

4.0 Connecting Your Leica Field Equipment

Overview

The following sections of this chapter detail the settings needed to make your instrument and data collector communicate. You will also find a list of the necessary equipment and the price of such accessories.

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4.1 Connecting the Data Collector to Conventional TPS

Introduction In this section we will discuss the parts and settings needed to have your Windows CE data collector work with Leica Conventional TPS instruments.

Conventional TPS instruments The conventional instruments covered in this section include all non-robotic TPS1100 instruments and all TPS700 instruments.

Required cable The following cable is required to connect the data collector to the total station.

Part number	Description
563625	Standard 9 pin to lemo connector RS232 serial cable. The 9 pin serial interface connects to the serial port of the data collector and the lemo connector plugs into the instrument.

Communication settings To establish communication between the instrument and the data collector, use the following communication parameters.

Devices	Settings
TPS1100, TPS700	Port Number: COM 1 Baud Rate: 19200 Parity: None Char. Length: 8 Stop Bits: 1
TPS1000	Port Number: COM 1 Baud Rate: 9600 Parity: Even Char. Length: 7 Stop Bits: 1

Note: Verify that the same communication settings are set on your total station.

End of Connecting the Data Collector to Conventional TPS

4.2 Connecting the Data Collector to Robotic TPS

Introduction In this section we will discuss the parts and settings needed to have your Windows CE data collector work with Leica Robotic instruments.

Robotic instruments The robotic instruments covered in this section include robotic: TPS1100 and TPS1000 instruments.

Required cables and brackets The following cables and brackets are required to connect the base radio with the instrument and to hold the data collector on the pole.

Part Number	Description
707135	Y-Cable, short
8211598	Pole Bracket Quick Release
8212364	Cradle for AllegroCE

Communication settings To establish communication between the instrument and the data collector, set the following communication parameters on the Allegro CE with an internal radio modem.

Devices	Settings
TPS1100 Robotic and TPS1000 Robotic	Port Number: COM3 Baud Rate: 19200 Parity: None Char Length: 8 Stop Bits: 1

Note: Verify that the same communication parameters are set on your robotic total station. Also, make sure that you activate the GEOCOM mode of the instrument before trying to communicate and measure with the data collector.

End of Connecting the Data Collector to Robotic TPS

4.3 Connecting the Data Collector to Leica GPS

Introduction In this section we will discuss the parts and settings needed of have your Windows CE data collector work with your Leica GPS System 500.

Required cables and brackets The following cable and brackets are required to connect the data collector to the GPS receiver.

Part Number	Description
560254	2.8m Cable, Lemo to DB9
8211598	Pole Bracket Quick Release
8212364	Cradle for AllegroCE

Note: The 821600 Cradle for Data Collector is sized to fit the Ranger device.

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4.3 Connecting the Data Collector to Leica GPS, Continued

Communication Settings To establish communication between the instrument and the data collector, use the following communication parameters.

Note: These communication settings are the default settings on your System 500 receiver. There will be no need to change the basic communication settings. The radio settings and channels may need to be changed depending on the radio and environment.

Devices	Settings
GPS 500	Port Number: COM 1 Baud Rate: 9600 Parity: None Char Length: 8 Stop Bits: 1 Radio Type: PDL (Pacific Crest) Serial Port to Radio Baud Rate: 38400 Radio Port: 1 Message Type: Leica Radio Stop Bits: 1 Radio Parity: None

End of Connecting the Data Collector to GPS

4.4 Ordering a System

Introduction This section lists the necessary accessories that you will need for the GPS, Robotic, and Conventional total stations. These items are in addition to any typical accessories that you require for your surveying jobs. Some items from the complete Leica solution may not be necessary, ie TR500s for GPS and RCS1100s for robotic.

4.4.1 Parts List for GPS

Parts list for GPS The following parts list includes the items that you will need in addition to the normal GPS system and its accessories. This list will also detail prices and part numbers for the items. Please be aware that these prices are subject to change at any time and may not be current.

Part Number	Description	Price US	Price CAN
560254	2.8m Cable, Lemo to DB9	\$120	\$180
8211598	Pole Bracket Quick Release	\$79	\$120
8212364	Cradle for AllegroCE	\$66	\$100

Note: The 8211600 Cradle for Data Collector is sized to fit the Ranger device.

End of Parts List for GPS

4.4 Ordering a System, Continued

4.4.2 Parts List for Conventional TPS

Parts list for
Conventional
TPS

The following parts list includes items that you will need in addition to your instrument, tribrach, batteries, tripod, prism, survey pole, and Allegro CE data collector.

Part Number	Description	Price US	Price CAN
563625	Standard 9 pin to lemo connector RS232 serial cable.	\$100	\$140
8211598	Pole Bracket Quick Release	\$79	\$120
8212364	Cradle for AllegroCE	\$66	\$100

Notes:

- 1) The pole bracket listed above will clamp on to the tripod leg and the combined cradle will act as a tripod holder for the unit.
 - 2) Tripod bracket, RGR-Bracket, is for a Ranger device, but other brackets are available for different CE devices.
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End of Parts List for Conventional TPS

4.4.3 Parts List for Robotic TPS

Parts list for
Robotic TPS

The following parts list includes the brackets that you will need to run your robotic instrument with your Allegro CE data collector with an internal radio modem. These parts are in excess of the base radio, cable, and battery necessary at the total station. The list below designates the items for the pole setup.

Part Number	Description	Price US	Price CAN
8211598	Pole Bracket Quick Release	\$79	\$120
8212364	Cradle for Allegro CE RCS	\$66	\$100

End of Ordering a System