



SitePro™

Operating / Safety Instructions
Consignes de fonctionnement / sécurité
Instrucciones de funcionamiento y seguridad

IMPORTANT:
Read Before Using

IMPORTANT
Lire avant usage

IMPORTANTE:
Leer antes de usar



model **DT05**

Toll Free: **(855) 354-9881**

www.SitePro.us.com

General

Thank you for selecting this series of digit theodolite. For the best performance of the instrument, please read this operator's manual carefully and keep it in a convenient location for future reference. Some of the diagrams shown in this manual may be simplified for easier understanding.

Please read this manual carefully before you use the apparatus and reserve it for the purpose of correct and safe use.

No further notice will be given for any changes of technical specifications or appearance to the apparatus for the improvement of performance and precision .

Precautions

1.Avoid heavy shock

For long-distance transportation, pay attention to external package and shock proof.

2.Setting and moving

When placing the instrument on the tripod head , hold the instrument and rotate the tripod screw until it is fixed securely on top of the tripod head. Repeat the above mentioned procedure for removing the instrument from tripod head. If the instrument must be carried with tripod attached, never carry it horizontally over the shoulder , always keep it in vertical direction when carried. The instrument must be kept in container for long-distance transportation.

3.Keep it clean

Clean dust of the instrument surface with cotton wool or small brush after using the instrument .Dry the instrument on time after exposed in the rain. Make sure not to use chemicals to clean battery case and plastic parts. If necessary, damp soft cloth is permissible. High absorbent cotton and lens-cleaning paper are used for exposed optics. Never use handkerchief and clothes.

4.Avoid the long-time irradiation

Never leave the instrument in extreme heat longer than necessary. It could adversely affect its performance.

5.Check the battery

Be sure to check the battery for voltage level before using the instrument.

6.Notice

Store the instrument in a place with good air circulation and low Humidity. Temperature is kept under 45°C. Often change drier in the instrument container.

Catalogue

1. Nomenclature

- 1.1 Nomenclature
- 1.2 Display and display mark
- 1.3 Operating keyboard and operating key

2. Preparation before measurement

- 2.1 leveling the instrument
- 2.2 Power switch on
- 2.3 Power switch off
- 2.4 Battery power display and Change the battery

3. Angle measurement

- 3.1 Angle measurement
 - 3.1.1 Measuring a horizontal and vertical angle
 - 3.1.2 Switching horizontal angle HA_R/HA^L
 - 3.1.3 Setting a horizontal angle
 - 3.1.4 Repetition angle measurement
 - 3.1.5 Measuring a percent of grade (slope measurement)
- 3.2 Recording and outputting data
 - 3.2.1 Communication interface
 - 3.2.2 Recording measurement data
- 3.3 Other function
 - 3.3.1 Illumination and the Automatic Power off
 - 3.3.2 Measuring distance with Cross-hair

4. Distance measurement

- 4.1 Use with the range finder(EDM)
- 4.2 Join with the EDM
- 4.3 Distance measuring

5. Function setting

- 5.1 Function setting
- 5.2 Function setting method
- 5.3 Time setting

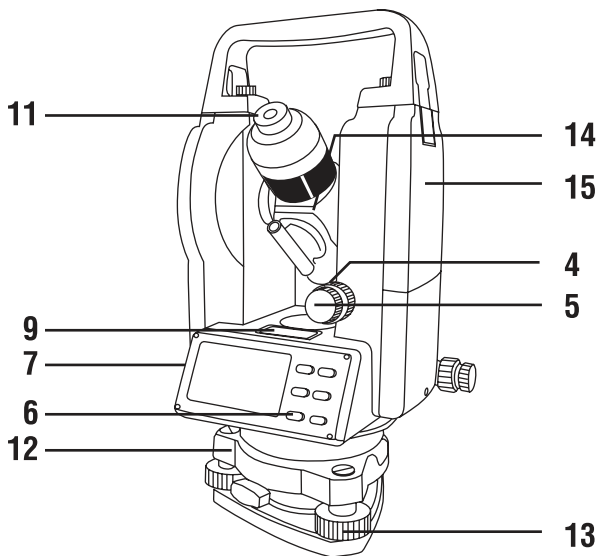
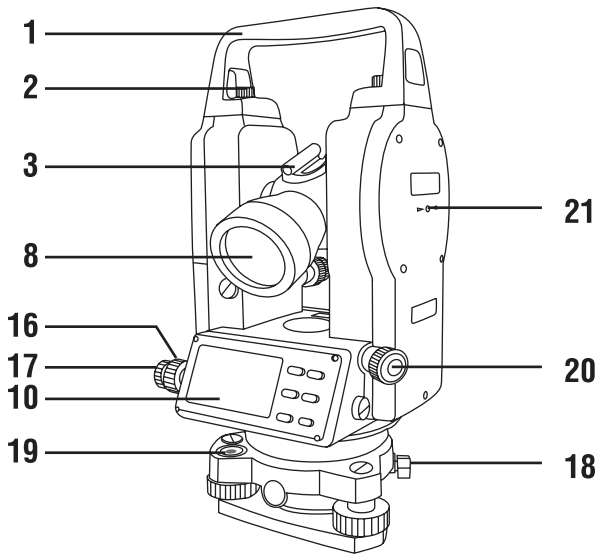
6. Check and adjustment

