



ELETTA
SUITE

ElettraSuite Radio Dispatcher Station

OVERVIEW

The **Radio Dispatcher Station (RDS)** is based on the FC3000 TETRA fixed-radio that is part of the VS3000 Mobile Station family and it is operated by means of a Personal Computer.

The RDS Station is the simplest of the Dispatcher Stations family and provides basic dispatching functionality.

The Dispatcher is operated from a PC in the same way as the other TETRA Dispatcher Stations and the GUI (Graphic User Interface) style has been preserved in order to facilitate the easy passage from one type of Dispatcher Station to another (minimizing training needs).

The RDS Station can also connect to a DAC (Dispatcher Audio Console) device providing the same configuration as the wired Stations.

Suited for small Control Rooms and transportable usage

The typical environment for this type of dispatcher is the small Control Centre, a peripheral office that would not need a wired dispatcher; which might be over-specified in respect of the type of work to be done and / or the personnel to be managed. The RDS provides a simpler solution better suited and more economic for these cases.

The RDS can also be deployed in Mobile Vehicular Units used to co-ordinate operations in temporary Incident Areas or in operations where there is a need to move the operating staff on occasion.

GENERAL FEATURES

This single Station is able to supply the following dispatching / administrative services provided by the Radio Dispatcher Application:

- Call management (all types of voice and data call) - constrained by the fact that the radio only allows one active call at a time.
- Pre-emptive priority (e.g. emergency) calls.
- Dynamic group management.
- Access to the Phone Books inside the fixed-radio.
- Group scanning priority management.
- History folders for voice calls, messages and alarms

Packet Data Context

Due to the absence of a wired link to the TETRA Infrastructure (as for wired Dispatcher Stations) it is necessary to provide an IP address if Packet Data activities are to be initiated. The

RDS offers this feature in order to run IP-based applications present on the PC (e.g. access to a remote database); in particular the Group management is provided using a packet data application.

Double-control and Resilience

The RDS can be configured such that the radio can be controlled either by the PC or the Front Panel of the fixed-radio (the normal operation of the FC3000). Resilience is enhanced by the fact that it is possible to keep in communication even in the case of a fault with the RDS application or PC.

Modularity and Re-use

Different roles of the fixed-radio module

When needed, the PC can be detached and the FC3000 part can be used as a stand-alone fixed-radio provided that the FC3000 is equipped with a Front Panel. The fixed-radio can alternate between different roles: for example, it can be detached and installed into a rack inside a Mobile System (such as a SELEX Xcalibur vehicle) equipped for critical missions.

Custom use of audio frequencies

The SELEX Communications RDS provides an audio output to enable the use of a custom audio device or an analogue recorder. It is also possible to connect the DAC console, making the RDS similar to the wired Dispatcher Stations.

COMPOSITION AND VERSIONS

The RDS Dispatching Station is based on the following components:

- Standard desktop mini-tower PC running under MS-Windows XP Professional operating system
- FC 3000 fixed-radio
- FPG1A - Front Panel
- DAC - Dispatcher Audio Console (optional) external device designed to provide audio-accessories (headset, microphone, loudspeakers, etc.), analogue recorder and Push-To-Talk connections
- Audio accessories:
 - for FC3000
 - for DAC

RDS Light version

In the standard configuration the Front Panel (FPG1A) is fitted and the audio-accessories are connected to it as per a fixed-radio (with the exception of the foot-PTT that, if required, is directly connected to the radio's case). In this simple configuration the loudspeaker used is the one that the fixed-radio is equipped with.

RDS full version

In the Full version the RDS is equipped with the DAC audio-

console and related accessories. The Front Panel can be optionally fitted; if the Front Panel is present the control of the Station can be transferred between the PC and FPG1A when needed.

The standard configuration provides audio-accessories for the DAC console, but accessories can alternatively be connected to the (optional) Front Panel. If a DAC is used, an audio output for recording purposes is available at the DAC case.

TECHNICAL DATA

RF power:	<ul style="list-style-type: none"> • 10 W (class 2 TETRA) • 3 W (class 3 TETRA) • 10 W (CW for Analogue standard)
Frequency band:	380 to 430 MHz and 410 to 470 MHz
AF power:	8W (on int. louds. with 4 Ohm load)
Power supply:	220 VAC (85 to 265V, 47 to 63 Hz)
Power consumption max.:	450W
Modulation:	<ul style="list-style-type: none"> • II/4 DQPSK (TETRA standard) • FM/PM (Analogue standard)
Carrier spacing:	<ul style="list-style-type: none"> • 25 kHz (TETRA standard, also on multiple of 12.5 kHz) • 12.5/25 kHz (Analogue standard)
RF performances compliant to:	<ul style="list-style-type: none"> • EN 300 392-2 (TETRA standard) • ETS 300 086 (Analogue standard) • ETS 300 133 (Analogue standard)
Environmental characteristics:	Compliant ETS 300 019-1-3 Class 3.1E
Operational:	ETSI ETS 300 019-1-3 class 3.1
Storage environment:	ETSI ETS 300 019-1-1 class 1.2
Transportation environment:	ETSI ETS 300 019 1-2 class 2.2
Electromagnetic compatibility:	EN 550022 Class A.
Operative temperature:	<ul style="list-style-type: none"> • -20° to +55° C TETRA TMO/DMO TX Single slot • -20° to +45° C TETRA DMO GTW/REP • -20/+45° C TETRA Full Slot with time limit • -20/+45° C FM with time limit

Mechanical data

Dimensions and weight:	(WxHxD) 540 x 90 x 270 mm, < 9 kg
Protection against dust and water:	IP20
Shock and vibrations:	ETS 300 019-1-2 class 2.3

Functionality and interfaces

Standard:	TETRA - Analogue FM/PM
TETRA operation modes:	<ul style="list-style-type: none"> • TMO • DMO + Idle Dual Watch • DMO Repeater 1A/1B DMO Gateway
External interfaces:	Audio I/F 4Wire, coax. antenna, RF-N type connector, SMA type coaxial connector for external wireless antenna, serial lines RS232 (PE1, PE2, SEC. LINK, SER. FG)
Internal options:	Wireless module GPS RX module