Communication Systems
ISDN and analog
Configuring and commissioning of ISDN systems
ISDN Training System

Hardware

Terminal Devices and Test Instruments

Teachware

Information and Consultation
ISDN Training System

- With many practical experiments for the building communications and building systems technology
- Setup and wiring of telecommunication systems
- Parameterization of telecommunication systems
- Configuration of system telephones
- Setup of an extension system
- Creation of test reports
- Troubleshooting in telecommunication systems
- Connection to house intercoms
- Use of computer telephony integration (CTI)
Project 1:
Installation of an ISDN system in a home

Project 2:
Installation of an ISDN system in a medium-sized business with two digital and four analog telephones

Project 3:
Extension of an ISDN system by a house intercom

Project 4:
Testing the BRI bus of an ISDN system

Project 5:
Commissioning of an analog fax machine and of a notebook for dispatch of faxes

Project process:
- Customer enquiry
- Customer consultation
- Order analysis
- Order planning
- Selection of components
- Working process and work preparation
- Commissioning
- Documentation
Hardware

ISDN Board

...with the add on KNX / EIB

Learning Objectives:

✓ Installation, wiring, parameterization and commissioning of communication systems
✓ Configuration of system telephones, setup of an ISDN-PBX
✓ Troubleshooting in telecommunication systems and creation of test reports
✓ Connection to house intercoms

The PBX systems on the A4-panel are cascadable.

Features:

1. S₀ bus, external via RJ-45 socket (UAE)
2. S₀ bus, internal via two RJ-45 sockets (UAE)
3. Hands-free phone interface via analog port
4. a/b connections, 4 of which directly connectable on the board via RJ-12 socket
5. Relay outputs on four 2mm safety sockets (30V/0.5A max.)
6. Sensor inputs on six 2mm safety sockets, floating
7. KNX/EIB connection
8. USB interface
9. Serial interface
- 2mm safety sockets for connection of S₀, analog units, relay outputs, sensor inputs, KNX/EIB bus
- Industrial sockets for connection of S₀, analog units, KNX/EIB
- Termination resistors for the S₀ bus
- ISDN software Win. 2000 / XP / Vista (incl. server or client solution)
Extension boards

41 170  S0-Bus Extension Board
The S0-Bus Extension Board is designed in the A4 panel system format.
   1 universal connector RJ-45 8(8)
   3 ISDN connectors, of which:
      - RJ-45 2x8(4),
      - RJ-45 1x8(4),
      - RJ-45 8/8(4)
   - Connection of all contacts via 2 mm safety sockets
   - Termination resistors for the S0 bus

41 172  RJ-12 Connection Board  (41 171  TAE Connection Board)
The RJ-12 Connection Board is designed in the A4 panel system format.
   3 RJ-12 connection sockets, of which
      - RJ-12 1x6(6),
      - RJ-12 6/6(4),
      - RJ-12 6/6(6)
   1 secondary signal box
   - Connection of all contacts via 2 mm safety sockets

Note:
EIB® and KNX® are registered trademarks of the European Installation Bus Association, Brussels and of the Konnex Association.
Door intercom station

41 175 Door Phone Board

The door intercom station is designed in the A4 panel system format.

- door intercom with floating analog interface
- floating switching contacts
- bell transformer 230V AC 50Hz / 12V AC
- door bell
- door opener
The simulator of wiring faults is designed in the A4 panel system format.