- 6.1 Check and adjust plate level
- 6.2 Check and adjust circular level
- 6.3 Check and adjust vertical cross-hair
- 6.4 Collimation of the instrument sight line
- 6.5 Check and adjust optical plummet
- 6.6 Vertical angle 0 error and collimation error and tilt angle compensator 0 error correction
- 6.7 Tilt correction function
- 6.8 The method of adjusting the electronic compensator

Technical specifications

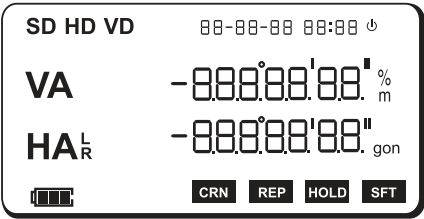
1. Nomenclature

1.1 Nomenclature





- | | |
|---|----------------------------|
| 1 Carrying handle | 2 Handle screw |
| 3 Sighting collimator | 4 Vertical motion clamp |
| 5 Vertical tangent screw | 6 Operating key |
| 7 Outputting data communication interface | 8 Objective lens |
| 9 Plate level | 10 Display window |
| 11 Eyepiece | 12 Base plate |
| 13 Foot screw | 14 Focusing knob |
| 15 Battery | 16 Horizontal motion clamp |
| 17 Horizontal tangent screw | 18 Base locking lever |
| 19 Circular level | 20 Optical plummet |
| 21 Instrument height mark | |

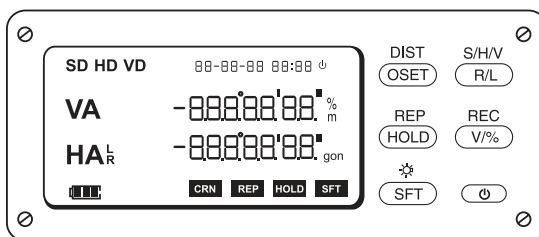
1.2 Display and display mark









Display	Function	Display	Function
SD	Slope distance	SFT	The second function
HD	Horizontal distance	CRN	Tilt correction
VD	Height difference	%	Percent grade
VA	Vertical angle	m	Distance unit : m
HA ^L	Horizontal angle left	gon	Angle unit

HA _R	Horizontal angle right		Battery level
REP	Repeat the horizontal angle	88-88-88	Date
		88:88	Time
HOLD	Hold the horizontal angle		Auto power off

1.3 Operating keyboard and operating key



keys	Function1	Function2
	Set horizontal angle 0	Distance measurement
	Hold the horizontal angle	Repeat horizontal angle measurement
	Select the second function	Turn on or off illumination
	Switch horizontal angle right or left	Switch SD/HD/VD display
	Percent grade of vertical angle	Record measurement data
	Power switch	

2. Preparation before measurement

2.1 level the instrument

Level and center the instrument correctly to insure the best performance.

1.Place the tripod

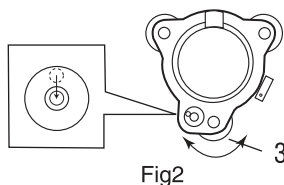
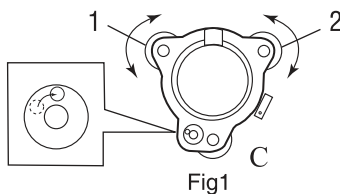
First, put the tripod leg in the proper position and tighten the locking screws.

2.Attaching the instrument to the tripod head

Place the instrument carefully on the tripod head, and move the instrument slowly by loosening adjusting screw. Align the plumb bob with the point on the ground. When aligned, tighten the adjusting screw.

3.Initial rough leveling the instrument with circular level

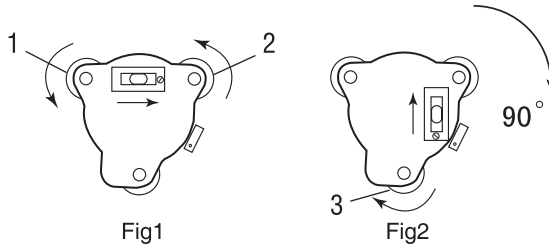
- (1) Use level screws 1,2 to move the bubble of the circular level until the bubble of the circular level is now located on a line perpendicular to a line running through the centers of the two leveling screws being adjusted.
- (2) Revolve the leveling screw 3 to shift the bubble to the center of the circular.



