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You can read the recommendations in the user guide, the technical guide or the installation guide for PENTAX R-322NX. You'll find the answers to all your questions on the PENTAX R-322NX in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual PENTAX R-322NX
User guide PENTAX R-322NX
Operating instructions PENTAX R-322NX
Instructions for use PENTAX R-322NX
Instruction manual PENTAX R-322NX

TOTAL STATION **R-300X** SERIES

QUICK REFERENCE GUIDE

BASIC PROCEDURES FOR R-300X SERIES

R-322NX R-322EX
R-323NX R-323EX
R-325NX R-325EX
R-335NX R-335EX
R-315NX R-315NX
R-326EX

The reflectorless function is applied to
R-322NX, R-323NX, R-325NX, R-326EX,
R-335NX, R-315NX

PENTAX Industrial Instruments Co., Ltd.

2-36-9, Maeno-cho
Itabashi-ku, Tokyo 174-0063 Japan
Tel. +81 3 3960 0502
Fax +81 3 3960 0509
E-mail: international@piliic.pentax.co.jp
Website: www.pentax.co.jp/piliic/survey
www.pentaxsurveying.com



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Manual abstract:

, Ltd. 2-36-9, Maeno-cho Itabashi-ku, Tokyo 174-0063 Japan Tel. +81 3 3960 0502 Fax +81 3 3960 0509 E-mail: international@piic.pentax.co.jp Website: www.pentax.co.jp/piic/survey www.pentaxsurveying.

com Electronic Total Station Quick Reference Guide Basic Procedures for R-300X series R-322NX, R-323NX, R-325NX, R-335NX, R-315NX, R-322EX, R-323EX, R-325EX, R-335EX, R-315EX, R-326EX The description concerning the reflectorless function in this guide is applied to R-322NX, R-323NX, R-325NX, R-326EX, R-335NX, R-315NX. PENTAX Industrial Instruments Co., Ltd. CONTENTS General Instruction Manuals Precautions regarding safety Warning Usage Precautions 1 Basic Operation 1.1 Removing the Battery 1.

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" x2" means that [ESC] key is pressed two times. @@PRECAUTIONS 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 R-300NX is a class-IIIa (3R) Laser product. Avoid direct eye exposure. R-300X without "NX" is a class-II (2) Laser product. 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. 6 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. @@@@@@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. Auto focus The Auto focus may not function under every condition depending on brightness, contrast, and the shape and size of the target. In such a case, use the Power Focus buttons or the manual focus ring. Atmospheric correction During surveys for which the survey precision or atmospheric measurement method is defined, measure the atmospheric temperature and pressure separately and enter those values rather than using the Automatic Atmospheric Correction function.

7 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. @@(2) Turn the knob clockwise.

@@@@@@@@@5 degrees Middle speed: when rotated fully by approx. 10 degrees High speed: after one second of time has passed in the middle speed position 1.5.3 Manual focus Rotate the focus ring manually: 1.5.4 Continuous AF mode To activate the continuous AF: ... for 2 seconds NOTE: Track the target by keeping the target close to the center of the reticle as much as possible. To quit: or rotate the Power focus knob : NOTE: In case the focus does not change for one minute, the continuous AF mode will also terminate automatically.

10 1.6 Angle Measurement 1.6.1 Horizontal Angle Set the screen MODE A : [] or 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 : : : , , x2 input value by using: To read clockwise angle : 1.6.2 Vertical angle To display vertical angle : To change permanently the combination of values displayed in MODE A: x2 x3 + Select by To read the slope % or : x3 1.7 Distance Measurement Set the screen MODE A: [] or 11 MODE A screen 1.7.1 Select your target Select target type (measurement mode): (Reflecting sheet) (Prism) (Reflectorless) NOTE: The selected target is maintained until next time you change. 1.

7.2 Distance measurement For a single shot measurement: [When "Long Range Mode" is displayed] NOTE: "Long Range Mode" is displayed only when measuring with higher laser power (in reflectorless measurement with the instrument setting "REF.LESS RANGE" set as "LONG" and "Warning Message" set as "ON") . 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. NOTE: Quick mode is the function to shorten the initial measurement time using prism and reflector sheet. To set the mode, use direct command number [0][0][7][5][2][2]. When the meas key is pressed during quick mode, "<-- -->" is displayed on the screen. 1.

7.3 Changing Target constants The default constants are: Reflecting sheet : 0mm Prism : -30mm Reflector-less : always 0mm Before changing the constants, set Target Constant in the Initial Setting to "INPUT" mode: x2 x2 x3 + To change Prism constant: input value by using : , , x2 12 To change Sheet constant: input value by using: , , x2 1.7.4 Input Temperature and Atmospheric pressure The default atmospheric correction mode is "Automatic" . Before manual input, change the default mode to "ATM INPUT" : + To Input temperature : , , x2 x2 x2 input value by using: To Input atmospheric pressure: x3 input value by using: 1.7.5 Laser pointer To activate Laser pointer : To quit Laser pointer : , , x2 NOTE: The laser pointer is kept activated until it is deactivated by the above procedure. 1.7.6 Adjusting Laser Plummet brightness or 1.

7.7 Adjusting LCD contrast + or 13 1.7.8 Adjusting Illumination brightness + for LCD (for Reticle) or 2. Changing Instrument settings You can change the instrument settings by "HELP" menu or by inputting "007" code. 2.1 Help menu While the screen is in MODE A or MODE B, + Select a desired item by Change the setting or x2 NOTE: Some items have sub-menus where the selecting procedure by using F1 - F4 is again repeated.



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@@@PRIORIT Y DISP CRV/REF CORR MIN UNIT ANG. V. ANG.

@@TILT DISP. @@@@range. @@@@5 hrs (ETH+EDM),12 hrs (ETH) with Approx. 2.2 hrs of charging time Weight Approx.

@@* Normal conditions: 20km visibility with slight shimmer. @@* Reflector sheet: PENTAX genuine Reflector sheet (5cm x 5cm). @@It is incorporated in all X series models and effective up to 500m. @@@@- The measurement range may be influenced by the shape of the target and its environment. - The measurement range at TRACK mode is over 5m.

- It takes time, longer than usual, to measure the distance exceeding 200m or to measure the distance to the object that is hard to measure. - The maximum distance that can be shown on the display is 322m in the non-prism measurement mode. - The measurement range, accuracy of distance measurement and time required to measure may be influenced by the shape, size of surface area and reflection rate of the target and its environment. * The operating time becomes shorter under the low temperature, due to the temperature dependence of the battery performance. 20 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. @@@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." Or for R-300 NX models: "This laser product is complied with the provisions of 21 CFR 1040. 10 and 1040.11. For a Class IIIa laser product.

" B) Caution label is located near the exit aperture: "AVOID EXPOSURE. Laser radiation is emitted from this aperture." 21 C) Warning lo.



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