ТсрЕТ

Surveying and Setting Out using Total Station

Introduction

This application, installed in a pocket PC, allows the user to survey and stake out topographical data using a wide range of total stations, connected through a standard cable or through wireless Bluetooth technology. In motorised stations, the software will automatically direct the device to the desired location. The program provides numerous options and may be used for traditional mapping or surveying, and for projects involving linear works.



Surveying

Before starting the survey, the program controls the direction of the system by comparing the theoretical data with the measured data. Points or stations may then be taken by recording the data as coordinates or as observations, indicating the height of the prism and code for each one. These files can subsequently be calculated using the TCP Digital Terrain Model or other commercial programs.

The application likewise provides the ability to measure cross sections, whilst allowing the user to control the current station and the distance to the alignment at all times.



Setting Out

The software provides numerous options for stake out points, roads and geometric constructions with lines. The prompts provide the information regarding the current position and the objective position at all times.

For setting out sections over an alignment, different options for stake out sections, heads and shoulders, the cross sections, station and code, the station and displacement, etc. The screen

shows precise information regarding the distance to the alignment and the profile, the difference in the spot height and the plan and elevation graphs of the current section.



Tools

Apart from the options mentioned above, the software provides the ability to calculate distances and areas between points, to calculate the coordinates of a point over the plan and elevation alignment, to analyse a point using a digital model, to find intersections between straight lines and/or circles, to find the current position through an inverse intersection, to use the geodesic calculator, etc.



File Management

The application works with ASCII files in a format that is compatible with TCP – Digital Terrain Model, although it also contains a program for PCs that allow the user to convert the files containing plan and elevation alignment and transversal profiles to the most common formats used in the market. All of the information exchanged between the PC and the Pocket PC is transmitted in a very simple manner using Microsoft ActiveSync.

Each project may contain files with stations, points, longitudinal profiles, cross sections, plan and elevation alignments, superelevations, surfaces and DFX cartography, allowing the user to edit and add new information and draw this information on the screen.



CAD

The **TcpCAD** module may also be purchased along with the application, in order to gather data and map over a digital cartography in a DFX or AutoCAD DWG format.

This module provides options for viewing the drawings with zoom and in real time framing, layer control, colours and line type, drawing lines, polylines, arcs, circles and texts and the most common editing commands.

This component allows the user to apply the browse options over cartography and data capture point-by-point or continuously, by drawing specific blocks or polylines in real time depending on the assigned codes. It is also possible to graphically design the points that will be mapped or used for defining the local adjustments.

System Requirements

Supported Devices

Platform	Brand	Model	Processor	Operating System
Handheld PC	PSION	NetPad	ARM	Windows CE .NET
Handheld PC	PSION	WorkAboutPro	ARM	Windows CE .NET
Handheld PC	Topcon	FC-1000	SH4	Windows CE 3.0
Handheld PC	Topcon	FC-2000	ARM	Windows CE .NET
Handheld PC	Topcon	FC-100	ARM	Windows CE .NET
Handheld PC	Topcon	FC-200	ARM	Windows CE .NET
Handheld PC	Topcon	Ranger	ARM	Windows CE 3.0
Handheld PC	Trimble	ACU	ARM	Windows CE .NET
Handheld PC	Trimble	TsCE	ARM	Windows CE 3.0
Handheld PC	Trimble	Recon	ARM	Windows CE .NET
Pocket PC	Compaq	iPAQ 3630	ARM	Windows CE 3.0
Pocket PC	Compaq	iPAQ 3950	ARM	Pocket PC 2002
Pocket PC	Compaq	iPAQ 3970	ARM	Pocket PC 2002
Pocket PC	HP	iPAQ 5450	ARM	Pocket PC 2002
Pocket PC	HP	iPAQ 5500	ARM	Pocket PC 2003
Pocket PC	HP	iPAQ 2200	ARM	Pocket PC 2003
Pocket PC	HP	iPAQ rx3700	ARM	Pocket PC 2003
Pocket PC	HP	iPAQ rz1310	ARM	Pocket PC 2003
Pocket PC	HP	iPAQ rx1950	ARM	Pocket PC 2003
Pocket PC	HP	iPAQ hx2190	ARM	Pocket PC 2003
Pocket PC	HP	iPAQ hx2490	ARM	Pocket PC 2003
Pocket PC	HP	iPAQ hx2790	ARM	Pocket PC 2003
Pocket PC	Acer	N35	ARM	Pocket PC 2003
Pocket PC	Unitech	PA-500	ARM	Wmobile 5.0

Supported Total Stations

Brand	Model		
Nikon	DTM-420		
Nikon	NPL -350		
Sokkia	SET-4		
Sokkia	SET-3B		
Sokkia	3100		
Sokkia	3110		
Sokkia	3120		
Sokkia	3130-R		
Topcon	CTS-1,CTS-2		
Topcon	CTS-1,CTS-2		
Topcon	GTS-4B Series		
Topcon	GTS-220 Series		
Topcon	GTS-600 Series		
Topcon	GTS-720 Series		
Topcon	GPT-2000 Series		
Topcon	GPT-3000 Series		
Topcon	GPT-7000 Series		
Topcon	GPT-7000i Series		
Topcon	GPT-8000 Series		
Topcon	GPT-9000M Series		
Topcon	GPT-9000A Series		
Topcon	IS Series		
Topcon	QS Series		
Leica	T - 1000		
Leica	TC - 1000		
Leica	TC - 1100		
Leica	TCR - 303		
Leica	TCR - 400		
Leica	TPS - 400		
Leica	TCR - 705		
Leica	TCR - 800		
Leica	FlexLine		
Leica	тсзо / тмзо		
Trimble	5500		
	5600		
Trimble	3300		
Focus	FOCUS 10		
Pentax	PIS - II		
Pentax	PCS - 315		
Pentax	W – 825 XN		

Note: Not all of the features of the application are available for all the devices and total stations.

For an updated account of the certified receiver models and Pocket PCs, please check the website. If you wish to evaluate the possibility of adapting the application to a specific receiver or mobile device, please contact our Technical Service.

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