ML300G User Manual V2.0

Learn how to set up your new MiCODUS Tracker

1.Main Features

4G LTE+2G GSM	Real- time Tracking	Historical Route Playback	Superstrong Magnetic	Waterproof IP65	Movement Aalarm
2500mAh	Voice Monitor	Overspeed Alarm	Vibration alarm	Geo-fence	Type-C

2.Specifications

Device Information	Model	ML300G
	Weight	132g
	Dimensions	78mm(L)*53mm(W)*14mm(H)
	Battery	3.7V 2500mAh Li-Polymer Battery
	Working Voltage	DC 3.4V - 4.5V
	Working Current	4V/Average 55mA
	Sleep Current	4V/Average 6mA
	Waterproof Level	IP65
Working Parameters	Battery Life	Real-time Tracking mode: around 4-6 days; Power Saving Mode: around 7-10 days; Hibernate Mode: around 15-20 days
	Working Temperature	-20°C~ 75°C
	Working Humidity	10%-85%RH
Cellular Specifications	SIM Card	Nano SIM
	Cellular Antenna	Built-in FPC Antenna
	Working Frequency	4G LTE CAT1: B1/B2/B3/B4/B5/B7/B8/B28/B66 2G GSM/GPRS: 850/900/1800/1900MHz
	GNSS	GPS+BDS
	GPS Frequency	L1: 1575.42±1.023MHz
	BDS Frequency	B1: 1561.098±2.046MHz
GNSS Specifications	Dimension of Antenna	18mm*18mm*2mm
	Satellite Channels	32
	Tracking Sensitivity	-162dBm
	Hot/Cold Start	<2s, <32s @ Open Sky
	GNSS Antenna	Built-in Ceramics GNSS Antenna
	Positioning Type	GNSS+LBS+AGPS
	Positioning Accuracy	GNSS Accuracy: <5M @ Open Sky LBS Accuracy: 100-2000m (Depend on density of base stations)
Main Features		4G+2G, Realtime Tracking, Vibration Alarm, Shift Alarm, Voice Monitor, Built-in Magnet, Light Sensor, Type-C Charge etc

3.Activate Device

First Step: Prepare And Install Sim Card

• If use your local SIM card, please make sure the SIM card already enabled SMS, internet data traffic, call and caller ID displaying functions;

• If use our spionlink SIM card, then please recharge it via this website www.spionlink.com to get data plan firstly

LED	Event	State
POWER LED (RED)	Charging	Solid
	Charger inserted and battery has been fully charged	Dark
	Charger has not been inserted	Dark
CELL LED (YELLOW)	Searching for network	Flash every 1 second
	Network has been registered	Solid
GPS LED (Blue)	GPS is in fixing	Flash every 1 second
	GPS has fixed	Solid
ALL LED	Device is working but stopped more than 5min	ALL LED TURN OFF
	Device has not been turn on	
	Device ran out of battery	

Second Step: Configure APN

Please get the exact correct APN name from local SIM card provider.Take the tracker to a good signal place for operation and configure the APN for it as below:

SMS Command Format	Reply	Example	Note
apn,apn content, apnuser,apnpasswd#	apn ok	apn,orange,orange, orange#	If there has APN user and APN apnpassword, then please use this command for configuration
apn,apn content#	apn ok	apn,internet#	If there doesn't have APN user and APN password, then please use this command for configuration

Note: The APN information is very important, it must 100% correct to match with the sim card of the tracker, if you configured wrong APN, the tracker also will reply "SET APN ok" but it will can't get online!

4.Package Content

ML300G Tracker	x 1
USB Charging Cable	x 1
User Guide	x 1
Packing Box	x 1

5.Functions Explanation

1. Voice Monitor

For example:

* Set up a center number for the device:
CENTER,password,A,CENTER NUMBER#

For example, if you want to set up this number as center number:+8613366668888, the command be sent like this:
CENTER,888888,A,+8613366668888#

* Use the center number to set up a number for the tracker to call back: MONITOR,number for monitor#

For example, if your send this command:
MONITOR,+8613366668888#,then the tracker will make a call to this number +8613366668888 and this number can pick up the call to monitor the voice around it.

2. Set Working Mode

For example:

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MODE,1,10,3600#

SET MODE OK

MODE,2,0800,1#

SET MODE OK

MODE,3,0800,1#

SET MODE OK

* Command format: MODE,A,T1,T2#

* For example: Realtime Tracking Mode:
MODE,1,10,3600#

This means the tracker will upload every 10 seconds when it is moving, and every 3600 seconds when it is static.

