TOTAL STATION
V200 SERIES

QUICK REFERENCE GUIDE

BASIC PROCEDURES
POWER TOPO EXPRESS

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PENTAX®
Ahead of Vision

Quick Reference Guide
Basic Procedures
for Total Station V-200 Series

V-227N
V-227

The description concerning the reflectorless function in this guide is applied to V-227N.

PENTAX Industrial Instruments Co.,Ltd.

CONTENTS

Instruction Manuals

Quick Reference Guide is intended to provide a quick reference in the field. For ease of use in the field, the following Quick Reference Guide booklets are provided in the carrying case.

1. Quick Reference Guide
   (Basic procedure)
   (Power Topo Express,Operating procedure)

The complete instruction manuals are contained on the CD that is attached to each V-200.
This guide uses the symbol " xN"as an expression of repeating times of key operation. For example. " ESC x2" means that [ESC] key is pressed two times.
The symbol "+"expresses that multiple keys are pressed simultaneously.

RECAUTIONS REGARDING SAFETY

Before using this product,be sure that you have **thoroughly read and understood the instruction manual** that is included in the attached CD-ROM to ensure proper operation.

WARNING

Solar Observation

Never view the sun directly using the telescope as this may result in loss of sight.

Laser Safety 

V-200 is a class-II (2) Laser product. Avoid direct eye exposure. Do not stare into laser beam.

Electro-Magnetic Compatibility (EMC)

This instrument complies with the protection requirement for residential and commercial areas. If this instrument is used close to industrial areas or transmitters, the equipment can be influenced by electromagnetic fields.

Risk of Explosion

Do not use this product in a location where there is coal dust,or near flammable material as there is a risk of explosion.

USAGE PRECAUTIONS

Target Constant

Confirm the Target Constant of the instrument before measurement.

Reflectorless

The reflectorless measurement range may vary depending on the target and surrounding brightness.

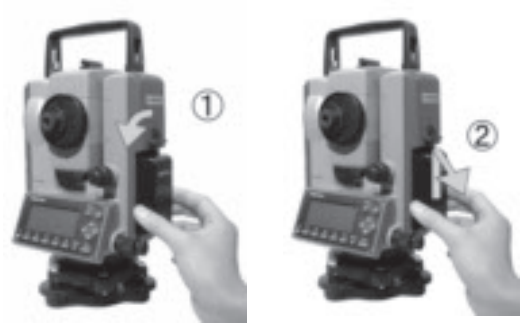
In case the reflectorless measurement results in low accuracy, perform the distance measurement by Prism. (V-227N)

Battery & Charger

Use the battery charger that is suitable to the battery you are using. If water should happen to splash on the instrument or the battery, wipe it off immediately and allow it to dry in a dry location.

1. Basic Operation

1.1 Removing the Battery



(1) Rotate the knob above the battery pack counter-clockwise.
(2) Lift up the battery pack and remove it from the instrument.

1.2 Attaching the Battery

(1) Place the channel on the bottom of the battery pack, onto the protrusion of the instrument and push the battery pack down into place.
(2) Turn the knob clockwise.

1.3 Turning the Power On and Off

To set power on :  To shut down: 

To turn the power supply off, press the I/O key for more than 1 second and then release it. Power turns OFF.

NOTE: The power is automatically turned off after 10 minutes of inactivity (Factory default setting).

1.4 Display and keyboard

1.4.1 Operation keys

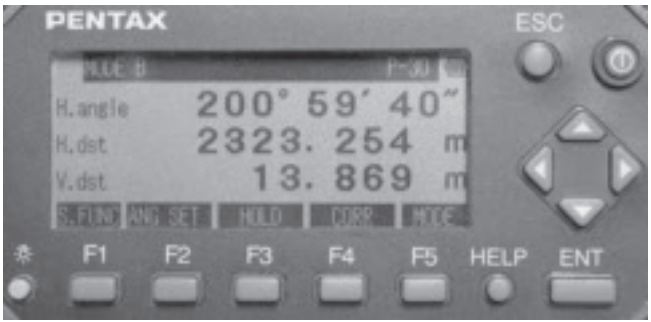
[ESC]	Returns to previous screen or cancels an operation.
	Turns the illumination of the LCD display and telescope reticle on and off.
	Moves the cursor to the direction,respectively. The up or down increases or decreases the value,respectively.
[ENT]	Accepts the selected (highlighted) choice or the displayed screen value.
[HELP]	Pressing this key causes a help menu to appear in MODE A or MODE B or causes a help message to appear.

1.4.2 Function keys

MODE A

[MEAS]	Pressing this key one time measures the distance in normal mode.Pressing this key twice measures the distance in coarse mode.
[TARGET]	Select the target type by following order. PRISM / REFRECTORLESS **(V-227N models only)**
[0 SET]	Resets the horizontal angle to 0° 0’ 0” by pressing twice.
[DISP]	Switches the display composition in the order “H.angle / H.dst. / V.dst.”, “H.angle / V.angle / S.dst.” and “H.angle / V.angle / H.dst. / S.dst. / V.dst.”
[MODE]	Switches the screen between MODE A and MODE B.

MODE B



[S.FUNC]	PowerTopoExpress Special Functions
[ANG SET]	Brings up the angle setting screen for setting angle-related parameters. (H.ANGLE / %GRADE, H.ANGLE INPUT and R/L REVERSE)
[HOLD]	Pressing this key twice retains (holds) the horizontal angle shown on the display.
[CORR]	Brings up the screen for changing the target constant,temperature, Pressure setting.
[MODE]	Switches the screen between MODE A and MODE B.

