



Electronic Total Station

## Quick Reference Guide

### PSF software For R-300 series

### Operating Procedure

R-322N, R-323N, R-325N, R-335N, R-315N,  
R-322, R-323, R-325, R-335, R-315, R-326

Draft Ver. 02.10.19 yk

PENTAX Precision Co., Ltd.

#### 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. Basic procedure
2. PowerTopoLite for R-300 series, Operating procedure
3. PSF software for R-300 series, Operating procedure


The complete instruction manuals are contained on the CD that is attached to each R-300.

#### PRECAUTIONS REGARDING SAFETY

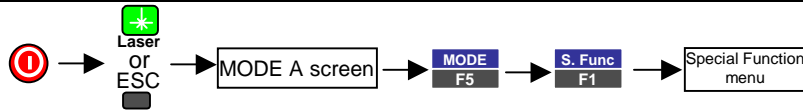
Before using this product, be sure that you have ***thoroughly read and understood the instruction manual*** that is included on the attached CR-R to ensure proper operation.

#### OPERATIONAL PROCEDURE

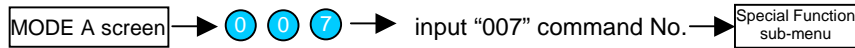
The operational procedure in this guide is described based on the default software parameter settings (preferences). Changing preferences may cause a different operational procedure. For further detail of preferences, please refer to the instruction manual of PCS300 software.

This guide uses the symbol " xN " as an expression of repeating times of key operation. For example, "  x2 " means that [ESC] key is pressed two times.

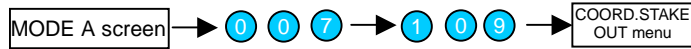
## 1. Starting a Special Function



Special functions are also accessible by "007" code:



example:



Note: "007" commands are listed in the table below.

Special functions are also accessible by the HELP MENU. For HELP MENU procedure, refer to "2. Changing Instrument Settings" of the Quick reference Guide, Basic Procedures for R-300.

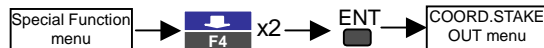
PCS300 software adds the following functions to the HELP MENU Instrument Setting. .

Menu No.	Functions	"007" command No.
24.	Distance Stakeout	101
25.	RDM	103
26.	Coordinates	104
27.	Offset Shots	105
28.	Coord. Stakeout	109
29.	REM	112
30.	Resection	113
31.	Data Storage	119
32.	Memory Management	200

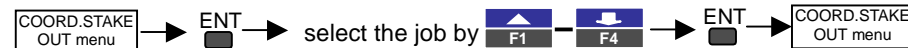
## 2. COORD. STAKEOUT

007-109

To start Coord. Stakeout:

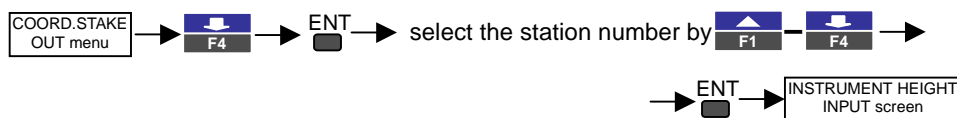


Select the Job:



Note: To create a new job, press [ENT] at the first empty line and input a job name.

Select the station:



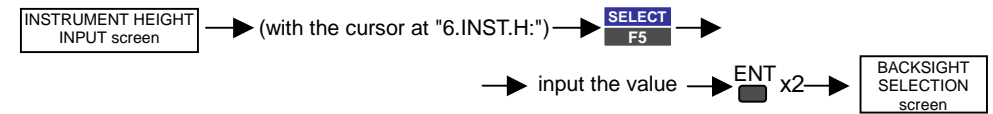
Note: To input a new station number, press [ENT] at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate:



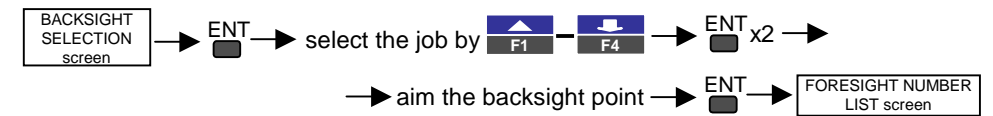
STORE F2 saves the input data in memory.

