




Instruction manual




HOW TO READ THIS MANUAL

About this instruction manual

- This instruction manual covers only the operating method of TSshield and setting menus of the total station necessary when using TSshield.
- For safety precautions and instructions for use of the total station and how to operate other modes, refer to the instruction manual of the total station.
- To use the service of TSshield, a web browser plug-in "Microsoft Silverlight" is necessary.
Confirm that the PC, OS and web browser in use are compatible with the system requirements for Silverlight.
 For the details of Microsoft Silverlight, refer to its official website.
- Any and all software provided under TSshield Service will be licensed only to you, and you must not sell, rent, lease, sublicense or otherwise dispose whole or part of the software.

Symbols

The signs/marks as shown below are used in the instruction manual.

[CNFG]	:	Indicates softkeys of the total station and buttons on a PC.
{ESC}	:	Indicates operation keys on the total station
<WLAN settings>	:	Indicates screen titles
	:	Indicates precautions and important information which should be read before operating the instrument
	:	Indicates chapters (sections) which are relevant or should be referred to
	:	Indicates supplementary notes

- Corporate and product names used in the instruction manual are the trademarks or registered trademarks of individual companies.

Backing up data

- Data should be backed up (transferred to an external device etc.) on a regular basis to prevent data loss.

Exceptions from responsibility

- The user of this product is expected to follow all operating instructions and make periodic checks (hardware only) of the product's performance.
- The manufacturer, or its representatives, assumes no responsibility for results of faulty or intentional usage or misuse including any direct, indirect, consequential damage, or loss of profits.
- The manufacturer, or its representatives, assumes no responsibility for consequential damage, or loss of profits due to any natural disaster, (earthquake, storms, floods etc.), fire, accident, or an act of a third party and/or usage under unusual conditions.
- The manufacturer, or its representatives, assumes no responsibility for any damage (change of data, loss of data, loss of profits, an interruption of business etc.) caused by use of the product or an unusable product.
- The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage different to that explained in the operator's manual.
- The manufacturer, or its representatives, assumes no responsibility for damage caused by incorrect operation, or action resulting from connecting to other products.

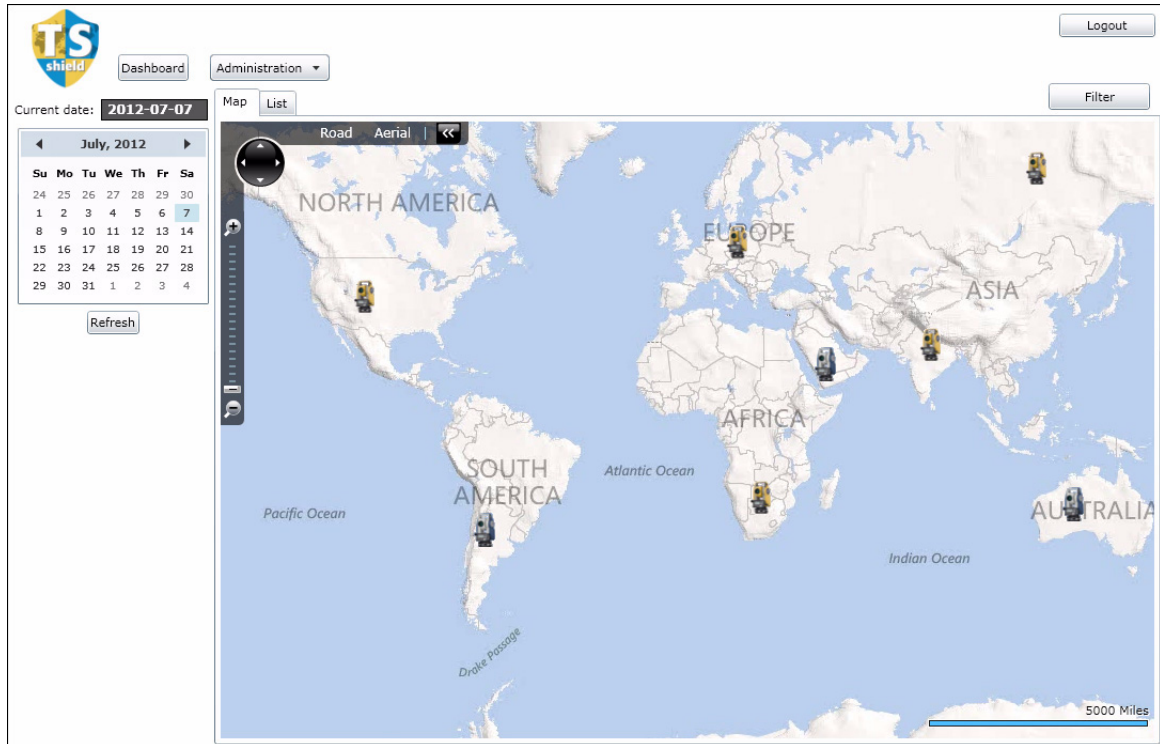
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1. TSshield OVERVIEW

TSshield is a cloud-based information management service. It collects various information from your total station and provides you with a range of support to ensure you can use the total station safely.

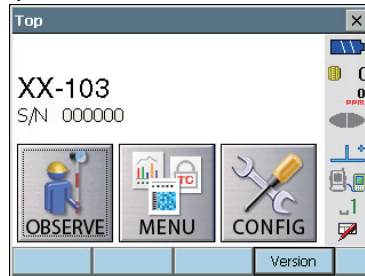
This allows us to send update information to you when the software embedded in your total station is not up-to-date, and also allows you to see various information about your total station purchased via your dedicated website.



1.1 Mode Settings

Following are mode settings and key operations for shifting between modes of TSshield for this instrument.

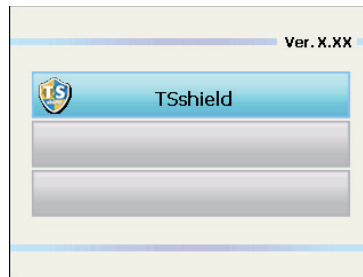
Top menu



{PRG}

{PRG}

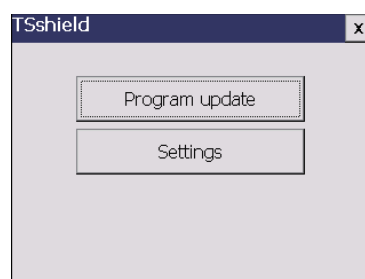
Program mode



[TSshield]

{ESC}

TSshield menu



2. USER REGISTRATION AND LOGIN

It is necessary for you to register your TSshield to use the instrument you have purchased.

2.1 New Registration

If you are using TSshield for the first time, register your information and the instrument information.



- If you are already a registered user, you can put in the information of additional instruments.
☞ "4.1 Register Additional Instruments"

1. Go to the web page



Connect to the following URL from your computer.

<http://tsshield.tierraservice.com/>

2. Start registration

Press [New Registration].



- Press  (Japanese) •  (English) to change the displayed language.

Confirm the contents on the screen and press [Next].

3. Enter registration information

Enter your information and that of the total station you have purchased.

The model, serial number (S/N) and ID code are displayed when the total station is turned on.

New Registration

Company Name *
Department name
Name *
Surname *
Password *
Password (Confirm) *
E-Mail address *
E-Mail address (Confirm) *
Timezone *
Country *
State *
Address *
Zip Code *
Telephone *

Type: Total station *
Series *
Model: -103 *
S/N: XXXXXX *
ID Code: XXXX - XXXX *

Prev Next

User Registration

This Instrument is not activated.
Please do the User Registration

Model: -103
S/N: XXXXXX
ID Code: XXXX-XXXX
Unlock Code:

Confirm Demo Unlock

4. Send registration information

When you have finished entering the information, press [NEXT].

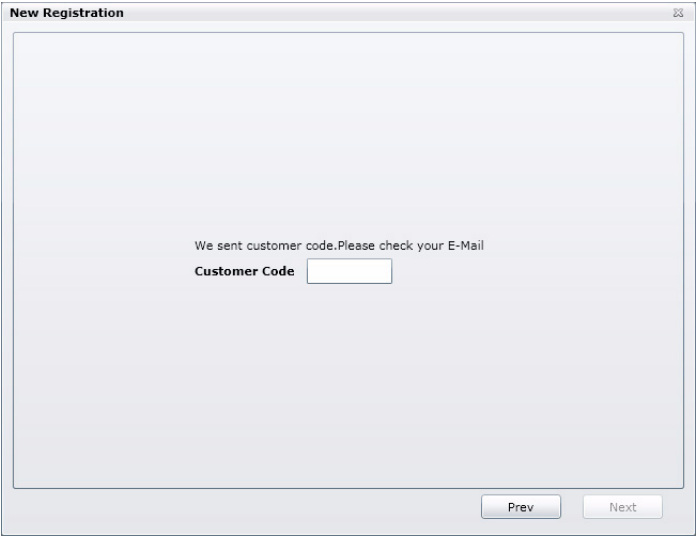
A registration completion mail is sent to the email address you have registered.

