

SRG3900

MOBILE RADIO

SIZE AND WEIGHT

TRANSCIVER

980g, 177mm x 50mm x 110mm

SEPURA COLOUR CONSOLE (SCC1)

220g, 185mm x 58mm x 33mm

HANDSET-BASED CONSOLE (HBC2)

225g, 69mm x 162mm x 28mm

FREQUENCY BANDS

344 - 400MHz

380 - 430MHz

407 - 473MHz

806 - 870MHz

POWER SUPPLY

10.8 to 15.6V DC, typical 13.8V DC

RF PERFORMANCE

10 watt RF power output (Class 2)

RF power adjustable in steps of 5dB, independently

adjustable for TMO & DMO operations

Adaptive power control supported

Receiver static sensitivity -112dBm (-116dBm typical)

Receiver dynamic sensitivity -103dBm (-107dBm typical)

Receiver class A & B

AUDIO

Rated audio output - 8 W @1kHz into 4 Ohms

Dual speaker configuration capable of driving two 4 Ohm speakers

Fixed level line-out audio option enabling broadcast & recording support

2x1W of additional audio drive via speaker mics or

handsets attached to up to two SCC1 colour consoles

Line-in audio for third-party console interface support

Five independent volume controls for loudspeaker & audio accessories^{2,4}

Three audio accessories per console

ENVIRONMENTAL

Dust & water protection to IEC529 IP54

ETS 300 019 -2-5 drop, vibration & humidity

Storage temperature -40°C to 85°C⁵

Operating temperature -30°C to 70°C⁶

IP67 radio marine enclosure option

IP67 SCC2 console option

PRODUCT OPTIONS

GPS/Glonass location tracking

DMO repeater type 1A (licence enabled)

DMO gateway (licence enabled)

Air Interface encryption options

End-to-end encryption options

Wide range of languages supported including Cyrillic,

Chinese, Korean & Arabic

Coloured bezels (on SCC1/SCC2 & HBC2 consoles)

Smart card support

Virtual console support (licence enabled)

Line in/out audio support (licence enabled)

Consoles: SCC1, SCC2 (IP67), HBC2 & Virtual Console

USER INTERFACE

Normal, large & very large mode text⁴

Night mode

262k colours plus monochrome support

Dual remote console support

Call history

Phone book (2000 entries)

9900 talkgroups in TMO/DMO

5000 multi-level talkgroup folders

Intelligent search facility

Up to 50 dynamic group number assignment (DGNA) with support for lifetime timers

Efficient management of talkgroups using up to 5000

folders in a multilevel folder structure with up to 75

talkgroups per folder

Talkgroup folder management via PEI & SDS

Priority group scanning with support for background groups

Fast talkgroup access supports up to five TMO and five DMO groups

Query selected talkgroup

Macro keys: a single key can perform a sequence of complex functions

Quick groups

Transmit inhibit with on/off status messaging

Fixed & definable scan lists

Missed call indicator

Intuitively-enhanced user interface

Choice of three user interface presentation styles

Auto-capitalisation during SDS text entry

Two context keys

User profiles

Sepura Picture Message

Smart menu

CONSOLE: SCC1

High resolution 320 x 240 pixels QVGA TFT display

Large 57.6mm x 43.2mm active area

Three accessories supported: one front-mounted & two

rear-mounted audio accessories

Front-mounted connector for data & configuration via

Radio Manager

AMPS, on-dash & single DIN mount options

Fully compatible with existing accessories, cables & legacy

mounting options

Common enhanced Sepura user interface

Two context-sensitive keys⁴

Missed event LED & soft key

Tri-colour status LED

16 configurable soft keys

Dual remote console support, each up to 30m from the

transceiver

IP54 certified; IP67 variant available⁹

Optional coloured keymat bezels

CONSOLE: HBC2

Large high resolution 320x240 pixels QVGA 2.2" TFT display

Hands-free mic & PTT option

Fist mic mode & handset installation modes

Magnetic cradle, AMPS mountable

Fully compatible with existing console cables

Common enhanced Sepura user interface

Two context-sensitive keys⁴

Missed event LED & soft key

Tri-colour status LED

16 configurable soft keys

Dual remote console support, <30m from the transceiver

IP55 certified

Optional coloured keymat bezels

Also available: virtual console, embedded car console,

handlebar control unit & air-approved console

VOICE SERVICES

Full-duplex calls (to MS & PABX/PSTN)

Half-duplex calls (individual & 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