-2-

Input the Instrument height:



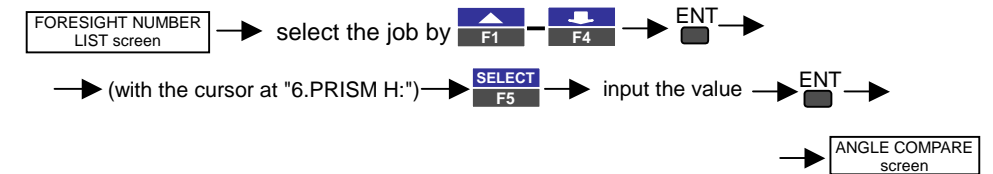
Select the Backsight point:



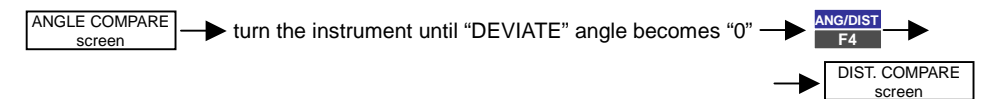
Note: To input new point information, press [ENT] key at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate. F2 [STORE] key saves the input data in memory.

Orientation can be also made by azimuth angle input from the next ANGLE COMPARE screen, instead of selecting the backsight point. Proceed to the next step:

Select a foresight and stakeout:



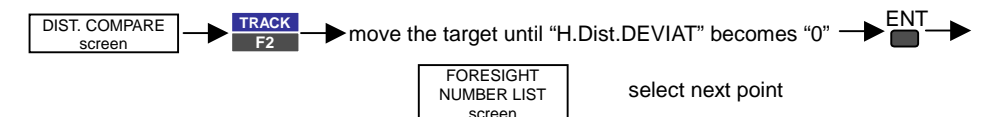
To define the stakeout direction:



Note: To set the azimuth angle,



To define the stakeout distance:

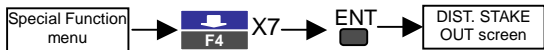


Note: F3 [TARGT] switches the EDM mode to Prism -> Reflecting sheet -> Reflectorless -> Prism -> ..., each time it is pressed.  
 After TRACK measurement, the target position can be measured accurately by using F1 [MEAS].

To quit:



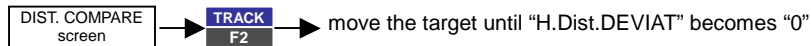
### 3. DISTANCE STAKEOUT 007-101



To input the distance:



To define the stakeout distance:

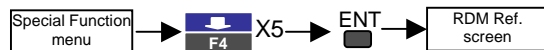


Note: F3 [TARGT] switches the EDM mode to Prism -> Reflecting sheet -> Reflectorless -> Prism -> ..., each time it is pressed.  
 After TRACK measurement, the target position can be measured accurately by using F1 [MEAS].

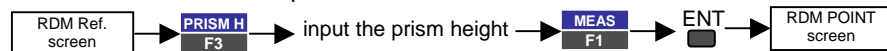
To quit:



### 4. RDM 007-103

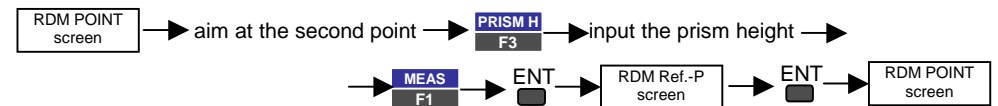


To measure the reference point:



