italtec

ISO 9001-2000

BT-1002/GE

GENERAL ELECTRONICS

CONFIGURATION

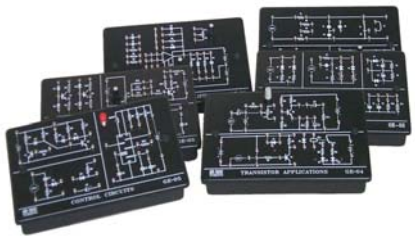
It is composed of::
-N° 6 MODULAR BLOCKS
dedicated to **:**
- **GE-01:** Passive Networks
- **GE-02:** AC/DC fundamentals
- **GE-03:** Semiconductor devices
- **GE-04:** Transistor applications
- **GE-05:** Control circuits
- **GE-06:** Operational amplifier
- N. 1 Ledger-shaped support suited to hold 4 blocks (on two ranks)
- N. 1 Set of cables banana - plug with pins for supply and multi-coloured interconnections
- Accessories
- Technical manual with electric diagrams
- Student manual with 86 proposed exercises
- Case container
- Volume: 55 x 55 x 20 h cm
- Weight: 22 Kg

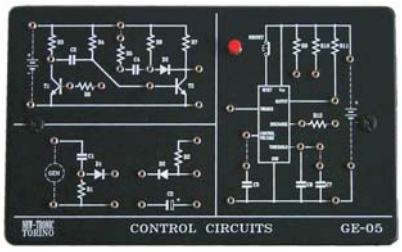
FEATURES

The common features of the modular blocks are the following:
- components mounted on printed circuit board (shielded)
- standard socket terminals (Ø 2 mm) for measurements and connections
- silk-screened synoptical panel
- unbreakable plastic case
- magnetic fastening device to the circuit former

TOPIC COVERAGE

GE-01 PASSIVE NETWORKS
1. Ohm's circuits
2. Generator's output impedance
3. Phase relationship
4. Capacitive Circuit
5. Inductive Circuit
6. Series and parallel inductors
7. Series and parallel capacitors
8. Capacitive divider
9. Balanced divider
10. RC Circuit
11. CR Circuit
12. LR Circuit
13. RL Circuit
14. Series Resonance
15. Parallel Resonance
16. Time constants
17. RC and CR Circuits on square-wave operation
18. RL and LR Circuits on square-wave operation





GE-02 AC/DC FUNDAMENTALS
1. Diode: unidirectional behaviour
2. Forward and reverse biasing
3. Dynamic rilief of the characteristic curve
4. Limiter circuits
5. Two independent levels Limiter
6. Clamper circuit
7. Transformer: no-load test
8. Power and efficiency transfer
9. Reflex resistance of a transformer
10. Half-wave rectifier
11. Full-wave rectifier
12. Bridge rectifier
13. Ripple filtering
14. Voltage doubler

GE-03 SEMICONDUCTOR DEVICES
1. The Zener Diode
2. Input voltage regulation
3. Load regulation
4. Synchronizing signals
5. Power regulator
6. Regulator with variable output voltage
7. Regulator with current output
8. Efficiency test of bi-junction transistors
9. Base-emitter characteristic rilief
10. Base-collector characteristic rilief
11. Transistor circuit currents
12. Transistor circuit voltages
13. Output characteristic and load line

GE-04 TRANSISTOR APPLICATIONS
1. Transistor switching application
2. Switching time
3. Transistor bias
4. Resistive Divider Bias
5. Automatic bias networks
6. BJT linear operation
7. Wide signals amplification
8. Dynamic load line
9. Amplifiers frequency response
10. Square-wave signal response
11. Input resistance of the amplifier stage

GE-05 CONTROL CIRCUITS
1. Transistor astable multivibrator
2. Astable multivibrator improvement
3. Control pulse
4. Transistor monostable Multivibrator
5. Timer astable operation
6. Timer monostable operation
7. Frequency divider
8. Pulse width modulator (PWM)
9. Pulse Position modulator (PPM)

GE-06 OPERATIONAL AMPLIFIER
1. Max variation of the output voltage
2. Output impedance measurement
3. Slew rate
4. Current and power drain
5. Inverting voltage amplifier
6. Noninverting voltage amplifier
7. Summing amplifier
8. Buffer, emitter follower
9. Offset voltage measurement and calculation
10. Band width rilief and calculation
11. Max width of the undistorted output signal
12. Integrator circuit
13. Differential circuit
14. Low-pass active filter
15. High-pass active filter
16. Band-pass active filter
17. Half-wave rectifier circuit
18. Comparator applications
19. Schmitt Trigger
20. Noninverting comparator
21. Inverting comparator