- Documentation
- Fault list
- Solutions
- System connection cable
- 8 bus connections with the following faults:
  - Wires exchanged
  - Lines exchanged
  - Wire interruption
  - Low level
  - no voltage
  - no termination
Hardware

- **external \( S_0 \)**
- **industrial connector for internal \( S_0 \)**
- **internal \( S_0 \)**
- **termination resistors for internal \( S_0 \) bus**
RS232 connection

USB connection

analog connection a5/b5
analog connection a6/b6
analog connection a7/b7
analog connection a8/b8
industrial connector for analog connections a5/b5 ... a8/b8
relay outputs (max. 30V DC/1A):
- door opener
- door intercom control

3 inputs for voltage free contacts

EIB / KNX bus connector: to the KNX / EIB Professional Programming Board e.g.
Acquire work skills with our approved Mobile Learning Trainer (MLT)
PLANNING AND REALISATION OF COMMUNICATION SYSTEMS
Terminal Devices and Testers

Terminal Devices

41 103  Set of terminal devices
Set of terminal devices consisting of:
- analog convenience telephone
- analog standard telephone
- ISDN convenience telephone with CTI interface
- system telephone for ISDN system with answering machine

41 169  Fax machine for plain paper
Fax machine for plain paper with the following parameters:
- PSTN (public switched telephone network) or PABX
- fax type group 3
- compatibility ITU-T T.30
- plain paper A4

41 109  ISDN quick testing device
Cabling tester for BRI bus for the following tests:
- Display of normal or emergency operation
- Wires exchanged
- Short circuit
ISDN Tester / PC-Software

41 108  ISDN tester incl. accessories

BRI tester with a sophisticated design for BRI, U- and a/b interfaces:

- Passive monitoring
- Exchange simulation
- Support for testing permanent circuits
- Cabling tests
- Voltage and signal level measurement
- BRI interface in TE/NT mode with D-channel monitoring
- BRI and analog interface in TE mode
- CLIP and advice of charges on analog line plus analog monitor
- Cabling test for BRI accesses
- S0 bus monitor
- S0 bus recorder

41 107  WIAnalyse

PC software:

- Connection test report
- D-channel data
- D-channel decoding
- S0 bus monitor

41 108  Remote Kit

PC software:

- controlling the tester
- configuring test runs
- starting and evaluating test runs
Project orientated training

Teacher manual
Contents:
- Solutions manual for the teacher with methodical recommendations
- Unlimited copyright for educational institutions
- Size: 105 colour pages
- incl. documentation of the devices (100 pages)

Exercises
- Project 1: Installation of an ISDN system in a home
- Project 2: Installation of an ISDN system in a medium-sized business with two digital and four analog telephones
- Project 3: Extension of an ISDN system by a house intercom
- Project 4: Testing the BRI bus of an ISDN system
- Project 5: Commissioning of an analog fax machine and of a notebook for dispatch of faxes

Student manual / project tasks
Structure of the manual and contents same as in teacher edition, however without solutions and technical documentation

E41 140CD Manual "Building communication: Configuring and commissioning of ISDN systems", incl. CD-ROM
Student edition: Project tasks

E41 141CD Manual "Building communication: Configuring and commissioning of ISDN systems", incl. CD-ROM
Teacher edition: Solutions
PowerPoint presentation on the subject of „Configuring and commissioning of ISDN systems“
- Templates for the students for presenting their working results
- Unlimited copyright for educational institutions
- 49 transparencies
- on CD-ROM

Technocards are display sheets with colored illustrations giving assistance in how to use the devices. They show the essential operating elements, the in- and outputs of the devices, a short function description and safety instructions.

Commissioning and Troubleshooting
- Commissioning of the ISDN systems from the PC
- System integration of KNX / EIB
- Installation of the driver software and the software „TK-Suite“
- Basic configuration for internal connections
- Restoring default settings
- Use of the door intercom
- Programming the answering machine
- Operating the different answering machines
- Use of computer telephony integration (CTI)
Information and Consultation

Consultation
► Selection of products complying with syllabuses
► Comprehensive system determination
► Service-Center – we will call you back and support you in planning and project development
► Classroom layout concepts
► Ergonomic workplace design
► Joint compilation of offers
► Information about our products / manuals
► Planning of seminars

Where this catalogue ends, we start consulting...

