



APPLICATIONS

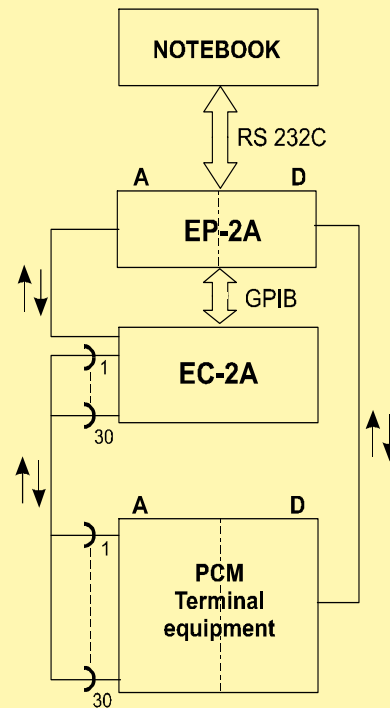
By interconnecting the EC-2A with the PCM Channel Analyser EP-2A and the analogue terminal of a PCM Channel equipment a test system is established to measure a wide range of parameters of the unit under test automatically and rapidly.

This test system is advantageously used during production, installation, operation as well as maintenance of 2048 kbit/s multiplex equipment.

FEATURES

- Automatic sequential connection of up to 30 analogue Tx and Rx of PCM MUX equipment to the PCM Channel Analyser EP-2A
- Low insertion loss, high crosstalk attenuation
- Built-in bridge for return loss and unbalance measurements
- DC line termination and line battery feed
- Remote control via GPIB interface bus
- Line status indication

Application of EC-2A with EP-2A



SPECIFICATIONS

Maximum ratings:

Max. input AC level +20 dBm
 Withstand DC voltage between a-b wires 60 V
 Withstand DC voltage between c-f wires 60 V
 Withstand DC voltage against ground 60 V

Specifications of switches:

Max. DC current 100 mA
 Max. switching time 10 ms

AF features:

Types of connected channels balanced two or four wired
 Number of connected channels max. 30
 Input and output connectors three pcs. balanced
 Insertion loss on 600 termination between channel connection and input or output:
 200 Hz to 4 kHz max. 0.02 dB

Remote controlling of the device

Control equipment: EC-2A or personal computer
 Type of built-in interface: GPIB
 Setting operating modes: by DIP switch in 8 pos.

Characteristics of measuring bridge:

Measurements: balance and return loss
 Feeding of the bridge across the main input
 input impedance: 600 Ω balanced
 output of the bridge: 600 Ω balanced
 Measurement via the channel selector
 in two-wire mode on a-b wires
 in four-wire mode on e-f wires

Return loss measurement:

Measuring range: 0 to 45 dB
 Frequency range: 200 Hz to 4 kHz
 Measuring accuracy:
 0 to 30 dB 1 dB
 30 to 45 dB: 2 dB
 Reference impedance:
 internal : 600 Ω
 external : 600 to 900 Ω
 (connected to aux. input)
 Max. input level:
 200 Hz to 300 Hz: -6 dB
 300 Hz to 4 kHz: 0 dB
 Level on measuring points: 0 dB
 (0 dB input level, nominal impedance)
 Output signal belonging to 20 dB return loss a
 0 dB feeding level and 600 Ω termination
 on 1 kHz -20 ±0.5 dB

Balance loss measurement:

Measuring principle: LCL, according to ITU-T
 Rec. O.9 (2.1)
 Measuring range: 5 to 56 dB
 Frequency range: 200 Hz to 4 kHz
 Measuring accuracy:
 5 to 46 dB: 1 dB
 46 to 56 dB : 2 dB
 Terminating impedance: 600 Ω
 Max. input level:
 200 Hz to 4 kHz -6 dB
 Level on measuring points 0 dB
 (at -6 dB input level)
 Output signal belonging to 40 dB balance loss
 at -6 dB feeding level and 600 Ω termination
 on 1 kHz -40 ±0.5 dB

Characteristics of DC current loop:

Number of built-in current loops: 2
 (connected to main output and input)
 Max. DC current: 150 mA
 Voltage drop at 20 mA current max. 5.5 V
 Voltage drop at 100 mA current max. 12 V
 Output impedance
 200 Hz to 4 kHz approx. 30 kΩ

Characteristics of DC feeding bridge:

Number of built-in feeding bridge: 2
 (connected to main output and input)
 Supply voltage (I_t = 0): approx. 30 V
 Supply current at R_t = 400 Ω : >20 mA
 Max. supply current (R_t = 0 Ω): approx. 38 mA
 Output impedance
 200 Hz to 4 kHz approx. 50 kΩ
 Balance loss
 200 Hz to 4 kHz min. 45 dB

Line status indication: (main output and input)

Line feeding voltage on
 Line looped

Connections:

Selected channels
 DIN 41612 type socket 64 pole, 2 pcs
 In- and outputs
 Balanced socket : 3 pole, 3 pcs
 GPIB interface: IEEE 488 connector

General specifications:

Power supply
 External adapter with a.c. line cord
 AC supply 100 to 240 V, 50 to 60 Hz
 Power consumption max. 10 VA
 (One pc. adapter can supply both of EP-2A
 and EC-2A)
 Ambient temperature rang
 Operating +5 to +45 °C
 Storage and transport -20 to +70 °C
 Dimensions 290 x 230 x 70 mm
 Weight approx. 2 kg

Ordering Information

PCM CHANNEL SELECTOR EC-2A 277-000-000

Including

Cable for interconnection of the EC-2A and EP-2A
 Three balanced measuring cables
 IEEE cable (short)
 Power cable
 64-way female connector set for interconnection the
 EC-2A and DUT (MUX)
 Operating Manual

Necessary options in case if the EC-2A is used without EP-2A

Interface connecting cable
 with CENTRONICS connectors
 at the each end for remote control Y-107-336
 AC adapter Y-146-004