1.5 Angle Measurement

1.5.1 Horizontal Angle

Set the screen MODE A : → MODE A screen

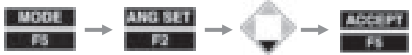
Control keys for measuring horizontal angle:

To set the angle to 0 :

To hold the angle :

To release HOLD :

To input an angle :



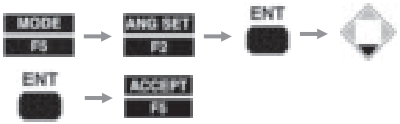
input value by using :

To read clockwise angle :

1.5.2 Vertical angle

To display vertical angle :

To read the slope % :



1.6 Distance Measurement

Set the screen MODE A :  → MODE A screen

1.6.1 Select your target **(V-227N models only)**

Select target type (measurement mode):

NOTE: The selected target is maintained until next time you change

1.6.2 Distance measurement

For a single shot measurement : 

For tracking measurement : 

NOTE: The number of shots can be defined. The default is “one time”.The measuring modes activated by the above operations can be also changed.

1.6.3 Changing Target constants

The default constants are:
Prism : -30mm
Reflector-less : always 0mm **(V-227N models only)**

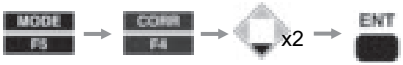
Before changing the constants,set Target Constant in the Initial Setting to “INPUT”mode:

To change Prism constant: 

input value by using: 

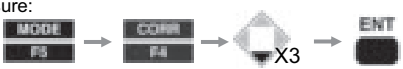
1.6.4 Input Temperature and Atmospheric pressure

To Input temperature :



input value by using:

To Input atmospheric pressure:



input value by using:

1.6.5 Adjusting LCD contrast

1.6.6 Adjusting Illumination brightness

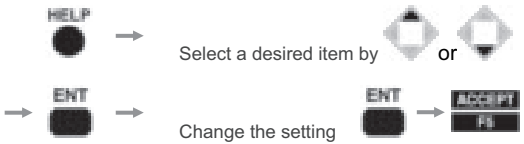
for LCD

for Reticle

2. Changing Instrument settings

2.1 Help menu

While the screen is in MODE A or MODE B,



NOTE: Some items have sub-menus where the selecting procedure by using direction keys is again repeated.

2.2 Instrument setting items

HELP menu list		(Default) Other options
PRISM CONST		(**-30mm**), 0mm, INPUT
ATM CORR		(**ATM INPUT**), ppm INPUT, NIL
SHOT COUNT	SHOT CONT	(**1 time**), 3 times, 5 times, INPUT
	SHOT INPUT	(**01 times**), input
CRV/ REF CORR		(**0.14**), 0.2, NIL
ATM CORR DISP		(**OFF**), ON
MIN UNIT ANG.		(**FINE**), COARSE
V. ANG. STYLE		(**Z. 0**), H. 0, COMPASS
QUAD BUZ		(**OFF**), ON
AUTO OFF		(**10 MIN**), 20 MIN, 30 MIN, NIL
EDM OFF		(**3 MIN**), 5 MIN, 10 MIN, NIL
COMPENSATOR		(**ON**), OFF
ATM UNIT	TEMP. UNIT	(**Centigrade**), Fahrenheit
	PRESS UNIT	(**hPa**), mmHg, inchHg
DIST. UNIT		(**m**), ft, ft+ inch
ANG. UNIT		(**DEG**), DEC, GRD, MIL
SET UP COM.	BAUD RATE	(**1200**), 2400, 4800, 9600
	DATA LENGTH	(**8**), 7
	PARITY BITS	(**NIL**), EVEN, ODD
	STOP BITS	(**1**), 2
	SIGNAL CONTROL	(**ON**), OFF
	XON/ XOFF	(**ON**), OFF
	THROUGH COMMAND	(**NIL**), a, b, c, d, e, f

3. Warning and Error Messages

Warning Message	Meaning	What to do
Out of tilt range	Displayed when the instrument is tilted beyond the vertical compensation range (±3') in case automatic compensation is selected. This message may be temporarily displayed if the instrument is turned too fast.	Re-level the instrument. Repair is needed if the message is displayed when it is properly leveled.
Excess data	The input data exceeds the allowable range.	Press the [ESC] key and enter the correct data.
Mismatched Target	This message is displayed if a long distance which is a far beyond measurable distance of V-227N is measured with a wrong target mode. lease select a correct target then measure. If a wrong target is selected, a correct distance cannot be measured.	Select the correct target, mode.
Target is too close.	The measurement distance is less than 1.5m in Prism mode.	Select a longer point, or use a tape measure.
Unsuitable Condition	•Under too strong sun light. •Unstable light value owing to shimmer or obstacles. •Target,Prism do not face the instrument. •Target,Prism are not correctly sighted. • Measurement range is over in Reflectorless mode. • Sufficient signal does not return by sighting sharp edge etc. at Reflectorless mode.	Change the object that has much better reflectivity, or use a prism, or wait until the sun activity has weakened.
Error Message	**Meaning**	**What to do**
EDM ERROR 04 -05, 34-39, 50-53	Distance measurement system problem	Turn the power off, and then turn on again. Repair is needed when the message appears consistently.
ETH ERROR 70-76	Angle measurement system problem	
MEMORY ERROR 19	Memory problem	
ERROR PS DATA of EDM ERROR P DATA of EDM	Problem of the internal EDM parameters	
ERROR ETH DATA	Problem of the internal ETH parameters	

