A REAL DUAL-MODE...
ANALOG + DMR

LANDER DMR

DMR
DIGITAL MOBILE RADIO ASSOCIATION

emc
TECNOLOGIA ITALIANA,
COMUNICAZIONE SICURA

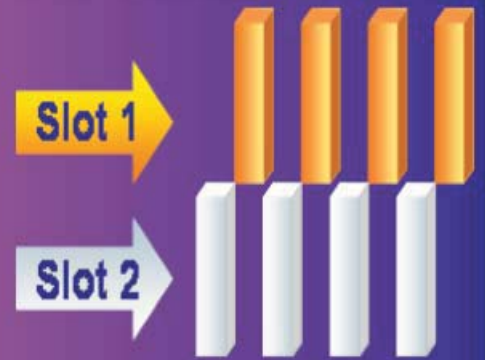# New DMR mobile radio features: *general*

DUAL-MODE:

- ✓ New DMR Digital features
- ✓ Maintaining the preceding Analog features
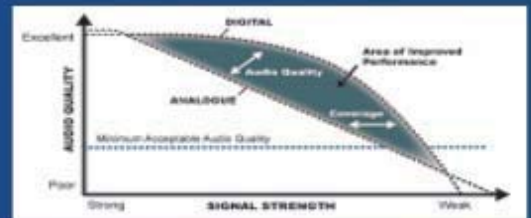- ✓ ...for a gradual transition to the new technology

1 PHYSICAL CH ▶ 2 VIRTUAL COMMUNICATION CH:

- ✓ Two contemporary conversation on a frequency
- ✓ Voice Slot – Data Slot
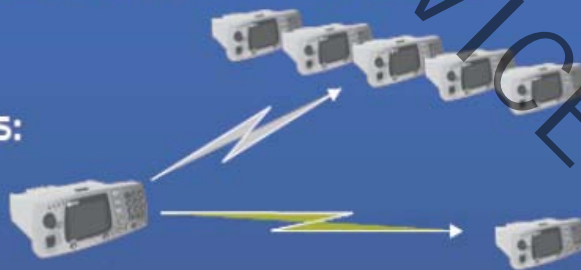
Slot 1

Slot 2

BETTER AUDIO QUALITY

New *operating* DMR mobile radio features

- Reliable and Encrypted DMR Communications

- Different call modes:
  - Individual
  - Group
  - Emergency

  <u>Managed from the user as analog calls</u>

- Higher Transmission Rate (4.800bit/s for each slot)

- Programmable Error correction mode

- Repeater Mode and Direct Mode

- GPS position with RSSI level

- Sms, Alert Call

- Programmable GPS data sending (on PTT, timed, ...)

Hardware Configuration: Base *Station*

LANDER DMR radio terminal is available in different hardware configurations, which allow the use in various fields:

LANDER DMR terminal, connected to EMC WILL power supply, allows operators to communicate with the whole fleet both in analog and DMR mode. Integrated speaker, together with microphone, allow clear and fast communications.
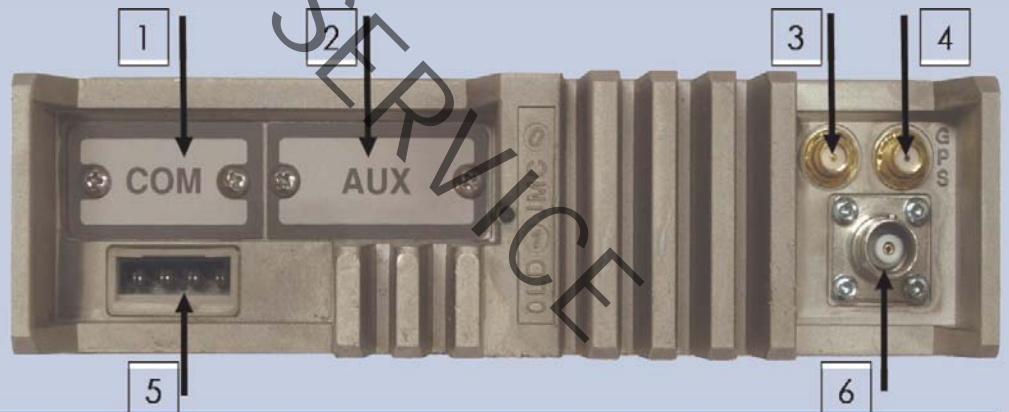
EMC WILL power supply has been designed to work at 12Vdc and 220Vac, with automatic switch to battery backup in case of electrical black-out.

Hardware Configuration: *DataLander DMR*

LANDER DMR radio terminal has been designed and created to work without front in **DataLANDER DMR** version for specific datas transceiving applications.

Connections:
1) **RS232** (DB9)
2) **AUX** (DB15)
3) **GSM/GPRS** Antenna
4) **GPS** Antenna
5) Power supply
6) Radio Antenna

Analog Data Transmission:
- ❏ Via integrated radio modem
- ❏ 1200 / 2.400 bit/s
- ❏ Communication protocol: ETSI 300-230
- ❏ 95+95 characters with programmable serial protocol
- ❏ Programmable Error Correction: Hagelbarger

Digital DMR Data Transmission:
- ❏ 2 data slots
- ❏ up to a 4.800 bit/s for each slot
- ❏ 1.024 byte Packets
- ❏ Communication Protocol: ETSI DMR
- ❏ Programmable Error Correction: raw,¾,½

Advanced Management of radio unit and front

LANDER DMR technology allows an advanced management of radio unit and front, in particular:

Managing a radio unit with n°2 fronts connected frontally and posteriorly. Usefull in activities which involve two operators working in different places.

Managing n°2 radio unit with an only front.
Usefull to operate, through an only front, with two radio unit on different frequency bands (i.e. VHF and UHF) or to manage **transponder mode**.

Bicoloured Display with automatic back-lighting

Bicolured display to differentiate radio visualizations with different lighting modes.
By programming the following modalities can be set:
- standard mode with white display background
- **red mode** with RED display background
- **flashing mode** in white - red background colors

LANDER DMR mobile terminal display is completely customizable via programming software: fields positioning , fonts, characters dimensions, icons, icons position on the display, ...

Backlight can be automatically controlled from terminal software using light sensors or set from radio menu.