



# STP8100

## HAND-PORTABLE

The STP8100 Hand-Portable combines **ruggedness** and high performance with a **streamlined user interface**. The radio is aimed at users who typically need little more than to adjust volume, select and send Status Messages and change their Talk Group.

### TOUGH

The STP8100 has been designed to perform in the most physically challenging environments where users demand ruggedness and durability. In addition, the radio offers **unparalleled water and dust resistance**.

### HIGH PERFORMANCE

The RF power is fully customisable up to **1.8 Watts** in TMO, DMO and as a **DMO Repeater**, delivering reliable communications when most needed, extending coverage beyond the reach of typical hand-portable radios.

The largest front-facing loudspeaker available in a TETRA hand-portable provides powerful, clear audio and alerting, even in the noisiest environments.

### FEATURE-RICH

The STP8100 boasts a comprehensive set of features including optional **GPS** and **Man-Down** functionality - both improving user safety, efficiency and reducing operational costs.

# THE **STP8100** IS A RUGGED TETRA HAND-PORTABLE

## EMERGENCY OPERATION

THE EMERGENCY KEY IS LOCATED ON THE TOP OF THE RADIO IN A RECESS BETWEEN THE NAVI-KNOB™ AND THE ANTENNA - FACILITATING EASE OF ACTIVATION AND ENHANCING USER SAFETY.

## NAVI-KNOB™ OPERATION

WHEN USED IN COMBINATION WITH THE MODE KEY, PROVIDES QUICK ACCESS TO TALKGROUPS, VOLUME ADJUSTMENTS, STATUS MESSAGES AND 'USER PROFILE SELECTION'.

## LARGE TACTILE PRESS-TO-TALK KEY

LOCATED ON THE SIDE OF THE RADIO IMMEDIATELY BELOW A SOFT KEY.

## RUGGED ACCESSORY CONNECTOR

WITH SECURE SCREW DOWN FEATURE TO ENSURE A RELIABLE CONNECTION FOR A COMPREHENSIVE RANGE OF AUDIO ACCESSORIES.

## ERGONOMIC KEYPAD

LARGE, WELL-SPACED KEYS, TO ENSURE EASY, ACCURATE, OPERATION - EVERY TIME.

## POWERFUL AUDIO

THE LARGE LOUDSPEAKER DELIVERS LOUD, CLEAR AUDIO, EVEN IN THE NOISIEST ENVIRONMENTS.

## MAN-DOWN PERSONAL SAFETY

MULTI-DIMENSIONAL MOTION SENSING TECHNOLOGY IS USED TO AUTOMATICALLY PROVIDE MAN DOWN DETECTION AND REPORTING.

## SMA ANTENNA CONNECTOR

DELIVERS 1.8 WATTS OF RF POWER IN TMO, DMO AND REPEATER MODES. INCREASES RANGE BY UP TO 20% WHEN COMPARED TO STANDARD TETRA HAND-HELDS, EXTENDING NETWORK AND DIRECT MODE COVERAGE.

## MISSED EVENT INDICATOR

A BLUE LED INDICATES THAT A CALL OR MESSAGE HAS BEEN MISSED. A SOFT KEY CAN BE CONFIGURED TO DISPLAY A LIST OF MISSED CALLS OR MESSAGES.

## LARGE COLOUR DISPLAY

THE LARGE CLEAR DISPLAY USES 'DUAL ILLUMINATION' TECHNOLOGY TO ENSURE SCREEN CLARITY UNDER ALL LIGHT CONDITIONS.

## FEATURE ACTIVATION KEYS

PROVIDE INSTANT ACCESS TO FEATURES VIA A SINGLE KEY PRESS - USED FOR RAPID NAVIGATION THROUGH THE USER MENU.

## DMO REPEATER OPTION

UNIQUE ON SEPURA HANDHELD, COVERT AND GATEWAY RADIOS. 'REPEATS' DIRECT MODE VOICE AND DATA TRAFFIC, EXTENDING GEOGRAPHICAL COMMUNICATION RANGE BETWEEN PARTICIPATING RADIOS.