4. Specifications

	V-227 N	V-227
Telescope		
Magnification	30 x	
Resolving power	3”	
Field of view	2.6% (1° 30’)	
Minimum focus	1.0m	
Focus	Manual	
Distance measurement		
Laser Class	Visible Laser: Class II (2)	
Measurement range (Good condition)		
Reflectorless	1.5m – 90m	-
Mini prism	1.5m-800m (1100m)	1.5m-600m (900m)
1P	1.5m-1400m (1900m)	1.5m-1000m (1300m)
3P	1.5m-1900m (2400m)	1.5m-1300m (1600m)
Accuracy		
Prism	±(3+2ppm x D)mm	
Reflectorless	±(5+2ppm x D)mm	-
Measuring time		
Repeat meas.	Normal:Prism 2.0sec.(1mm) Track: Prism 0.4sec.(1cm)	
Angle measurement		
Measuring method	Absolute rotary encoder	
Minimum count	5” (10cc) /10” (20cc) selectable	
Accuracy(ISO17123-3)	7”	
Compensator	Single axis	
Sensitivity of vials		
Plate level	40”/1div.	
Circular level	8’/2mm	
Dimensions/Weight		
Instrument	172(W) x 343(H) x 177(L)mm	
Weight (incl. Battery)	5.4kg	
Battery pack BP02		
Power source	Ni-MH (Rechargeable)(4300mAh) ,DC6V	
Operation time	Continuous Approx.5 hrs (ETH+EDM),12 hrs (ETH) with Approx. 2.2 hrs of charging time	
Internal Memory		
Coordinates data	6000 points	
Others		
Data communication	RS-232C	
Water resistant	IP44 (instrument only)	
Ambient temperature	-20°C ~ +50°C / -4°F ~122°F (Working range)	
Tripod thread	5/8” x 11	
Charger BC03 and AC Adapter AC01	Input voltage (AC01) :100~240V Output voltage (BC03) :DC7.5V	
Base	Detachable	
Plummet	Optical	

NOTE:

* The measurement range may vary by measurement conditions.

* Normal conditions: 20km visibility with slight shimmer.

* Good conditions: 40km visibility, overcast, no heat, no shimmer and moderate wind.

* EDM Measuring time varies according to distance to be measured and conditions of the environment.

* The operating time becomes shorter under the low temperature, due to the temperature dependence of the battery performance.

* The points that can be recorded in one job file are maximum 2,000 measuring points(XYZ).The user can make up to 8 job files.

NOTICE TO THE USER OF THIS PRODUCT

To assure compliance with the Safety standard 21 CFR, Chapter 1. Subchapter J. The U.S. bureau of Radiological Health requires the following information to be provided to user.:

It can be dangerous to look into the beam with optical equipment such as binoculars and telescopes.

1. Specifications of Laser Radiation

A) The EDM module of the V-200 produces a visible light beam, which is emitted from the telescope objective lens and the center hole of the instrument base plate. The V-200 is designed and built to have a laser diode radiating at 620-690nm.

B) Radiant power
The V-200 is designed and built to radiate a maximum average radiant power of 0.95mW from the telescope.The user may be subject to this radiation as a beam while operation until such time that the instrument is turned off.

2.The following labels are affixed to and must remain attached to this laser product.

A) The following Certification label is located near the Plate level: "This laser product is complied with the provisions of 21 CFR 1040. 10 and 1040.11. For a Class II laser product."

B) Caution label is located near the exit aperture:
"AVOID EXPOSURE.Laser radiation is emitted from this aperture."

C) Warning logotype is located on the surface of the telescope:
"CAUTION LASER RADIATION DO NOT STARE INTO BEAM"

D) Warning label is Located near the exit aperture.

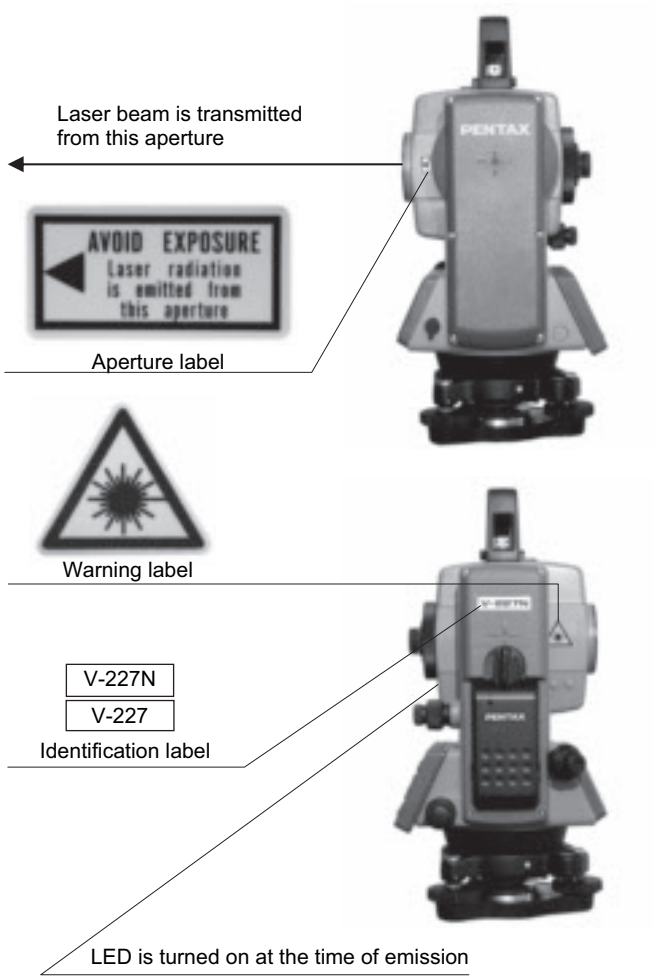
3.Caution to maintain the safety in compliance with the standard

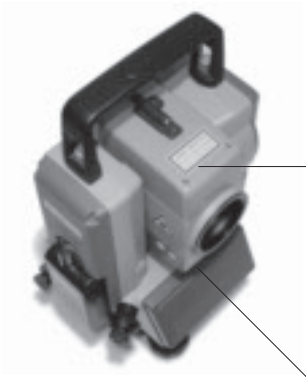
A) To maintain the safety standard, refrain from any operation, maintenance, or adjustment other than described in this instruction manual.

B) Operation, maintenance or adjustment other than those specified in this instruction manual may result in hazardous radiation exposure.

C) Maintenance and repair not covered in this manual must be done by an authorized Pentax dealer.

