GPS-P: Microphone+ GPS

GPS automatic location unit integrated on portable TETRAPOL microphone

- **16 channels GPS receiver**
- **Extra low power consumption. Power supply direct from the radio.**
- **Fully compatible with TETRAPOL terminals (SIRDEE, ACROPOL, etc..)**
- **Microcontroller with remote functionality configuration.**
- **High fidelity Radiophone**
- **Location unit "plug and play", without vehicle installation.**

The GPS-P is a device integrated in a radiophone portable microphone SIRDEE TETRAPOL.

Versatile unit

The GPS-P devices offers two different functionalities:

- Use as radiophone with P.T.T. (Push To Talk) fully compatible with TETRAPOL terminal
- GPS location and transmission of the position data by the TETRAPOL network (SIRDEE in Spain and ACROPOL in France) of Interior Ministry, based on AVL Polling schema powered by Tetrapol

The GPS-P device follows a strict ergonomics criteria that allows a comfortable way of using.
The connection with the radio Terminal is made by a spiral cable that allows a high mobility level, when it's extended, but it's gathered perfectly when it is not in use.

The GPS-P device has a metallic subjection clamp which offers a great robustness and 360º orientation, this allows the device collocation at the user's shoulder

GPS-P Personal location unit

Maximum functionality

The GPS receiver included has 16 channels, high sensitivity, (-158dBm when following and −148dBm when acquiring) and extra low power consumption
The GPS antenna is integrated in the GPS-P device.
It is a helicoidally antenna which offers a omnidirectional signal reception.
This set, GPS receiver and omnidirectional antenna, offers the better warranty to obtain the pedestrians location in any situation, as much in open field as in city.

The GPS-P device uses a 8 bits microcontroller that includes all the necessary memory to work (Flash memory for Firmware, RAM memory for the volatile data and EEPROM for configuration file). This architecture allows to reduce to the maximum the size of the equipment.
In the other hand, this microcontroller uses an extra lower power consumption(<3mA), this feature allows to expand the useful life of battery.

The GPS-P device contemplates the different layers from communication protocols used by the High Disponibility SAIR platform from the Interior Ministry of Spain, or the LOXANE platform of FRANCE. Additionally it allows the customization of the operation parameters to work with external AVL platforms.

GPS-P: Microphone+ GPS

FEATURES

- 2 serial ports: one for communication with the GPS receiver and the other for communication with the radio Terminal
- Status control: 1 informative bicolour LED.
- Processor: PIC18LF6722, 8 bits @ 7,37MHz.
- Memory: 128KB FLASH, 4KB RAM, 1KB EEPROM.

GPS RECEIVER

General	GPS receiver in frequency L1 and codes C/A of 16 channels in continuous following and positioning at 1Hz.
High sensitivity	Following: < –158dBM Acquiring: < -148dBM
Exactitude	Position: 10 m CEP (50%) without S/A in horizontal plane. Sped: 0,1 m/s without S/A Time: 1 □s synchronizing at GPS time.
Signal acquisition	Cool starting in less than 42 s Normal starting in less than 33 s Hot starting in less than 5 s.
Signal re acquisition	0,1 s
Peak altitude	18.000 m
Maximum speed	1.854 Km/h
Acceleration	4g
Jerk	20 m/s3
GPS differential	Input of RTCM corrections SC104 differentials
Antenna GPS	Active at 3V3, omnidiretional

ELECTRICAL FEATURES

Power supply	Directly from the Radio Terminal SIRDEE.
Power supply voltage	3,3V
Consumption	Following: < 60mA @ 3V3 Idle: < 5mA @ 3V3
Battery	Back-up for reacquisition and memory saving.

AUDIO FEATURES

Speaker	Impedancy: 16 Ω Compatibility: compatible with SIRDEE portable radio. Volume control: integrated volume control high/low.
Microphone	Type: microphone electrets Compatibility: compatible with SIRDEE portable radio.
Additional audio output	By 3,5mm jack connector

AMBIENTAL FEATURES

Temperature	Working: -40ºC a 85ºC Storage: -40ºC a 85ºC.
Humidity:	5% to 95% without condensation at 60ºC.

PHYSICAL CHARACTERISTICS

Box	ABS black
Size	100*70*30 (without fixation clip)
Weight	150g
Fixation	Fixation clip with 360º adaptable
PPT pulser	integrated
Conectors	External: RJ45 for power supply + audio + data Internal: FTS105 for firmware loading
Connection cable with the Tetrapol terminal radio	Connector 1: Connector RJ45 Connector 2: Connector with fixation clip to the Terminal Radio TETRAPOL (includes pins with recoil springs). Cable: Cable is spiral of 30cm (in rest)

KNOSOS. GPS tracking systems, data transmission and Mobility.
Calle Álava, 140, Planta 7 – 08018 Barcelona (Spain)
Tel. (34) 933 208 305 Fax (34) 933 208 306
e-mail: knosos@knosos.es web: www.knosos.com /www.amper.es

KNOSOS