4.Further leveling the instrument with plate level

- (1) Loosen horizontal motion clamp and revolve the instrument, By adjusting leveling screws 1,2, the plate level vial is parallel to a line running trough the center of two leveling screws, and place the bubble in the center of the level vial.

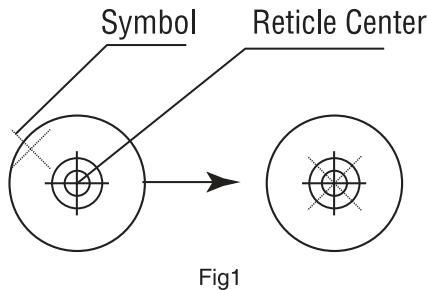
- (2) Next, revolve the instrument 90° (100gon) around its vertical axis and use the remaining screw 3 to center the level bubble once more.



- (3) Repeat the above procedure for each 90° revolution of the instrument and check whether the level bubble is correctly centered for all points.

5. Centering the instrument with optical plummet

Adjust the eyepiece of the optical plummet telescope to the user's eyesight. Move the instrument by loosening with the center mark of the optical plummet telescope. Carefully move the instrument in order to make it steady.




6. Final leveling of the instrument

Repeat procedure of 4. and check whether the level bubble is in the center of the level vial. Finally tighter adjusting screw.

2.2 Power switch on

Press "  ", and the instrument enters the state of measuring angles.





2.3 Power switch off

Press "  " over 2 seconds, the LCD will show "OFF", and the instrument can be power off.

In order to make sure instrument work continuously, pay attention to battery power display. If battery power is insufficient, replace the battery. Please see Section "Battery power display and Change the battery "

2.4 Battery power display and Change the battery

Battery power display

Mark	Meannings
	Sufficient battery power. (90%-100%)
	Effective battery power. (50%-90%)
	Effective battery power.(10%-50%)
	Poor battery power (0-10%). Need to replace battery.

Change the batteries

For removing

- ◆ Press the release button of the battery case and hold it on.
- ◆ Pull the battery case toward you.
- ◆ Remove it out.

Installation



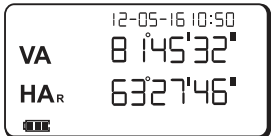
- ◆ Put the battery in the battery case.
- ◆ Press the release button and hold the battery case toward the groove in the instrument.

3. Angle Measurement

3.1 Angle measurement

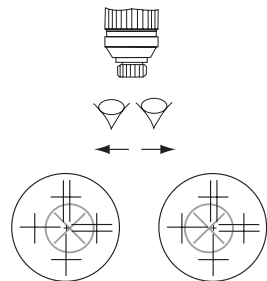
3.1.1 Measuring a horizontal and vertical angle

Ensure the instrument in the angle mode:

Operating	Display
1. Collimate the first target A.	
2. Press 【OSET】 key twice, and set horizontal angle of target A at 0°00'00".	
3. Collimate the second target B and the horizontal and vertical angle are displayed.	

How to collimate



1. Point the telescope toward the light. Turn the diopter ring and adjust the diopter so that the cross-hair is clearly observed. (turn the ring toward you first and then backward to) .
2. Observe the target with sighting collimator. Allow a certain space between the collimator and yourself, if for collimating.
3. Focus the target with the focusing knob.




Note :



If parallax is created between the cross-hair and target when viewing vertically or horizontally while looking into the telescope. Focusing is incorrect or diopter adjustment is poor. This adversely affects precision in measurement or survey. Eliminate the parallax by carefully focusing and diopter adjustment.

3.1.2 Switching horizontal angle HA_R/HA^L

Operating	Display
1. Collimate the target A.	
2. Press 【R / L】 key, The mode horizontal angle right " HA_R " switches to horizontal angle left " HA^L " mode .	
3. Measure the target in the same manner as HA_R mode.	
◆ Everytime 【R/L】 key is pressed , HA_R/HA^L mode switches.	

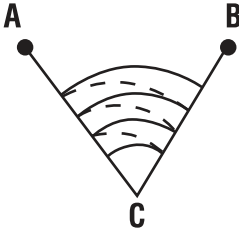
3.1.3 Setting a horizontal angle


Operating	Display
1. Turn Horizontal tangent screw and set the horizontal angle required	

2. Press 【HOLD】 key twice and the horizontal angle is hold.	<div> 12-05-16 10:50 VA 90°00'20" HA_R 30°45'25"  HOLD </div>
3. Collimate the target	
4. Press 【HOLD】 key again to stop holding the horizontal angle.	<div> 12-05-16 10:50 VA 90°00'20" HA_R 30°45'25"  </div>

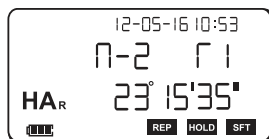
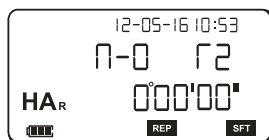
3.1.4 Repetition angle measurement

To find the horizontal angle with greater precision, perform repetition measurement.