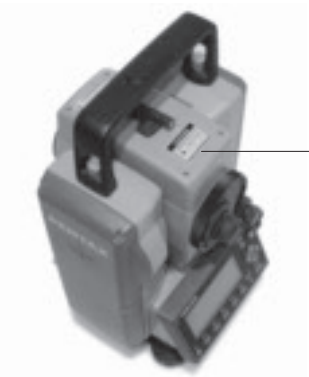
D) The Laser beam emission by the Distance measurement can be terminated by pressing [Meas] or [ESC]key.





Warning logotype

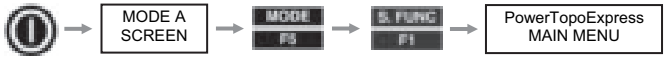
Warning logotype



Warning logotype

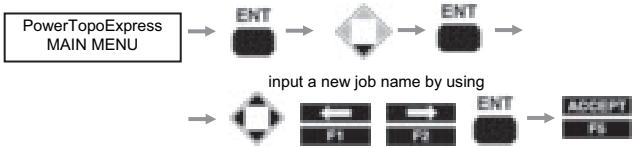
Power Topo Express
Operating Procedure

5. Starting Special Function

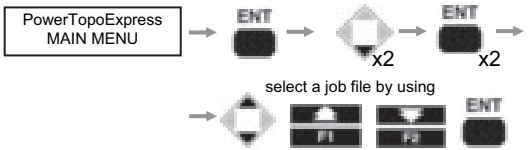


6. Creating / Selecting a Job File

To create a new job file:



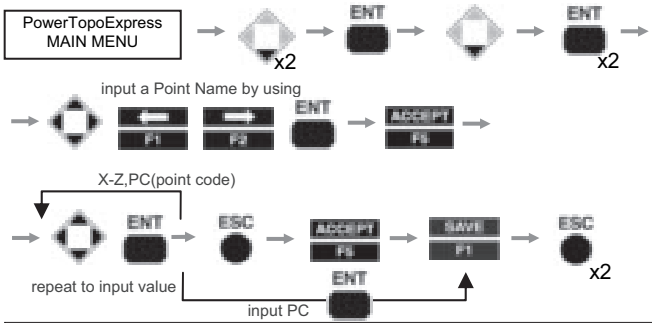
Or to select a job file:



NOTE:
Once a job file is created or selected, it is effective until a new job file is created or another job file is selected.The default job file "PENTAX" is provided permanently so that data is stored even when no user defined job file exists.The points that can be recorded in one job file are maximum 2,000 measuring points(XYZ).The user can make up to 8 job files.

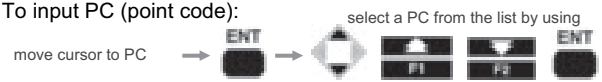
7. Input a Known Point Coordinate

To input and store a known point coordinate:



NOTE:
There are other functions in VIEW menu; Graphical View, Edit Rectangular Data, and Edit Polar Data. For detail of these functions, please refer to the instruction manual of PowerTopoExpress.

To input PC (point code):

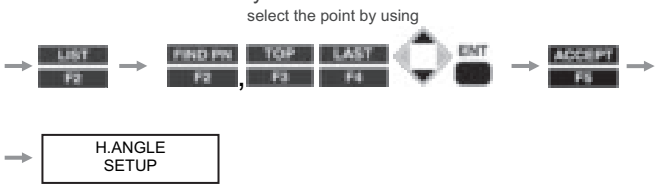


NOTE:
PC list is displayed only when point codes are stored in the job named “PointColeList”. “PointCodeList”job can be created by the procedure described in the section 2, and PC can be stored by inputting PN and PC as a point coordinate data. PC list can be also transferred from a computer. For more detail, refer to the instruction manual of PowerTopoLite. A new point code can be input and memorized as a point coordinate data, but it is not stored as the data of “PointCodeList”. If a new PC need to be added to the list, select “PointCodeList” job and add a PC as a new Rect.Coord.Data.

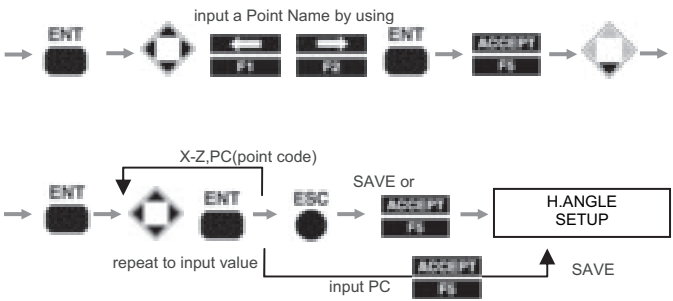
8. Rectangular Coordinate Measurement

8.1 Station Point Setup

To select from the memory:



Or to input the station point information:



NOTE:

The input item (cursor position) may be selected by 

To input PC (point code):

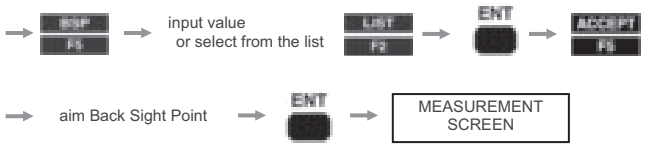
NOTE:
Input items are PN (point name), X, Y, Z, IH (instrument height), and PC (point code).
If the inputted PN already exists in the memory,then the corresponding point information (coordinate & point code) is displayed in the screen.
The result of Free Station, prior to stakeout, is automatically set in the each field of Station Setup.

8.2 Orientation (Station Point H.Angle Setup)

To input a given angle:

Or to set the angle 0°:

Or to calculate by the Back Sight Point:



8.3 Measurement

To select the Target type: **(V-227N models only)**

Repeat
Until the desired target type is selected

NOTE:
You can check the selected target type at the left side of the Battery mark in the top line of the screen.

