STP**9000**
HAND-PORTABLE

DIMENSIONS

Height: 133mm
Width: 61mm (54mm)
Depth: 32mm (Standard Battery)
Depth: 37.5mm (High Capacity Battery)

WEIGHT

With Standard Battery: 250g
With High Capacity Battery: 275g

FREQUENCY BANDS

344-400MHz – STP9035
380-430MHz – STP9038
407-473MHz – STP9040
806-870MHz – STP9080

POWER SUPPLY

7.4V (nominal) Lithium Polymer Battery Packs
Intelligent Reporting Batteries
1160mAh Standard Battery
1400mAh Mid Capacity Battery
1880mAh High Capacity Battery

RF PERFORMANCE

RF Power – MS Power Class 3L (1.8 Watts)
RF Power – customisable for:
    TMO/DMO/Repeater
    Adaptive Power Control Supported
    Receiver Class – A and B
    Receiver Static Sensitivity – 112dBm
    (– 115dBm typical)
    Receiver Dynamic Sensitivity – 103dBm
    (106dBm typical)

PRODUCT PERFORMANCE

Audio Power – >1 Watt
Operational Temperature (Conformance tested)
-20°C to +60°C
Operational Temperature (Min/Max)
-30°C to +70°C[4]
Storage Temperature -40°C to +85°C[1]
Dust & Water Protection to both IP67 and IP65
(waterproof, submersible, sprayproof and dustproof)
plus tested for complete 8hr shifts "in the pouring rain"
Shock, drop & vibration ETS 300 019
Salt fog: MIL810E 509.4(I); duration 24hr salt[5]
Salt water: submersion, rated at 1m depth for
30 minutes[5]

RFID PERFORMANCE:

Internal tag – HITAG S2048, short range, 125KHz,
ISO11784 and ISO11785 compliant
Range: 1 cm from back of individual
radio box pack
User accessible storage – 512 bits, passive
technology pre programmed (user can overwrite):
    32 bit unique identifier
    Serial number
    Hardware code
    TEI

PRODUCT OPTIONS

GPS
Bluetooth[6]
Man-Down Alarm[3]
DMO Repeater Type 1A
Air Interface Encryption Options
End to End Encryption Options
Wide Range of Languages supported
Micro SD card
Coloured bezels
STProtect – in-building tracking solution[6]
Smart card support

DISPLAY AND USER INTERFACE

Large 30x38mm Active LCD Area
Hi-Resolution display (176 x 220 pixels)
Transflective TFT Display, 262K colours
Normal, Large & Very Large Mode Text
16 Configurable Feature Activation Keys
Vibrate Call/message
Call History
Phone Book (2000 entries)
9900 Talkgroups in TMO/DMO
5000 Multi-Level Talkgroup Folders
Intelligent Search Facility
Quick Groups
Transmit Inhibit with on/off Status Messaging
Fixed & definable Scan Lists
Remaining Charge Time Indication
Missed Call Indicator
Intuitively-enhanced user interface
Choice of three user interface presentation styles
(Compatibility mode, Grid mode and List mode)
Haptic technology to enhance key tactility when
used with heavy gloves
Twist and zoom portrait image viewer
Auto-capitalisation during SDS text entry
Two context keys
Wake On Alarm

VOICE SERVICES

Full Duplex Calls (to MS and PABX/PSTN)
Half Duplex Calls (Individual and Group)
Priority Call
Emergency Call (Pre-emptive Priority)
Intelligent Alarm Reporting
Talking Party Identity
Calling Line Identity Presentation
DTMF Dialling
MSISDN Dialling
Abbreviated Dialling
Dynamic Group Number Assignment
Background (hidden) Groups
Ambience listening
Privacy mode
Whisper mode
Group focus
DMO Individual Call
DMO Group Call
DMO Emergency Call
DMO Intelligent Emergency Call
Independent Volume Control
Gateway pairing

DATA SERVICES AND APPLICATIONS

Status messaging (in TMO & DMO)
SDS Messaging (in TMO & DMO)
Auto – capitalisation on SDS text entry
Concatenated SDS messaging
Multi-slot packet data
Circuit mode data
TETRA paging and call out
WAP browsing
WAP shortcuts in SDS
WAP sites can be stored on Micro SD card
Battery status advised immediately on start-up

Short Data Applications (SDAs)
WAP sites, images, maps and text stored on MicroSD
card via Radio Manager2
Lone-Worker feature
Missed event application
User-expandable up to 4GB via Micro SD card

LOCATION BASED SERVICES

GPS integrated option -192dBw (-162dBm) tracking
sensitivity
Over-The-Air GPS reporting using the following protocols
• ETSI location standard reporting (LIP)
• NMEA & Sepura compact messaging
GPS-based compass
Enhanced indoor start-up and acquire through
'predictive ephemeris'
Bluetooth Location System compliant
STProtect
RFID tag equipped

SECURITY SERVICES

Authentication
Class 1, 2 and 3 and 3G TETRA Security
Air Interface Encryption
TEA1/2/3/4 Supported[2]
Smart Card E2E Encryption Support[2]
Embedded E2E Encryption Support[2]
In-Country E2E Encryption Algorithm Support[2]
Multiple E2E Algorithm Support[2]

