



GPT-7000/GTS-720 SERIES

**WINDOWS CE
TOTAL STATION**

The New Generation Total Station from Topcon

Topcon, the world leader in precise positioning solutions, is now proud to announce the introduction of the new GPT-7000/GTS-720 series Total Stations with Windows CE.NET™ operating system.

The Topcon GPT-7000 Series are Pulse Laser Total Stations with a superior non-prism measurement capability. Making use of an updated optical system, the GPT-7000 Series incorporates special techniques to provide accurate, reliable and safe non-prism distance measurement over a range of upto 250 meters.

The GTS-720 Series provides standard EDM measurement to a glass prism.

The very latest technology is combined to produce power saving features for long battery life, graphical user interface, familiar "PC" touch screen operation and powerful on-board software to get even the most complicated jobs done accurately and quickly.

Windows CE™ Advantages

The GPT-7000/GTS-720 series of advanced Total Stations incorporates the most up to date computer technology on a platform that can keep up with the rapid pace of technological development. The Windows CE.NET™ operating system, gives the advantages of a familiar "pc" user interface, touch screen operation, improved graphics capabilities, software expansion possibilities, increased interface flexibility and broad range compatibility.

For programmers it is easier to convert software written for other hardware and a 32-bit multi-tasking environment allows application developers to get the best out of modern microprocessor design. Special consideration has been given to the power efficiency of the system by employing power saving technology to make the most of battery life. With the GPT-7000/GTS-720 you have the most upto date technology working for you on site and providing seamless interface with your office computer hardware and the latest data handling capabilities such as USB and Bluetooth.



Outstanding features

GPT-7000 Long Range Non-prism measurement

The GPT-7000 Series can measure over a range of upto 250m in Non-Prism mode. Topcon's unique Pulse Laser technology with narrow beam optical system is a Class 1 laser. This allows the instrument to be used in compliance with safety regulations on the construction site or in crowded public areas. A Class 1 laser is permitted in these environments being safe for the user and passer-by. The GPT-7000 series have a visible laser pointer to identify the measurement point at the center of the cross-hairs of the telescope.

The GPT-7000 has a dual optical system for laser distance measurement. Non-prism measurement is made with a narrow beam system providing a stable invisible narrow beam, which produces a stable measuring spot for non-prism measurements. This allows accurate measurements at longer distances but also improves the ability to measure to difficult surfaces, such as asphalt, at shorter distances.

The second optical system in the GPT-7000 series is used for making measurements using a reflecting glass prism (as with traditional EDM). This system has a broader measurement beam and is very stable over long distances upto 3 Km. The high stability of the beam ensures excellent performance even in conditions with high heat shimmer or other circumstances where the air is unstable, such as over water or along side buildings.

Fast Computing Speed

The "brain" of the GPT-7000/GTS-720 Series is the SH7750R (177Mhz) Microprocessor and 64MB RAM. This fast processing unit ensures fast calculations and immediate screen updates.

Large Full Colour Graphic Display

The large 3.5inch TFT Colour LCD(240x320 Dots) shows a large amount of information at once and helps you know at what stage you are in any process. Even in bright sunshine the Semi-transparent LCD can be seen clearly. The touch screen operation ensures the GPT-7000/GTS-720 is easy to use and with the alpha-numeric key-pad, data entry is quick and easy.

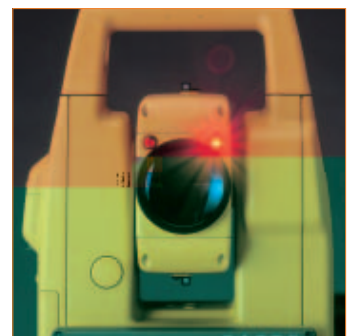
Long Life Battery

Topcon's new battery system using Lithium-Ion battery BT-61Q allows 7.5 hours (GTS-720 series) of continuous measurement in angle and distance mode and over 10 hours for angle measurement only. Universal Charger BC-30 provides quick re-charging of the battery.