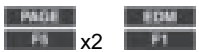
To measure:

Or to start tracking:

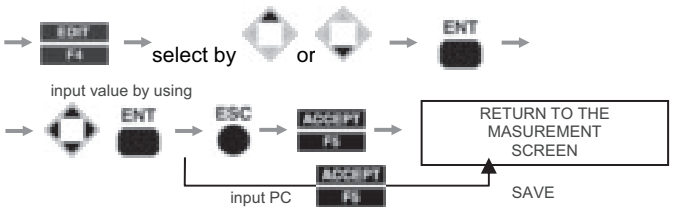
x2

NOTE:

Shot count can be changed by using



To input the point information:



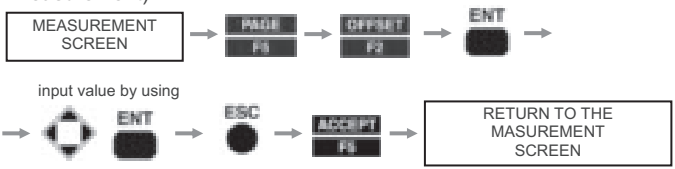
To save the point information:

Or to measure and save:

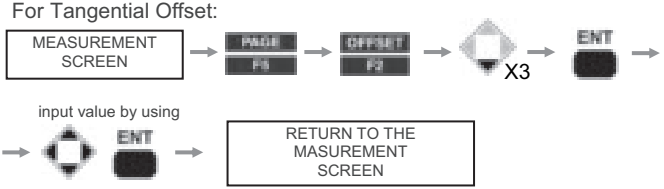
NOTE:
The Point number is automatically incremented or decremented to make rapid continuous measurements possible.

8.4 Offset Measurement

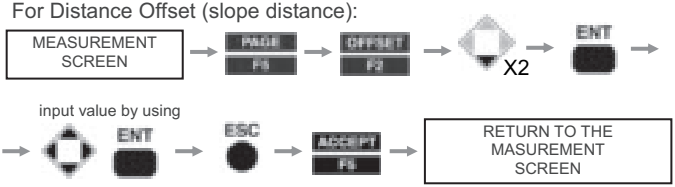
For Radial Offset (the horizontal distance offset along the line of measurement):



For Tangential Offset:



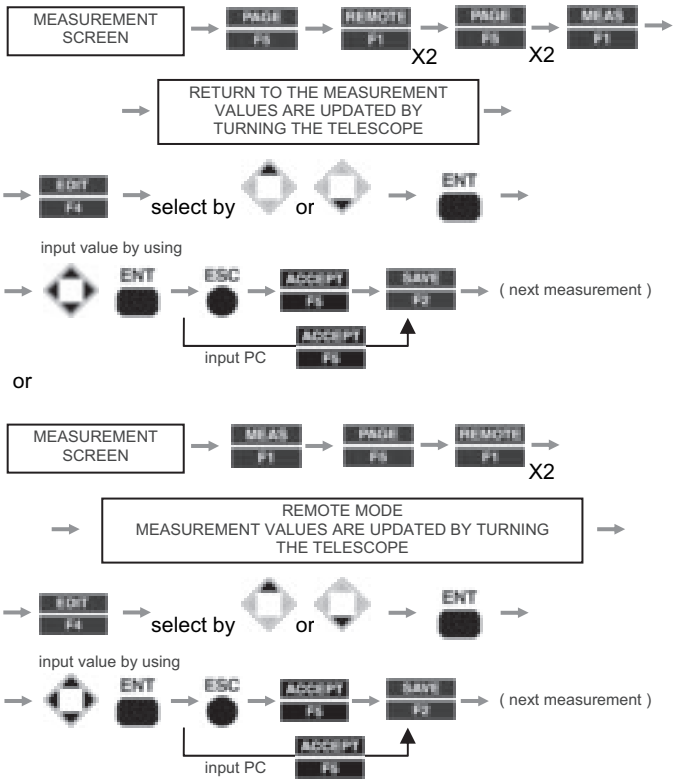
For Distance Offset (slope distance):



NOTE:
The Offset values are cleared once the measurement is saved.

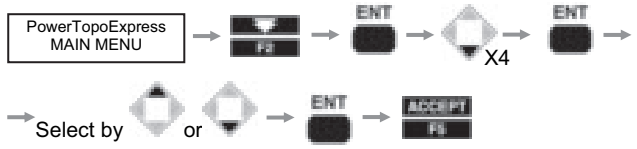
8.5 Remote measurement

To enter the Remote mode:

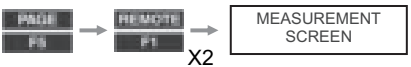


NOTE:
Remote values are calculated based on the assumption of the reference plane. Three types of the reference plane are available in PowerTopoExpress; Cylindrical surface, Fixed plane (default) and Rotated plane.

To change the reference plane type:



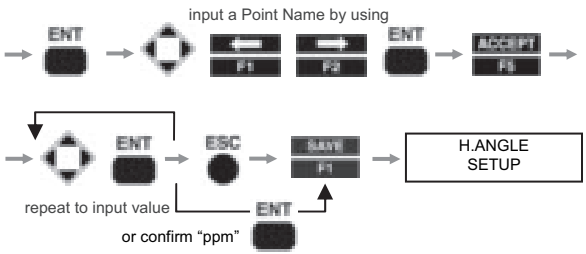
To quit the Remote mode:



9. Polar Coordinate Measurement

9.1 Station Point Setup

To input the point information:



NOTE:
Input items are PN (point name), IH (instrument height),PC (point code), TEMP (temperature), PRESS (atmospheric pressure) and ppm. "TEMP" and "PRESS" can be input only when "Atmospheric Correction" is set to "ATM INPUT"."ppm" can be input only when "Atmospheric Correction" is set to "ppm INPUT".The input item (cursor position) may be selected by

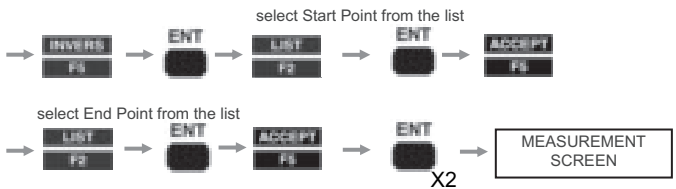
9.2 Orientation (Station Point H.Angle Setup)

Only when the orientation of the horizontal angle is required, proceed according to the following procedure.Otherwise, just pass this step by

To input a given angle:

Or to set the angle 0°:

Or to calculate by the Back Sight Point:



9.3 Measurement

To select the Target type: **(V-227N models only)**

Repeat
Until the desired target type is selected

NOTE:
You can check the selected target type at the left side of the Battery mark in the top line of the screen.