DMO REPEATER SERVICES (LICENCE REQUIRED)

DMO Voice Repeated
DMO Tone Signalling Repeated
Group Status & SDS Repeated
Type 1A efficient operation over one RF Channel
Presence Signal Support
Emergency Call
Monitoring & Participation in Calls

CONNECTIVITY

TETRA voice and data
Bluetooth support for voice and data (PEI)
ETSI Bluetooth PTT extension command compliant
Bluetooth trusted device, auto re-connect and master
pairing
PEI Data via RS232,USB data cables or Bluetooth
Accessory connections via Rugged Accessory
Connector (RAC)
High speed interface for feature-rich audio accessories
Audio and data connection via facility connector
MicroSD card slot (4GB max)
Passive 125KHz RFID tag
STProtect

ACCESSORIES

Personal Charger
Vehicle DC Charger
1+1 Desktop Charger
6+6 Desktop Charger
12 and 24 Way Battery only Chargers
Wide Range of Antennas
Stud and Belt Attachments
Rugged Belt Clip
Rugged and Soft Leather Cases
Basic IP55 Remote Speaker Microphone
Advanced IP55 Remote Speaker Microphone
(with and without RF Antenna)
Hands-Free Kit
Personal Ear Pieces
Public Order Accessories
Semi-Covert Accessories
Feature-rich and basic car kits
Serial and USB Data Leads
4 & 8 Way Programming Pods
Two-way, battery-only, charger for vehicles

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1 – As defined in ETSI EN300 019-2-1 and EN300 019-2-2.
2 – Availability is subject to export licence.
3 – The Man-Down Alarm should in no way be regarded as a substitute for compliance with appropriate risk assessment and other safety procedures and practices.
    To enable Man-Down a Software License is also required.
4 – Operating at temperature extremes may limit some aspects of operational performance.
5 – 'Connector protector' must be enabled in customisation. An antenna, a battery and either an accessory or the STP9000 series RAC cover must be fitted. Lightly rinse in fresh water after salt
    exposure to prevent salt crystal build-up
6 – Bluetooth and STProtect hardware options cannot both be fitted at the same time.

Sepura's policy is to continually improve its products and services. The features and facilities described in this document were correct at publication, but are subject to change without notice.
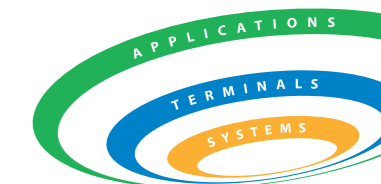
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STP**9000**
HAND-PORTABLE

The STP9000 is the flagship of a highly innovative series of TETRA hand-portable radios, designed for users who want the best. Waterproof, submersible, dust-proof and marine-hardened, the IP67-rated STP9000 provides the latest smart technology in a 'go anywhere' package.

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Going further in critical communications

APPLICATIONS
TERMINALS
SYSTEMS

STP9000 is a rugged TETRA HAND-PORTABLE

NAVI-KNOB™ OPERATION
In combination with the mode key, provides simple and quick access to talkgroups, user profile selection and status messaging as well as simply adjusting the volume.

BLUETOOTH MODULE
Allows interaction with a wide range of wireless accessories. Conforms with ETSI PTT command as extension of headset profile, thus allowing use of newly emerging rugged, professional Bluetooth-enabled accessories.

RFID TAG
Facilitates access control solutions, tracking of pool-issued radios and potential for integration with back-end systems.

LARGE TACTILE PRESS-TO-TALK KEY
Large, easy to find and glove-friendly.

MAN-DOWN PERSONAL SAFETY
Multi-dimensional motion sensing technology automatically provides man-down detection and summons assistance.

PRODUCT DESIGN
The STP9000 leverages the tough technology developed for Sepura's STP8X Intrinsically-Safe series to deliver a market-leading IP67 package, proven to perform in the most demanding operational environments.

EMERGENCY OPERATION
Easy to locate, protected from accidental operation, but simple to activate in a real emergency. Now with a "wake-on-alarm" feature allowing users to summons assistance even if the STP is switched off.

SMA ANTENNA CONNECTOR
Delivers 1.8 watts of RF power in TMO, DMO and Repeater Modes. Increases range, thus extending network and direct mode coverage.

MISSED EVENT INDICATOR
A blue LED indicates that a call / message has been missed. The soft key next to the LED can be configured to display a list of missed calls / messages.

LARGE, SUNLIGHT-VISIBLE, COLOUR DISPLAY
Featuring an enhanced user interface, which offers three presentation styles to suit user preferences. Dual illumination technology ensures screen clarity under all light conditions.

RUGGED ACCESSORY CONNECTOR
Ensures a reliable connection with a wide range of audio accessories.

ERGONOMIC KEYPAD
Large, well-spaced keys, enhanced by haptic technology, which allows the user to feel a key press, even through thick gloves.

POWERFUL AUDIO
Large loudspeaker delivers outstanding audio, even in the noisiest environments.