## PRODUCT DESIGN\*

WITH IP55 CLASSIFICATION, AN INTERNAL METAL CHASSIS AND TOUGHENED PLASTIC CASING, THE STP8100 HAS BEEN DESIGNED TO PERFORM IN THE MOST DEMANDING OPERATIONAL ENVIRONMENTS.



Monotype®



TOUGH • HIGH PERFORMANCE • FEATURE RICH



Product is not actual size

## STP8100 HAND-PORTABLE:

- Rugged
- **High Power** RF and Audio
- Fully integrated, ultra-sensitive, GPS option
- Automatic Man-Down reporting option
- Fully integrated **Bluetooth™** option
- Micro-SD memory card slot
- End-to-End encryption requires only a software upgrade for activation<sup>2</sup>
- DMO Repeater ready (frequency efficient Type 1A option) with Call Participation.
- A wide range of market leading accessories
- Supported by Sepura's market-leading software tools, including Radio Manager

The STP8100 is a rugged TETRA hand-portable radio designed and built to meet industry standard IEC529 **IP55** for day to day use in some of the harshest working environments.

## FEATURE-RICH TETRA RADIOS WITH A LARGE, HIGH RESOLUTION COLOUR DISPLAYS

High resolution, a **wide viewing angle** and 262k colours represents one of the best performing displays in a TETRA hand-portable. Offering a large display area of 6 lines of 24 characters, text can be displayed in Large (double normal size) or **Very Large Mode** (approximately four times normal size) to give better legibility.

The User Interface (UI) of the STP8100 is common to all other Sepura hand-held and vehicle radios. By employing the same easy to use, **quick access menu system**, training costs can be substantially reduced and users can move easily between radio types during their working day.

The STP8100 has been specifically designed to provide easy access to the features of the radio with the minimum of key presses.

## AT THE FOREFRONT OF USER SAFETY

The fully integrated **GPS** receiver is capable of processing extremely low-strength signals meaning that 'clear sight of sky' is no longer essential and accurate positioning is available in many buildings and urban canyons.

Extending the standard position reporting, the STP8100 can send location information when the Emergency Call, Lone Worker or Man-Down alert is initiated. The **Man-Down** reporting option uses multi-dimensional, motion sensing technology to monitor both the **orientation** and **motion** of the radio user. If certain parameters are exceeded, Man-Down functionality will automatically place the radio into the Emergency Mode generating an alert, complete with location report directed to a predefined address.

This technology enables control rooms to track the movement of staff and to be automatically alerted in the case of a field worker becoming incapacitated.

## SMART THINKING

Application support to and from control centres, databases and intranets can be achieved using the efficient Sepura **Short Data Applications**. The STP8100 can send and receive information using multi-slot packet data, circuit data, Status or SDS services.

To support these applications and offer users greater flexibility, a standard Micro SD Card can be inserted to increase memory, up to 32GB.

For example, photos, maps and records of the location of hazardous chemical data can all be stored on the memory card. As this is a removable industry standard formatted card, it is easy to manage this data and update it using standard PCs and PDAs.

## STP8100 HAND-PORTABLE CONNECTIVITY

**Bluetooth** connectivity is optionally available, allowing commercially available devices including rugged headsets, personal computers, PDAs and beacon location systems, to be wirelessly linked with the STP8100.

The STP8100 audio connector supports a comprehensive range of conventional wired accessories for data and voice functions. This rugged screw-down feature is designed for continued, reliable operation.