Experience
► Comprehensive range of innovative products, systems and solutions
► Quality service from first consultation to delivery and beyond
► Trainer-seminar / Inhouse-trainings
► Projects and references:
  - Industrial training institutions
  - Vocational schools / technical colleges
  - Chambers of commerce
  - Academies / universities

We will help you ...
► in all questions concerning the equipment for vocational technical education
► on site
► over the telephone

Contact: ELABO TrainingsSysteme GmbH
Service-Center
Im Hüttental 11
85125 Kinding / Germany
☎: +49/ (0)8467/ 84 04 - 0
Fax: +49/ (0)8467/ 84 04 44
sales@elabo-ts.com
http://www.elabo-ts.com
Your enquiry

ELABO TrainingsSysteme GmbH
Aus- und Weiterbildung
Im Hüttental 11
85125 Kinding – Germany

FAX to: +49/ (0) 8467/ 8404 - 44

We request for:
- [ ] Contact by telephone
- [ ] Contact by mail
- [ ] Consultation on site  [ ] yes  [ ] no

Please send us an offer for:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Quantity</th>
<th>Designation / Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>41 131</td>
<td></td>
<td>ISDN Board + KNX / EIB international (page 4)</td>
</tr>
<tr>
<td>41 170</td>
<td></td>
<td>S-Bus Extension Board (page 5)</td>
</tr>
<tr>
<td>41 172</td>
<td></td>
<td>RJ-12 Connection Board (page 5)</td>
</tr>
<tr>
<td>41 175</td>
<td></td>
<td>Door Phone Board (page 6)</td>
</tr>
<tr>
<td>41 102</td>
<td></td>
<td>ISDN Fault Simulator (page 7)</td>
</tr>
<tr>
<td>41 103</td>
<td></td>
<td>Set of terminal devices (page 12)</td>
</tr>
<tr>
<td>41 169</td>
<td></td>
<td>Fax machine for plain paper (page 12)</td>
</tr>
<tr>
<td>41 108</td>
<td></td>
<td>ISDN tester incl. accessories (page 13)</td>
</tr>
<tr>
<td>41 107</td>
<td></td>
<td>WIN analyse (page 13)</td>
</tr>
<tr>
<td>41 106</td>
<td></td>
<td>Remote Kit (page 13)</td>
</tr>
<tr>
<td>41 109</td>
<td></td>
<td>ISDN quick testing device (page 12)</td>
</tr>
<tr>
<td>90 005</td>
<td></td>
<td>Set of safety measuring leads, 2 mm</td>
</tr>
<tr>
<td>E91 904</td>
<td></td>
<td>Set of ETS ring binders (page 14)</td>
</tr>
<tr>
<td>E41 140CD</td>
<td></td>
<td>Manual &quot;Configuring of ISDN systems&quot;, Student edition (page 15)</td>
</tr>
<tr>
<td>E41 141CD</td>
<td></td>
<td>Manual &quot;Configuring of ISDN systems&quot;, Teacher edition (page 14)</td>
</tr>
<tr>
<td>E41 142CD</td>
<td></td>
<td>Commissioning and Troubleshooting Manual (page 15)</td>
</tr>
<tr>
<td>E41 143</td>
<td></td>
<td>Presentation aids for Building communication ISDN (page 15)</td>
</tr>
<tr>
<td>E41 144</td>
<td></td>
<td>Set of TechnoCards for Building communication ISDN (page 15)</td>
</tr>
</tbody>
</table>

We are also interested in:

☎: +49/ (0)8467/ 8404 - 0 oder Fax: +49/ (0)8467/ 8404 44

Subject to technical modifications and further developments.
04/2008
ELABO TrainingsSysteme
Aus- und Weiterbildung GmbH

ELABO TrainingsSysteme GmbH
Im Hüttenal 11
85125 Kinding / Germany

☎: +49/ (0)8467/ 84 04 - 0
Fax: +49/ (0)8467/ 84 04 44

E-Mail: sales@elabo-ts.com
Internet: http://www.elabo-ts.com