Note

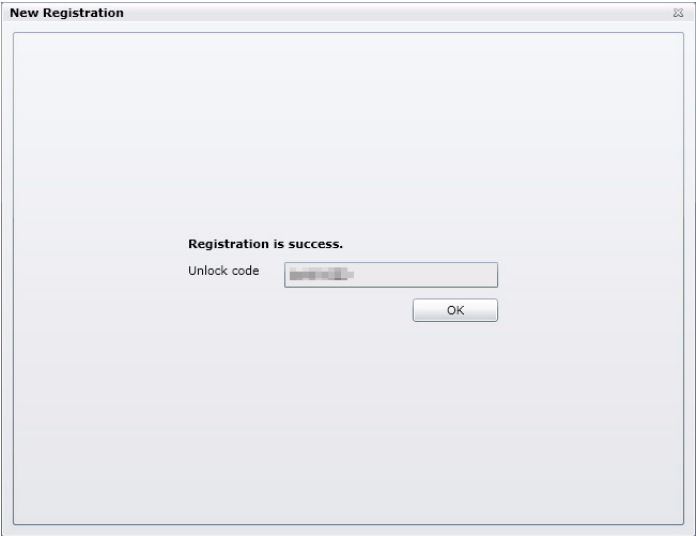
- The registration completion mail contains your customer code and the password for login. Securely store it.
- As an e-mail containing the verification code is sent from tsshield@tierraservice.com, if you have set the restriction on receiving e-mails, change the restriction setting.

5. Obtain the unlock code

Enter on the web page your customer code provided in the registration completion mail, and press [NEXT].



The unlock code is displayed on the screen, and an e-mail including the unlock code is sent to you.



6. Certify the license

Deactivate the demo mode.

Certifying the license can be done either by communicating the unlock code to the server through the total station or by entering the unlock code in the total station.

Note

- If you are in a place with poor signal quality, enter the unlock code in the total station to certify your license.

- (1) When certifying your license through communication with the server

Turn on the total station.

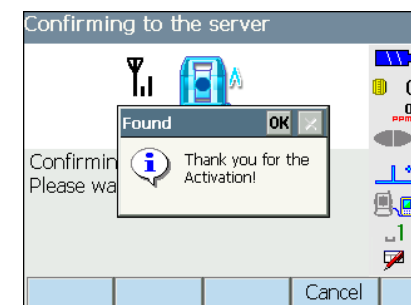
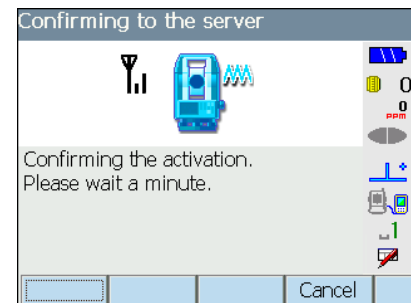
Press **[Confirm]** on the User Registration Screen.

When your registered information has been confirmed with the server, the demo mode is deactivated.



Note

- It may take a maximum of 10 min depending on the reception condition. If registration does not complete 10 min after, reception condition may be bad.

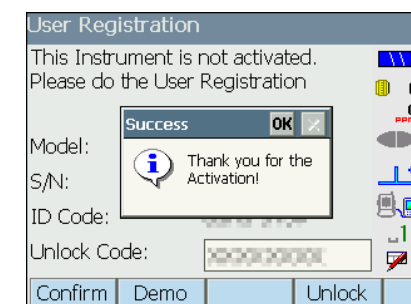


- (2) When certifying your registration by entering the unlock code

Turn on the total station.

Enter the unlock code in the total station and press **[Unlock]**.

When the correct unlock code has been entered, the demo mode is deactivated.



2.2 Login

1. Access the web page

Access to the following URL via a PC.

<http://tsshield.tierraservice.com/>

2. Login

Enter the registered e-mail address and password, select the brand of the instrument for which you wish to display information, and then press **[Login]**.



New Registration

To log in for the first time, user registration for TSshield is required. It is necessary to press **[New Registration]** on the Login screen to register your information and product information.

 "2.1 New Registration"

2.2.1 If you forget your password

If you forget your password for login, you can change it with the following procedures.

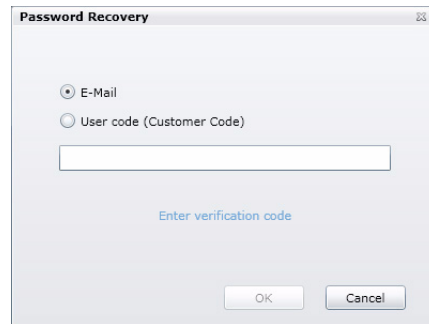
1. Display <Password Assistance>

Press **[Forgot your password?]** on the Login screen.



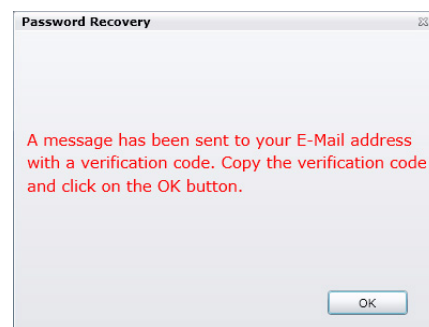
2. Input registration information

Check either “E-Mail” or “User code (Customer Code)”. Then enter the registration information of checked item.



The screenshot shows a dialog box titled "Password Recovery". It has two radio buttons: "E-Mail" (which is selected) and "User code (Customer Code)". Below the radio buttons is a text input field. Underneath the input field, the text "Enter verification code" is displayed in blue. At the bottom of the dialog box, there are two buttons: "OK" and "Cancel".

Pressing **[OK]** issues a verification code to the registered e-mail address. At the same time, the <Password Recovery> screen is displayed.



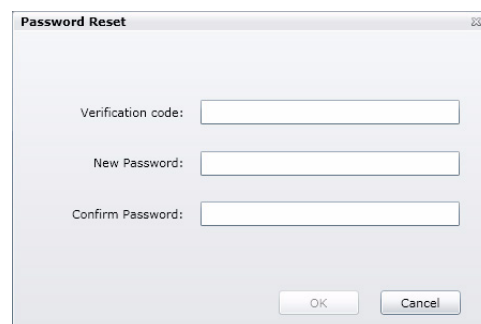
The screenshot shows the same "Password Recovery" dialog box, but now it contains a red text message: "A message has been sent to your E-Mail address with a verification code. Copy the verification code and click on the OK button." At the bottom right of the dialog box, there is a single "OK" button.

Note

- Your customer code is included in the registration confirmation mail sent to you after user registration.
- As an e-mail containing the verification code is sent from tsshield@tierraservice.com, if you have set the restriction on receiving e-mails, change the restriction setting.

3. Set the password

Enter the verification code contained in the e-mail, and enter a new password. Then enter the new password once again, and press **[OK]**.



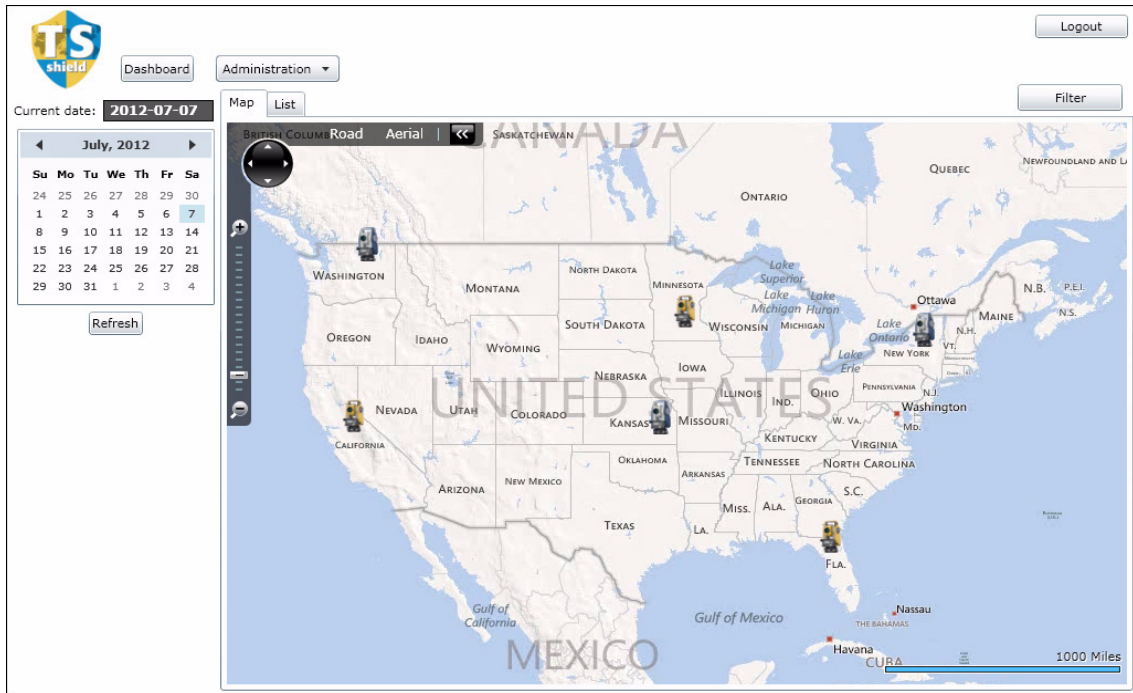
The screenshot shows a dialog box titled "Password Reset". It contains three text input fields: "Verification code:", "New Password:", and "Confirm Password:". At the bottom of the dialog box, there are two buttons: "OK" and "Cancel".