Point Guide System

Topcon's Point Guide function is available as standard on the GPT-7000/GTS-720 Series. Get on line quickly and easily with this feature. Two (2) LED lights, one flashing and one constant, help identify the correct direction for setting out.





USB (universal serial bus) connection



Compact Flash memory card



Bluetooth Wireless communication*



Traditional RS-232C

* In order to communicate by Bluetooth, Bluetooth type CF card is required locally and the PC/Data Controller, which receives/sends the data, also must be provided with Bluetooth.

Multiple interface options

The Windows CE.NET operating system has made possible multiple methods of data communication between the instrument and external devices. GPT-7000/GTS-720 Series have as standard a Compact Flash card slot and USB connection port.



TopSURV-OnBoard Stake out



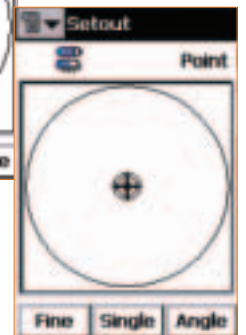
Intuitive Operation by touch pad display



Over 3 meters



From 0.05 to 3 meters



Less than 0.05 meters



Most TopSURV functions can be performed with the help of the Map View

TopSURV On-Board software

The instrument application software supplied by Topcon for the GPT-7000/GTS-720 Series is based on the Windows CE controller software, TopSURV. Providing advanced surveying functionality and easy user interface, TopSURV-OnBoard, makes full use of the Windows CE™ technology and the hardware capabilities of the Total Station.

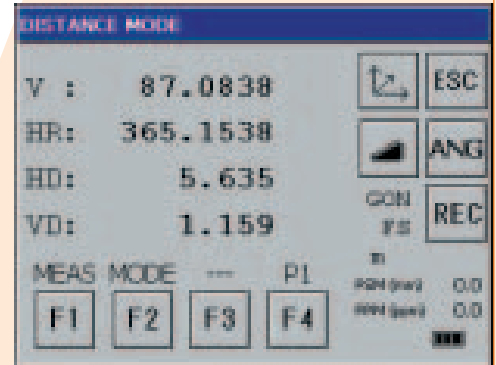
TopSURV-OnBoard includes all functions for Survey, Setting Out, Co-go calculations and "Roads" functionality for defining and setting out road profiles.

Even with it's advanced functionality, TopSURV-OnBoard is easy to use, with clear menu screens to guide you through each routine.

Basic Measurement Programs

In addition to TopSURV-OnBoard the Total Stations include a number of simple programs for basic measurement tasks. These include:

- Back sight measurement
- Remote Elevation Measurement
- Missing Line Measurement
- Measurement using stored coordinates



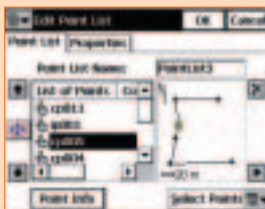
TopSURV-OnBoard menu Structure

Job



- Open
- New
- Delete
- Config (Survey/Scale Factor/Units/Display/Alarms)
- Import (From Job/From File/From Controller/Code Libraries)
- Export (To Job//To File/To Controller/Code Libraries)
- Info
- Mode
- Exit

Edit



- Points
- Codes
- Points Lists
- X-Sect Templates
- Roads
- Raw data

Survey



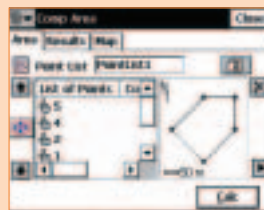
- Occ/BS Setup
- Observations (Hz Angle/Hz-V1 Angle/Dist. Offset/Hidden Point/2 Line Section/Line & Corner/Line & Offset/Plane & Corner)
- Remote Control
- Cross Section
- Find Station
- Tape Dimension