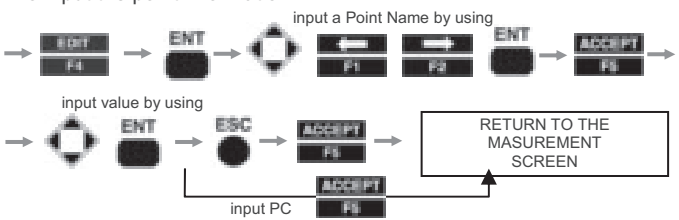
To measure:

Or to start tracking:

NOTE:

Shot count can be changed by using

To input the point information:



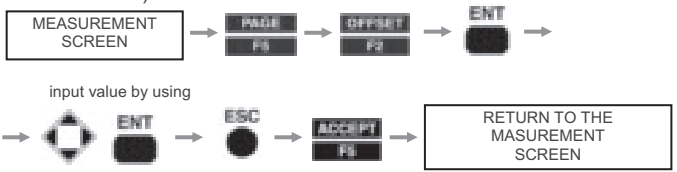
To save the point information:

Or to measure and save:

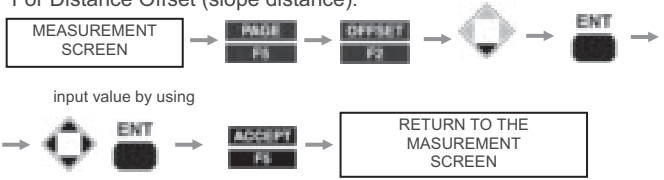
NOTE:
The point number is automatically incremented or decrimented for rapid continuous measurements.

9.4 Offset measurement

For Radial Offset (the horizontal distance offset along the line of measurement):



For Distance Offset (slope distance):

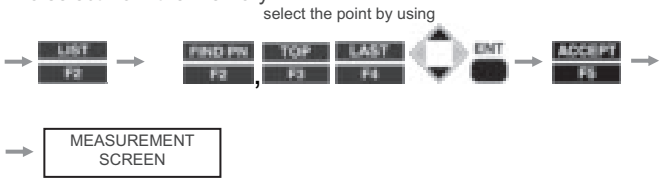


NOTE:
The Offset values are cleared once the measurement is saved.

10. Free Stationing

10.1 Known Point Setup

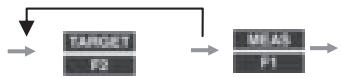
To select from the memory:



Or input PN which is already stored in memory to call and display the known coordinate

10.2 Measurement

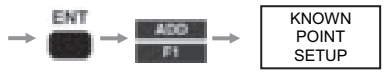
Select the target type and measure:



Repeat
Until the desired target type is selected
(V-227N models only)

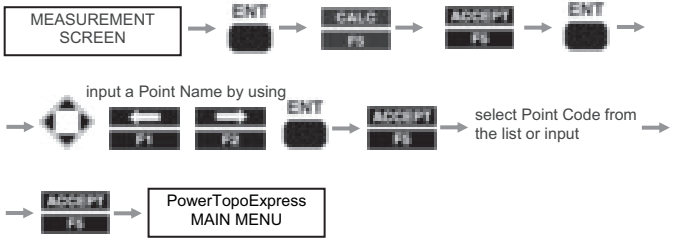
NOTE:
You can check the selected target type at the left side of the Battery mark in the top line of the screen.

To proceed to the next point:



Repeat "Known Point Setup" and "Measurement" for all known points.

10.3 Calculation

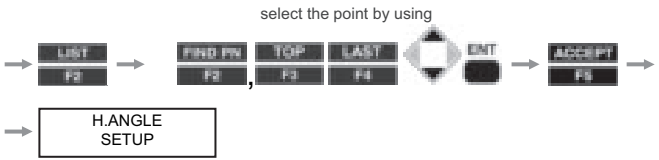


NOTE:
The result of Free Station is automatically carried forward to the station setup of Rectangular coordinate measurement and stakeout.

11. Stake Out

11.1 Station Point Setup

Select from the stored data:



Or input PN which is already stored in the memory to call and display the known coordinate

NOTE:
The result of Free Station, prior to stakeout, is automatically set in the each field of Station Setup.

11.2 Orientation (Station Point H.Angle Setup)

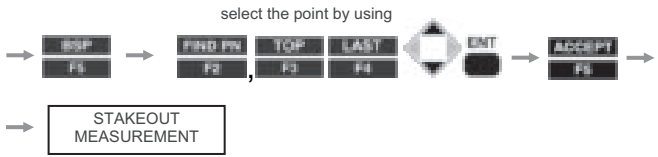
To input a given angle:

Or to set the angle 0°:

Or to calculate by the Back Sight Point:

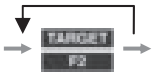
11.3 Stakeout Point Setup

Select the point from the stored data:



11.4 Stakeout Measurement

Check the designed value, and press to proceed to the Stakeout screen.
Turn the instrument until "DH. Angle" reads to "0".
Select the Target type:



Repeat
Until the desired target type is selected
(V-227N models only)

NOTE:
You can check the selected target type at the left side of the Battery mark in the top line of the screen.

