

SRG3900 SERIES MOBILE RADIO



SIZE AND WEIGHT

TRANSCIVER

980g, 177mm x 50mm x 110mm

SEPURA COLOUR CONSOLE (SCC1, SCC2, SCC3)⁷

220g, 185mm x 58mm x 33mm

HANDSET-BASED CONSOLE (HBC2, HBC3)⁷

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^{2,4}

Up to three audio accessories per console

ENVIRONMENTAL

Dust & water protection to IEC529 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°C⁶

Storage temperature -40°C to +85°C⁵

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 options³

End-to-end encryption options³

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: SCC⁷, HBC⁷, Virtual Console, AIU. Specialist solutions include HCU handlebar control unit, air-approved & marine consoles, embedded car 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

Context key support⁷

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 support⁷

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

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 support⁷

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 & 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 options³
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 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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