

Motorola ONCORE™ GPS I/O Software Commands

The VP ONCORE™, and older Basic ONCORE™ and XT ONCORE™ products, may be operated in Motorola Binary mode at 9600 Baud, NMEA mode at 4800 Baud and LORAN (RMI) emulation mode at 1200 Baud.

The new GT ONCORE™, optimized for AVL, tracking and positioning applications, and UT ONCORE™, optimized for timing applications, also feature binary operation at 9600 Baud (only). I/O commands for these receivers are a sub-set of the full VP ONCORE™ I/O command set as indicated below.

The table below, and on the following page, provides a Binary command listing by function. For those using the "PC Controller Software" supplied with Motorola's Engineering Evaluation Kits, a "Controller Command" column is included as a cross reference.

Full I/O command and response messages for the VP ONCORE™ (and older Basic ONCORE™ and XT ONCORE™) are listed and explained in detail in the complete ONCORE™ Users Guide P/N TRM0001. I/O Commands and messages for the GT ONCORE™ and the UT ONCORE™ are detailed in the complete ONCORE™ users Guide P/N TRM0002.

Function	Description	Controller Command	Default Setting	Binary Command	GT/UT
1PPS	1PPS Cable Delay Option	ppsdelay	0.000	@@Az	UT
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	UT
1PPS	1PPS Time Offset	ppsoff	0	@@Ay	
2-D	2-D to 0-D HDOP Threshold	dopmask	12.0	@@AC	
3-D	3-D to 2-D xDOP Threshold	dopthr	6.0	@@AI	
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 Data Output Message	almout	Polled	@@Be	GT/UT
Almanac	Almanac Data Input	almin	N/A	@@Cb	GT/UT
Application	Application Type	aptype	Land	@@AB	
ASCII Output Msg	Pos, Vel, Date/Time, Fix Type, DOP, (More)	N/A	Polled	@@Eq	GT
Broadcast	Satellite Broadcast Data Message	None	Polled	@@BI	
Date	Date	date	No change	@@Ac	GT/UT
Datum	Datum ID Code	datum	WGS-84	@@Ao	
Datum	User Defined Datums	udatum	WGS-84	@@Ap	
Defaults	Set-To-Defaults	default	N/A	@@Cf	GT/UT
DOP	xDOP Type	doptype	PDOP	@@Aj	
DGPS	Differential Correction Time-out	dto	90 seconds	@@AJ	
DGPS	Output Pseudorange - correction Output Message	corout	Polled	@@Bh	
DGPS	Pseudo-range Correction Input	corin	N/A	@@Ce	
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	ephhold	Disable	@@AA	
Ephemeris	Input Ephemeris Data	ephin	N/A	@@Bf	
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	Binary Command	GT/UT
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	
Hold	Hold Position Parameters	php	0	@@As	UT
Hold	Position-Hold Option	ph	Disable	@@At	UT
Hold	Altitude-Hold Height Parameter	ahp	0	@@Au	
Hold	Altitude-Hold Option	ah	Disable	@@Av	
Height	Height	hgt	0.00	@@Af	GT/UT
ID	Receiver ID Command String	id	N/A	@@Cj	GT/UT
Ignore	Satellite Ignore List	ignore	None	@@Am	
Ionosphere	Ionosphere Correction Option	ion	Enable	@@Aq	
Latitude	Latitude	lat	0 degrees	@@Ad	GT/UT
Leap	Leap Second Pending Status Message	leapsec	Polled	@@Bj	UT
Longitude	Longitude	lon	0 degrees	@@Ae	GT/UT
LORAN	Switch I/O Format (to Binary from LORAN)	None	N/A	BIN	
LORAN	Switch I/O Format (to NMEA from LORAN)	None	N/A	NMEA	
LORAN	Output Time Interval (0-9999 Seconds)	None	Polled	T	
LORAN	Positioning Data Output	None	Polled	Z	
Mask	Satellite Mask Angle	mask	10 degrees	@@Ag	
Message	Output Align (message to top of minute)	None	Disable	@@AE	
Mode	Position Fix/Idle Mode Option	mode	idle	@@Cg	
NMEA	Switch I/O Format (to Binary or LORAN)	None	N/A	FOR	
NMEA	GPGGA (GPS Fix Data)	None	Polled	GGA	
NMEA	GPGLL (Geographic Position -Latitude, Longitude, time)	None	Polled	GLL	
NMEA	GPGSA (GPS DOP and Active Satellites)	None	Polled	GSA	
NMEA	GPGSV (GPS Satellites in View)	None	Polled	GSV	
NMEA	GPRMC (Recommended Minimum Specific GPS/Transit Data)	None	Polled	RMC	
NMEA	GPVTG (Track Made Good & Ground Spd)	None	Polled	VTG	
NMEA	GPZDA (Time and Date)	None	Polled	ZDA	
Position - 6CH	Position/Status/Data Output Message-6 Ch	pos	Polled	@@Ba	
Position - 8CH	Position/Status/Data Output Message-8 Ch	ps8	Polled	@@Ea	GT/UT
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	
Satellite	Satellite Select	ss	None	@@Ai	
Satellite	Satellite Select Options	sm	Automatic	@@Ah	
Satellite	Visible Satellite Status Message	vis	Polled	@@Bb	
Self-Test - 6CH	Self-Test-6 Channel	selftest	N/A	@@Ca	
Self-Test - 8CH	Self-Test-8 Channel	selftest8	N/A	@@Fa	GT/UT
Self -Test	Power-On Failure Message (not VP/BA/XT)	N/A	N/A	@@Sz	GT/UT
Switch	Switch I/O Format (to NMEA or LORAN)	ioformat	Motorola	@@Ci	
Threshold	xDOP Hysteresis	dophys	1.0	@@Ak	
Thresholds	Correction Thresholds (Fix & Output)	corthr	F=0 /O=32	@@AD	
Time	GMT	gmt	00.00	@@Ab	
Time	Time of Day	time	No Change	@@Aa	
Time	UTC Time Correction Option	utc	Enable	@@Aw	

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