Status messaging (in TMO & DMO)

SDS messaging (in TMO & DMO)

SDS store & forward

SDS via DMO gateway

Auto-capitalisation on SDS text entry

Concatenated SDS messaging

Multi-slot packet data

Circuit mode data

TETRA paging & call out

WAP browsing

WAP shortcuts in SDS

Battery status advised immediately on start-up

Short data applications (SDAs)

Lone Worker feature

Missed event application

30 quick status messages

LOCATION-BASED SERVICES (OPTIONAL)

34-channel concurrent GPS/GLONASS receiver

SBAS differential GPS support

-191dBW (-161dBm) acquisition sensitivity

-191dBW (-161dBm) tracking sensitivity

Over-The-Air GPS reporting using the following protocols:

- ETSI location standard reporting (LIP)

- NMEA & Sepura compact messaging

Enhanced indoor start-up & acquire through 'predictive ephemeris'

Active anti-jamming of Continuous Wave (CW) jammers

Multipath mitigation

GPS-based compass

SECURITY SERVICES

Authentication: mutual and SwMI initiated

TMO & DMO Air Interface encryption support: TEA1, TEA2,

TEA3 & TEA4³

Trunked mode class 1, 2, 3 & 3G TETRA security

Direct mode DM-2C support

PIN & PUK entry temporary enable and disable

Fully integrated E2E hardware with tamper protection

Public & private algorithm E2E support enabled via

software upgrade³

Integral SIM connector for smart card-based

E2EE options⁵

Optional remote smart card reader

Dual E2EE algorithm support with dynamic switching

of active algorithm³

Software authenticity & protection employing

digital signature

GATEWAY SERVICES (LICENCE REQUIRED)

Group voice call between DMO & TMO

Individual voice calls between DMO & TMO

Emergency group call from DMO to TMO & TMO to DMO

Pre-emption (in either direction) of existing call

SDS messaging in either direction

Configurable routing of SDS messages to console or PEI

intelligent handling of point to point calls & SDS messages

whilst operating as a gateway

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 & data

PEI Data via RS232, or USB data cables direct to radio or

via SCC1

Accessory connections via consoles and AIU

SASI high speed interface for feature-rich audio

accessories (on SCC1 & SCC2)

Digital I/O lines (3 in, 1 out), expandable via AIU

Line level audio connection

Remote control via status-triggered functions

1 - Further information available on request

2 - Accessories connected at the rear of a console use the same volume level

3 - Functionality is subject to an export licence

4 - Display mode and audio support will change when the legacy console, HBC or Virtual Console are connected

5 - As defined in ETSI EN300 019-2-1 and EN300 019-2-2

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

7 - Speakers to be wired in parallel by installer

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.

SRG3900

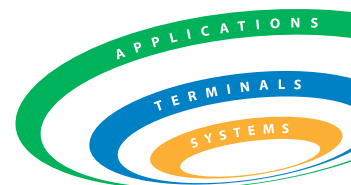
MOBILE RADIO



A fully-featured TETRA mobile radio, the SRG3900 offers a wide range of installation options, dual remote console support, an intuitive user interface, missed event notifications and short data application (SDA) support.

sepura

Going further in critical communications



SRG3900 CONSOLE OPTIONS



HANDSET BASED CONSOLE



SCC BLACK BEZEL



SCC BLUE BEZEL

Extends radio coverage

A 10W RF TETRA engine, and the most proven gateway and repeater technology on the market, extends communication into areas previously beyond network coverage.

Improved ease of use

With three presentation styles – grid, list and compatibility mode – the SRG3900 uses the same enhanced user interface as the STP9000 and STP8X, reducing the need for retraining.

Customer-defined smart menus give intuitive access to hundreds of soft key features. Related functions can be grouped together, allowing features to be activated quickly with no need to remember complicated key combinations.

Reduced cost of ownership

The SRG3900's compatibility with all accessories from the SRG3500 range, the Radio Manager 2 fleet management tool and the CMC encryption management suite allows you to maximise the value of existing investments.

Short Data Applications (SDAs)

Built and deployed on Radio Manager 2, SDAs permit the user to simply and intelligently interact with a back-end IT system, allowing the automation of work flows, job allocation and remote control.

WAP and SDS URL shortcuts

SDS text messages now support URL shortcuts that allow the user to browse images and text, organised into a convenient and intuitive WAP site. Accessed over the TETRA network, these sites allow the rapid dissemination of data, such as missing person information.

