



THE NEW STP8X

INTRINSICALLY-SAFE
HAND-PORTABLES

The two radios in the STP8X series form the foundation of Sepura's **market-leading** portfolio of Intrinsically-Safe (IS) TETRA solutions. Comprising full-keypad and reduced-keypad variants, the series offers an impressive array of features and benefits and a full range of accessories. Combined with the fact that both variants meet the highly demanding v6 of the IECEx/ATEX standard, this means that the STP8X series meets user requirements across a wide range of highly demanding sectors.

User safety, robustness and ease of use are the key factors in the design of the STP8X series. It therefore offers an IP67 (dustproof, waterproof and submersible) environmental protection rating, loud, clear audio, a choice of intuitive user interfaces and an extremely tactile keypad.

The full-keypad variant is designed to meet the needs of users who need swift and easy access to a full set of functionality. The reduced keypad option has the same level of functionality, but is targeted primarily at users who frequently need to use the radio with heavily-gloved hands but still need easy, safe and direct access to specific functions.

Worldwide, the STP8X has proven its worth in sectors as diverse as fire and rescue, open-cast mining, petro-chemicals, airports, policing and the military.

RUGGED DESIGN

The STP8X offers unrivalled levels of ruggedness and robustness. Its IP67 rating means that it is able to withstand submersion in up to 1m of water for 30 minutes and it is completely dustproof. Its suitability for the harshest and most challenging of environments is considerably enhanced by the fact that it meets the new v6 of the IECEx/ATEX standards. Version 6 is the most rigorous testing regime to date for Intrinsically-Safe radios, demanding that the product is capable of withstanding being heated to 80°C at 90% relative humidity for 28 days, followed by being rapidly chilled to between -25°C and -30°C for 24 hours (to attempt to induce brittleness). Immediately on emerging from the cold chamber, it is then impacted and drop tested and submitted for a formal IP test for both liquid and vacuum-assisted dust ingress, in order to check that the product integrity has not been breached.

EASE OF USE

The STP8X series features an enhanced user interface. This offers three different presentation styles, which users can select according to their personal preference or operational requirements. Compatibility mode allows existing Sepura users to be immediately familiar with the STP8X, whilst Grid and List modes will appear familiar to new users who may be more accustomed to user interfaces on smartphones or other GSM devices. This choice of user interface helps to minimise training costs.

Both variants in the series also feature a highly-tactile keypad, which is designed for use with heavily-gloved hands. The reduced-keypad version is specifically intended for such users who require only swift access to specific functions.

The inclusion of Bluetooth connectivity in the STP8X enables users to connect easily and wirelessly to suitable peripheral devices and accessories. This minimises the use of wires and cables and makes it ideal for users, such as those on oil rigs or in manufacturing environments, who are frequently close to moving machinery.

In addition, the "Twist and Zoom" feature uses smartphone technology to allow a portrait image (stored on a Micro SD card) to be zoomed to full-screen size, allowing the user to see full detail of an image as they rotate the radio.

LOUD AND CLEAR

Clear communication is fundamental to user safety across many sectors. The STP8X is the loudest TETRA Intrinsically-Safe radio on the market. Together with its unrivalled clarity of audio, achieved through its award-winning innovative hardware and software developments, the STP8X enables users to communicate quickly and efficiently in noisy environments where workers use, for example, heavy machinery and protective headgear and clothing.

A RANGE OF SOLUTIONS

The STP8X is part of an overall range of Sepura IS solutions. Also includes an extensive range of audio accessories which have been specifically designed to meet the communication and operating requirements of the many sectors which make use of IS equipment. These also, where appropriate, offer IP67 environmental protection and help the STP8X radios to deliver their outstanding full- and half-duplex audio quality in a range of environments.

SCREEN LEGIBILITY

Crystal-clear clarity is fundamental when operating in demanding environments. The large, clear, hi-resolution display utilises "dual illumination" technology to ensure screen clarity under all light conditions, including harsh sunlight.

LONG BATTERY LIFE

With users frequently working long shifts and making significant numbers of calls, the long battery life that the STP8X offers is a key benefit in many sectors.

USER SAFETY

The STP8X offers the most advanced Man-Down solution in the TETRA IS market, with motion and tilt-monitoring as well as both a local alarm and over-the-air alerting. This capability is backed up by an integrated GPS receiver, which enables organisations to quickly locate personnel, ensuring their safety.

