</p>
3	Then from the main menu of the instrument go to Tools then Check and Adjust.	 <p>The screenshot shows the 'Tools Menu' with the following options: 1 Format Memory Device, 2 Transfer Objects..., 3 Upload System Files..., 4 Calculator, 5 File Viewer, 6 Licence Keys, 7 Check & Adjust..., and 8 Field to Office. Option 7 is highlighted. Navigation buttons 'CONT' and 'PAGE' are visible at the bottom.</p>

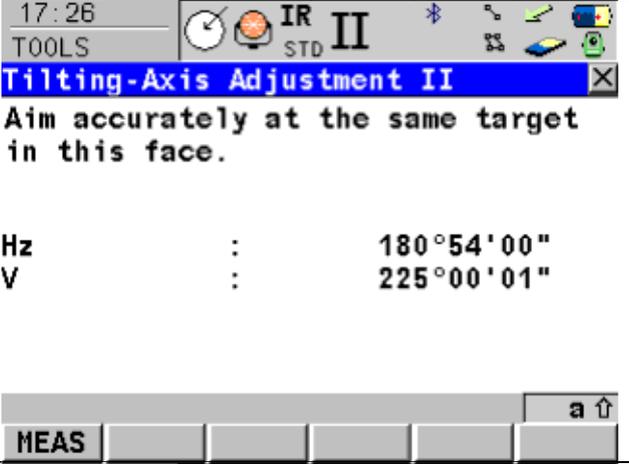
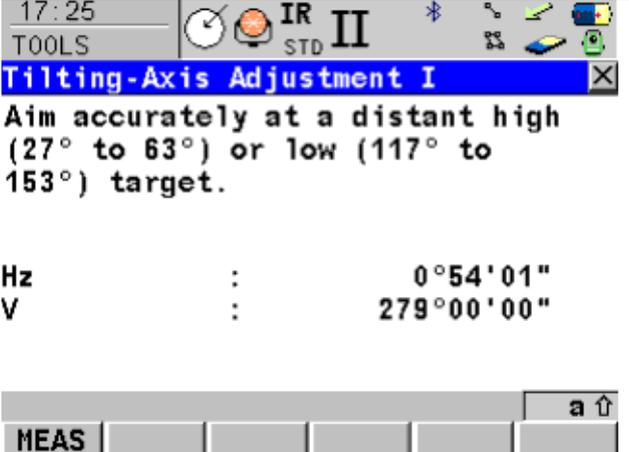
4	Select "Combined (l, t, l, c, ATR)	
5	Select ATR adjust On to calibrate the ATR (as long as you're using a prism). Then simply manually aim accurately at the centre of the prism and press Meas .	
6	If the instrument is robotic it will then change to face 2 and you can manually aim at the same target and press Meas again.	
7	Repeat the procedure two more times by pressing Meas then finish the calibration and store the results.	

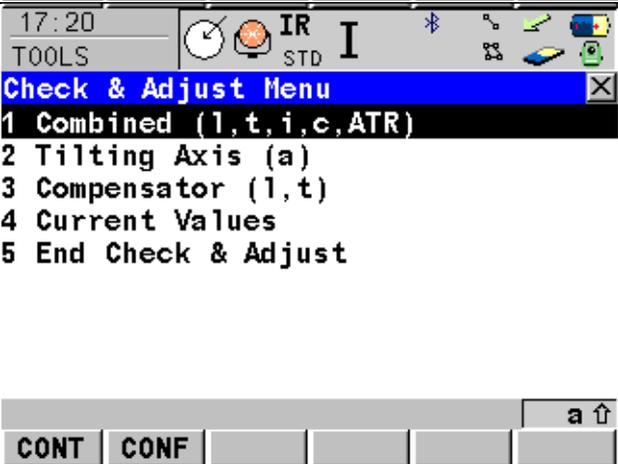
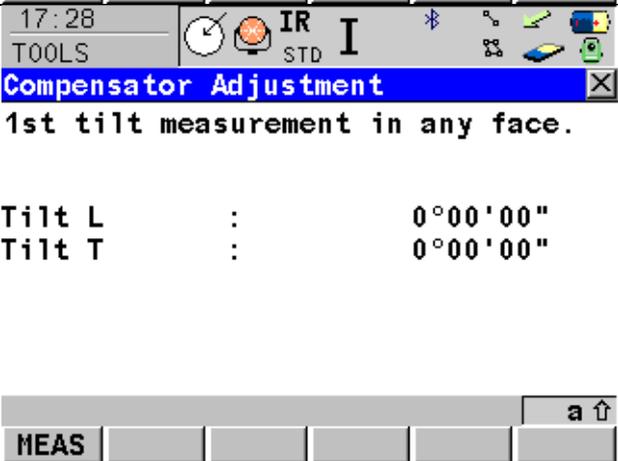
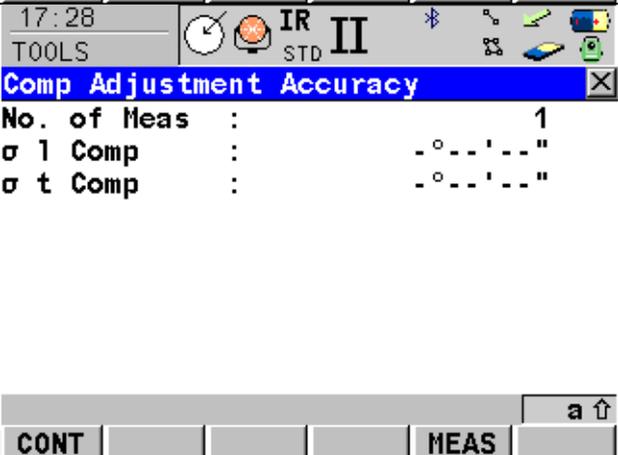
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8	<p>You will then be presented with the results of the adjustment (hopefully minimal). Then press finish to store the results.</p>	 <p>17:24 T00 S IR STD II</p> <p>Adjustment Results</p> <table border="1"> <thead> <tr> <th>Component</th> <th>New</th> <th>Use</th> </tr> </thead> <tbody> <tr> <td>l Comp</td> <td>0°00'00"</td> <td>Yes</td> </tr> <tr> <td>t Comp</td> <td>0°00'00"</td> <td>Yes</td> </tr> <tr> <td>i V-index</td> <td>-0°00'00"</td> <td>Yes</td> </tr> <tr> <td>c Hz-col</td> <td>0°00'00"</td> <td>Yes</td> </tr> <tr> <td>ATR Hz</td> <td>0°00'10"</td> <td>Yes</td> </tr> <tr> <td>ATR V</td> <td>0°00'26"</td> <td>Yes</td> </tr> </tbody> </table> <p>CONT REDO USE MORE a ↑</p>	Component	New	Use	l Comp	0°00'00"	Yes	t Comp	0°00'00"	Yes	i V-index	-0°00'00"	Yes	c Hz-col	0°00'00"	Yes	ATR Hz	0°00'10"	Yes	ATR V	0°00'26"	Yes
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ATR V	0°00'26"	Yes																					
9	<p>Then we can check the tilting axis. For this one we need to position the prism 270 above or below the horizontal plane of the total station.</p>																						
10	<p>Select "Tilting Axis (a)" then press Cont.</p>	 <p>17:20 T00LS IR STD I</p> <p>Check & Adjust Menu</p> <ol style="list-style-type: none"> 1 Combined (l,t,i,c,ATR) 2 Tilting Axis (a) 3 Compensator (l,t) 4 Current Values 5 End Check & Adjust <p>CONT CONF a ↑</p>																					
11	<p>Manually aim at the prism/target centre and press Meas.</p>	 <p>17:25 T00LS IR STD II</p> <p>Tilting-Axis Adjustment I</p> <p>Aim accurately at a distant high (27° to 63°) or low (117° to 153°) target.</p> <p>Hz : 0°54'01" V : 279°00'00"</p> <p>MEAS a ↑</p>																					