STPROTECT MODULE
An option which enables use of Sepura's STProtect indoor location and lone worker solution. Facilitates indoor tracking where GPS-based tracking is not possible.

BOTTOM CONNECTOR
Featuring Connector Protector™ technology to provide protection from corrosive salt water and salt fog.

- **Robust, 'tough technology'** inherited from state-of-the-art development for the STP8X ATEX/IECEX radio
- **Market-leading IP67** (submersible, waterproof and dustproof) rating
- High power RF and audio, with **improved full-duplex audio** experience
- Intuitive, enhanced UI, with **3 presentation styles** (Grid, List and Compatibility modes)
- **Integral RFID tag** allows rapid asset tracking of pool-issued radios
- **Fully integrated Bluetooth™** option
- Enhanced key tactility through **haptic-based technology**
- **Man-Down** automatically summons assistance

- **Wake-On-Alarm** activation
- **Micro-SD** memory card slot
- **End-to-End encryption** option
- **DMO Repeater ready** (frequency efficient Type 1A option) with Call Participation
- **"Smart" building blocks** - adding advanced WAP and MicroSD card functionality allows users to "build" smart solutions to meet operational challenges
- A wide range of **market-leading accessories**, designed for a wide range of public safety, industrial and other users
- Supported by Sepura's market-leading software tools, including **Radio Manager 2** which helps organisations to lower cost of ownership by making fleet re-programming easier

Highly innovative, designed for critical communication users who demand the very best TETRA radios

IP67 submersible   Bluetooth™   RFID   micro

Robustness – The STP9000 boasts an IP67 (submersible, waterproof and dustproof) environmental protection rating, which means that it will still function after having been submerged in up to 1m of water for up to 30 minutes. In addition, new Connector Protector technology provides **marine-hardened protection** against the corrosive damage that salt water and salt fog can cause to exposed connectors.

Improved ease of use – The STP9000 provides an enhanced user interface, which offers three different presentation styles, which users can select according to their personal preference:
- Compatibility mode allows existing Sepura users to be immediately familiar with the STP9000.
- Grid and List modes will appear familiar to new users who may be accustomed to user interfaces on smartphones or other GSM devices, rather than a radio.

These new presentation styles lower training costs for both new and existing Sepura users.

Smart keypad and display technology – Following detailed user feedback, Sepura has added 'haptic' technology to the STP9000. Haptics produce a physical movement of the radio, felt through the hand, which confirms to gloved users that the key press has been successful. In addition, the 'Twist and Zoom' feature uses smartphone technology to allow a portrait image to be zoomed to full-screen size, enabling the user to see full detail of an image, such as a missing person, as they rotate the radio. The feature also enables access to details concerning the image.

Resource and information management – Tracking radios, particularly in a pooled system, can be difficult, so the STP9000's **built-in RFID tag** will be of considerable benefit to many users. In addition, the micro SD card slot makes it easy to store and manage data, such as photos, maps, missing person information and hazardous chemical data.

Enhanced user safety – The STP9000 features a wide range of features to enhance user safety. In addition to lone-worker, Man-Down, enhanced GPS and STProtect capability, the **Wake-On-Alarm** feature, which enables the STP9000 to be switched on and make an emergency call by simply pressing the emergency button, also helps to protect users.

Reduced cost of ownership – The STP9000 is compatible **not only with all audio accessories**, batteries and chargers from Sepura's STP8000 hand-portable range, but also with its market-leading Radio Manager 2 fleet management tool and CMC encryption management suite - all factors which help organisations to maximise the value of existing investments.

Indoor location capability – An **STProtect module** can be optionally fitted within the radio. This is a key element of the STProtect complete indoor location and lone worker protection solution. In areas where GPS signals cannot penetrate, it allows organisations such as prisons, airports and industrial sites to track and protect lone workers, locate employees, control access to restricted areas and ensure pre-defined security patrol routes are being adhered to.

Smart Technology – Sepura has provided a host of "smart" features which allow organisations to maximise their efficiency and enhance their operations. These include:
Bluetooth functionality - by adding trusted device and master pairing features, the potential uses of Bluetooth have been widened considerably. Implementation of the ETSI PTT Bluetooth command as an extension of

the headset profile enables use of the newly-emerging range of rugged, professional, wireless accessories.

Short Data Applications - Short Data Applications (SDAs) allow the user to simply and intelligently interact with a back-end IT system. Built and deployed on Radio Manager 2, SDAs allow the automation of work flows, job allocation and remote control capabilities. They also allow the user to rapidly access a remote database. SDAs have been demonstrated to improve the effectiveness of users, thus saving organisations valuable time and money.

MicroSD card - Complete WAP sites can now be encrypted and stored on the MicroSD card conveniently and quickly via Radio Manager 2 (RM2). For the first time users can access up to 4GB of data, images and text, organised into a convenient and intuitive WAP site.

SDS text messages can now contain URL shortcuts that takes the user directly to data on the local WAP site stored on the SD card, or to a back-end WAP site accessed via TETRA. These powerful features allow the rapid dissemination of data to targeted users, such as missing person information.