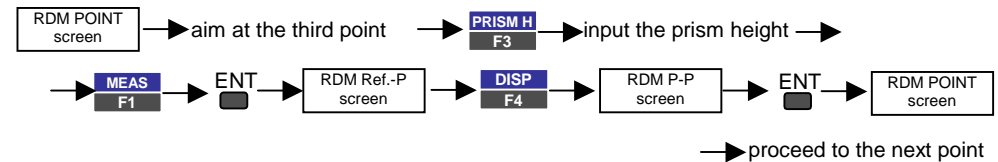
Note: F2 [TARGT] switches the EDM mode to Prism -> Reflecting sheet -> Reflectorless -> Prism -> ..., each time it is pressed.  
 F4 [DIST] is a toggle switch to change the distance display between "H.dist", "S.dist" and "V.Dist".

To measure the second point:



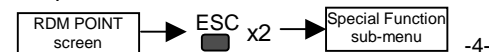
Note: In the RDM Ref.-P screen, the distance and the grade % from the reference point to the first point are displayed.

To measure the third point:



Note: In the RDM P-P screen, the distance and the grade % from the previous point are displayed.

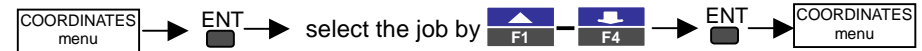
To quit:



### 5. COORDINATES 007-104

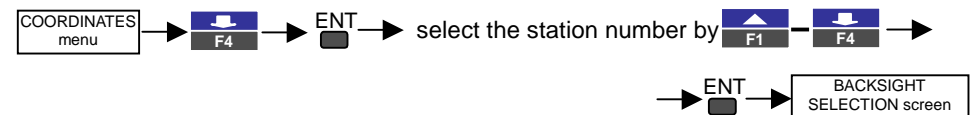


Select the Job:

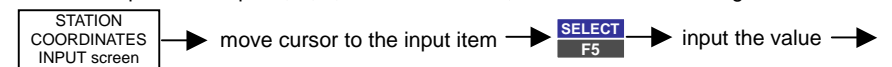


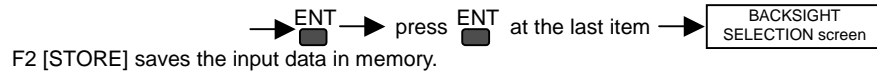
Note: To create a new job, press [ENT] at the first empty line and input a job name.

Select the station:

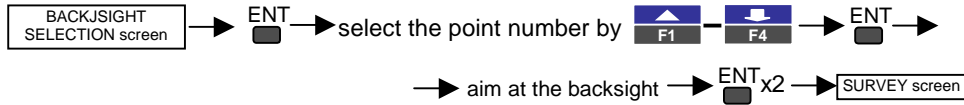


Note: To input a new station number, press [ENT] at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate, and the instrument height:



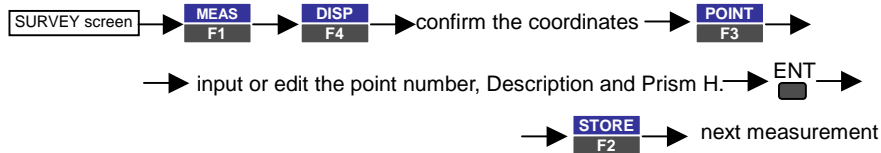


Select the Backsight point:



Note: To input new point information, press [ENT] at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate. F2 [STORE] saves the input data in memory.  
Orientation can be also made by azimuth angle input from the next SURVEY screen, instead of selecting the backsight point. Proceed to the next step:

To measure:



Note: The point number is automatically incremented or decremented for quick survey. By pressing F5 [1/2], other functions are displayed:

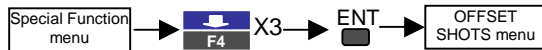
- F2 [H.INPUT] Input the orientation angle
- F3 [0 SET] Set the orientation angle to 0
- F4 [HOLD] Hold the displayed horizontal angle.
- F5 [2/2] Toggle switch to change the functions