Enter the new password to log in on the Login screen.

3. DASHBOARD

When you log in TSshield, the Dashboard screen is displayed.

On the Dashboard screen, it is possible to display the location of and information on the instrument by switching between the Map and List tabs.



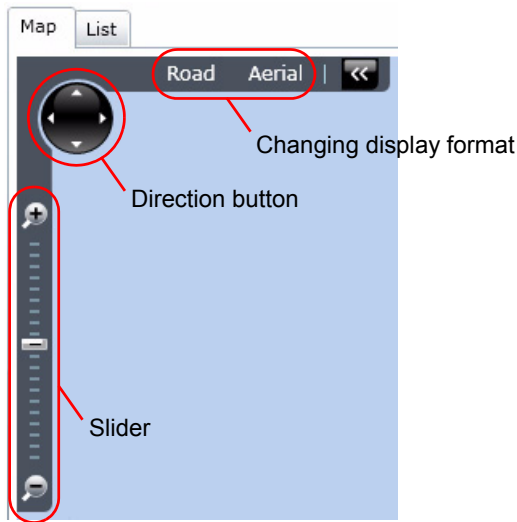
To display information on a specific date, select the date on the calendar, and press [Refresh] to update the information. The currently selected date is displayed in [Current date].

Pressing [Dashboard] on any screen always returns to the Dashboard screen.

3.1 Display Map

View controller:

Click any of the direction buttons to move in the relevant direction on the map. You can zoom in/out the location on the map using a slider.



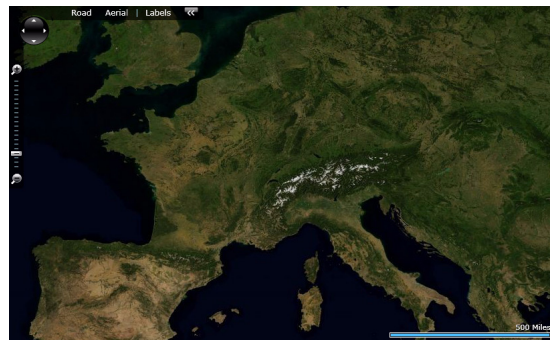
View controller

Display format:

Switch the display format between the road map (Road) and aerial photo (Aerial).

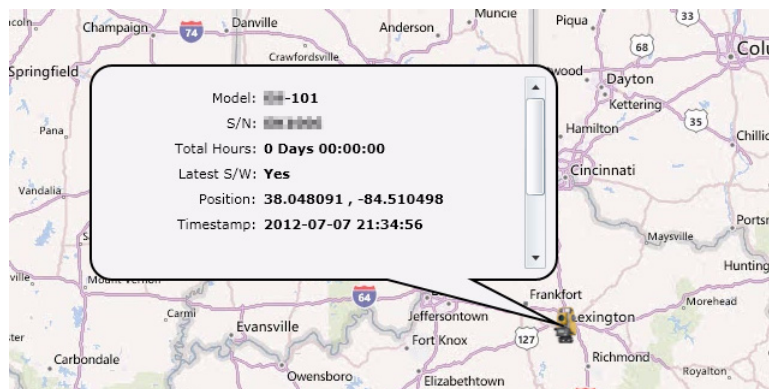


Road map



Aerial photo

Overlaying the mouse cursor on an icon will display the detailed information on the instrument.



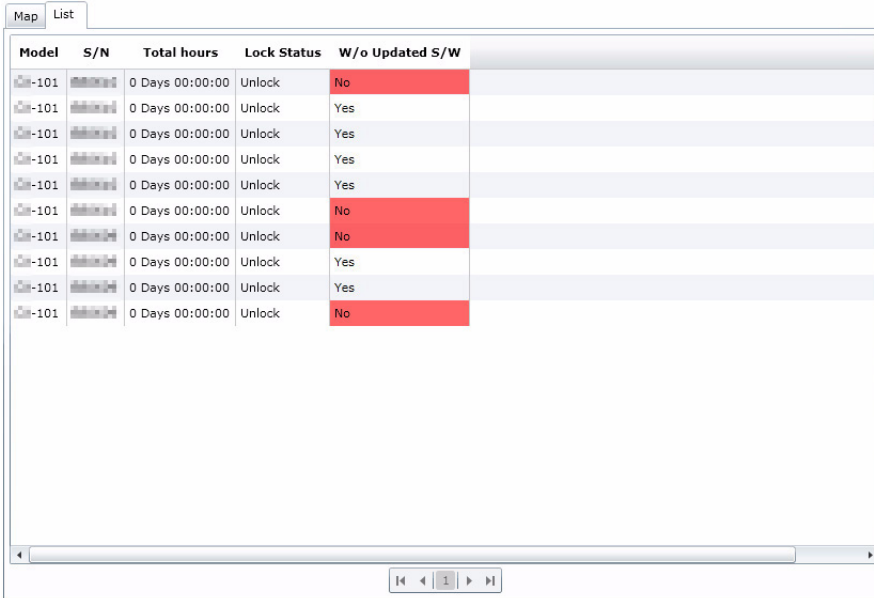
Note

- The position where the instrument conducted communication last on the selected day is indicated as an icon.
- Immediately after login, the information on the day before the login date is displayed.

3.2 Display Lists

Display the list of information on the instrument.

Clicking an item sorts data using the item as a sort key.

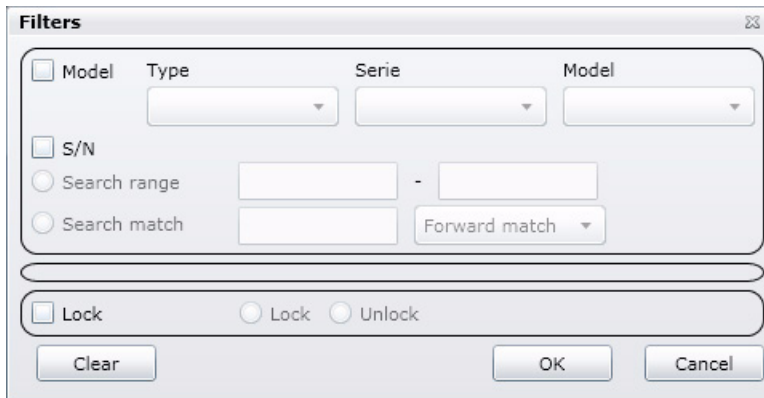


Model	S/N	Total hours	Lock Status	W/o Updated S/W
Cir-101	000000	0 Days 00:00:00	Unlock	No
Cir-101	000000	0 Days 00:00:00	Unlock	Yes
Cir-101	000000	0 Days 00:00:00	Unlock	Yes
Cir-101	000000	0 Days 00:00:00	Unlock	Yes
Cir-101	000000	0 Days 00:00:00	Unlock	Yes
Cir-101	000000	0 Days 00:00:00	Unlock	No
Cir-101	000000	0 Days 00:00:00	Unlock	No
Cir-101	000000	0 Days 00:00:00	Unlock	Yes
Cir-101	000000	0 Days 00:00:00	Unlock	Yes
Cir-101	000000	0 Days 00:00:00	Unlock	No

3.3 Filter

Display the instrument selected based on the specified condition on the Dashboard.

It is possible to combine multiple conditions.



Filters

Model Type Serie Model

S/N

Search range [] - []

Search match [] Forward match ▾

Lock Lock Unlock

Clear OK Cancel

Search condition

- The model and serial number of the instrument
- Lock status

Set the conditions and press **[OK]**.

Pressing **[Clear]** deletes all the set conditions.

4. MANAGEMENT OF INSTRUMENT

The <Instrument Info> screen displays the list for the registered instruments (products). You can get the information of an instrument to confirm its conditions or change its lock setting.

4.1 Register Additional Instruments

If you are already a registered user, you can put in the information of additional instruments.

1. Go to the web page

Connect to the following URL from your computer.

