

FlexLine: Mobile data transfer solution (Field to Office & Office to Field)

- when it has to be **right**



We are pleased to inform you about a solution for transferring data (e.g. Measurements, fixpoints) via mobile phone from and to the Total Station.

The mobile phone is connected by USB cable to the Total Station. The mobile phone is detected from the Total Station as "Mass Storage device", like a USB memory stick.

Field to Office-Workflow:

Use the "Data Export" functionality of the Total Station to transfer data (e.g. the measurements, fixpoints) to the memory card of the mobile phone. Use the mobile phone's E-Mail functionality to send an E-Mail from the field with the measurement data attachment. The E-Mail can be sent to any address to the office or other mobile e-mail users in the field.

Office to Field -Workflow:

You receive an E-Mail with attachment (e.g. fixpoints, Codelist) in your mobile email account. Access this account with your mobile phone's E-Mail functionality and download the file to the memory card of the mobile phone. Use the "Data Import" functionality of the Total Station to import your file to the Total Station.

Pre-Conditions:

1. Total Station equipped with Communication Sidecover GSD04
2. Mobile phone is featured with:
 - a. USB connector (for cable plug in)
 - b. Memory card (SD, USB,...) with USB mass storage functionality
 - c. E-Mail Application
3. General:
 - a. E-Mail account with POP/IMAP service (e.g. gmail.com)

• **Settings on the mobile phone (depends from mobile phone: our example Nokia 6500)**

Setting up the USB connection type to "Mass Storage"

Go in the mobile phone's menu to "Settings" → "Connectivity" → "USB Data Cable" → Data Storage"

Setting Up Mail Service (Mailbox) - if not already done

1. Go in the mobile phone's menu to "Messaging"
2. Select "Options" and then "Add Mailbox"
3. Enter the E-Mail address (e.g. example@gmail.com)
4. Either manually type in POP/IMAP information of your E-mail provider or use the automatic search offered by the mobile phone.
5. The Mailbox access is now configured.

• **Field to Office Workflow (depends from mobile phone: our example Nokia 6500)**

Data Export from the instrument to the mobile phone

1. Connect the USB cable on one side with the mobile phone and on the other side with your Total Station
2. Switch on the mobile phone and then the Total Station. The mobile phone will show a message that the connection is established. The Total Station shows a message that a "non Leica" stick inserted. Accept this by pressing OK
3. Select on the Total Station in the Menu "Transfer" → "Data Export" → Select the data you want to transfer → Select the destination folder on the mobile phone's memory device → Select the Format and file extension and press OK. The file is transferred to the mobile phone.

Sending E-Mail from the mobile phone

4. Go in the mobile phone's Menu to "Messaging"
5. Select "Create Message" and then choose "E-Mail Message"
6. Enter the mail recipient, the mail Subject and a mail message

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7. To attach the measurement data press "Insert" and then select "Open Gallery" to browse to the measurement file located on the mobile phone's hard disk.
8. Select the file to be attached and press "Insert"
9. Select "Options" → "Send" (at first use the mail-account's password needs to be entered)
10. The E-mail inclusive attachment is sent so that the file can be downloaded and post-processed in the office.

• **Office to Field Workflow (depends from mobile phone: our example Nokia 6500):**

Receiving E-Mail with the mobile phone

1. Receive an E-Mail with the data to be uploaded with your email account (e.g. example@gmail.com). It is possible to send yourself a email !
2. Depending from your mobile phone settings you are informed automatically about the incoming mail or connect manually to the mail account (Menu → Messaging → Select the account by pressing "Select" and connect to mailbox by pressing "Yes")
3. Open the message, press "Options" and select "Save Object"
4. Select the target folder where the attachment should be stored and press "Select". The file needs to be saved to the card (SD, micro USB,...)

Data Import from the mobile phone to the Total Station

5. Connect the mobile phone with the USB cable with the Total Station and then switch on the Total Station. The mobile phone will show a message that the connection is established. The Total Station shows a message that a "non Leica" stick inserted. Accept this by pressing OK
6. Select on the Total Station in the Menu "Transfer" → "Data Import" → Select the data you want to transfer → Select the Job name and press OK. The file is transferred to the Total Station

Note:

- a. The solution is independent from the FlexLine firmware version and thus works from version 1.00 onwards.
- b. Despite the quite common requirements listed above the solution depends from the mobile phone, thus we cannot guarantee the functionality.
- c. On some mobile phones it might be required to format the memory card before use
- d. Some mobile phones do have a file-size limitations for attachments
- e. For quick check whether the solution works with your mobile phone, you can connect the mobile phone by USB cable to
 - i. the PC – if the phone is detected by the PC as "Mass storage device" then the Field to office solution should work.
 - ii. to the Total Station – if the instrument shows a warning that a non Leica USB stick has been connected, then the Field to office solution should work.
- f. Some mobile phones require a restart of the Total Station after connecting.
- g. The solution shown is a "as is" solution as we cannot support all devices or offer support for connecting.

Schematic setup and workflow:

