

Motorola ONCORE™ GPS I/O Software Commands

This command summary includes all of the software commands available for Motorola's ONCORE OEM GPS receivers including the older XT and Basic ONCORE models. All models may be operated in Motorola binary format at 9600 baud. Full I/O features for all receivers are shown in the Configuration Matrix Tech-Note #497.

Motorola's WinOncore software was developed for use with the GT+ and UT+ receivers. Motorola's PC Controller software v10.1 may be used with all ONCORE receivers and a "Controller Command" column is included for reference.

The VP ONCORE v8.8 command set is used as a reference. The VP ONCORE is currently at v10.0 and contains the same commands as v8.8. The UT and GT ONCORE receivers generally employ a subset of the VP ONCORE command set.

The GT ONCORE and UT ONCORE were originally released at v1.3. A later GT v1.6 was released with additional commands. The latest v2.0 versions, now known as the UT+ and GT+, incorporate all of the commands from previous UT v1.3 and GT v1.3 & 1.6 firmware releases shown in the table below.

Function	Description	Controller Command	Default Setting	VP/XT & Basic ver 8.8	UT ver No.	GT ver No.
1PPS	Measurement Epoch Offset Option	NONE	0.000	@@Ax		
1PPS	Time Raim Setup & Status 6-Channel	trstat	Time RAIM Algorithm "OFF"	@@Bn		
1PPS	Time Raim Setup and Status 8-Channel	trstat8	Time RAIM Algorithm "OFF"	@@En	1.3	
1PPS	1PPS Cable Delay Option	ppsdelay	0.000	@@Az	1.3	
1PPS	1PPS Time Offset	ppsoff	0	@@Ay	2.0	
1PPS	Pulse Mode 1 pps/100 pps		1PPS	@@AP		
Alert-Planning	Alert Planning-6-Channel	alert	N/A	@@Cd		
Alert-Planning	Alert Planning-8-Channel	alert8	N/A	@@Fd		
Almanac	Almanac Update Option	almhold	Update	@@An		
Almanac	Almanac Status Message	alm	Polled	@@Bd		
Almanac	Almanac Output Message	almout	Polled	@@Be	1.3	1.3
Almanac	Almanac Data Input	almin	N/A	@@Cb	1.3	1.3
Application	Application Type	aptype	Land	@@AB		
Broadcast	Satellite Broadcast Data Message	NONE	Polled	@@BI		
Date	Date	date	No change	@@Ac	1.3	1.3
Datum	Datum ID Code	datum	WGS-84	@@Ao	1.3	1.6
Datum	User Defined Datums	udatum	WGS-84	@@Ap	1.3	1.6
Defaults	Set-To-Defaults	default	N/A	@@Cf	1.3	1.3
DOP	xDOP Type	doptype	PDOP	@@Aj		
DGPS	Differential Correction Time-out	dto	90 seconds	@@AJ		
DGPS	Pseudo-range Correction Output Message	corout	Polled	@@Bh		
DGPS	RTCM Port Mode	p2baud	9600	@@AO		2.0
DGPS	Pseudorange Correction Input	corin	N/A	@@Ce		1.6
DGPS	Ephemeris Data Input	ephin	N/A	@@Bf		1.6
DGPS	Inosphere Correction Status	ion	enabled	@@Aq	2.0	1.6
DOP-6CH	xDOP Table Status Message-6-Chan	dop	Polled	@@Bc		
DOP-8CH	xDOP Table Status Message-8-Chan	dp8	Polled	@@Ec		
Ephemeris	Ephemeris Hold Option	ephold	Disable	@@AA		
Ephemeris	Input Ephemeris Data	ephin	N/A	@@Bf		1.6
Ephemeris	Ephemeris Data Output Message	ephout	Polled	@@Bi		
Extension Msg	Position/Status/Data Extension Msg-6-CH	ext	Polled	@@Bk		

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Function	Description	Controller Command	Default Setting	VP/XT & Basic ver 8.8	UT ver No.	GT ver No.
Extension Msg	Position/Status/Data Extension Msg-8-CH	et8	Polled	@ @Ek		
Fix	Position Fix Algorithm Type	fix	N-in-view	@ @Ar		
Fix/Idle	Position Fix/Idle Mode Option	mode	idle	@ @Cg		
Height	Height	hgt	0.00	@ @Af	1.3	1.3
Hold	Hold Position Parameters	php	0	@ @As	2.0	
Hold	Position-Hold Option	ph	Disable	@ @At	2.0	
Hold	Altitude-Hold Height Parameter	ahp	0	@ @Au		2.0
Hold	Altitude-Hold Option	ah	Disable	@ @Av		2.0
ID	Receiver ID Command String	id	N/A	@ @Cj	1.3	1.3
Ignore	Satellite Ignore List	ignore	None	@ @Am		
Ionosphere	Ionosphere Correction Option	ion	Enable	@ @Aq	2.0	2.0
Latitude	Latitude	lat	0 degrees	@ @Ad	1.3	1.3
Leap	Leap Second Pending Status Message	leapsec	Polled	@ @Bj	1.3	
Longitude	Longitude	lon	0 degrees	@ @Ac	1.3	1.3
LORAN	Switch I/O Format	NONE	N/A	BIN		
LORAN	Output Time Interval	NONE	Polled	T		
LORAN	Positioning Data Output	NONE	Polled	A		
Mask	Satellite Mask Angle	mask	10 degrees	@ @Ag	2.0	2.0
Message	Output Align	NONE	Disable	@ @AE		
NMEA	Switch to Binary I/O	NONE	N/A	FOR		2.0
NMEA	GPGGA (GPS Fix Data)	NONE	Polled	GGA		2.0
NMEA	GPGLL (Geographic Position-Latitude/Longitude)	NONE	Polled	GLL		2.0
NMEA	GPGSA (GPS DOP and Active Satellites)	NONE	Polled	GSA		2.0
NMEA	GPGSV (GPS Satellites in View)	NONE	Polled	GSV		2.0
NMEA	GPRMC (Recommended Minimum Specific GPS/Transit Data)	NONE	Polled	RMC		2.0
NMEA	GPVTG (Track Made Good & Ground Speed)	NONE	Polled	VTG		2.0
NMEA	GPZDA (Time and Date)	NONE	Polled	ZDA		2.0
Position - 6CH	Position/Status/Data Output Message: 6-Channel	pos	Polled	@ @Ba		
Position - 8CH	Position/Status/Data Output Message: 8-Channel	ps8	Polled	@ @Ea	1.3	1.3
Position	ASCII Position Message	as8	polled	@ @Eq		1.6
Range Data-6CH	Satellite Range Data Output Message-6-Ch	rng	Polled	@ @Bg		
Range Data-8CH	Satellite Range Data Output Message-8-Ch	rg8	Polled	@ @Eg		
RomTest (GT/UT)	System Power on Failure	NONE	N/A	N/A	1.3	1.3
Satellite	Satellite Select	ss	NONE	@ @Ai		
Satellite	Satellite Select Options	sm	Automatic	@ @Ah		
Satellite	Visible Satellite Status Message	vis	Polled	@ @Bb	2.0	1.6
Self-Test-6CH	Self-Test-6 Channel	selftest	N/A	@ @Ca		
Self-Test-8CH	Self-Test-8 Channel	selftest8	N/A	@ @Fa	1.3	1.3
Switch	Switch I/O Format	ioformat	Motorola	@ @Ci		2.0
Threshold	2-D to 0-D HDOP Threshold	dopmask	12.0	@ @AC		
Threshold	xDOP Hysteresis	dophys	1.0	@ @AK		
Threshold	3-D to 2-D xDOP Threshold	dopthr	6.0	@ @AI		
Thresholds	Correction Thresholds	corthr	0/32	@ @AD		
Time	GMT Offset	gmt	00.00	@ @Ab	1.3	1.3
Time	Time of Day	time	No Change	@ @Aa	1.3	1.3
Time	UTC Time Correction Option	utc	Enable	@ @Aw	1.3	1.3
Time	UTC Offset	utcoff	GPS Time	@ @Bo	2.0	
Velocity	Velocity Filter	filter	100 (disabled)	@ @AN		2.0

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