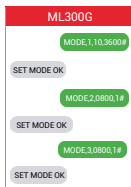* For example: Power Saving Mode:
MODE,2,0800,1#

This means the tracker will enter into power saving mode at 08:00am and upload every 1 hour. If now is 09:00am, then the tracker will enter power saving mode at 08:00am of tomorrow.

* For example: Hibernation Mode: MODE,3,0800,1#

This means the tracker will enter into power saving mode at 08:00am and upload every 1 hour.

Note: The difference between the mode 2 and mode 3 is that, under mode 2, the device can be waked up by sms, call and light sensor, under mode 3 the device will just can be waked up by light sensor.

3. Vibration Alarm

* Set up a center number for the device:
CENTER,password,A,CENTER NUMBER#

For example, if you want to set up this number as center number:+8613366668888, the command should be sent like this:CENTER,888888,A,+8613366668888#

For example:

* Note: Please put the country code as prefix with the center number!

* Set up SOS contact numbers:
SOS,A,SOS1,SOS2,SOS3#

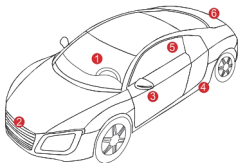For example,: SOS,A,+8613366667777,
+8613366667778,+8613366667779#

Note: You can set up 3 SOS alarm numbers for the device at the same time

* Set up the vibration alarm way: SENALM,ON,2#

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CENTER,888888,A,+8613366668888#

SET CENTER NUMBER OK

SOS,A,+8613366667777,+86133
66667778,+8613366667779#

SET SOS NUMBER OK

SENALM,ON,2#

SET VIBRATE ALARM OK

6.Installation Recomendation

① Driving seat sundries box
② Front bumper
③ Driving sundries box
④ Under the chassis
⑤ Rear windscreen
⑥ Rear bumper

7.Trouble Shooting

Type	Use
Unable to connect to tracking platform	Check the APN and settings. Check whrther the data service of SIM card is enabled. Check the balance of SIM card.
Tracker shows offline	Check whether external power is still connected. Check if the vehicle entered netword blind area. Check the balance of SIM card.
Unable to locate	Make sure the top side facing upward without metallic things shielded. Make sure it's not in area with no satellite coverage.
Location drift	In area with poor GNSS signal (tall building around or basement), drifting may happen. Check whether vibration happens around to trigger the accelerator.
No command reply	Make sure command format is correct. Vehicle may be in network blind area. Make sure SIM card is well inserted and has SMS servi

8. Full SMS Commands List

Query Commands

Functions	Command Format	Example
Version Inquiry	VERSION#	Device Reply Example: ID: ID number of the tracker IMEI: IMEI number of the tracker ICCID: The ICCID number of the SIM card in the tracker VERSION:The firmware version of the tracker
Parameter Inquiry	PARAM#	Device Reply Example： ID: ID number of the tracker IMEI:IMEI number of the ICCID:The ICCID number of the SIM card in the tracker APN:APN name,APN user,APN password, IP: Domain name and port number or IP address, port pumber MODE:Working mode;interval or starting time, upload interval SPEEDLIMIT:The overspeed threshold ANGLERPT: Data uploading angle CENTER: Center number of the tracker SOS: SOS1,SOS2,SOS3 GMT: Time zone
Status Inquiry	STATUS#	BATTERY: XX% (Built-in Battery Power Percent) INTERNET: CLOSED (No Network) FAILED (Connecting Network or Failure) SUCCESS (Connected to Network) NET: NONE (No GSM Signal),HIGH/MED/LOW (Signal Strength) 18 GPS: CLOSED(GPS Module Closed),FIXED,N(Positioned and satellite number),UNFIX,0(Not Positioned yet) SPEED: 30KM/H(The current speed of the target) SENSOR: ON/OFF (Sensor on or off), LEVEL: 3 (Sensitivity level 1-9) STATE: ARM (Arm or Disarm)
Alarms Parameters	ALARM#	ID: 19172012644(Device ID number) STATE: ARM(DISARM)(Fortified state of device) SPEED: ON(OFF);30km/h(speed limit); alarm ways SHIFT: ON(OFF);300m(shift limit);alarm ways VIBRATE: ON(OFF);3(sensitivity of sensor);alarm ways LOW BATTERY: ON(OFF);alarm ways TEARDOWN: ON(OFF);alarm ways

