

# SRG3900

## SERIES

### MOBILE RADIO



#### SIZE AND WEIGHT

##### TRANSCIVER

980g, 177mm x 50mm x 110mm

##### SEPURA COLOUR CONSOLE (SCC1, SCC2, SCC3)<sup>7</sup>

220g, 185mm x 58mm x 33mm

##### HANDSET-BASED CONSOLE (HBC2, HBC3)<sup>7</sup>

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 (to be wired in parallel by installer)  
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 SCC front-mounted accessory ports  
Line-in audio for third-party console interface support  
Five independent volume controls for loudspeaker & audio accessories<sup>2,4</sup>

Up to three audio accessories per console

#### ENVIRONMENTAL

Dust & water protection to IEC60529 IP54  
ETS 300 019 -2-5 drop, vibration & humidity  
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>5</sup>  
IP67 radio marine enclosure option  
IP67 SCC console option  
IP67 HCU handlebar control unit option

#### PRODUCT OPTIONS

GPS/Glonass location tracking  
DMO repeater type 1A (licence enabled)  
DMO gateway (licence enabled)  
Air Interface encryption options<sup>3</sup>  
End-to-end encryption options<sup>3</sup>  
Wide range of languages supported including Cyrillic, Chinese, Korean & Arabic  
Coloured bezels  
Local & remote smart card support  
Virtual console support (licence enabled)  
Line in/out audio support (licence enabled)  
Extensive console support: SCC<sup>7</sup>, HBC<sup>7</sup>, Virtual Console, AIU. Specialist solutions include HCU handlebar control unit, air-approved & marine consoles, embedded car console.

#### USER INTERFACE

Normal, large & very large mode text<sup>4</sup>  
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  
Context key support<sup>7</sup>  
User profiles  
Sepura Picture Message  
SmartMenus, allowing easy access to hundreds of pre-programmed features

#### CONSOLE: SCC

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  
Context key support<sup>7</sup>  
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 available<sup>9</sup>

#### CONSOLE: HBC (HANDSET-BASED CONSOLE)

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  
Context key support<sup>7</sup>  
Missed event LED & soft key  
Dedicated emergency key  
Tri-colour status LED  
16 configurable soft keys  
Dual remote console support, up to 30m from the transceiver  
IP55 certified

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## Going further in critical communications

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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## 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 & TEA4<sup>3</sup>  
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 upgrade<sup>3</sup>  
Integral SIM connector for smart card-based  
E2EE options<sup>3</sup>  
Optional remote smart card reader  
Dual E2EE algorithm support with dynamic switching  
of active algorithm<sup>3</sup>  
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 SCC  
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 subject to export licence

4 – Display mode/audio support changes when the legacy console, HBC1 or Virtual Console is connected

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

6 – Operating at temperature extremes may limit operational performance

7 – SCC1/2: STP-style UI (two context keys); SCC3/SCC3 (IP67): SC20-style UI (three context keys)

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