

■ Revision History

Date	Version	Description	Owner
2006/06/08	V0.9-Draft	Initial Draft	Jeffrey Wang
2006/07/03	V1.0.0	First Release, Modify the description of LPInterval in Input Command Parameters	Jeffrey Wang
2006/08/03	V1.0.1	Add a new command allows the user to query or enable/disable static navigation to the receiver	Jeffrey Wang

■ LOCOSYS proprietary ASCII command

All the commands follow the syntax as below:

Command:

\$PLSC,MID,Parameter...*<CKSUM>¹\r\n

Response:

\$PLSR,MID,Valid,Parameter...*<CKSUM>\r\n

MID ²	Description	Remark
200	Power management	
201	Poll Software Version	
202	Query or enable/disable static navigation	

● 200 --- Power Management

This command is used to setup the state of Power Mode or to check.

Input Command Parameters:

Name	Value	Unit	Description
MID	200		Message ID
Mode	0..3		See Table 1
OnTime ³	200..900	ms	Must be a multiple of 100. OnTime must be greater than or equal to 200 ms and less than or equal to 900 ms. Must be set when setting TricklePower parameters, not needed when enabling Push-to-Fix. Set to 0 when mode = 3.

¹ Checksum is the absolute value calculated by exclusive-OR'ing the 8 data bits (no start bits or stop bits) of each char in the sentence, between, but excluding "\$" and "*". The hexadecimal value of the most significant and least significant 4 bits of the result are converted to two ASCII characters (0-9,A-F) for transmission.

² When message ID not support or format error, response will be either "\$PLSR,999,0,ERROR*60" or "PLSR,MID,0,ERROR*CS"

³ SiRF recommends the use of 300ms, 1-second or 400 ms, 2-seconds for optimum performance.

LPIInterval	1000.. 2147483000 ⁴	ms	Must be an integer value greater than or equal to 1000 (i.e., 1 second). LPIInterval does not need to be a multiple of 100. Must be set when setting TricklePower parameters, not needed when enabling Push-to-Fix. Set to 0 when mode = 3.
MaxAcqTime	1000.. 2147483000	ms	When Adaptive Trickle Power is enabled, MaxAcqTime (in ms) is the maximum allowable interval from the start of an Adaptive Trickle Power cycle to the time a valid position fix is obtained from navigation. If this time elapses and no fix is obtained, the receiver is deactivated for up to MaxOffTime, and when the receiver reactivates, a hot start is commanded. The integer must be in multiples of 1000 ms. The smallest allowable value is 1000 ms. The largest value is 2147483000 ms.
MaxoffTime	1000.. 1800000	ms	The longest period (in ms) for which the receiver deactivates due to the MaxAcqTime timeout. The actual deactivated period may be less if the user-specified duty cycle (OnTime / LpInterval) can be maintained. It must be a positive number. The smallest allowable value is 1000 ms. The largest allowable value is 1800000 ms (i.e., 1800 seconds, or 30 minutes.)
PushToFixPeriod	10..7200	sec	The receiver automatically awakens every Push-to-Fix period to obtain a position fix, collect ephemeris (if needed), and calibrate the real-time clock (RTC) (if needed).
Checksum			
<CR><LF>			End of message termination

Table 1 - Power management modes

Value	Description
0	Ask receiver to send current power mode
1	Set receiver to Full power mode
2 ⁵	Set receiver to Adaptive Trickle Power mode
3 ⁶	Set receiver to Push To Fix mode

⁴ SiRF recommends the LPIInterval do not larger than 10000

⁵ In power saving mode, a notification "\$PLSR,OkToSend*12" will send first then following NMEA sentences.

⁶ Recommend not to use in case of module not support "Push To Fix" power mode.

Output Command Parameters:

Name	Value	Unit	Description
MID	200		Message ID
Valid	0..1		0: command invalid, 1: command valid
Mode	1..3		See Table3.1-1
OnTime	200..900	ms	Display when mode = 2
LPInterval	1000.. 2147483000?	ms	Display when mode = 2
MaxAcqTime	1000.. 2147483000	ms	Display when mode = 2 and 3
MaxoffTime	1000.. 1800000	ms	Display when mode = 2 and 3
PushToFixPeriod	10..7200	sec	Display when mode = 3
Checksum			
<CR><LF>			End of message termination

Example:

Input	Output	Description
\$PLSC,200,0*0E	\$PLSR,200,1,1*03	Query the power mode
\$PLSC,200,1*0F	\$PLSR,200,1,1*03	Set continuous power mode
\$PLSC,200,2,200,3000,300000, 30000*0D	\$PLSR,200,1,2,200,3000,300000, 30000*01	Set trickle power mode
\$PLSC,200,3,0,0,300000,30000, ,7200*14	\$PLSR,200,1,3,300000,30000,72 00*18	Set push to fix power mode

● 201 --- Poll Software Version

This command is used to query the software version of SiRF and Manufacturer.

Input Command Parameters:

Name	Value	Unit	Description
MID	201		Message ID
Checksum			
<CR><LF>			End of message termination

Output Command Parameters:

Name	Value	Unit	Description
MID	201		Message ID
Valid	0..1		0: command invalid, 1: command valid

SiRF	String		SiRF software version
Mfer	String		Manufacturer software version
Checksum			
<CR><LF>			End of message termination

Example:

Input	Output	Description
\$PLSC,201*13	\$PLSR,201,1,GSW3.1.1_3.1.00.07-C23P1.00 ,B20060608.4800bps*10	SiRF and Manufacturer SW version

● 202 --- Query or enable/disable static navigation

This command allows user to query or enable/disable static navigation to the receiver

Input Command Parameters:

Name	Value	Unit	Description
MID	202		Message ID
Command	0..2		0: query; 1: enable; 2: disable
Checksum			
<CR><LF>			End of message termination

Output Command Parameters:

Name	Value	Unit	Description
MID	202		Message ID
Valid	0..1		0: command invalid, 1: command valid
Result	0..2		Query result or command echo
Checksum			
<CR><LF>			End of message termination

Example:

Input	Output	Description
\$PLSC,202,2*0E	\$PLSR,202,1,2*02	Disable static navigation
\$PLSC,202,0*0C	\$PLSR,202,1,0*00	The static navigation is disabled
\$PLSC,202,1*0D	\$PLSR,202,1,1*01	Enable static navigation
\$PLSC,202,0*0C	\$PLSR,202,1,1*01	The static navigation is enabled