To quit:

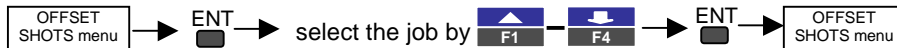


## 6. OFFSET SHOTS

007-105

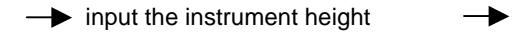
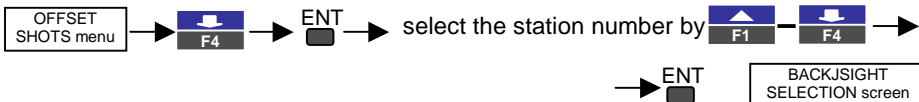


Select the Job:

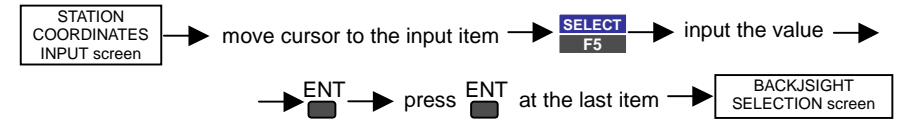


Note: To create a new job, press [ENT] at the first empty line and input a job name.

Select the station:

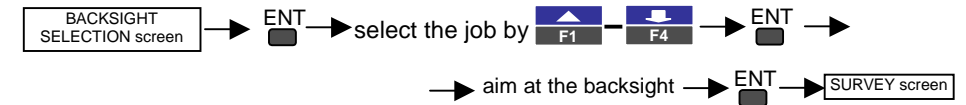


Note: To input a new station number, press [ENT] at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate, and the instrument height:



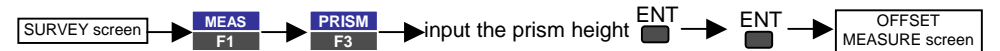
F2 [STORE] saves the input data in memory.

Select the Backsight point:



Note: To input new point information, press [ENT] at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate. F2 [STORE] saves the input data in memory.  
Orientation can be also made by azimuth angle input from the next SURVEY screen, instead of selecting the backsight point. Proceed to the next step:

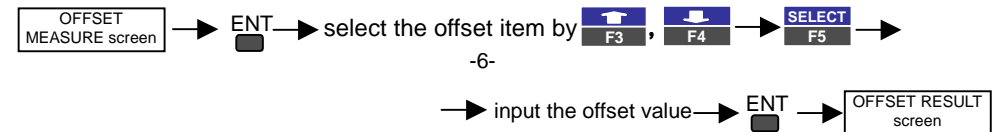
To measure:



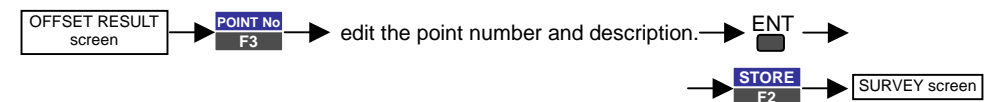
Note: By pressing F5 [1/2], other functions are displayed:

- F2 [H.INPUT] Input the orientation angle
- F3 [0 SET] Set the orientation angle to 0
- F4 [HOLD] Hold the displayed horizontal angle
- F5 [2/2] Toggle switch to change the functions

To input the offsets:



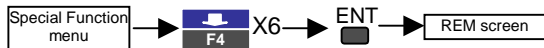
To save the result:



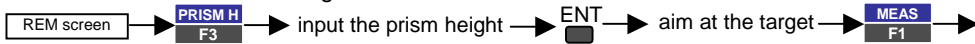
To quit:



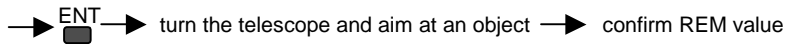
## 7. REM 007-112



To measure the reference height:



