

THE EVOLUTION CONTINUES...

# THE IMPROVED HTS-580 SERIES TOTAL STATION

EXTENDED REFLECTORLESS  
MEASUREMENT RANGE OF 500M  
(FOR THE HTS-580AGX+)

ABSOLUTE ENCODING NOW  
A STANDARD IN ALL MODELS

UPGRADED SENSORS FOR  
TEMPERATURE AND PRESSURE  
(FOR HTS-580AGX SERIES)

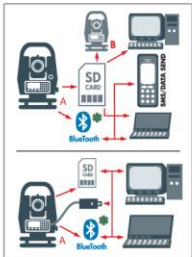
NEW ON-BOARD PROGRAM  
TEMPERATURE AND PRESSURE  
**TRAVERSE  
ADJUSTMENT**

NEW ON-BOARD PROGRAM  
**COGO**

## THE ALL NEW & UPGRADED FEATURES



New Panel and LCD Design



Data sharing possibilities  
using external memory card  
(Bluetooth integration is an option &  
not incorporated as a standard feature)



Dual compensator models



Automatic temperature &  
pressure sensors



External memory card slot



Graphical display capability

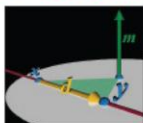
1. **Wide LCD panel with full background illumination** ensures easy viewing of on-screen data at all times. Redesigned keyboard panels with **ergonomic buttons** and user defined short-cut keys ensure ease of operation.
2. Built in **SD card interface** allows for easy and convenient data transfer, and facilitates large data storage
3. Built in **USB and RS-232 interface**
4. 300m reflectorless range for the the HTS-580AGX and 500m for the AGX+
5. **Upgraded automatic Temperature and Pressure Sensor** in the HTS-580AGX and AGX+
6. **Dual compensator** used in the HTS-580AGX and AGX+ ensures added operation stability
7. Selectable language display currently include **English, Portuguese, German, and Chinese**. Display language customization possible
8. Graphical points with lines plotting and display in the HTS-580AGX and AGX+, allows for **plane viewing of surveyed points** on instrument screen.



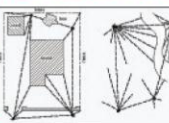
## ONBOARD SOFTWARE CHOICES FOR HTS-580A SERIES



On-board Road Program



COGO Program



Traverse Adjustment

Users can choose either the **Road Design program** or **COGO & Traverse Adjustment Programs** to be included onboard. Please specify upon ordering



ASME IANHE ZAOBAO AWARD  
2007 Singapore Prestige Brand  
Winner, SPBA - Regional Brands

**HORIZON®**  
**MEASURE RIGHT**

## EVOLUTION OF HORIZON TOTAL STATION CONTINUES WITH THE NEW HTS-580 SERIES DEBUT..



The new HORIZON HTS-580 series total station is now equipped with absolute encoding in all models to allow for significantly better vertical angle measurement stability, as compared with incremental encoding used in traditional instruments.

The operation simplicity for the instrument range has been retained, to allow for even first-time users to pick up the instrument and operate it with relative ease. In addition, 2 new on-board programs, COGO (Coordinate Geometry) and Traverse Adjustment, have been added to increase the functionality of the instrument, in line with HORIZON's belief in constant evolution in its products.

The instruments in this new range are capable of very rapid measurements like before, even with additional programs loaded on board.

The HTS-580 series currently of 3 models in its product line up, namely the HTS-580A, the HTS-580AGX, and the HTS-580AGX+. All 3 models are available in 2", 3" or 5" accuracy.

HORIZON is also introducing its multilingual instrument platform, which currently supports English, Portuguese, German, and Chinese. We would be glad to discuss language customization possibilities with you upon request.

### HTS-580A series

The basic infra-red total station in the series. This instrument is designed as a simple, straight forward instrument, targeted toward users who are considering using total stations in their work without stretching their budgets. Despite its competitive pricing, its build quality and operational reliability are never compromised, consistent with HORIZON's policy to deliver its best for its clients at all times.

### HTS-580AGX series

An enhanced reflectorless total station series, with a standard measurement range of 300m. In addition, this range topping instrument is equipped with other exclusive features.

These include dual axis compensation for added stability, automatic pressure and temperature sensing, and graphical points and line plotting and viewing.

The HTS-580AGX remains one of the leading instrument in terms of product features and value for money in the industry, and is designed as an instrument to cater to the rigors and requirements of most surveying and jobs.

### HTS-580AGX+

The HTS-580AGX+ has all the features of the HTS-580AGX, and an extended reflectorless measuring range of 500m".

