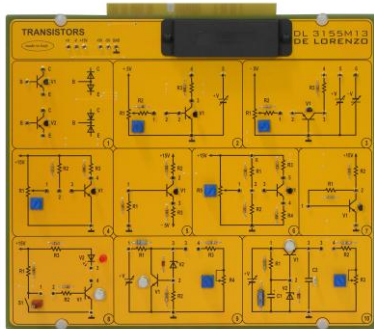




## TRANSISTORS



DL 3155M13

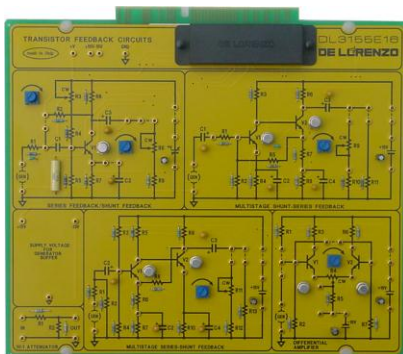
### Theoretical topics:

- The transistor currents
- Input and output characteristics
- Collector feedback polarization
- Voltage divider polarization
- Emitter polarization
- The transistor as a switch
- The transistor as a regulator
- Reading and use of technical specifications taken from the catalogues
- Fault simulation

### Circuit blocks:

- Verification of the integrity of the junctions of a BJT transistor
- Recording of the input and output characteristics of a BJT transistor in the common emitter configuration
- Recording of the output characteristics of a BJT transistor in the common base configuration
- The base polarization of a BJT transistor
- The emitter polarization of a BJT transistor
- The polarization of a BJT transistor with voltage divider
- The polarization of the collector feedback BJT transistor
- Operation of a BJT transistor as a switch
- Voltage regulator with parallel transistor
- Voltage regulator with series transistor

## TRANSISTOR FEEDBACK CIRCUITS



DL 3155E16

### Theoretical topics:

- Typical quantities and basic configurations of a feedback amplifier
- Feedback of a multistage amplifier
- The effects of series feedback on ac gain and on input and output impedance
- The effects of negative series feedback on bandwidth
- The effects of shunt feedback on ac gain and on input and output impedance
- Multistage shunt-series and series-shunt Feedback
- The shunt-series multistage amplifier current gain and output impedance
- Series-shunt multistage amplifier voltage gain and output impedance
- Differential amplifier operation
- Single-ended and differential gain characteristic
- Common mode gain and rejection ratio
- Fault simulation

### Circuit blocks:

- Series feedback / shunt feedback
- Multistage shunt-series feedback
- Attenuator
- Multistage series-shunt feedback
- Differential amplifier