Functions	Command Format	Example
Latitude& Longitude Inquiry	WHERE#	LAT:N23.02930,LON:E114.32180,SPEED:0.00KM/H,DATETIME:2023-01-05 14:39:11
Map URL Inquiry	URL#	http://map.google.com?q=22.557868,113.935090<0.0km/h 0.0> <2023-01-05 14:39:11> IMEI: 354188047752402

Setting Commands

Functions	Command Format	Example
APN Setting	APN,APN Name, APN User, APN Password#	Example: APN,CMNET# (if no APN User & APN Password) APN,internet,internet,internet# (if with APN User & APN Password)
Server Setting	If set with Domain Name: SERVER,1,Domain,Port#	SERVER,1,d.micodus.net,7700#
	If set if IP: SERVER,0,IP,Port#	SERVER,0,47.254.77.28,7700#
Restore factory settings	FACTORY#	FACTORY OK
Restart device	RESTART#	RESTART OK
Internet Traffic Switch	TRAFFIC,ON#	OPEN TRAFFIC OK
	TRAFFIC,OFF#	CLOSE TRAFFIC OK
Set the angle upload	ANGLEREP,X,A,B#	Example: ANGLEREP,ON,30,3# (Means the tracker will send a data supplement when the angle change exceeds 30 degrees and lasts for 3 seconds) X=ON/OFF, default:ON; A=5~180 degrees, diversion angle degree, default: 30 degrees; B=2~5 seconds, detecting time, default: 3 seconds,
	ANGLEREP,OFF#	CANCEL UPLOAD ANGLE OK

Functions	Command Format	Example
Time Zone Setting	GMT,Time zone orientation,Whole Time Zone [,Half Time Zone]#	Example:GMT,E,8#(if no half time zone) GMT,W,9,30#(if has half time zone) NOTE: Parameter : E / W: 0 ~ 12; 0/15/30/45
Mileage Statistics	MILEAGE,A,B#	A=ON/OFF, On/Off mileage calculation, default: Off B=0~999999,Mileage initial value，unit: km； default: 0, mileage return to zero
	MIELEAGE#	Query current mileage
Add SOS Administrator Number	SOS,A,1st number, 2nd number, 3rd number#	Set 3 numbers at a time: SOS,A,13800138000,13800138001,13800138002# Set the first number separately: SOS,A,13800138000# Set the second number separately: SOS,A,,13800138001# Means to set 3rd number separately: SOS,A,,,13800138002#
Delete SOS Administrator Number	SOS,D,1st number, 2nd number, 3rd number# or SOS,D,1,2,3#	Directly delete the number: SOS,D,13800138000# Delete 1st number: SOS,D,1# Delete 2nd number: SOS,D,2# Delete the 2nd and 3rd number: SOS,D,2,3#
Change IMEI	IMEICHG, 354188046912460#	NEW IMEI No.: 354188046912460
Add Center Number	CENTER,password,A, center number#	Example: CENTER,888888,A,+8613800138000# Note: Please set up the center number with the country code as prefix!
Delete Center Number	CENTER,password,D#	Example: CENTER,888888,D#
Set the instruction password	PWD,password,ON#	Enable instruction password successfully!
	PWD,password,OFF#	Cancel instruction password successfully!
Change the instruction password	PWDCHG,[A],[B]#	A=old password，six digitals，digital range: 0-9，default：888888； B=new password，six digitals，digital range: 0-9
Reset password	RSTPWD,A#	A=ID Number, ID number of the device;
Data Upload Time Zone Setting	DATAGMT,Time zone orientation,Whole Time Zone[,Half Time Zone]#	DATAGMT,E,8# (if no half time zone) DATAGMT,W,9,30# (if has half time zone) NOTE: Parameter : E / W: 0 ~ 12; 0/15/30/45