Setout



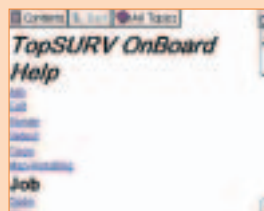
- Points
- Line
- Road
- Slope
- Point List
- Point & Direction
- Line & Offset
- Curve & Offset
- Spiral & Offset

Cogo



- Inverse
- Intersection
- Point & Direction
- Area
- Traverse Adjustment
- Inverse Pt To Line
- Inverse Pt To PtList
- Missing Line
- Scale
- Translate
- Rotate

Help



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SPECIFICATIONS

	GPT-7001/GTS-721	GPT-7002/GTS-722	GPT-7003/GTS-723	GPT-7005/GTS-725
TELESCOPE				
Magnification	30 X			
Field of view	1°30'			
Minimum focus	1.3m			
Reticle illumination	Provided			
DISTANCE MEASUREMENT (P)				
Mini prism *	1000m			GTS-725: 900m GTS-7005: 1000m
1 prism *	3000m			GTS-725: 2000m GPT-7005: 3000m
3 prism * (GTS-720 Series)	4000m			2700m
9 prism * (GTS-720 Series)	5000m			3400m
Accuracy	GPT-7000: upto 25m ± (3mm + 2 ppm x d)m.s.e. GPT-7000: over 25m ± (2mm + 2 ppm x d)m.s.e. GTS-720: ± (2mm + 2 ppm x d)m.s.e.			
Minimum reading	Fine: 0.2mm Coarse: 1mm Tracking: 10mm			
Measurement Time	GPT-7000: Fine: 1.2 sec Coarse: 0.5 sec Tracking: 0.3 sec GTS-720: Fine: 1.2 sec Coarse: 0.7 sec Tracking: 0.4 sec			
DISTANCE MEASUREMENT (NP) (GPT-7000 SERIES ONLY)				
Range (Kodak white card)	1.5 ~ 250m			
Accuracy	±5mm m.s.e			
Laser class	Class 1			
ANGLE MEASUREMENT				
Accuracy (Standard deviation based on DIN 18723)	1" (0.3mgon)	2" (0.6mgon)	3" (1.0mgon)	5" (1.5mgon)
Minimum reading	0.5" (0.1mgon)	0.5" (0.1mgon)	1" (0.2mgon)	1" (0.2mgon)
TILT SENSOR				
Type	Dual axis			
Compensating Range	± 4'			
COMPUTER UNIT				
Processor speed	177 Mhz			
Operating system	Microsoft® Windows® CE.NET 4.2			
Memory	2 x 64 MB			
DISPLAY				
LCD	3.5 inch TFT Color LCD			
	2 sides			1 side
Touch panel	Provided			
OPTICAL PLUMMET				
Magnification	3 X			
Field of view	4°			
OTHERS				
Instrument height	182mm			
Point guide	Provided			
Laser pointer (GPT-7000)	Yes (laser class 2)			
CompactFlash** Card Slot	Provided			
Dimension	343(H) x 245(W) x 219(L) mm			343(H) x 245(W) x 199(L) mm
Weight (incl. Battery)	GTP 7001, 7002, 7003: 6,3 kg GTP 7005: 6,2 kg GTS 721, 722, 723: 6,2 kg GTS 725: 6,1 kg			
Protection against dust and water	IP54			
Operating Temperature	-20°C to +50°C			
RECHARGEABLE BATTERY				
Maximum operating time including distance measurement	BT-61Q: GPT-7000: 5 hrs GTS-720: 7.5 hrs			
Weight	BT-61Q: 0.2 kg			
BATTERY CHARGER BC-30				
Recharging time (at +20°C)	BT-61Q: 4 hrs			

* Condition 1: Slight haze with visibility about 20 km, moderate sunlight with light heat shimmer

** Compact flash is trademark of SanDisk corporation.

Designs and specifications herein are subject to change without notice.

Important: In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.