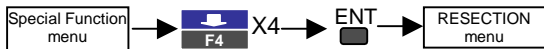
To execute Remote Elevation Measurement:



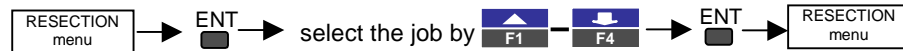
To quit:



## 8. RESECTION 007-113

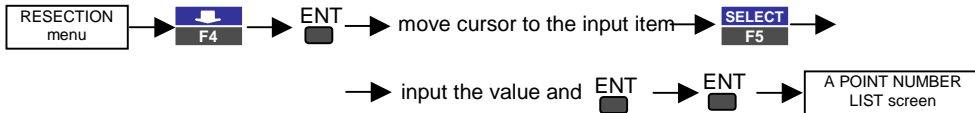


Select the Job:

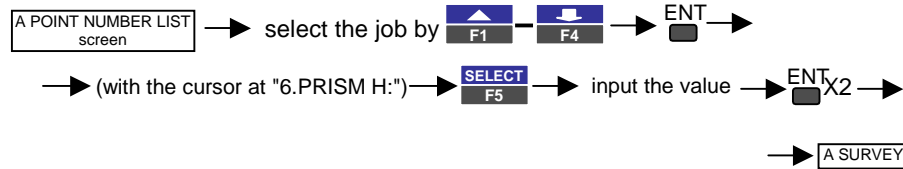


Note: To create a new job, press [ENT] at the first empty line and input a job name.

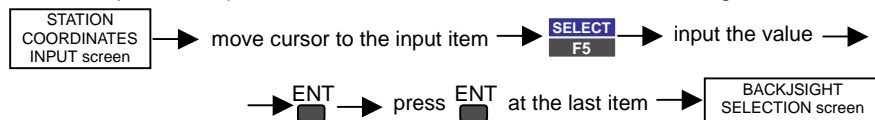
To input the station point information:



To select the reference point A:



Note: To input a new station number, press [ENT] at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate, and the instrument height:



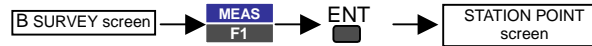
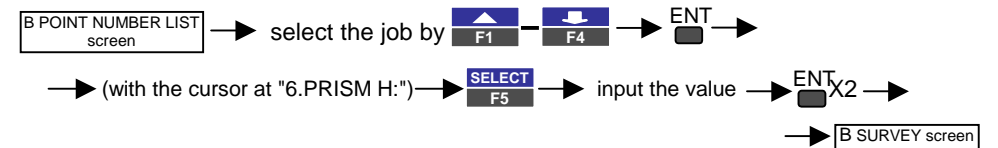
F2 [STORE] saves the input data in memory.

To measure the reference point A:

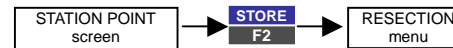


Note: Change the EDM mode by using F2 [TARGET] if necessary.

Select and measure the reference point B by the same procedure as for the point A.



To save the result



Note: If you do not need the result saved, just press [ENT] in the STATION POINT screen.

To quit:



## 9. DATA STORAGE 007-119

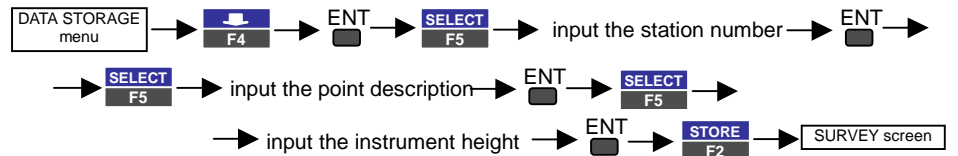


Select the Job:



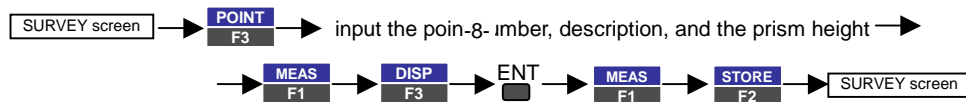
Note: To create a new job, press [ENT] at the first empty line and input a job name. After creating a new job, the program automatically proceeds to STATION INPUT screen.