Operating	Display
1. Press 【SFT】 , and then press 【HOLD】 to begin repetition angle measurement.	<div> 12-05-16 10:53 n-0 f1 HA_R 20°08'28"  REP SFT </div>
2. Collimate the target A.	

3. Press **【OSET】** , and set the horizontal angle of A to $0^{\circ}00'00''$.
4. Collimate the second target B using the horizontal tangent screw and motion clamp.
5. Press **【HOLD】** , and hold the horizontal angle.
6. Re-collimate the first target A using the horizontal tangent screw and motion clamp.
7. Press **【OSET】** , and set the horizontal angle of A to $0^{\circ}00'00''$.
8. Re-collimate the second target B using the horizontal tangent screw and motion clamp.
9. Press **【HOLD】** .The average of angle is shown.
10. Repeat 2~9 to measure the desired number of repetitions.



- ◆ The maximum number of angle measurements that can be made is 9.
- ◆ Press **【SFT】** to exit from this mode.

3.1.5 Measuring a percent of grade (slope measurement)

Operating	Display
1. Press 【V/%】 , the display of vertical angle switches to percent.	
2. Press 【V/%】 again.The display turns back to normal angle measurement mode.	
<p>◆ Every time press 【V/%】 ,the display mode switches. When measured grade is exceeding $\pm 100\%$ "EEEE.EEE" is displayed.</p>	

3.2 Recording and outputting data

3.2.1 Communication interface and Recording measurement data

This series of theodolite provides function of recording measurement data. The angle data and the distance data can be stored in the instrument's memory (up to 500 groups) or output through communication interface. The recorded data include time information. Before recording data, the recording method should be selected. If recording data through communication interface is selected, the communication settings should be made properly. (please see "function setting")

1. Communication interface

Connecting the instrument to the computer or the PDA through the cable the measurement data can be transferred to the computer or the data collection equipment.

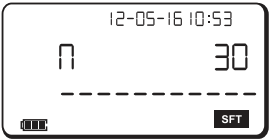
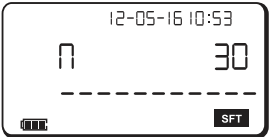
2. Recording measurement data

In the different measuring mode, press **【SFT】** , and then press **【V/%】** ,the measurement data can be outputted to the computer or the PDA （when selecting method of recording data through communication interface） , or stored in the memory of the instrument （when selecting method of recording data in the memory） .

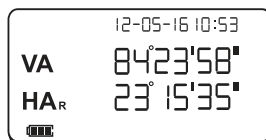
Mode	Output （ record ）
Angle mode	VA、 HAR (vertical angel 、 horizontal angle)
Distance mode	VA、 HAR、 SD(vertical angle 、 horizontal angle 、 slope distance)

3.2.2 Memory Mode

In the memory mode, the data recorded in the memory can be cleared or be outputted to the communication interface.

Operating	Display
1. Turn on while Pressing 【V/%】 come in the memory mode. ◆ The first line displays the effective data items in the memory.	
2. Press 【REC】 the second line will glint , and the instrument output the data to the interface.	

3. Press **【HOLD】** the first line will glint, press **【HOLD】** again in 5 seconds , then all the data in the memory will be cleared, and after doing this, the instrument exit from the memory mode and enter the angle measurement mode.



- ◆ In the memory mode, press **【SFT】** , exit from the memory mode, return to the angle measurement mode.

3.3 Other function

3.3.1 Illumination and timing close

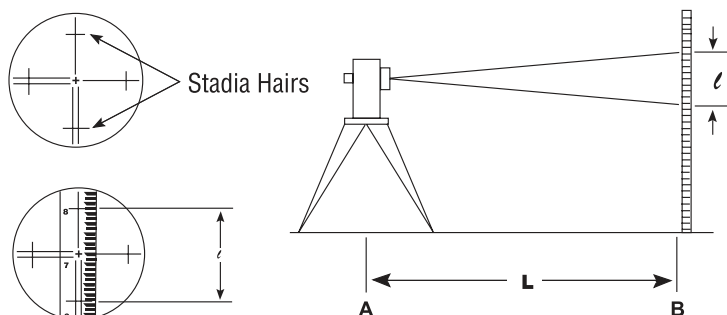
This electronic theodolite has a display and a illumination setting on the reticle. When you press **【SFT】** and hold on about two seconds the display and the illumination setting will be open or closed.

