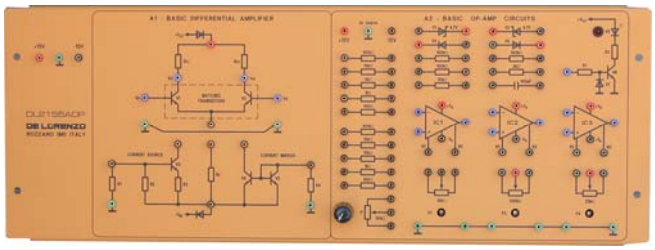
ELECTRONICS

Operational Amplifiers



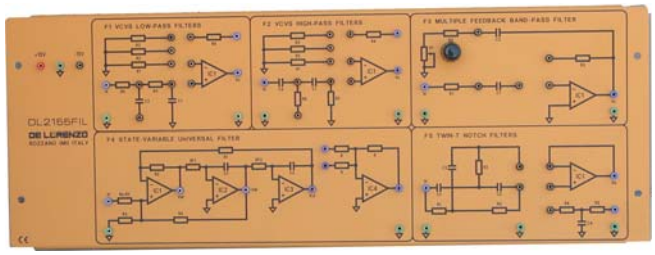
DL 2155AOP

Experiments

- Analysis and experimental check of differential mode amplification in a differential amplifier
- Measurement of CMRR and of slew rate
- Analysis and measurement of fixed and adjustable gain inverting amplifiers
- Analysis and measurement of fixed and adjustable gain non-inverting amplifiers
- Comparison and analysis of application fields of different amplifiers
- Study of application circuits with operational amplifiers

The board is designed for a first approach to operational amplifiers. It is divided in two sections.
The first section includes a transistor based differential amplifier and allows the general and full study of the input stage of a monolithic operational amplifier. The concepts of inverting and non-inverting inputs, common mode and differential amplification and common mode feedback are considered.
The second section shows three different monolithic operational amplifiers and a set of active and passive components, allowing to check and to compare the features of the three amplifiers and the study of the different application fields.
The board is supplied complete with a set of stackable, plug-in cables of suitable lengths and colours and with a training manual.
Power supply: ± 15 Vdc, 750 mA

Active Filters



DL 2155FIL

Experiments

- Low-pass and high-pass filters of the first and second order with Butterworth, Bessel and Chebyschev approximation
- Multiple feedback band-pass filters
- High-pass, low-pass, band-pass and throw-band filters of variable state type
- Dual T narrow-band notch filters

The board allows the study and the functional check on active filters carried out with operational amplifiers. The board is divided in five sections, and in each one there are more than one filter of the same kind. It is possible to study, respectively:
• low-pass filter VCVS of the first and second order
• high-pass filter VCVS of the first and second order
• multiple feedback band-pass filter
• universal filter of variable-state type
• dual T band-stop filters
The board is supplied complete with a set of stackable, plug-in cables of suitable lengths and colours and with a training manual.
Power supply: ± 15 Vdc, 750 mA