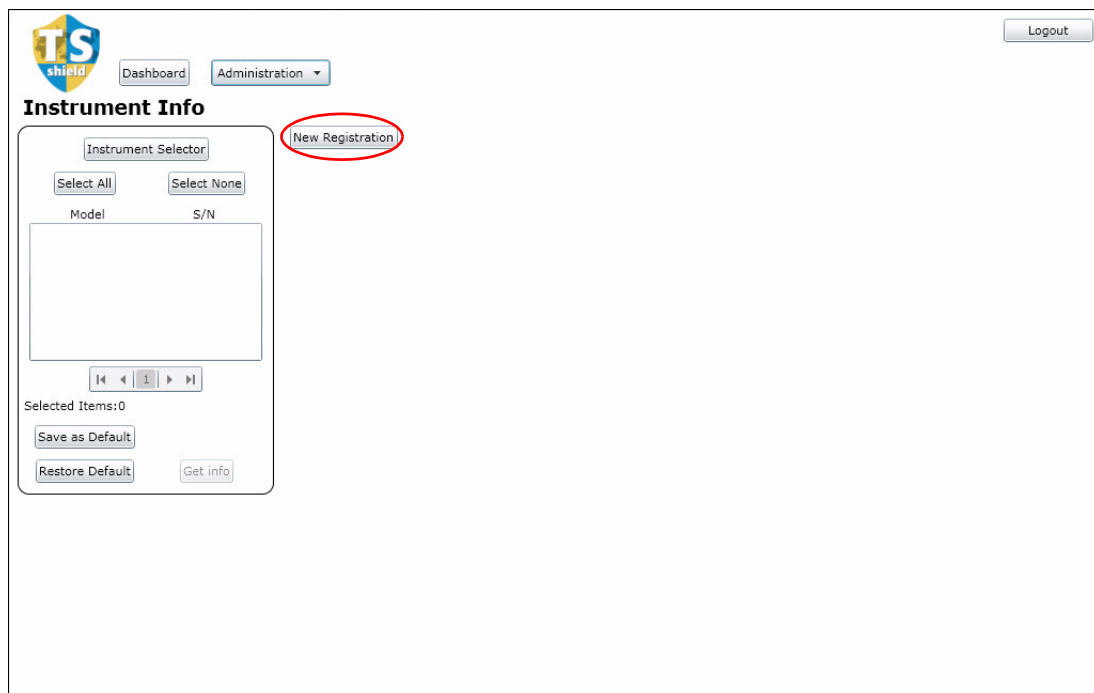
<http://tsshield.tierraservice.com/>

2. Display Instrument Info

Select "Instrument Info" from Administration.

3. Start registration

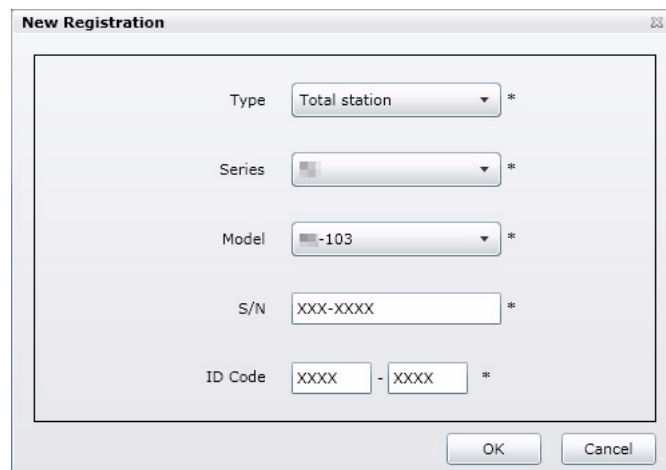
Press [New registration] to display the window shown below.



4. Enter registration information

Enter the information of the total station you have purchased.

The model, serial number (S/N) and ID code are displayed when the total station is turned on.



The 'New Registration' dialog box contains the following fields:

- Type: Total station *
- Series: [blurred] *
- Model: -103 *
- S/N: XXX-XXXX *
- ID Code: XXXX - XXXX *

Buttons: OK, Cancel

5. Send registration information

When you have finished entering the information, press [OK].

The unlock code is displayed on the screen, and an email containing the unlock code is sent to you.

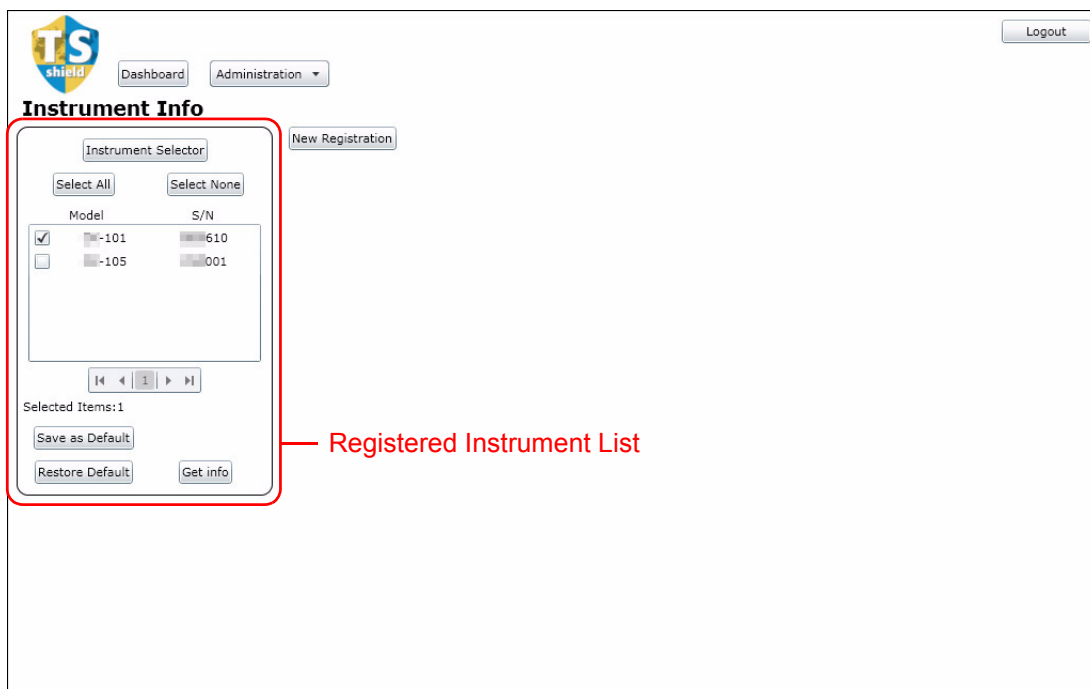
6. Certify license

☞ See Step 6 in "2.1 New Registration"

4.2 Display Instrument Information

Log in to TSshield.

A list of registered instruments is displayed at the left side of the screen.



The screenshot shows the 'Administration' section of the TSshield web interface. The 'Instrument Info' panel is highlighted with a red box and labeled 'Registered Instrument List'. It contains an 'Instrument Selector' table with the following data:

	Model	S/N
<input checked="" type="checkbox"/>	-101	610
<input type="checkbox"/>	-105	001

Buttons: Select All, Select None, Save as Default, Restore Default, Get info, New Registration, Logout

Note

- You can select any of the registered instruments to display its information.
☞ "4.5 Display Settings for Registered Instrument List"

Tick the checkbox for the instrument on which you wish to obtain information and press **[Get info]**.
The instrument information is displayed as a list.

The screenshot shows the 'Instrument Info' page. On the left, the 'Instrument Selector' has a table with two rows: one with a checked checkbox for Model '-101' and S/N '610', and another with an unchecked checkbox for Model '-105' and S/N '001'. Below this, the 'Get info' button is circled in red. On the right, the 'New Registration' table is circled in red. A red arrow points from the text 'Instrument Info List' to the table.

Type	Model	S/N	SP	Region	Lock Stg	Version	Position
Total station	-101	610		JPN	Unlock	Latest	34.1234 , 137.22254

Note

- Pressing **[Select All]** ticks checkmarks for all the registered instruments. Pressing **[Select None]** clears all the checkmarks.

Select any instrument from the Instrument Info List to display its detailed information.

The screenshot shows the 'Instrument Info' page with detailed information for the selected instrument. The detailed information section is circled in red. A red arrow points from the text 'Detailed information' to the section.

Model: -101
Region: JPN
S/N: [blacked out]
Unlock code: [blacked out]

User Registration Date: 20XX-01-30 13:48:20

SW Version
Version: Latest | Current | History
Common SW: Latest
Option SW: Latest

LOCK
Lock Setting: Unlock | Set
Setting Date: 2012-03-XX 11:34:59
Operator: [blacked out]

4.3 Confirm Software Version

The software version of the instrument selected in the Instrument Info List can be confirmed.

SW Version

Version

Common SW: **Latest**
Option SW: **Latest**

► Confirmation of version

Press [**Current**] to display the installed version and the latest version available for each software.

Name	SP	Region	Version	Latest Version
DCPU				
EDM				

Updating software: "5. Software Update"

► Confirmation of installation history

Press [**History**] to display the history of the version for each software installed in the instrument.

Timestamp	Name	SP	Region	From Version	To Version
20XX-12-16 16:36:19	EDM			--	
20XX-12-16 16:56:05	DCPU			--	
20XX-12-17 10:12:43	Basic		JPN	--	
20XX-12-20 02:31:16	EDM				
20XX-12-20 02:31:16	DCPU				

4.4 Confirm Lock Settings

Lock settings for the instrument selected in the Instrument Info List can be confirmed.

