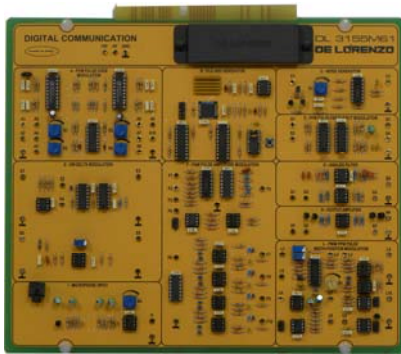


## DIGITAL MODULATION- DEMODULATION



**DL 3155M61**

### Theoretical topics:

- Different types of digital modulation and demodulation for analogue signals
- Evaluation of pros and the cons of each conversion mode
- Fault simulation

### Technical features:

- PCM modulator and demodulator
- 8 bit coding with compression, Mu or A selectable through bridge
- 2 channels for transmission and 2 channels for reception
- Possibility to use 1 or 2 digital channels
- Integrated anti-aliasing and band limiting analogue filters in reception, capacitive switching type
- Passing band from 300 Hz up to 3400 Hz
- PAM signal generation, demodulation, transmission for each single channel
- PAM modulator and demodulator
- Two channel time division
- Regeneration of the synchronism and channel signals
- Sampled, but not quantified signal
- PTM Signal Generation
- Passing band from continuous to 4000Hz
- PWM and PPM modulator and demodulator
- Single channel with passing band from continuous to 4000 Hz
- Regeneration of the synchronism signal
- Conversion of the PWM signal to PPM and from the PPM signal to PWM
- PCM signal generation and demodulation
- PCM Signal Time-Division
- Multiplexing

- PFM modulator and demodulator
- Single channel with passing band from 300 Hz to 3400 Hz
- Circuit realization with the use of a PLL
- Delta modulator and demodulator
- Single channel with passing band from continuous to 3400 Hz
- Timing
- Ramp signal generation
- Channel noise
- Possibility to adjust the noise that is superimposed to both analogue and digital signals
- Analogue filters
- 2 analogue filters with 3400 Hz limited band
- Output amplifier
- 2 amplifiers able to pilot a small loudspeaker
- Microphone amplifier
- Microphone amplifier with automatic gain control
- Channel bandwidth