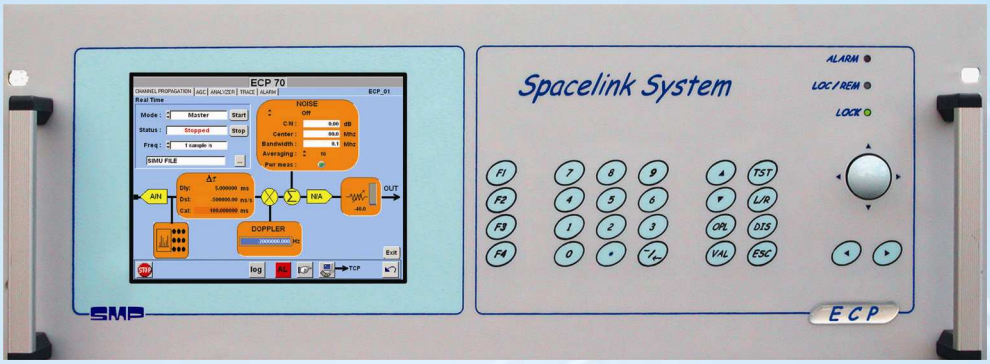
PROPAGATION CHANNEL EMULATOR : ECP



The ECP (Propagation Channel Emulator) synthesizes the principal phenomena of propagation occurring on RF signal links between earth and space.

Developed by the R&D laboratory, the ECP demonstrates the know-how of SMP in the field of high-speed data processing and integration: up to 4 synchronized channels can take place into a single generic SPACELINK unit thanks to an architecture based on a PCI bus.

The ECP applies a transfer function on a 40 MHz channel. It can simulate the following disturbances:

- Phase continuous variable delay up to 500 ms
- Time jitter
- Frequency Doppler shift
- Level fading
- AWGN noise generator (option)
- Multipath Rice/Rayleigh channel simulator (option)
- Tracking error signal simulator (option)
- Phase noise generator (option)
- PROPALOG data generation software (option)
- CW Jammers (3) (option)

TYPICAL APPLICATIONS FOR THE ECP INCLUDE:

- Earth terminal testing
- Satellite payload testing
- Satellite system integration test bench
- Wideband spectrum checking
- Tracking system test bench
- Earth mobile communication testing

GUI software and signal processing software are *in situ* upgradable via the remote interface.
SMP distributes the CNES PROPALOG software to perform realistic simulations according to the most advanced statistical disturbance models.

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