If you don't operate the instrument for 20 minutes, the power will be closed. About this function, please refer to "function setting"

3.3.2 Measuring distance with Cross-hair

Measuring distance with cross-hair is another application of the theodolite seriesproducts. So scale station pole is needed, for example:

Horizontal measuring staff and apparent distance staff.By viewing through the telescope, the length between upper and under stadia hairs which multiplies 100 is the distance from instrument center to station pole.(The length refers to the reading from station pole between two stadia hairs.)



4. Distance measurement

4.1 Use together with the range finder(EDM)

This instrument can be used by combining with the range finder (EDM) to perform the function of Total Station. Before measuring distance, the atmospheric correction and the prism constant of the EDM should be set correctly. For more detail information, please refer to the EDM operating manual.

4.2 Join with the EDM

Join the instrument and EDM with the coupling equipment. Connect theodolite's data communication interface to EDM'S using a data cable. Adjust the adjustment screw, make sure the optical axis parallel with the EDM'S. Reference the fig.

4.3 Distance measuring

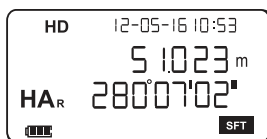
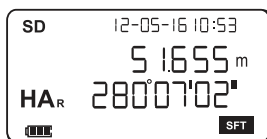
Operating	Display
1. Press 【SFT】 , and then press 【DIST】 to come in the distance measurement mode. If the last measured distance data is effect, it will be displayed, or "-----"will be displayed.	

2. Collimate the target using the telescope, while Aiming the prism using the EDM.

3. Press **【DIST】** The instrument begins communication with the EDM, waiting the data from the EDM, while the title SD is blinking. If the communication success, the distance measuring result is displayed.

4. Press **【L/R (S/H/V)】** SD (slope distance), HD(horizontal distance), VD (height difference) are displayed alternately,

5. Press **【SFT】** to come back to angle measurement mode.



5. Function setting

5.1 Function setting



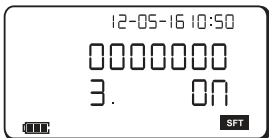

The flowing setting items can be set by user:

1	Tilt angle compensation	*OFF、ON
2	Vertical angle level 0	*90° (OFF) 、 0° (ON)
3	Automatic power off	*OFF
		ON (If no operation in 20minutes, turn off automatically)
4	Minimum angle display	*1" 、 5" 、 10"
5	Setting communication baud rate	1200、2400、4800、*9600
6	Selecting data recording method	*interface (OFF) 、 memory (ON)
7	Collimation error correction	*OFF、ON
8	Buzzer	OFF、*ON
9	Selecting unit of angle	*dms (OFF) ,gon (ON)
Options Marked with "*" are the factory default settings.		

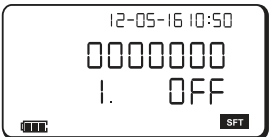
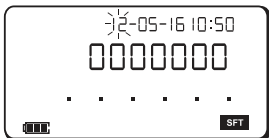
5.2 Function setting method

In this mode, the keys are assigned function as following:

【OSET】	Select the item circle.
【HOLD】	Select the time item (month、date、year、hour、minute) .
【L/R】	Select the upwards item or the time item add 1.
【V%】	Select the downwards item or the time item minus 1.
【SFT】	Confirm the setting, exit the setting mode, return to the angle mode.

Operating	Display
1. Press 【SFT】 and 【R/L】 key at the same time, come in the setting mode.	
2. Press 【OSET】 to select the item (1~9) .	
3. Press 【R/L】 or 【V%】 , change the setting of the selected item.	
4. Setting all the items as you need.	
5. Press 【SFT】 to finish setting return to the angle measurement mode.	

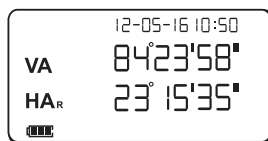
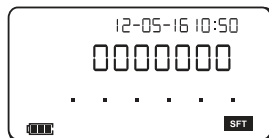
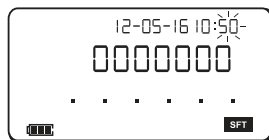
5.3 Time setting

Operating	Display
1. Press 【SFT】 and 【R/L】 key at the same time, come in the setting mode.	
2. Press 【HOLD】 to select the item (month、date、year、hour、minute、second) , the selected item will glint.	