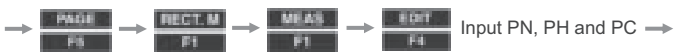
To measure in Tracking mode:

(move the target until “DH.dist” reads “0”)

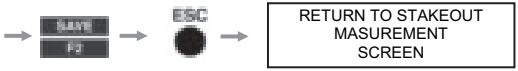
To quit measurement

(position the target accurately)

To confirm the position of the stake:



Input PN, PH and PC

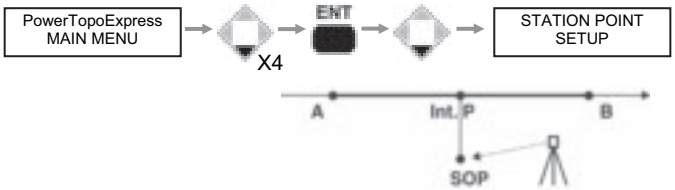


To proceed to the next point:

(repeat from “Stakeout Point Setup“)

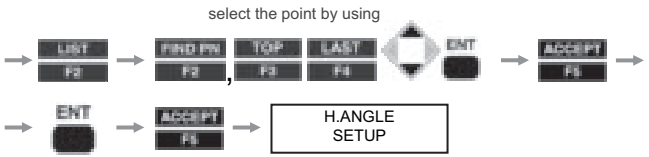
12. Stake Out (Point to Line)

"Point to Line" gives the distances between SOP and Int.P,A and Int.P,B and Int.P.



12.1 Station Point Setup

Select the point from the stored data:



NOTE:
The result of Free Station, prior to stakeout, is automatically set in the each field of Station Setup.

12.2 Orientation (Station Point H.Angle Setup)

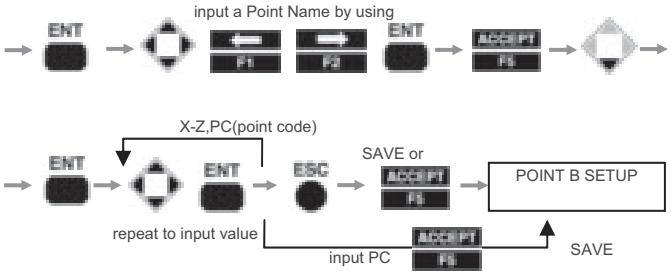
To input a given angle:

Or to set the angle 0°:

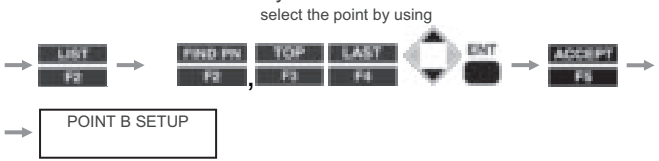
Or to calculate by the Back Sight Point:

12.3 Point A Setup

To input values:

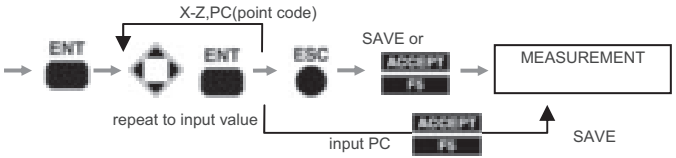


Or to select from the memory:

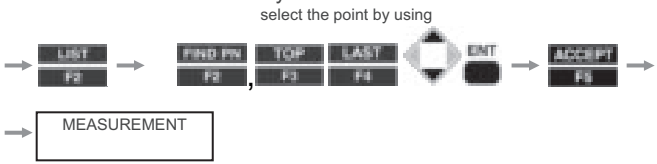


12.4 Point B Setup

To input values:



Or to select from the memory:

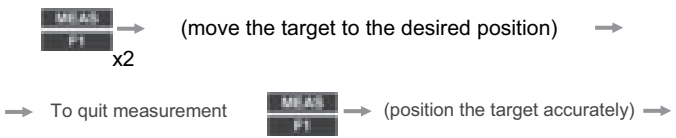


12.5 Point To Line Measurement

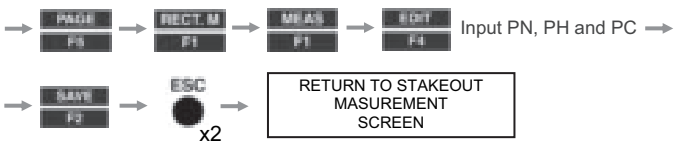
To select the Target type:

Repeat
Until the desired target type is selected
(V-227N models only)

To measure in Tracking mode:

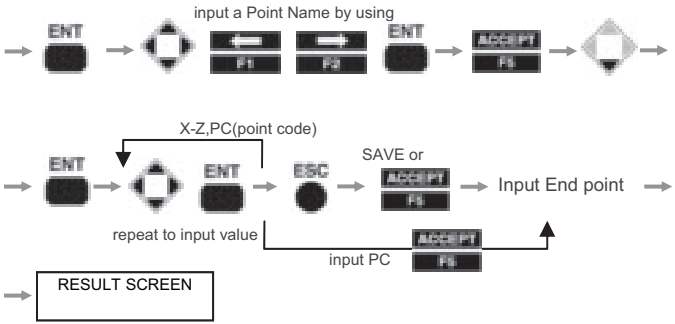


To confirm the position of the stake:



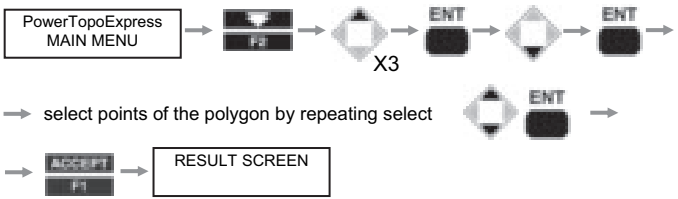
13. INVERS

To input SP (Station point):



14. Area Calculation

To start area calculation:

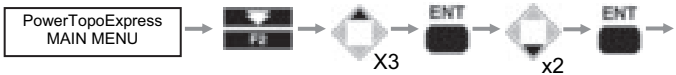


To return to the calculation menu screen:

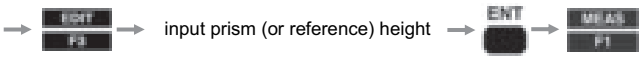
NOTE:
This function calculates the length of 2D contour of a polygon, and the 2D surface (area) of the polygon. The polygon is defined by selecting points in such a way that the contour segments of the polygon do not intersect. The last selected point is automatically tied to the first selected point to form the closed figure. There are several function keys for point selection, such as "ALL", "FIND PN", "FROM", "TO", and "ORDER". Refer to the instruction manual on the CD-R.

