



Air & Vessel Traffic Management Systems

AIR TRAFFIC CONTROL GROUND SYSTEMS CATALOGUE OF ACCESSORIES

Selex ES can provide a wide range of Air Traffic Control equipment to accomplish the radio system. Radiating systems, automatic/manual filtering systems and power amplifiers can complete Customer's ATC communication architecture to protect radio channels from external electromagnetic interferences or to improve the coverage area.

OTE PA100

Power amplifiers for ATC applications in VHF e UHF ranges

The OTE PA100 Power Amplifier provides:

- Protection against short and open circuits
- Embedded "bypass" switch that operates automatically in the case of failure or manually by external command from the ONM100 Open Network Management system
- Power supply transmission state alarms and bypass status on front panel indication facilities
- Bypass and output power settings
- Output power VSWR and modulation depth measurements.

OTE PA100 power amplifiers are designed to meet the most demanding radio coverage requirements in both VHF and UHF frequency ranges. They extend the coverage area to more than 100NM without modifications on antenna radiating system.



OTE PA100 VHF



OTE PA100 UHF

OTE AF100/D

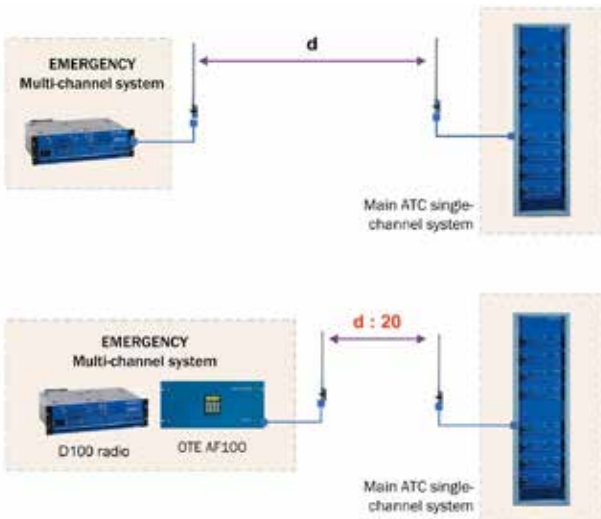
Automatic RF filtering system for VHF and UHF “Last Resort” aeronautical communications

Together with the OTE D100 series radio equipment and Remote Command Units the OTE AF100jD Automatic Filter provides rapid back-up of a lost frequency connection thus increasing airspace safety. The OTE AF100/D filter comprises a double cavity band-pass filter with automatic tuning.

The built-in data interface offers full programmability either remotely or locally and thanks to its LCD display provides indication of frequency channel and mode of operation. The OTE AF100/D incorporates self-protection circuits to avoid damage from transmitter activation during tuning operations.



The AF100/D Automatic Filter can reduce the distance from the antenna system of the main radio communication network more than 20 times @ 500 kHz of frequency spacing. The AF100/D is available in both VHF and UHF aeronautical bands.



OTE BPF100 AND OTE BPF200

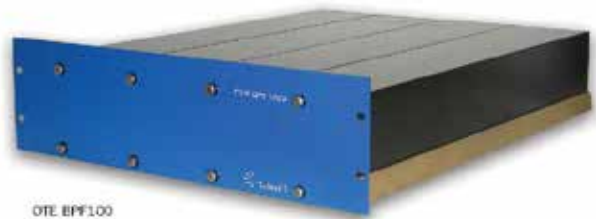
UHF and VHF band-pass cavity filters

RF filtering is a critical issue in radio systems when congested transmit receive or integrated Tx/Rx sites feature a large number of radio units. In addition reduced frequency spacing may introduce severe performance reduction due to mutual interference.

The OTE BPF100 and the OTE BPF200 series is a family of filtering devices specifically designed to be paired with ATC radio equipment such as the OTE D100 series.

By taking advantage of cavity-resonator technology and advanced mechanical design the OTE BPF family of filters provide high rejection of interfering and unwanted signals. This introduces low insertion loss and - therefore - negligible performance reduction on the connected transceiver transmitter or receiver device.

The equipment can be tuned to any VHF or UHF aeronautical operating frequency. The loop can also be adjusted to select the best compromise between selectivity and insertion loss factors in accordance with system requirements.