3. Press **【R/L】** or **【V%】** ,
add or minus it.

4. Finish settings of all items.

5. Press **【SFT】** to return to
the angle measurement mode.



6. Check and adjustment

Pointers on adjustment

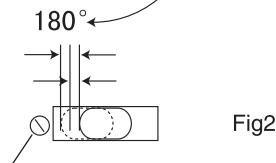
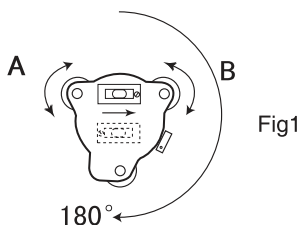
- Adjust the eyepiece of the telescope properly prior to any checking operation which involves sighting through the telescope. Remember to focus properly, with parallax completely eliminated.
- Carry out the adjustment in the order listed, as the adjustments are dependent one upon another. Adjustments carried out in the wrong sequence may even nullify previous adjustments.
- Conclude adjustments by tightening the adjustment screws securely (but do not tighten them more than necessary, as you may strip the threads, Twist off the screw or place undue stress on the parts.)

- d. The attachment screws must also be tightened sufficiently upon completion of adjustments.
- e. Always repeat checking operations after adjustments are made in order to verify results.

6.1 Check and adjust plate level

Check

- a. Place the plate level parallel to a line running through the centers of two leveling screws (e.g. A,B). Use these two screws to place the bubble in the center of the plate level vial.
- b. Next, revolve the instrument 180° or 200g around the vertical axis check bubble movement of the plate level. If the bubble has been displaced, then proceed with the following adjustment.
- b. Next, revolve the instrument 180° or 200g around the vertical axis check bubble movement of the plate level. If the bubble has been displaced, then proceed with the following adjustment.



Adjustment screw to correct 1/2

Adjustment

- a. Adjust the level adjustment capstan screw with the accessory adjusting pin and return the bubble towards the center of the plate level vial. However, correct only one-half of the displacement by this method.
- b. Correct the remaining 1/2 amount of the bubble displacement with the leveling screws.
- c. Revolve the instrument 180° or 200g around the vertical axis once more and check bubble movement if the bubble is still displaced, then repeat the adjustment.

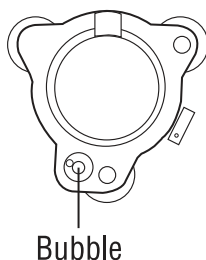
6.2 Check and adjust circular level

Check

Carefully level the instrument with the plate level. If the bubble of the circular level is centered properly at this time, adjustment is not required. Otherwise, proceed with the following adjustment.

Adjustment

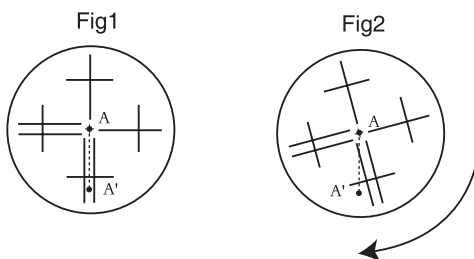
Shift the bubble to the center of the level by adjusting three capstan adjustment screws on the bottom surface of the circular level, with the accessory adjustment pin. (see diagram)



6.3 Check and adjust vertical cross-hair

Check

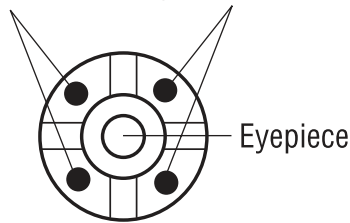
- Set the instrument on the tripod and carefully level it.
- Sight the cross-hair on a well-defined point A on the wall at a distance of at least 50 meters. (160ft)
- Next swing the telescope and check whether the point travels along the length of the vertical cross-hair.
- If the point appears to move continuously on the vertical hair (see fig.1), the vertical cross-hair lies in a plane perpendicular to the horizontal axis.(adjustment is not required.)
- However if the point appears to be displayed from the vertical cross-hair(see fig.2), adjustment is required in the reticule plate.



Adjustment

- Unscrew the cross-hair adjustment section cover by revolving it in the counter-clockwise direction. This will expose four eyepiece section attachment screws.
- Loosen all four attachment screws slightly with the accessory screw-driver.(while taking note of the number of the revolutions.) Make vertical cross-hair coincide with A by turning eyepiece and tighten the four attachment screws.
- Check if there is displacement in horizontal direction while point A travelling along vertical cross-hair. If not, check is concluded.

Reticle retaining screws

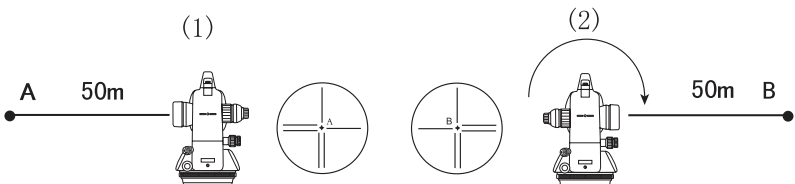


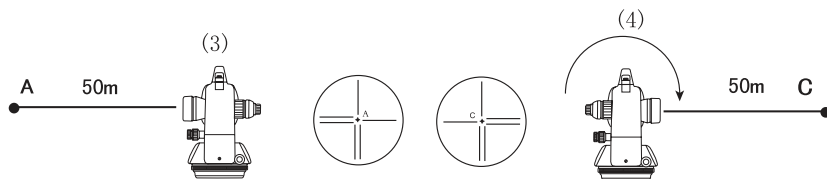
6.4 Collimation of the instrument sight line

Collimation is required to make the line of sight of the telescope perpendicular to the horizontal axis of the instrument.