LOCK

Lock Setting

Setting Date: **20XX-03-29 11:34:59**
Operator:

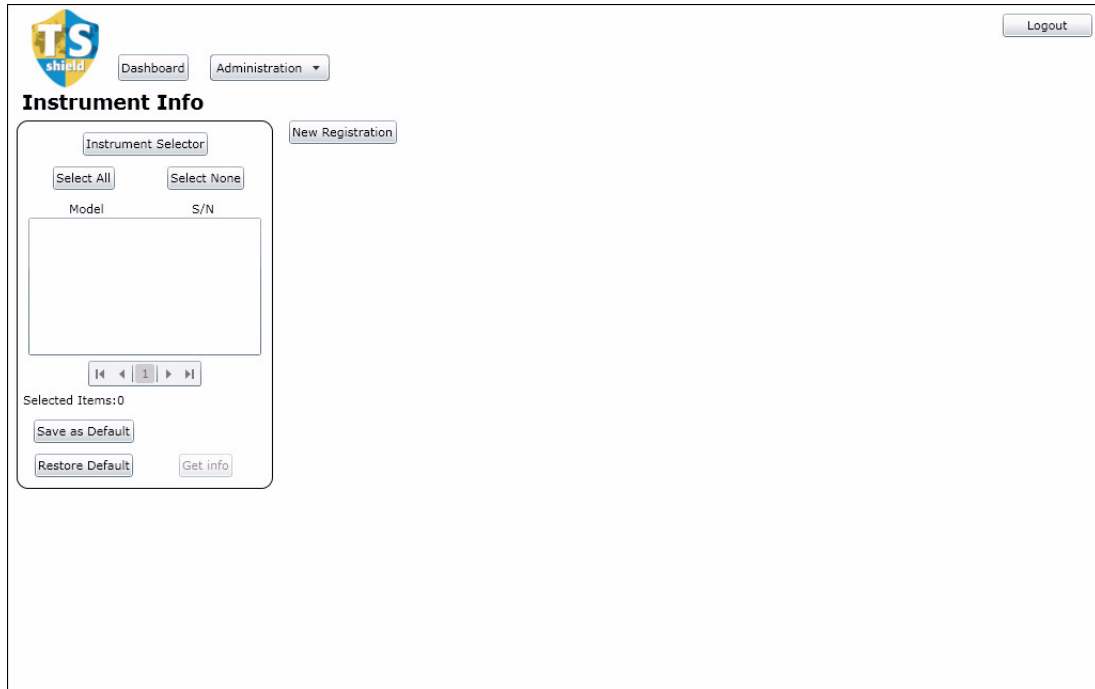
Locking instrument: "6. Lock Function"

4.5 Display Settings for Registered Instrument List

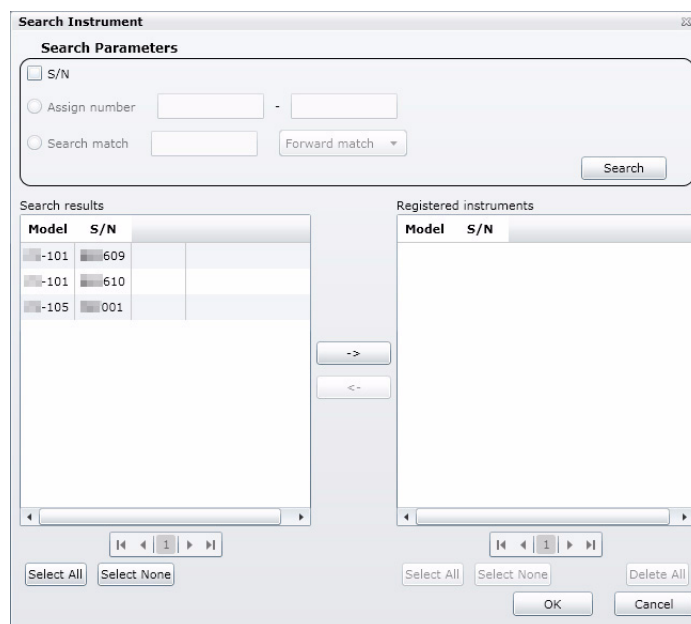
You can designate the instruments to be displayed in the Registered Instrument List. Search for an instrument meeting the conditions and add the instrument to the List. Also, you can delete an instrument which is registered in the List.


1. Search instrument

Press **[Instrument Selector]** to display <Search Instrument> screen.



Enter search criteria in "Search Parameters", and press **[Search]** to display a search result.

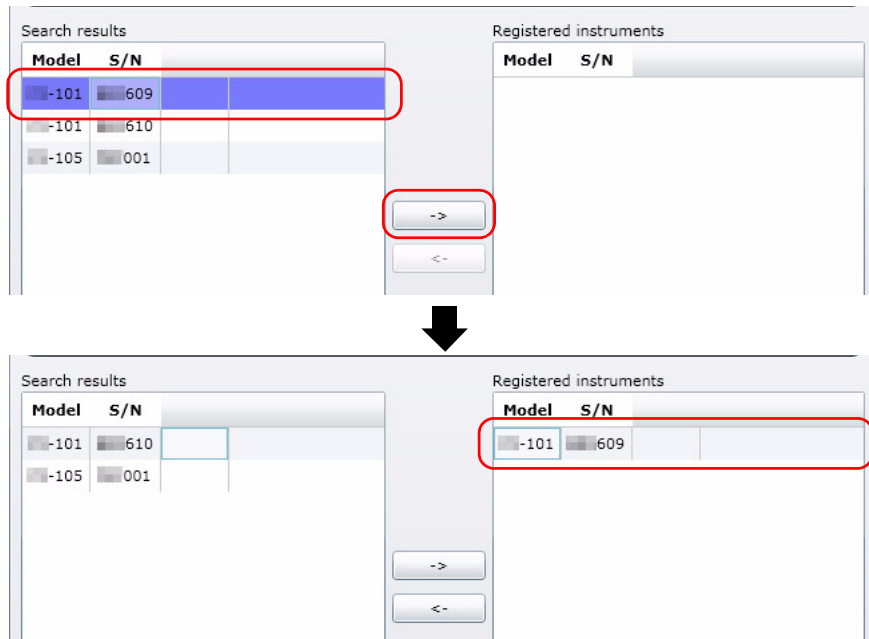


 Setting search criteria: " 4.5.1 Searching instrument"

2. Add information to the Instrument Info List

Select an instrument to be added to the list from the search result and press [-->].

Pressing [Select All] selects all the instruments displayed in the search result. Pressing [Select None] clears all the selections.



3. Delete information from the Instrument Info List

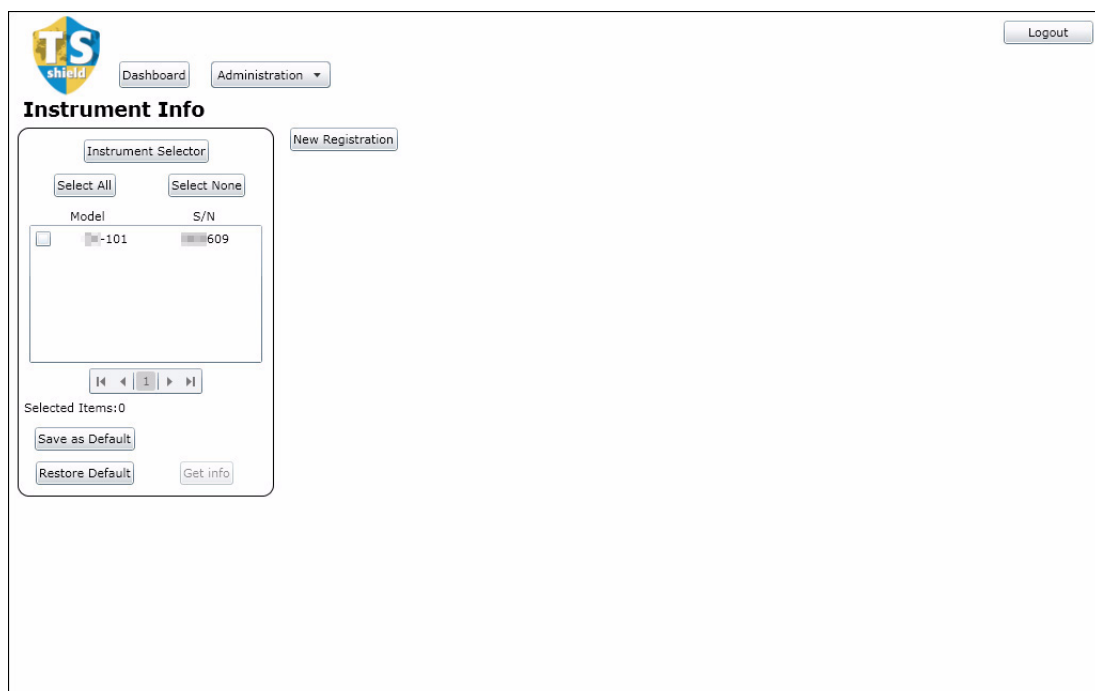
Select an instrument to be deleted from the list in "Registered Instruments" and press [<-].

Pressing [Select All] selects all the instruments displayed in the search result. Pressing [Select None] clears all the selections.

Pressing [Delete All] deletes all the registered instruments from the list.

4. Confirm selection

Pressing [OK] on <Search Instrument> screen reflects the setting to the Registered Instrument List.