# STP8100

## 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

299-344MHz – STP8130  
 344-400MHz – STP8135  
 380-430MHz – STP8138  
 407-473MHz – STP8140  
 806-870MHz – STP8180

### POWER SUPPLY

7.4V (nominal) Lithium Polymer Battery Packs  
 Intelligent Reporting Batteries  
 1260mAh 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/REP  
 Adaptive Power Control Supported  
 Receiver Class – A and B  
 Receiver Static Sensitivity -112dBm  
 Receiver Dynamic Sensitivity -103dBm

### PRODUCT PERFORMANCE

Operational Temperature (Conformance tested)  
 -20°C to +60°C  
 Operational Temperature (Min/Max)  
 -30°C to +70°C<sup>6</sup>  
 Storage Temperature -40°C to +85°C<sup>1</sup>  
 Dust & Water Protection IP55  
 Shock, Drop & Vibration ETS 300 019

### PRODUCT OPTIONS

GPS  
 Bluetooth  
 Man-Down Alarm<sup>4</sup>  
 DMO Repeater Type 1A  
 Air Interface Encryption Options  
 End to End Encryption Options (including  
 Smart Card support)  
 Wide Range of Languages

### 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  
 5 Configurable Feature Activation Keys  
 Vibrate Call/message  
 Call History  
 Telephone/Radio Phone Book (2000 entries)  
 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  
 Independent Volume Control

### VOICE SERVICES

Full Duplex Calls (to MS and PABX/PSTN)<sup>3</sup>  
 Half Duplex Calls (Individual and Group)<sup>3</sup>  
 Priority Call  
 Emergency Call (Pre-emptive Priority)  
 Intelligent Alarm Reporting  
 Talking Party Identity  
 Calling Line Identity Presentation  
 DTMF dialling (from address book)<sup>3</sup>  
 Dynamic Group Number Assignment  
 Background (hidden) Groups  
 DMO Individual Call<sup>3</sup>  
 DMO Group Call  
 DMO Emergency Call  
 DMO Intelligent Emergency Call

### DATA SERVICES AND APPLICATIONS

Status Messaging (in TMO & DMO)  
 SDS Messaging (in TMO & DMO)<sup>5</sup>  
 Concatenated SDS Messaging  
 Multi-slot Packet Data  
 Circuit Mode Data  
 TETRA Pager and Call Out  
 Short Data Applications<sup>5</sup>  
 Image & Map Storage on Memory Card  
 Lone Worker Feature  
 Missed Event Application

### LOCATION BASED SERVICES

GPS Integrated Option  
 -190dBw (-160dBm) Tracking Sensitivity  
 GPS Based Compass  
 Over the Air GPS reporting using the following  
 protocols:  
 • ETSI Location Standard Reporting (LIP)  
 • NMEA &  
 • Sepura Compact Message  
 • Bluetooth Location System

### SECURITY SERVICES

Authentication  
 Class 1, 2 and 3 TETRA Security  
 Air Interface Encryption  
 TEA1/2/3/4 Supported<sup>2</sup>  
 Smart Card E2E Encryption Support<sup>2</sup>  
 Embedded E2E Encryption Support<sup>2</sup>  
 Indigenous E2E Encryption Algorithm Support<sup>2</sup>  
 Multiple E2E Algorithm support<sup>2</sup>

### DMO REPEATER SERVICES (LICENCE REQUIRED)

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

### CONNECTIVITY

TETRA V+D  
 Bluetooth Support for Voice and Data (PEI)  
 PEI Data via RS232 and USB Data Cables  
 Audio Connections via Rugged Accessory  
 Connector  
 High Speed Interface for Feature-rich Audio  
 Accessories  
 Audio and Data Connection via Facility  
 Connector  
 Micro SD Card Slot

### 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 Remote Speaker Microphone  
 Hands-Free Kit  
 Personal Ear Pieces  
 Public Order Accessories  
 Semi-Covert Accessories  
 Feature-rich Car Kit  
 Serial and USB Data Leads  
 4 & 8 Way Programming Pods

1 – as defined in ETSI EN300 019-2-1 and EN300 019-2-2

2 – availability is subject to export licence.

3 – selectable from phonebook and incoming call list.

4 – 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.

5 – entering text is not possible on Korean or Chinese language variants.

6- operating at temperature extremes may limit some aspects of operational performance

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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