Functions	Command Format	Example
Working Mode Setting	MODE,A,T1,T2#	A=1/2/3, 1: Tracking mode 2: Power saving mode 3: Hibernation mode; Default mode: 1 A=1 (For example: MODE,1,10,3600# means the tracker will work under mode 1, it will upload every 10s under moving status and 3600s under static status) T1: upload interval of GPS data in moving status, unit: second,10-3600s; default: 10s T2: upload interval of GPS data in static status, unit: second, 180-65535s; default: 3600s A=2 (For example: MODE,2,0800,1# means the tracker will work with power saving mode since the next 08:00am, and upload every 1 hour) T1: interval start time,format: HH:MM T2: time interval,range: 1 -72 unit: hour,default interval: 24hours A=3 (For example: MODE,3,0800,1# means the tracker will work with hibernation mode since the next 08:00am, and upload every 1 hour) T1: interval start time,format: HH:MM T2: time interval,range: 1 -72 unit: hour,default interval: 24hours NOTE: The difference between Mode 2 and Mode 3 is that under Mode 2 the device can be wake up by SMS, Call and light sensor, but under Mode 3 the device just can be wake up by light sensor!
Heartbeat Packet Upload	HBT,time#	Example: HBT,3# (Means the tracker will send hearbeat data package to server very 3min to keep the network connected) Time: 1-60min, default 3min
Sensor Sensitivity	SENLEVEL, sensitivity#	Example: SENLEVEL,4# (Means the shake sensor level is set to 4) A=1-9 NOTE: 1-9 is from week to strong vibration

Sleep Mode Setting	SLEEP#	NOTE: After set this sleep mode, the device will enter into sleep mode automatically when the device keep stationary status more than 5min.
	SLEEP,OFF#	CANEL SLEEP MODE OK
Voice Monitor	MONITOR,N#	Example: MONITOR,+8613366669999# (Means the tracker will make call to +8613366669999, and this number +8613366669999 can pick up the call to monitor the voice) N: Number for Voice Monitoring NOTE: 1. Please send this monitor command via the center number; 2. Any number can be set up to monitor the voice, the tracker will make a call to the number N and it will can pick up the call to monitor voice

Alarm Setting Commands

Functions	Command Format	Example
Vibration Alarm Setting	SENALM,A,M#	Example: SENALM,ON,2# (Means the vibration alarm already been enabled and the alarm message will be sent via Server, Sms and Call) A=ON/OFF, default: OFF; M=0/1/2, way of alarming, 0 :GPRS only,1: SMS+GPRS, 2: GPRS+SMS+phone call, default:1
	SENALM,OFF#	CANEL VIBRATE ALARM OK
Overspeed Alarm Setting	SPEED,A,B,M#	Example: SPEED,ON,120,1# (Means the speed limit is 120km/h and the alarm way is via SMS and Server) A=ON/OFF, open or close over speed alarm, default: OFF B=1~255(km/h), speed limit, default: 100(km/h); M=0/1/2, way of alarm, 0 : GPRS only, 1: SMS+GPRS, 2:GPRS+SMS+CALL, default: 1
	SPEED,OFF#	CANCEL OVERSPEED ALARM OK
Shift Alarm Setting	SHIFT,A,B,M#	Example: SHIFT,ON,100,1#(Means Setting 100 meters shift alarm range, when the ignition turned off, vehicle's 100 meters' shift will trigger the alarm and the alarm message will be sent via Server and SMS) A=ON/OFF; default:ON B=Shift Distance (Range: 100-9999m) M=0/1/2; way of alarm, 0 : SERVER only, 1: SERVER+SMS, 2: SERVER+SMS+CALL, default:1
	SHIFT,OFF#	CANCEL SHIFT ALARM OK

Low Battery Alarm Setting	BATALM,A,M#	Example: BATALM,ON,1# (Means the low battery alarm already been enabled and the alarm message will be sent via Server and SMS) A=ON/OFF,default: ON; M=0/1/2, way of alarming,0: SERVER only,1: SERVER+SMS, 2: SERVER+SMS+Call, default:1； NOTE: Once the battery level is below 20% device will alarm
	BATALM,OFF#	CANCEL LOW BATTERY ALARM OK
Disassemble Alarm Setting	TEARDOWN,A,M#	Example: TEARDOWN,ON,2#(Means the teardown alarm already been enabled and the alarm message will be sent via Server, SMS and Call) A=ON/OFF; default:ON M=0/1/2; way of alarm, 0 : SERVER only, 1: SERVER+SMS, 2: SERVER+SMS+CALL, default:1
	TEARDOWN,OFF#	CANCEL DISASSEMBLE ALARM OK

9.After-sale Contact Information

E-mail:support@micodus.com
Skype:MiCODUS

10. Download the APP

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