- Pressing **[Save as Default]** specifies that the currently displayed instrument to be displayed immediately after login.
Press **[Restore Default]** to regain initial settings.

4.5.1 Searching instrument

Search Instrument

Search Parameters

S/N

Assign number -

Search match Forward match ▾

Search



- Pressing **[Search]** without setting any parameters displays all the instruments registered by users in “Search results”.

► Search by limiting range of serial number

- (1) Check “S/N”.
- (2) Select “Assign number” to set the range of serial numbers.
Enter the starting number in the left field and the ending number in the right field.
- (3) Press **[Search]** to display instruments with matching serial numbers in “Search results”.

Search Instrument

Search Parameters

S/N

Assign number -

Search match Forward match ▾

Search

► Search by characters contained in serial number

- (1) Check “S/N”.
- (2) Select “Search match” and enter a search word in the field.
- (3) Set the search criteria.
Forward match: Instrument with the serial number starting with the search word
Backward match: Instrument with the serial number ending with the search word
Partial match: Instrument with the serial number containing the search word
- (4) Pushing **[Search]** displays instruments with matching serial numbers in “Search results”.

Search Instrument

Search Parameters

S/N

Assign number -

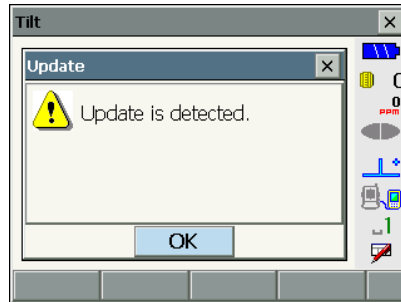
Search match Forward match ▾

Search

5. SOFTWARE UPDATE

TSshield automatically connects to the network to check if any software in the total station needs update and, when necessary, downloads programs start updating the software, except for OS (Operating System) and some software for program mode.

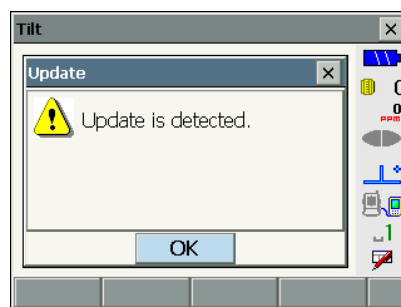
When software is registered as requiring update, a message will be displayed when the total station is started.



- In order to update the software, you need to have Wireless LAN (WLAN) Internet access and have your total station set for Wireless LAN.
- Forward port number 21 and number 7000, and set FTP to passive mode in advance.
 - ☞ For the setting procedure, refer to the instruction manuals of your modem or router, or ask their manufacturer.
- In case of restricting some access points on the network using filter etc., contact your local dealer.
- Update may take 10 to 40 min depending on the number of files to update, reception condition and Wireless LAN connection condition.
- You can install the firmware of the instrument offline by downloading its installer from the website.
 - ☞ "5.4 Update Firmware Offline"

5.1 Notice and Setting of Update Information

When the total station is turned on, it checks if there is any software update information. When there is, the following screen is displayed. Press **[OK]** to perform normal update.



You can change how often you want to confirm update information in the Settings.

► Procedure

1. Enter the TSshield menu

Select <TSshield> in the program mode.

2. Select <Settings>



3. Select <Update setting>

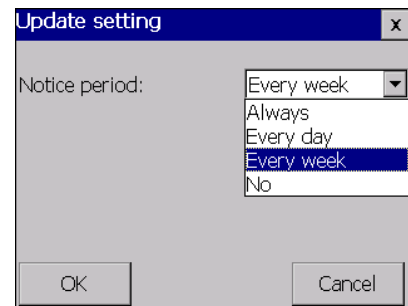
<Update setting> is displayed.



4. Change notice cycle

Select a notice period.

Press [OK] to complete the change and return to <TSshield settings>.



- Choices available for update notice period: Always / Every day / Every week / No

5.2 Wireless LAN Settings

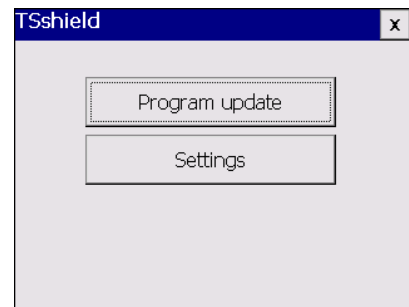
► Procedure

1. Enter the TSshield menu

Select [TSshield] in the program mode.

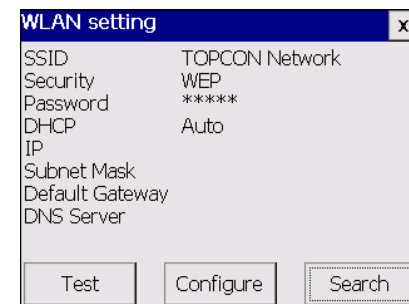
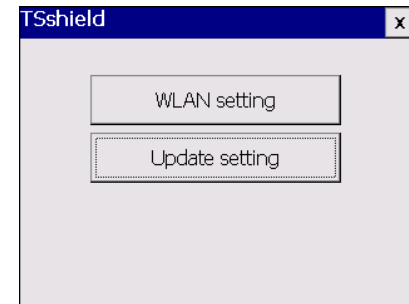


2. Select [Settings].



3. Select [WLAN setting]

<WLAN setting> is displayed.



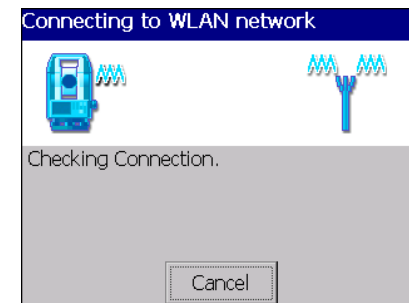
4. Search for access point

Press [Search] to start searching for Wireless LAN access points in your area.

Press [Cancel] to stop searching.

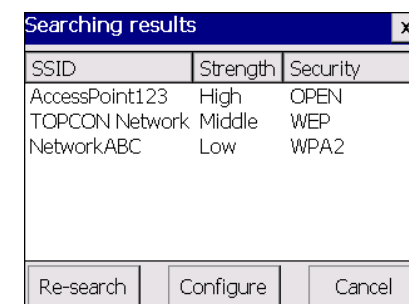


- Press [Configure] and go to Step 7 to directly input setting details.



5. Select an access point

When searching is complete, a list of obtained access points is displayed. Select an access point to connect to, and press [Configure], then you are redirected to <Change the WLAN setting>.



6. Input a password

Input a password (encrypt key) for a wireless LAN.

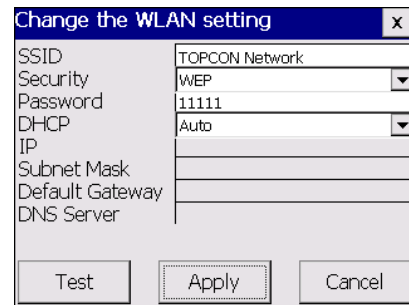
- Press **{SHIFT}** and **{α}** to display **<Input Panel>**. Close **<Input Panel>** by pressing **{SHIFT}** and **{α}** again.

7. Set details

Input necessary details.



- The items you can set are as follows:
 - SSID (Maximum size is 31)
 - Security type
 - Password (Maximum size is 31)
 - DHCP
 - IP address (IP)
 - Subnet Mask (SUB)
 - Default Gateway (GW)
 - DNS Server
- For the contents of settings, refer to the instruction manual of your Wireless LAN terminal.



SSID	TOPCON Network
Security	WEP
Password	11111
DHCP	Auto
IP	
Subnet Mask	
Default Gateway	
DNS Server	

Test Apply Cancel

8. Reflect input contents

After inputting details, press **[Apply]**, then you are redirected to **<WLAN setting>**.

9. Conduct connection test

Press **[Test]** on **<WLAN Setting>** to conduct a connection test. If the connection test fails, check if there is any error in setting.

Press **[OK]** to finish the connection test and return to **<WLAN setting>**.



10. Finish the settings

Press **[Configure]** to finish Wireless LAN settings and return to **<TSshield>**.

5.3 Perform update



- Make sure to use the provided battery and there is enough battery left before performing update.
- The update should be done where Wireless LAN connection is in good condition.
- Do not remove the battery during the update. Do not also disconnect the Wireless LAN. Installed program will be damaged, and the total station might not operate collect. Disconnected Wireless LAN might need some time for reconnection.

► Procedure

1. Enter the TSshield menu

Select <TSshield> in the program mode.