DATA CAPABILITIES

Users of IS radios often require the ability to interact or communicate automatically with a variety of other systems, particularly those at the back-end of an operation. The growing range of Sepura radio applications, including use of WAP and SDS technologies, enables automated job allocation or database look-ups for hazardous chemical data, for example. Users are also able to rapidly review data stored actually on the radio via its removable Micro SD card option.

INFORMATION SECURITY

Air Interface and "End-to-End" (E2E) encryption options on the STP8X offer protection against eavesdropping and ensure the confidentiality of sensitive operational information.

FLEET INTEGRATION

The STP8X is fully compatible with Radio Manager 2, Sepura's market-leading fleet management tool, thus reducing the total cost of ownership and allowing users to manage their fleets efficiently.

RUGGED DESIGN • QUALITY AUDIO • EASY TO USE



Product is not actual size

ACCESSORIES RANGE

The STP8X is supported by a comprehensive range of approved IS accessories which are designed to ensure safe and reliable operation and the loud, clear audio that is so vital in many hazardous environments. The range allows users to tailor their solution to meet their own specific requirements.

HOT SWAP ACCESSORIES

The STP8X RSM and PTT support a hot swap Nexus interface. Sepura approved and certified Nexus based Headsets can be attached to or removed (Hot Swapped) from, the RSM*† or PTT*† whilst in a dust or gas hazardous environment.

STP8X ACCESSORIES

A selection of the wide-ranging portfolio of accessories for the STP8X series:



✔ **HOT SWAP**

STP8X Heavy Duty Headset (attaches to RSM or PTT)



✔ **HOT SWAP**

STP8X Heavy Duty Clip-on Helmet Headset (attaches to RSM or PTT)



✔ **HOT SWAP**

STP8X Lightweight Boom Headset (attaches to RSM or PTT)



STP8X Advanced Remote Speaker Mic (RSM)*



STP8X Large button PTT*



✔ **HOT SWAP**

STP8X Skull Mic Headset (attaches to RSM or PTT)



✔ **HOT SWAP**

STP8X Throat Mic Headset (attaches to RSM or PTT)

*Peltor interface variant also available. Please check latest IECEx/ATEX certificates for approved Peltor headsets.

†Accessories connected directly to the STP8X RuSC connector, such as the RSM and PTT, cannot be attached or removed in a hazardous environment



STP8X

INTRINSICALLY-SAFE HAND-PORTABLE

INTERNATIONAL IECEx SPECIFICATIONS V6

Gas Environment = Ex ib IIC T4 Gb
($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$)

- Protection by Intrinsic Safety: Ex ib (1 countable fault)
- Gas Group: IIC (and all lower groups IIB and IIA)
- Temperature Class: T4 (135°C (max internal surface temp) and all lower groups T3, T2 and T1)
- Equipment Protection Level: Gb (Gas Zone 1 and 2)
- ($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$) identifies that the product achieved all certification conditions whilst the ambient temperature varied between these temperature extremes

Dust Environment = Ex ib IIIC T90°C Db
($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$)

- Protection by Intrinsic Safety: Ex ib (one countable fault)
- Dust Group: IIIC (conductive dust and all lower groups IIB and IIIA)
- Temperature: 90°C (maximum temperature case could reach)
- Equipment Protection Level: Db (Dust Zone 21 and 22)
- Enclosure rated to IP6x (Dust tight enclosure)
- ($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$) identifies that the product achieved all certification conditions whilst the ambient temperature varied between these temperature extremes

ATEX SPECIFICATIONS V6

Gas Environment = Ex II 2G Ex ib IIC T4 Gb
($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$)

- Equipment Group: II
- Equipment Category: 2 (Suitable for use in Gas Zones 1 & 2)
- Protection by Intrinsic Safety: Ex ib (1 countable fault)
- Gas Group: IIC (Hydrogen and the lower classes including: IIB – Ethylene; and IIA – Propane)
- Temperature Class: T4 (135°C (max internal surface temp) and all lower groups T3, T2 and T1)
- Equipment Protection Level: Gb (Gas Zones 1 and 2)
- ($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$) identifies that the product achieved all certification conditions whilst the ambient temperature varied between these temperature extremes

Dust Environment = Ex II 2D Ex ib IIIC T90°C
($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$) Db IP6x