Input the station information:



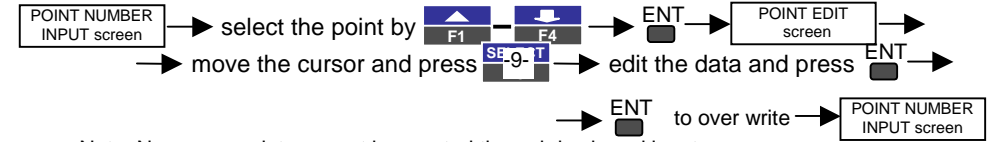
Note: Target constant, ppm value, and atmospheric temperature and pressure are automatically applied. If you require measuring and inputting manually, change the instrument settings. Refer to the instruction manual.

To input the point information and measure:



Note: In this program, there is no separate procedure to measure the backsight point, as the first data saved after the station information is usually considered as that of the backsight point, depending on the post processing program.

For the orientation of the horizontal angle, use the function keys on the second function page by pressing F5 [1/2].



Note: New survey data cannot be created through keyboard input.

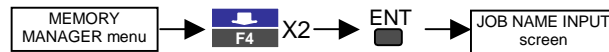
The survey data that is automatically obtained by the instrument cannot be edited.

## 11. MEMORY MANAGEMENT

007-200



To input or edit coordinate data:

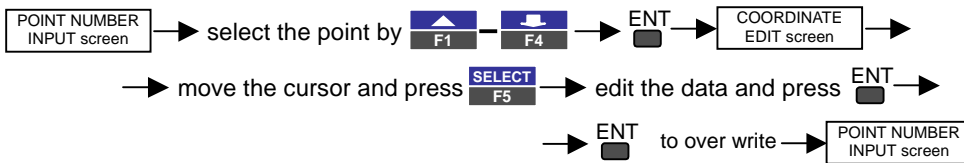


Select the Job:



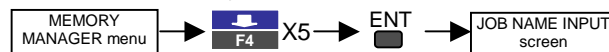
Note: To create a new job, press [ENT] at the first empty line and input a job name.

Point selection:



Note: To input new point information, press [ENT] at the first "0000" line, and input the number, and then a point description, X, Y, and Z coordinate.

To input or edit survey data:



Select the Job:

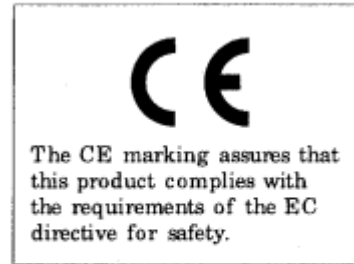


Note: To create a new job, press [ENT] at the first empty line and input a job name.

Point selection:

**PENTAX Precision Co., Ltd.**

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Fax: +81-3-5905-1225



Member symbol of the Japan Surveying Instruments Manufacturers' Association representing the high quality surveying products.



ファイル名 : Quick\_Guide\_PCS-1019.doc  
フォルダ : G:¥0\_R-300¥ 取扱説明書  
テンプレート : C:¥WINDOWS¥Application

Data¥Microsoft¥Templates¥Normal.dot

表題 : R-300 シリーズ

副題 :

作成者 : 第一開発設計部

キーワード :

説明 :

作成日時 : 02/10/19 10:35

変更回数 : 5

最終保存日時 : 02/10/30 12:41

最終保存者 : Kata

編集時間 : 443 分

最終印刷日時 : 02/10/30 12:48

最終印刷時のカウント

ページ数 : 8

単語数 : 1,574 (約)

文字数 : 7,716 (約)