15. REM

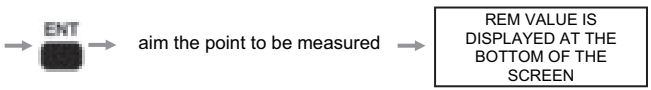
To start REM:



Measure the Reference point:



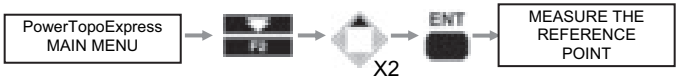
Measure the elevation of the remote point:



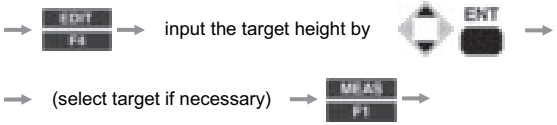
To return to Calculation menu:

16. RDM (Remote Distance Measurement)

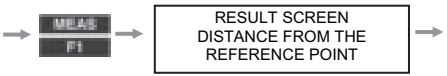
To start RDM:



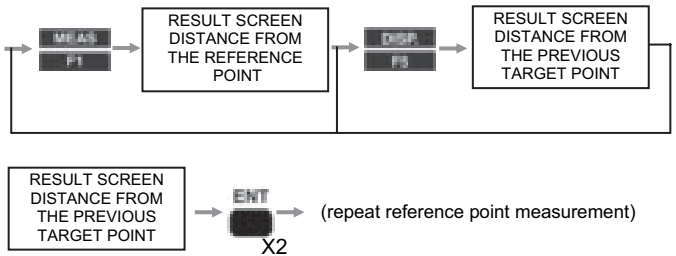
Measure the Reference point:



Measure the 2nd point (Target Point):



Measure the 3rd point (Target Point):



To return to PowerTopoLite Main menu:

Preference List

Item		Default	Options	Remark
Language		ENGLISH	Your Language	
COORD.AXIS	DISP.1	X	Any alpha-numeric character	Axis labels that are displayed in 1st line, 2nd line, and 3rd line
	DISP.2	Y	Any alpha-numeric character	
	DISP.3	Z	Any alpha-numeric character	
	DISP.1 AXIS	BASE	RIGHT ANGLE, HEIGHT	Orientation direction of each axis.
	DISP.2 AXIS	RIGHT ANGLE	BASE DIRECTION, HEIGHT	
	DISP.3 AXIS	HEIGHT	BASE DIRECTION, RIGHT ANGLE	
	ROTATION	CW	CCW	Direction of H.angle measurement
INPUT METHOD		FULL TEMPLATE	DIVIDED TEMPLATE, MATRIX	
ACTION METHOD		PROCESS TYPE	STRUCTURE TYPE	Operational procedure type
REMOTE METHOD		FIXED PLANE	CYLINDER FACE, ROTATED PLATE	
COMPARE METHOD		ALL IN ONE INFO.	LARGE CHARACTER	Stake Out screen
REQUEST AIMING		OFF	ON	"AIM" message ON/OFF
ELEV. FACTOR	AVE.ELEV	0m	-9999.999m - +9999.999m	
	SCALE	1.0	0.00000001 - 1.99999999	
DUPLICATE PN CHK		OFF	ON	

Function List

			V-227N	V-227
FILE MANAGEMENT	INFORMATION		Yes	Yes
	CREATE		Yes	Yes
	DELETE		Yes	Yes
	ALL CLEAR		Yes	Yes
MEASURE	RECTANGULAR COORD.		Yes	Yes
	POLAR COORD.		Yes	-
VIEW&EDIT	GRAPHICAL VIEW		Yes	Yes
	CREATE THE RECT.POINT		Yes	Yes
	EDIT THE RECT.DATA		Yes	Yes
	EDIT THE POLAR DATA		Yes	-
FREE STATION			Yes	Yes
STAKEOUT	STAKE OUT		Yes	Yes
	POINT TO LINE		Yes	Yes
CALCULATION	INVERSE		Yes	Yes
	2D SURFACE		Yes	Yes
	REM		Yes	Yes
RDM			Yes	Yes
TRANSFER	RECEIVE RECT.DATA	DC1	Yes	Yes
		CSV	Yes	Yes
		ExtCSV	Yes	Yes
	SEND RECT.DATA	DC1	Yes	Yes
		CSV	Yes	Yes
		ExtCSV	Yes	Yes
	SEND POLAR DATA	DC1	Yes	-
		AUX	Yes	-
	COMMUNICATION SETUP	RECEIVE RECT.DATA	Yes	Yes
		SEND RECT. DATA	Yes	Yes
		SEND POLAR DATA	Yes	-
PREFEREMCE	LANGUAGE		Yes	Yes
	COORD.SYSTEM		Yes	Yes
	INPUT METHOD		Yes	Yes
	ACTION METHOD		Yes	Yes
	REMOTE METHOD		Yes	Yes
	COMPARE METHOD		Yes	Yes
	REQUEST AIMING		Yes	Yes
	ELEV.FACTOR		Yes	Yes
	DUPLICATE PN CHK		Yes	Yes

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The CE marking assures that this product complies with the requirements of the EC directive for safety.

ISO 9001:2000
ISO 14001:1996

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