2. Select [Program update]

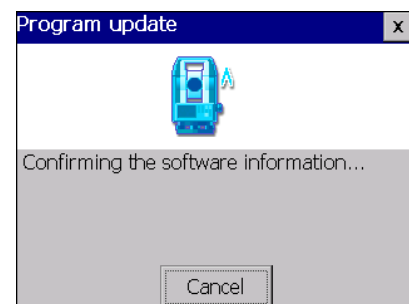
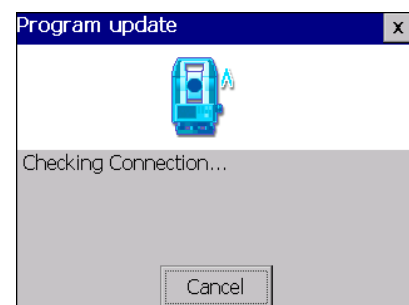
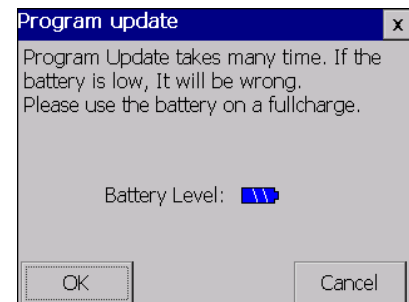
The total station checks with the server for update information.



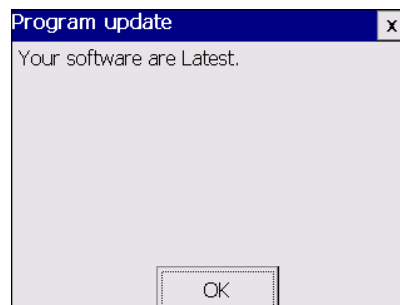
3. Confirm that there remains plenty of battery, press [OK].

The total station checks with the server for update information.

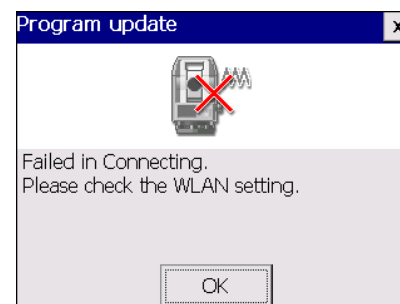
- Press [Cancel] to cancel the update.



- When the latest software is already installed, a screen shown in the right is displayed.



- When a screen shown in the right is displayed, press **[OK]** to cancel the update.
 Retry the update where Wireless LAN connection is in good condition or check the password for WLAN setting.

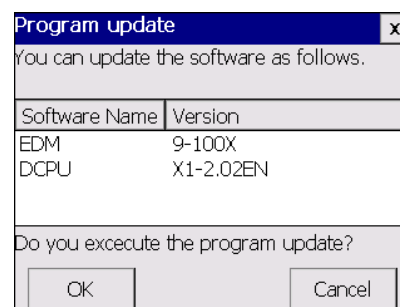


4. Perform update

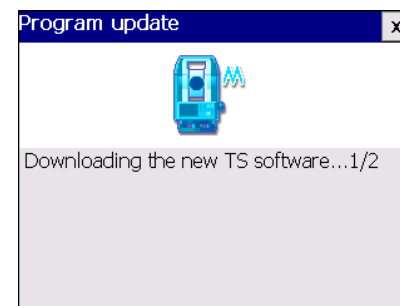
When there is updatable software, a screen shown in the right is displayed. Press **[OK]** to start update.



- The total station will restart automatically after completing the update. Press **[OK]** to perform update.

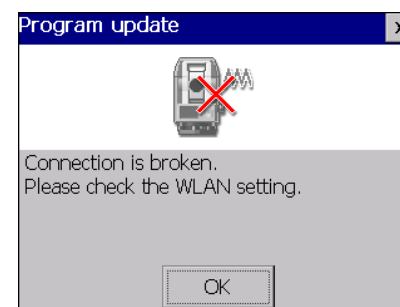


- When performig update, the screen shown in the right is displayed, the update program starts to be downloaded. (Download time depends on the connection condition).



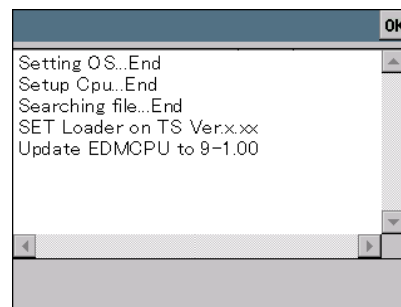
- Press **{ESC}** to cancel the download.

- When Wireless LAN connection is not in good condition, a screen shown in the right is displayed. Press **[OK]** to return to step 2.
 Retry the update where Wireless LAN connection is in good condition.



- When the program download is completed, the total station restarts in update mode and then software update starts automatically. It takes about 5 min before update completion.

- ✦ Canceling may take some time. Do not remove the battery while canceling is in progress.



5. Finish update

When update is complete, press [OK] to return to <TSshield>.

The total station restarts.

5.4 Update Firmware Offline

It is possible to update the firmware offline by connecting a USB memory storing the firmware installer to the total station. The installer can be downloaded from the TSshield website.

- ✦
 - When updating the firmware, attach a fully charged battery to the total station or use the external power source adapter (special accessory).
 - When updating, use a blank USB memory.

1. Download the installer

Download the firmware's installer (Setup.exe) from the TSshield website.

- (1) Select the instrument whose version is displayed as "OLD" in the Instrument Information. Press [Download] in the Software Version.

Instrument Info

Instrument Selector

Select All Select None

Model	S/N
<input checked="" type="checkbox"/> TS-105	XXXXXXXXXX
<input checked="" type="checkbox"/> TS-101	XXXXXXXXXX
<input checked="" type="checkbox"/> TS-101	XXXXXXXXXX
<input checked="" type="checkbox"/> TS-105	XXXXXXXXXX

Selected Items: 4

Save as Default Restore Default Get info

New Registration

Type	Model	S/N	SP	Region	Lock Stg	Version	Position
Total station	TS-101	XXXXXXXXXX		JPN	Unlock	Latest	34.1234 , 137.22254
Total station	TS-101	XXXXXXXXXX		JPN	Unlock	Latest	34.1234 , 137.22254
Total station	TS-105	XXXXXXXXXX		English		Old	35.773228 , 139.703934
Total station	TS-105	XXXXXXXXXX		Japan		Old	33.46381 , 132.423

Model: TS-105
Region: English
S/N: XXXXXXXX

User Registration Date: 20XX-01-30 13:48:20

SW Version

Version: Old Current History Download

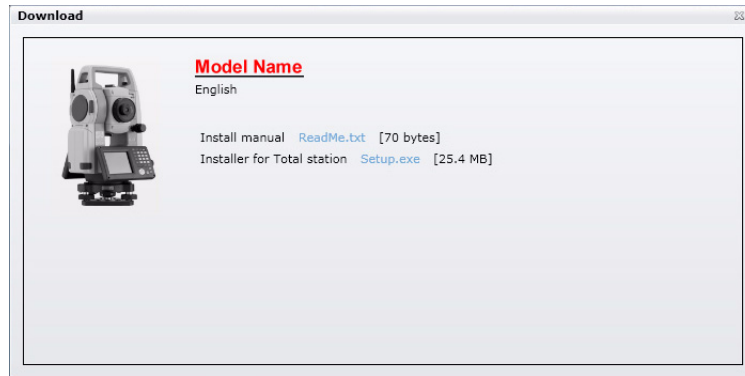
Common SW: Old
Option SW: Latest

LOCK

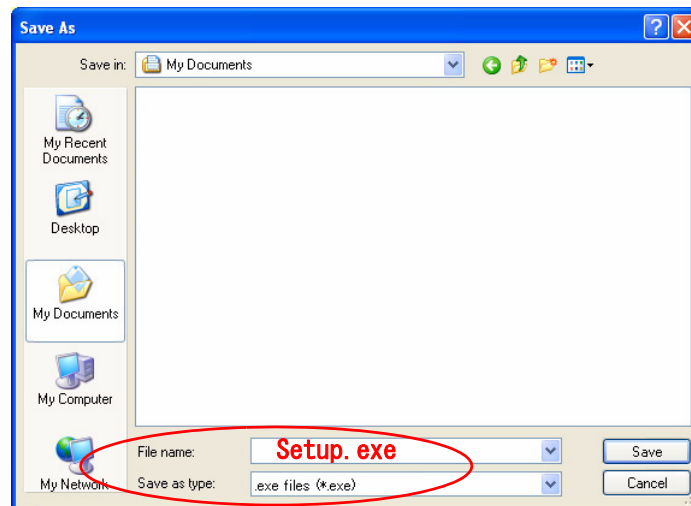
Lock Setting: [] Set

< Setting Date: []
Operator: []

- (2) Click the link for the file to download in the window below.
Follow the instructions on the screen to download the file.

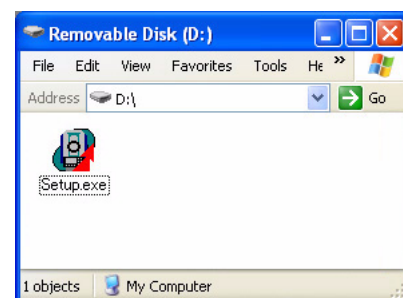


- Confirm that the downloaded file has a name of "Setup.exe". If it has a different name, change it to "Setup.exe".
- Depending on your PC environment, extensions may not be displayed.



2. Save the installer to a USB memory

Save Setup.exe in the root folder of a USB memory.