- Equipment Group: II
- Equipment Category: 2 (suitable for use in Zone 21 and 22)
- Protection by Intrinsic Safety: Ex ib (1 countable fault)
- Dust Group: IIIC (conductive dust and all lower groups IIB and IIIA)
- Temperature: 90°C (maximum temperature case could reach i.e. the lower this number the better)
- Equipment Protection Level: Db
- Enclosure rated to IP6x (Dust tight enclosure)
- ($-20^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$) identifies that the product achieved all certification conditions whilst the ambient temperature varied between these temperature extremes

DIMENSIONS

Height: 139mm Depth: 44mm
Width: 61mm/54mm Weight: \approx 338g

FREQUENCY BANDS

380-430MHz – STP8X038 (full keypad)
STP8X138 (reduced keypad)
407-473MHz – STP8X040 (full keypad)
STP8X140 (reduced keypad)

POWER SUPPLY

7.4V (nominal) Lithium Polymer Battery Pack
Intelligent Reporting Battery
1400mAh Battery

RF PERFORMANCE

RF Power – MS Power Class 4 (1W)
RF Power – customisable for TMO/DMO/REP
Adaptive Power Control Supported
Receiver Class – A and B
Receiver Static Sensitivity -112dBm
(-115dBm typical)
Receiver Dynamic Sensitivity -103dBm
(-106dBm typical)

PRODUCT PERFORMANCE

Voice Audio 1 Watt⁴
Operational Temperature -20°C to +55°C
Storage Temperature -40° to +85°C¹
Dust & Water Protection IP67 (dustproof,
waterproof and submersible)
Shock, Drop & Vibration ETS 300 019

PRODUCT OPTIONS

Bluetooth
GPS
Micro SD Card (Up to 4Gb supported)
Man-Down Alarm²
DMO Repeater Type 1A
Air Interface Encryption Options
End to End Encryption Options
Wide Range of Languages and Keymats supported⁷

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 Soft Keys (full-keypad)/
7 Configurable Soft Keys (reduced-keypad)
(+ Emergency key)
2 Context Keys
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
Large Tactile Keypad
Intuitively-enhanced user interface
Choice of three user interface presentation
styles (Compatibility mode, List mode and
Grid mode)

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 Dialling⁵
MSISDN Dialling⁵
DTMF Post Dial Tone Entry (full-keypad version only)
Dynamic Group Number Assignment
Background (hidden) Groups
DMO Individual Call
DMO Group Call
DMO Emergency Call
DMO Intelligent Emergency Call
TMO/DMO Independent Volume Control
Ambiance Listening
Privacy Mode
Whisper Mode
Group Focus

DATA SERVICES AND APPLICATIONS

Status Messaging (in TMO & DMO)⁵
SDS Messaging (in TMO & DMO)⁵
Concatenated SDS Messaging⁵
Multi-slot Packet Data
TETRA Pager and Call Out
WAP Browsing
Radio Applications
Image & Map Storage on Memory Card
Lone Worker Feature
Missed Event Application, indicator and soft key
Auto-capitalisation on SDS text entry (full-keypad
version only)
Circuit mode data

LOCATION BASED SERVICES

GPS Integrated Option
GPS Based Compass
Bluetooth location system compliant
Over The Air GPS reporting using the
following protocols:
• ETSI Location Standard Reporting (LIP)
• NMEA
• Sepura Compact Messaging

SECURITY SERVICES

Authentication
Class 1, 2 and 3 TETRA Security
Air Interface Encryption
TEA1/2/3/4 Supported²
SMART Card E2E Encryption Support²
BOS and Secra smart card support²
E2E Encryption Support²

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

ACCESSORIES

Klick-Fast Stud & Beltclip Attachments
Heavy-Duty Leather Case and Leather Holster
STP8X Heavy Duty Headset
STP8X Heavy Duty Helmet Clip-on Headset
STP8X Lightweight Boom Headset
STP8X Skull Mic
STP8X Advanced Remote Speaker Mic⁶
STP8X Large button PTT⁶
STP8X Throat Mic Headset
STP8X Lightweight boom headset with small in-line PTT
STP8X Scorpion clip-on boom headset
USB Data Lead
1-way or multi-way desk-top charger
12V / 24V DC in-vehicle charger, with remote option

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 – Using internal STP8X speaker

5 – Reduced-keypad variant uses Sepura pseudo keyboard text entry

6 – Pellor interface variant also available

7 – Reduced-keypad version supports multiple languages on one keymat. Full-keypad version supports multiple languages and localised keymats

Sepura's policy is to continually improve its products and services. The specifications, features and facilities described in this document are preliminary, they were correct at publication, but are subject to change without notice.