Sepura Picture Message

Sepura Picture Message allows the radio to securely receive images and any associated text, permitting simultaneous distribution to multiple user groups via SDS.

GPS and Glonass satellite tracking

Uniquely, the SRG3900 integral GPS module tracks both GPS satellites and the Glonass satellite network. Together with the latest **SBAS differential GPS support** and **CW anti-jamming** technology, this provides a **greater degree of accuracy and security**, and allows precise location of resources.

When a team is operating on DMO with the SRG3900 functioning as a network Gateway, it will automatically translate any received GPS location messages so that DMO users of Sepura handhelds can continue to be tracked.

Macro keys

Allow a complex sequence of functions to be combined and activated at the touch of a single key.

Status triggered functions

Facilitate the remote control of SRG3900 over-the-air, from an authorised Sepura radio or backend control system.

Network Performance monitoring

The SRG3900 can be remotely interrogated for a report on the signal level, location, neighbour cells and data latency of a TETRA network, allowing monitoring and auditing of the network service quality.

Enhanced user safety

Fully-configurable emergency call behaviour includes live microphone, emergency status messaging and GPS/Glonass location reporting options.

Flexible installation

Multiple installation options are supported, allowing tailored use in a variety of vehicles and scenarios:

- **Transceiver only** for remote RCU/SCADA telemetry operation.

› Powerful

- Class-leading 10 Watts RF power
- Gateway licence-enabled option brings network coverage to groups of DMO users
- Repeater licence-enabled option extends off-network coverage
- Loud, clear audio: 8W audio drive, allowing two speakers to be driven⁷ plus up to 2x1W of additional audio drive available via speaker mics or speaker handsets attached to up to two SCC1 colour consoles

› Flexible

- Backwards compatible with existing Sepura mobile installations
- Multiple installation options: transceiver only, dual console, virtual console, handset-based console
- Audio presentation options support PA broadcast, local recording and third-party radio equipment
- Additional features available via feature licence codes

› Intelligent

- Short data application and WAP support
- Night mode for easy, low-glare viewing
- Over-the-air remote control via Sepura status-triggered functions
- Macro key support
- Performance monitoring feature facilitates network analysis
- Combined GPS, Glonass tracking with differential GPS and 'predictive ephemeris' support
- Variety of encryption options



VIRTUAL CONSOLE SCREEN

- **Single console** for car-, motorcycle-, marine-, desk-, air-1 and rack-based solutions.
- **Dual console** for larger vehicles and train¹ installations that require multiple control points, each of which can be mounted up to 30m away from the transceiver. With automatic screen resolution and colour adjustment to cater for differing consoles⁴

Control heads to suit your needs Sepura offers the widest range of control heads on the market, each designed to match varying user needs.

- SCC1: high-resolution colour console, IP54 certified, AMPS or DIN slot mounted
- SCC2: high-resolution colour console, IP67 certified, dustproof and waterproof
- HBC2: space-saving, high-resolution colour handset-based console, IP55 certified
- HCU: IP67 certified handlebar mounted control unit
- Virtual console: integrates SRG3900 control from a PC/tablet running Microsoft Windows
- Air approved consoles¹
- Embedded car consoles

Specialist options

An international market leader within the TETRA policing, security and surveillance markets, Sepura has created a number of specialist options maximising the potential of the SRG for these sectors:

- Full and semi-covert installation solutions
- Suitcase-transportable variants

- Remote crypto smart-card reader
- Tamper-proof security processors and a range of software licence-enabled E2E encryption options³

Direct mode gateway

Extending network coverage to DMO teams.

Improved coverage

Links groups of users operating off-network in direct mode with the trunked TETRA radio network, extending coverage into network dead spots.

Intelligent communication

With Sepura Intelligent Call Conversion, the calling party only needs to call the TETRA identity of the SRG3900. Once switched to DMO gateway mode, the SRG3900 automatically converts and relays the incoming call or message to the associated team of direct mode users.

Operational effectiveness

Status messaging and SDS-based messaging, including text and GPS location reports, are seamlessly transferred between the network and direct mode users. A control room dispatcher is able to track the positions of individual users.

Extended coverage

Where no network coverage is available, the 10 watt DMO repeater allows multiple direct mode users to exchange voice and data messages over a wider area with increased reliability. The DMO repeater is ETSI-compliant Type 1A, and uses a single frequency, saving scarce spectrum.

Note: Direct mode gateway and repeater services are enabled by a feature licence code.