OTE BPF100



OTE BPF200

OTE MCP100 AND OTE MCP200

UHF and VHF multi-couplers

The OTE MCP100 and OTE MCP200 family of antenna coupling devices are specifically designed to connect more than one VHF or UHF ATC radio channel to one radiating system in order to save space on a tower or on the roof of a building. The OTE MCP family of multi-couplers uses the same cavity-resonator technology as the OTE BPF to protect any frequency against interfering and unwanted signals.

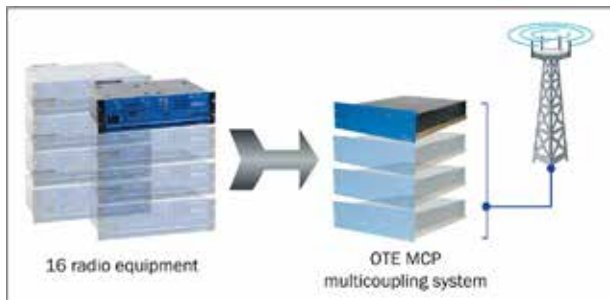
By taking advantage of a special hybrid-based technology the OTE MCP multi-coupling system can join up to 16 radio channels minimising the effects of the insertion losses to less than 3.5 dB.



OTE MCP100



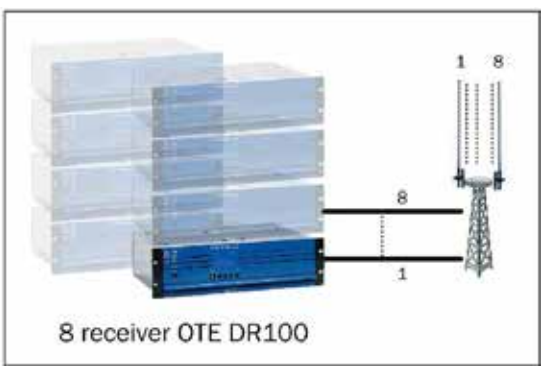
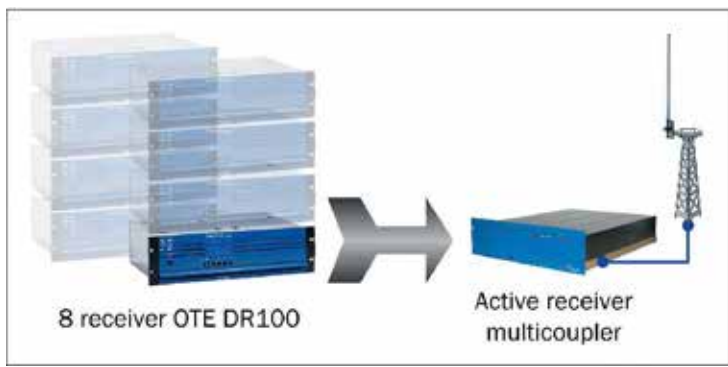
OTE MCP200



VHF AND UHF ACTIVE RECEIVER MULTI-COUPLERS

VHF/UHF Active Receiver Multi-couplers reduce to a minimum insertion losses caused by the antenna branching and feeder. Benefiting from its internal recovering modules the active receiver multi-coupler is able to recover up to 3dB over a passive unit improving the receiver sensitivity. Thanks to its linear design the active multi-coupler does not decrease intermodulation rejection capability.

The Selex ES active multi-coupler solution is also recommended when radio stations have a limited space to install complex radiating systems. The device allows the simultaneous operation of up to eight receivers linked to one common antenna.



RADIATING SYSTEM SOLUTIONS

Selex ES offers a wide range of products according to customer needs or to system requirements.

VHF AND UHF SINGLE-DIPOLE ANTENNAS



Omnidirectional broadband antenna

Ground Plane Broadband Antenna

Omnidirectional broadband antenna

VHF AND UHF MULTI-DIPOLE AND HIGH GAIN ANTENNAS

The Multi-Dipole series of antennas allow the allocation of more than one frequency on the same antenna without using external combining devices.

Any VHF/UHF combinations can be provided (up to five coaxial connections). When provided with one coaxial connection this type of antennas becomes a high gain model. This series of antenna models is available with gains of up to 9dBi for extended radio coverage.