



DC VOLTAGE GRADIENT TECHNOLOGY & SUPPLY LTD

**GLOBAL LEADERS IN DCVG / CIPS EQUIPMENT ECDA
& SURVEY SOFTWARE**

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CIPS EQUIPMENT SPECIFICATION

<i>Item - Name</i>	<i>Sub item.</i>	<i>Quantum, DCVG Ltd</i>
Country Of Origin		United Kingdom
Certificate Of Origin Issued		On Request
Country Of Manfn Origin Of Actual Data Logger		United Kingdom
Guarantee Length	6 months	YES
Guarantee Conditions	Components And Workmanship Not Misuse	YES
Calibration Certificates		YES
Free Technical Support		Unlimited E-Mail Support Based On Many Years Practical Experience
Spares Availability		Yes At Local Agent, or UK. Note. Many of Quantum parts are interchangeable with our analogue DCVG sets.
Surveyor Compatibility	Ease of use	Very Simple To Set Up And Operate
Data Logger origin	Modified standard PC	NO
Data logger Specifically Designed for CIPS Work		YES
Internal Memory	Normal memory size	32 meg
	Number of lines of data	62,500
	Limitations of data	Determined Only By Microsoft Excel Program Limitations
	Memory expandable	YES memory split into data 62500 lots
	Maximum memory size	One Gigabyte
Data logger Specifically Designed For True DCVG Work		Fully Compatable with analogue DCVG. Can also run lateral CIPS (sham DCVG). Has true DCVG capability but recommend analogue DCVG for location, Quantum for electrical measurement.
CIPS and true DCVG compatibility		Quantum specifically designed so it will operate at ON/OFF sequence of analogue DCVG so two techniques will run at same time.
Weight of data logger		3LB, or 1.5 Kg
Physical size		6" X 9" X 2"
Colour	Company Colour	RED
Straps	Waist & Neck	YES, Leather
Sensitivity	Voltage	1mV Resolution

Voltage Range	+/- 25 VOLTS	YES
	+/- 10 volts	YES
	+/- 5 volts	YES
	+/- 2.5 volts	YES
	+/- 1 volts	YES
	+/- 500 milli-volts	YES
	+/- 250 milli-volts	YES
	+/- 100 milli-volts	YES
	+/- 50 milli-volts	YES
	+/- 25 milli-volts	YES
	+/- 10 milli-volts	YES
Circuit Boards	Humidity And Dust Protection	Fully Potted In Epoxy For Environmental Protection
		Case Sealed With Silicone Sealant
Ease Of Set Up To Operate	Programming	Not necessary, just connect electrodes and back pack, switch on wait for satellite connection press CIPS button and walk.
Automatic recording of measurements		Data recorded automatically at set ON/OFF timing sequences.
Timing sequences		5 standard most commonly used for analogue DCVG and CIPS. Just press a button to select.
Number of input channels		Four + Satellite
Use of input channels		ON/OFF CIPS, Lateral CIPS, Trailing CIPS, (all three at same time) , DCVG Data Recording, Sat Aerial
Internal battery		Nickel Cadmium
	Battery Life In Use	8 hours, 24 hours if using External Battery for Satellite Aerial
External battery		12V Sealed Lead ACID 2.3 Ahr
	Battery Life In Use	24 hours
Screen		YES
LCD graphics screen		YES
Items on screen	Memory used	YES
	Satellite sync status	YES
	ON potential	YES
	OFF potential	YES
	Waveform	YES Constantly Observable
	Mode of operation	YES CIPS or DCVG
	Voltage range	-25 to +25 volts DC
	AC rejection	50 or 60 cycles selection
	Which channel viewed	YES 1 to 4 ON screen
	Width of ON / OFF pulse	YES
	Previous data review on screen	NO
Effect of sunlight on screen visibility		Very Little Effect
Previous use in Middle East.		YES extensively
Satellite Aerial	Type	Active, 12 Satellite GPS Engine,