### Standard Accessories for HTS Series



Charger



Rechargeable Battery



Lens Cover



Plumb Bob



Tool Kit



Data Transfer Cable



Rain Cover



HORIZON H-Link Data Transfer Software



Operations Manual



Hard Carry Case

### Optional Accessories



Diagonal Eyepiece  
For viewing odd angles



# HTS-580 SERIES SPECIFICATIONS

MEASURE RIGHT	HTS-580A		HTS-580AGX		HTS-580AGX+	
Type	Infra-Red		Reflectorless			
Laser class	Visible Laser: Class III a (3R) (Reflectorless)/ Class II (2) (Prism, Retro-target)					
Conformity	IEC 60852-1:2001/ EN 60825-1: 1994 +A11 : 1996 (CE - Test Standard: EN 61000-6-1: 2007 & EN 61000-6-1: 2003 as shown in the Test Report Number: SHEMO09080087001)					
Telescope	Fully Transiting, Coaxial sighting and Distance measuring optics. Image: Erect. Magnification 30x. Objective aperture: 45mm (EDM:50mm). Resolving power: 3". Field of view: 1° 30'. Minimum focus: 1m, Reticle glass: ∞ mark printed. Reticle illumination: 5 brightness levels					
Angle Measurement	Photoelectrical absolute encoder scanning. Both circles adopt diametrical detection					
Display resolution	1"/5" selectable					
Angle Accuracy (ISO 17123-3)	Available in 2", 3" or 5"		Available in 2", 3" or 5"		Available in 2", 3" or 5"	
Distance measurement	Infra-Red laser		Modulated laser type: 0.670μm, Basic Frequency: 60MHz, Coaxial EDM, Laser spot: 7 x 14mm/ 20m			
Unit of Measurement	Meters/ Feet Selectable					
Measurement range using:						
a. Single Prism	5000m (2" and 3")/ 4500m (5")* <sup>1</sup>					
b. Triple Prism	6000m (2" and 3")/ 5500m (5")					
c. Mini prism (25.4mm)	1500m (2" and 3")/ 1000m (5")					
d. HORIZON retro target	1200m (2" and 3")/ 1000m (5")					
e. Reflectorless (Long range)	NA		900m (2" and 3")/ 500m (5")* <sup>2</sup>			
f. Reflectorless (Standard range)	NA		300m* <sup>3</sup>		500m* <sup>3</sup>	
g. Display resolution	1mm					
Distance Measuring Accuracy						
a. Fine mode with prism	2mm + 2ppm x D (2" and 3")/ 3mm + 2ppm x D (5")* <sup>4</sup>					
b. Track mode with prism	3mm + 2ppm x D (2" and 3")/ 4mm + 2ppm x D (5")					
c. Reflectorless mode (LR/SR)	NA		3mm + 2ppm x D/ 5mm + 2ppm x D (2" and 3") / 5mm + 2ppm x D/ 7mm + 2ppm X D (5")			
Measuring time						
a. Fine mode with prism	1.2s (2" and 3")/ 1.4s (5")					
b. Track mode with prism	1s (initial), 0.9s (repeat) (2" and 3") 1.2s (initial), 1s (repeat) (5")					
c. Reflectorless mode	NA		0.6s (initial), 0.4s(repeat) (2" and 3") / 0.8s (initial), 0.4(repeat) (5")			
Vial Sensitivity	Plate vial: 30"/2mm, Circular Vial 8"/2mm					
Compensator						
System	Liquid Electric Detection type with 3' correction range					
Type	Single Axis Compensator		Dual Axis Compensator			
Graphical Plan display	NA		LCD graphical survey plan display system of measurements, points lines and polygons. Zoom in, zoom out, Panning features			
General						
Display and keypad	Alphanumeric/Dot Matrix LCD/ Full screen illumination using white backlight/ 28 keys/ dual keypads					
Data storage and transfer	SD card, RS232 and USB selectable. 100 000 points using SD card					
On board software programs	REM, MLM, Area 2D/3D, Point to Line, Layout, Resection, Offsets, Z Coordinates, Volume calculation, Road Design, COGO(Traverse, Line, Arc, Point Intersection, Inverse), Lead Traverse (Calculation, Adjustment and Balancing)					
Laser Pointer	No		Yes			
Tribrach type	Premium construction, dust and water proof, 3-pin forced groove detachable					
Plummet type	Selectable between Optical plummet: Erect image 3x magnification, focusing range: 0.3m to ∞, Field view 5° OR Laser plummet (Class II laser)					
Battery and charger	Compact Ni-H battery, 6V DC, Operation duration 8hrs (continuous), 16hrs (dormancy), quick battery charger with power cord, optional external battery (24hrs continuous operation time)					
Operating temperature range	-20°C to +55°C					
Sensors and Corrections	Manual input for temperature and pressure. Refraction and Earth curvature correction: Selectable K=0.14/0.02		Auto sensing and correction. Refraction and Earth curvature correction: Selectable K=0.14/0.02			
Physical dimensions	200 x 180 x 350mm, 5.8kg weight					
Standard accessories	Carrying case, rain cover, Transfer cables (USB and RS232c), plumb bob, extra battery, charger with power cord, 1GB SD card, Manual, target board, HLink data transfer software					
Waterproofing standard	IP54					

\*1 Under good conditions: no haze, overcast or moderate sunlight with very light heat shimmer. Range and accuracy are dependent on atmospheric conditions, background radiations, target used and its characteristics (i.e. color, background, geometric shape, contrast, size, dimensions, material etc)

\*2 Using the HORIZON supplied target board, grey side (KODAK Standard A4 x 18" x gray 0.18:).

\*3 Under low light conditions or when target is shadowed. The time required to measure may vary according to shape, size, surface are, reflectiveness of target and weather conditions.

\*4 D= measured distance, unit: mm

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