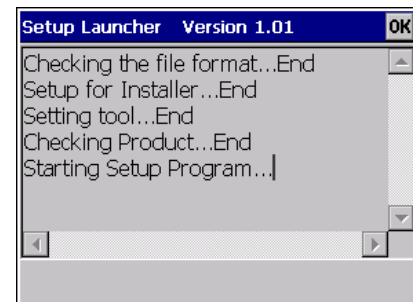
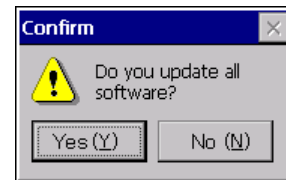


3. Connect the USB memory to the total station

Connect the USB memory to a USB port of the total station.

4. Execute update

After confirming that the total station has a sufficient battery level, press the power switch while pressing [Ⓚ] and [☀]. The installer automatically starts. Select [YES] to start update.



5. Exit update

When update is completed, the total station automatically restarts.

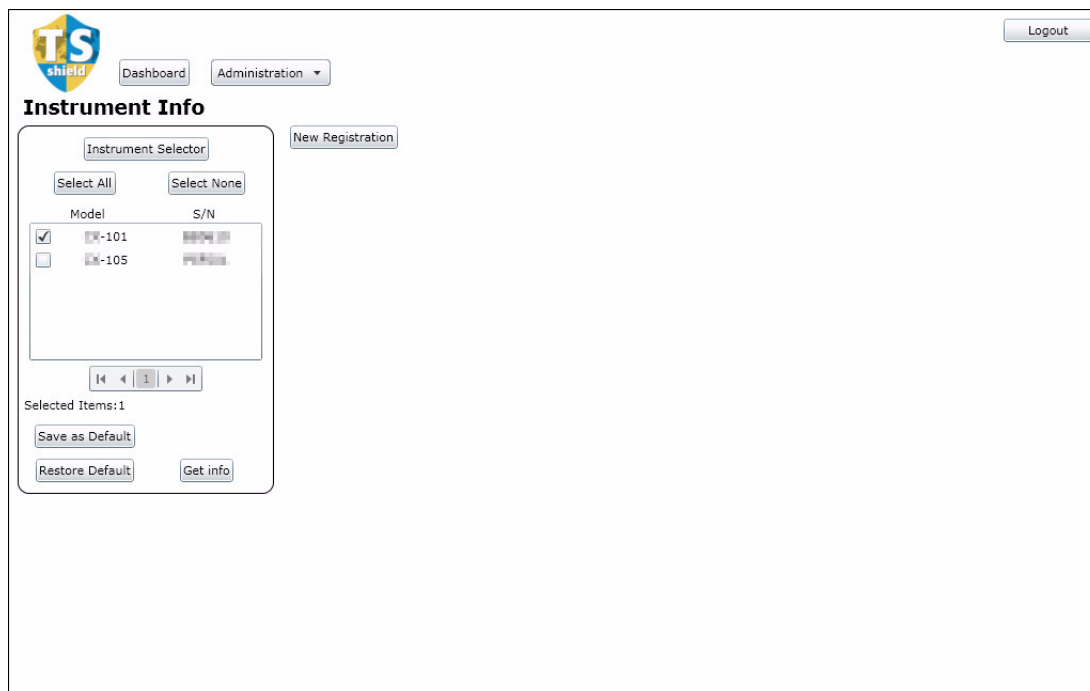
6. LOCK FUNCTION

TSshield has a function to lock the total station which is mislaid or lost on its web page. It prevents the total station to be used without the owner's permission.

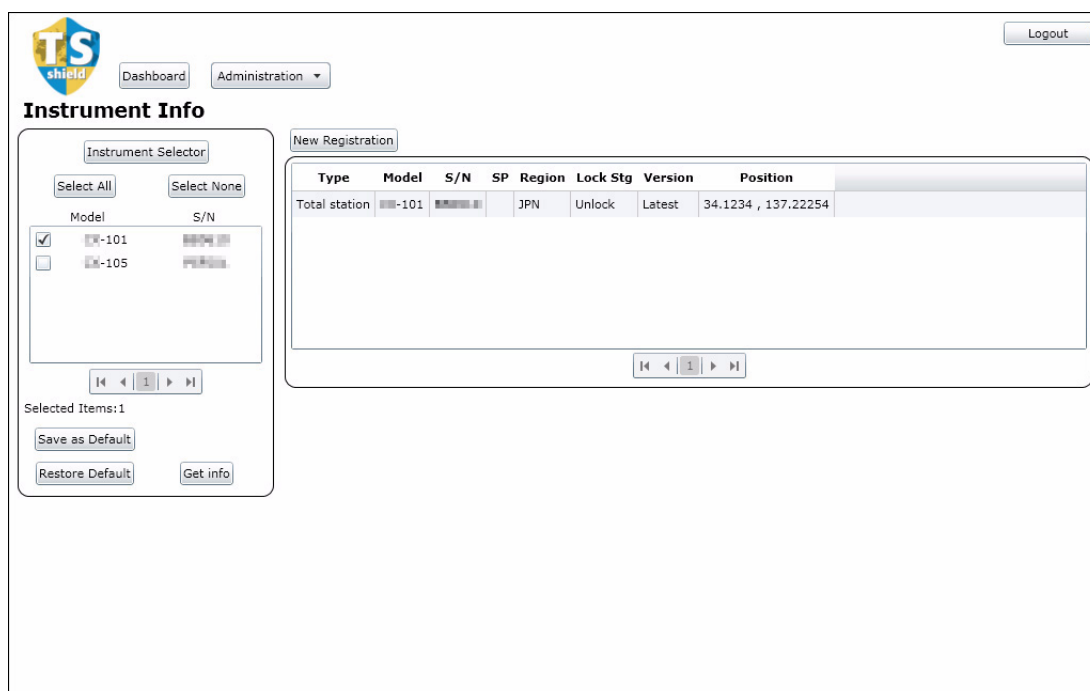
6.1 Lock a Total Station

1. Read in the instrument information

When you log in TSshield web page, the list of registered instruments is displayed.



Check the box of the instrument you want to lock in "Instrument Info", then press **[Get info]** to read in the instrument information.



2. Display the detailed instrument information

Highlight the instrument to display its detailed information.

The screenshot shows the TSshield Administration web interface. The 'Instrument Info' section on the left includes an 'Instrument Selector' with 'Select All' and 'Select None' buttons, a table with columns 'Model' and 'S/N', and a 'Selected Items: 1' section with 'Save as Default', 'Restore Default', and 'Get info' buttons. The 'New Registration' section on the right features a table with columns: Type, Model, S/N, SP, Region, Lock Stg, Version, and Position. The table contains one row: 'Total station', 'TS-101', 'BB0610', 'JPN', 'Unlock', 'Latest', and '34.1234, 137.22254'. Below the table, there are fields for 'Model: TS-101', 'Region: English', 'S/N: BB0610', and 'Unlock code: [blacked out]'. A 'LOCK' section includes 'Lock Setting' (Unlock/Set buttons), 'Setting Date: 20XX-03-29 11:34:59', and 'Operator: [blacked out]'. A 'SW Version' section shows 'User Registration Date: 20XX-01-30 13:48:20' and 'Version' (Latest/Current/History buttons), with 'Common SW: Latest' and 'Option SW: Latest'.

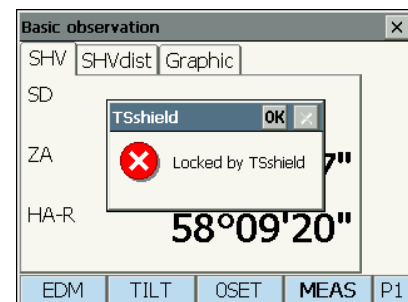
3. Do the settings for lock

Press **[Set]** in "Lock" in the screen of step 1 to display **<LOCK Settings>**. Select "Lock" in "Lock" and select an item in "Lock Reason". Press **[OK]** to complete the lock setting.

The 'LOCK Settings' dialog box contains two dropdown menus: 'Lock' (set to 'Lock') and 'Lock Reason' (set to 'Lost'). At the bottom, there are 'OK' and 'Cancel' buttons.

- The total station will be locked when it is connected to the server for the first time after the lock setting. Other than Power OFF, all the operation is invalid for the locked instrument.
- To unlock the instrument, unlock setting is necessary on the web page.

👉 "6.2 Unlock Total Station"



6.2 Unlock Total Station

1. Display the detailed instrument information

☞ "6.1 Lock a Total Station"

2. Do the settings for unlock

Press **[Set]** in "Lock" to display <LOCK Settings>.

Select "Unlock" in "Lock".

Press **[OK]** to complete the unlock setting.



- The total station will be unlocked when it is rebooted.

7. SPECIFICATION

The specifications specific to this instrument are as follows.
For other specifications, see the total station Operator's manual.

Wireless LAN function

Support format:	IEEE802.11b/g
Security	WPA/WPA-PSK/WPA2, WEP 128/64bit
Frequency band	2.4GHz

Cellular module function

Transmission method	2G: GSM (850/900/1800/1900MHz)
	3G: UMTS/HSDPA (WCDMA) (850/1900/2100MHz)

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Please see the attached address list or the following website for contact addresses.

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