Sat Used For Recording	Time of day	YES
	Date	YES
	Position Coordinates	YES
	Synchronising logger with Interrupters	YES
	Frequency of checking synchronisation	5 seconds
	Accuracy of logger Interrupter synchronisation	Better than 5 microseconds. More important is response time of rectifier being switched.
	Time to synchronise when initially switched on	Variable but usually less than 1 minute
Is GPS Aerial Used For Distance Measurements		YES
	Accuracy of distance (best)	0.6m resolution at best.
	Typical	3m depends on favorable conditions
Alphanumeric Keyboard		YES
	Number of keys available	50
	Hot keys	YES
	Feature key	YES, Common 8 available
	Separate keys for CIPS and DCVG	YES
	Separate distance log key	YES for marker posts, etc GPS every 5 seconds for all other
NUMBER OF RECORDED DATA PARAMETERS	Microprocessor channels	18, 17 of which are automatically recorded
	Items recorded	Record Number, Mode of Logging, Record Type, Pulse Sequence, ON And OFF Potential For 4 Separate Channels, Right Of Way Features, Time Of Day, Date, Northings, Eastings, Altitude, Synchronisation Status.
Number Of Actual Data Input Channels.		Five CIPS, lateral CIPS, trailing CIPS, DCVG, GPS



<u>Composition Of Full Set</u>		
	Data logger	YES Quantum
	Data logger satellite aerial	YES
	External battery needed as GPS aerial current hungry	YES included in all sets and properly mounted in the cable dispenser back pack.
	Type	Sealed 12 V Lead Acid
	External battery charger	YES Specific For Extra Battery
	Interrupters	Three in standard set
	Type of Interrupter	Satellite synchronised
	Battery chargers	Three
	Copper sulphate electrode probes	YES 1m long
	Number of electrodes	Three for CIPS And DCVG and Lateral CIPS
	Robust nature of electrodes	Very Robust
	Electrode handles	YES
	Number of handles	Three
	Electrode connection leads	YES Full Set
	Trailing wire back pack.	YES
	Satellite aerial holder	YES
	Back pack reel sizes	12.5cm
	Recommended wire size	30 SWG
	Approximate reel wire length Km	5 km
	Reel weight	3.5 kg
	Spare reels	YES Six Supplied
	Reels with wire	YES But To Order Extra
	Reel winding spindle	YES
	Equipment carry cases	YES Two Supplied
	Probe electrode carry case	YES One Supplied
	Operation manual	YES
	Training course available.	YES as extra
	Data download program	YES
	Data analysis program	YES as extra
	GPS distance calculating program	YES with every set

Composition Of Basic Set		
	Data logger	YES
	Data logger satellite aerial	YES
	External battery	YES
	Type	Sealed Lead ACID
	External battery charger	YES
	Interruptions	Two
	Type of Interrupter	Satellite
	Battery chargers	Two
	Copper sulphate electrodes	Yes 1m long
	Number of electrodes	Two
	Robust nature of electrodes	Very robust
	Electrode handles	YES
	Number of handles	Two
	Electrode connection leads	One Set
	Trailing wire back pack.	YES
	Satellite aerial holder	YES
	Back pack reel sizes	12.5cm, DIN 125
	Recommended wire size	30 SWG
	Approximate reel wire length km	5 Km
	Reel weight	3.5 Kg
	Operation manual	YES
	Data download program	YES
	Distance calculating program	YES
Download program	What measurements	YES & Separates CIPS, Analogue DCVG Measurements, Location Data & Exports To Excel.
Download cables	RS232	YES
	USB	YES + software
Back pack for trailing cable dispenser	Sholder harness	YES, heavily padded. very user friendly
		Sholder And Waist Adjustments
	Training wire reel size	All sizes up to 10 Inched Diameter, Normal Reel DIN 125 Reels (5 inch diameter)
	Din 125 reel weight	3.5 Kg OR 7 3/4 LBS
	Average wire length on reel	5 Km
	Auxillary battery.	YES for Satellite Aerial
	Back pack weight empty	3Kg, or 7 LB
	Full backpack weight	14 ¾ LBS, 6.5 Kg