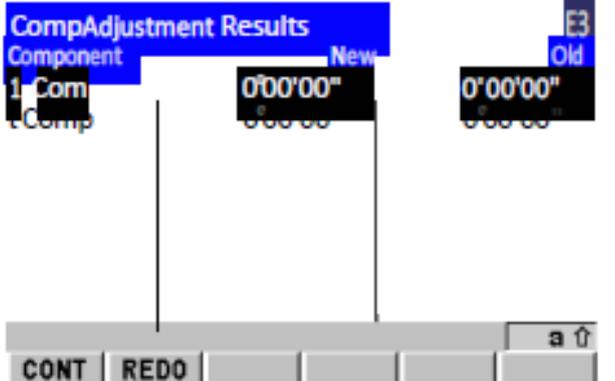
12	Repeat in face 2.	 <p>17:26 TOOLS IR STD II</p> <p>Tilting-Axis Adjustment II</p> <p>Aim accurately at the same target in this face.</p> <p>Hz : 180°54'00" V : 225°00'01"</p> <p>MEAS</p>
13	Press Meas at the next screen	 <p>17:26 TOOLS IR STD II</p> <p>T-Axis Adjustment Accuracy</p> <p>No. of Meas : 1 σ a T-axis : . ° "</p> <p>CONT MEAS</p>
14	Then repeat the procedure twice more.	 <p>17:25 TOOLS IR STD II</p> <p>Tilting-Axis Adjustment I</p> <p>Aim accurately at a distant high (27° to 63°) or low (117° to 153°) target.</p> <p>Hz : 0°54'01" V : 279°00'00"</p> <p>MEAS</p>

15	Then press Cont and accept the results if acceptable.	 <p>17:27 TOOLS IR STD I T-Axis Adjustment Accuracy No. of Meas : 2 σ a T-axis : 0°00'00"</p> <p>CONT MEAS a ↑</p>
16	You can also adjust the compensator alone. If you have completed the combined adjust (step 1) you have already adjusted the compensator and do not have to carry out this step.	 <p>17:20 TOOLS IR STD I Check & Adjust Menu 1 Combined (l,t,i,c,ATR) 2 Tilting Axis (a) 3 Compensator (l,t) 4 Current Values 5 End Check & Adjust</p> <p>CONT CONF MEAS a ↑</p>
17	To carry out the adjustment you do not need to aim to a prism, the instrument just needs to be level. Select Compensator (l, t) . Then aim at a specific point (that you can measure to again) and press Meas .	 <p>17:28 TOOLS IR STD I Compensator Adjustment 1st tilt measurement in any face.</p> <p>Tilt L : 0°00'00" Tilt T : 0°00'00"</p> <p>MEAS a ↑</p>
18	If you have a robotic instrument it will turn to face 2 and you have completed 1 measurement run.	 <p>17:28 TOOLS IR STD II Comp Adjustment Accuracy No. of Meas : 1 σ l Comp : -.-.'-." σ t Comp : -.-.'-."</p> <p>CONT MEAS a ↑</p>

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19	Repeat the run twice more then select finish to accept the new compensator values.	
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