Check

- Set the instrument up with clear sights of about 50 to 60 meters of both sides of the instrument.
- Sight point A at approximately 50 meter distance.
- Loosen the vertical tangent screw only and plunge the telescope 180° around the horizontal axis so that the telescope is point in the opposite direction.
- Sight point B, at equal distance as point A.
- Loosen the horizontal motion clamp and tangent screw and revolve the instrument 180° or 200gon . Fix a sight on point A once more and tighten the motion clamp and screw.
- Loose the vertical motion clamp and tangent screw and plunge the instrument 180° or 200gon and fix a sight on point C, which should coincide with the previous point B.
- If point B and C do not coincide adjust in the following order.





Adjustment

- Unscrew the cross-hair adjustment section cover.
- Find point D at a point between points C.B, which should be equal to $\frac{1}{4}$ the distance between points B and C, and measured from point C. This is because the parent error of BC is four times of the real error since the telescope has been reversed twice during checking operation.
- Shift the vertical cross-hair line and coincide it with point D, by revolving the left and right capstan adjustment screws. Upon completing the adjustment, repeat the checking operation once more. If point B and C coincide, further adjustment is not required. Otherwise, repeat the adjustment.



Reticle adjustment screws

Note:

- ◆ To move vertical cross-hair, first loosen the capstan adjustment screw in one side, then tighten the capstan adjustment screw on the other side to loosened number. To loosen screws is in anticlockwise direction, while to tighten them is in clockwise. But rotate screws as little as possible.
- ◆ After concluding the above adjustment, the following adjustment is required: 6.6 “Vertical angle 0 error and collimation error and tilt angle compensator 0 error correction”.

6.5 Check and adjust optical plummet

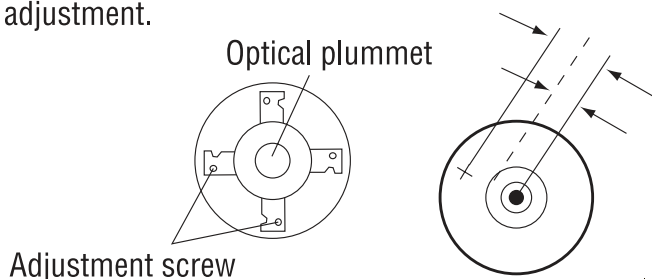
Adjustment is required to make the line of sight of optical plummet telescope coincide with the vertical axis (as otherwise the vertical axis will not be in the true vertical when the instrument is optically plumbed.)

Check

- Coincide the center point with the center mark of optical plummet telescope by adjusting optical plummet.
- Revolve the instrument 180° or 200gon around the vertical axis and check the center mark. If the point is properly centered in the center mark, adjustment is not required. Otherwise, adjust in the following manner:

Adjustment

- Unscrew the adjustment section cover of the optical plummet telescope eyepiece, by revolving it in the counter clock-wise direction and take it off. This will expose four capstan adjustment screws which should be adjusted with the accessory adjusting pin to shift the center mark to the point. However, correct only $1/2$ of the displacement in this manner.
- Next use the leveling screws and coincide the point and center mark.
- Revolve the instrument 180° or 200gon around the vertical axis, and check the center mark. If it is coincided to the point, then further adjustment is not required. Otherwise, repeat the adjustment.






Note:

To move center mark, loosen adjustment screw on one side and tighten adjustment screw in the other side according to the loosened number. (Loosen: counter clock-wise. Tighten: clock-wise. Rotate screws as little as possible.)

6.6 Vertical angle 0 error and collimation error and tilt angle compensator 0 error correction

With this option, making both face angular observations, You can measure and adjust tilt compensator 0 position error. And you can measure collimation error in your instrument so that the instrument can correct subsequent single face observations. The 0 index of the vertical circle of your instrument can be reset also, and the index error that will affect the accuracy of vertical angle measurement can be corrected.

Operating	Display
1. Turn on while Pressing 【R/L】 enter in “SETUP”is shown. then the first line will display “SET F1”and glint.	
2. Level the instrument and collimate the reference target in normal telescope setting (Face 1), press 【0SET】 , the first line will glint and display “SET F2”.	
3. Turn the telescope in reverse setting (Face 2),collimate the same target ,press 【0SET】 the first line will glint and display “SET”.	

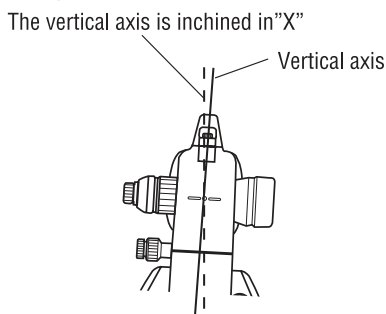
4. Press 【OSET】 to complete and return to the angle mode.	
◆ If you want to exit at any time , you can press 【SFT】 .	

Note:

After adjustment above finished, you should check the instrument again. Collimate the same target in Face1 and Face 2, the vertical angle summation should be within $360^{\circ} \pm 15''$ range. If out of range, you should adjust it again or follow “Collimation of the instrument”.

6.7 Tilt correction function

This electronic theodolite provides vertical axis incline compensator. It can compensate the incline angle automatically. When the incline sensor is switch on, the instrument can detect the vertical axis incline angle. When instrument incline over the compensation range, it display “TILT”. You should level the instrument manually.



Note:

The angle display is unstable when instrument is on an unstable stage or a windy day. You should turn off the auto tilt compensation.

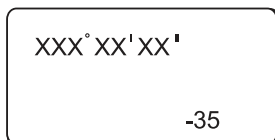
Turn on or off auto tilt compensation function, please refer to “function setting”.

6.8 The method of adjusting the electronic compensator

When the instrument compensation accuracy error occurs, it needs to be adjusted.

Proceed with the following steps:

Turn on, while Pressing **【R/L】** + **【V%】** button, enter in.



1. Make sure the vertical axis of the instrument is strict perpendicular (any rotation, plate level always centralized), Check the second line figures, if less than ± 60 , please go on the next step, if more than ± 60 , please start from the 5.step.
2. Coincide the telescope horizontal hair to collimator tube, pres **【OSET】** key.
3. Turning the theodolite base screw, make the telescope point down to $3'$ (the value shown on display is negative) ,Press **【OSET】** key.
4. Turning the theodolite base screw, make the telescope point up to $6'$ (the value shown on display is positive),Press **【OSET】** key, finish the settings.
5. When the step 1 figures more than ± 60 , you need to open the plastic cover of the battery box side, loose the E-bubble, adjust the position, to make the value less than ± 20 , and then go on the 2 ~ 4-steps.

Technical specifications

Telescope	Length	156mm	
	Image	Erect	
	Objective aperture	45mm	
	Magnification	30X	
	Field of view	1° 30'	
	Resolving power	3.5"	
	Minimum focus distance	1.3m	
	Stadia ratio	100	
	Stadia constant	0	
Electronic angle measurement	Method	Absolutely Code	
	Minimum reading	1"/5"/10"	
	Accuracy	2"	
	Display mode	LCD double face	
Tilt compensator	Electric incline sensor	Vertical angle compensation	
	range	± 3'	
Communication interface	Communication standard	RS232C	
	EDM input port	NO Supplied	
	Data output port	Supplied	
Optical plummet	Imaging	Erect	
	Magnification	4X	
	Field of view	5°	
	Focusing range	0.5~∞	
	Accuracy	0.5mm / 1.5m	
Power supply	Battery	NI-H Chargeable battery box	Dry alkaline battery
	Continuous working time	20 hours	12 hours
Level sensitivity	Circular level	8'/2mm	
	Plate level	30"/2mm	
Others	Working temperature	-10°C ~ +45°C	
	Waterproof class	IP45	
	Net weight	4.8kg	

WARRANTY

LIMITED WARRANTY PROGRAM

SitePro warrants the Digital Theodolite to the original purchaser for a period of two (2) years from date of purchase against any defects in material or workmanship. This warranty does not cover part failure due to normal wear or tool abuse. For more details of warranty coverage and warranty repair information, call (855) 354-9881. This warranty does not apply to accessories items or damage caused where repairs have been made or attempted by person other than SitePro or authorized service center. This warranty gives you specific legal rights and you may have other rights which vary in certain states or provinces.

This Limited Warranty does not apply to accessory items such as tripods, rods, poles, prisms, hand levels, field supplies, instrument accessories and other related items. These items receive a 90 day limited warranty.

To make a claim under this Limited Warranty, you must return the tool, transportation prepaid, along with any relevant paperwork (RGA number, if you have obtained one, proof of purchase, contact information, and any request for new accessories, etc.) to our Service Department or an Authorized Service Center.

SitePro/Service Department, 7619 S 1150 E, Otterbein, IN 47970

IMPLIED WARRANTIES ARE EXPRESSLY LIMITED IN DURATION TO ONE YEAR FROM DATE OF PURCHASE.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S., AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSION OR LIMITATION OF SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THESE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE/PROVINCE TO STATE/PROVINCE.



© Dave White's SitePro, LLC
Otterbein, IN