

# EIB-Integra Connection

TN-017

---

Cybrotech Ltd  
14 Brinell Way, Harfreys Industrial Estate  
Great Yarmouth, Norfolk, Nr31 0LU - UK  
tel: +44 (0)1493 650 222  
[www.cybrotech.co.uk](http://www.cybrotech.co.uk)  
[info@cybrotech.co.uk](mailto:info@cybrotech.co.uk)  
Copyright © 2008 Cybrotech Ltd.  
Subject to change without notice  
PBL-TN017-EN-2008-12

# 1. Preface

This document shows how to connect EIB and Integra systems, using EIB ASCII Terminal from Automations und Steuerungstechnik GmbH, <http://www.bb-steuerungstechnik.de>.



Data is exchanged both ways, from EIB to Integra and from Integra to EIB.

# 2. Devices



0.0.x power supply 2x320 REG-K, Merten 6837-29



0.0.25 multi-function 2-gang push-button with RTC, Merten 6232-19



0.0.10 blind actuator REG-K/4x/10 with manual mode, Merten 6492-08

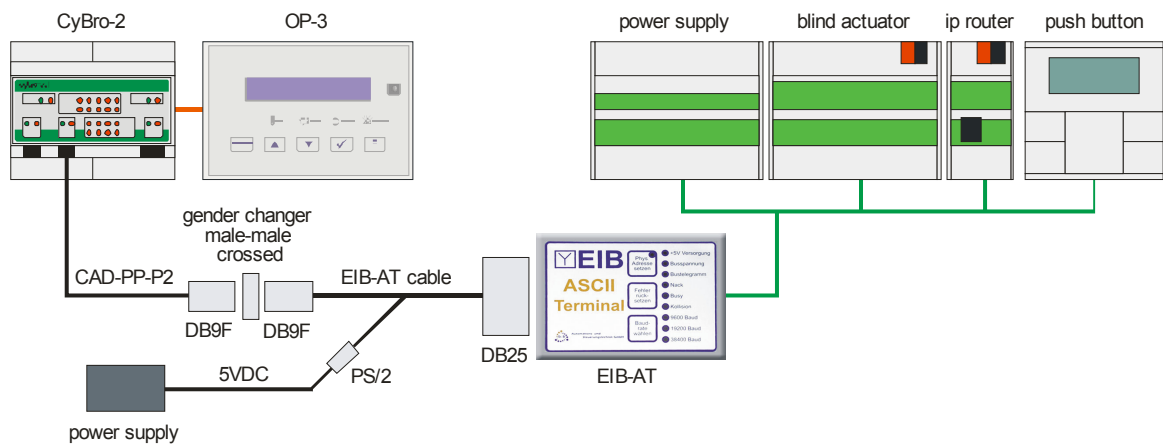


0.0.200 KNX/IP router REG-K, Merten 6803-29



0.0.100 EIB ASCII Terminal, Automations und Steuerungstechnik GmbH

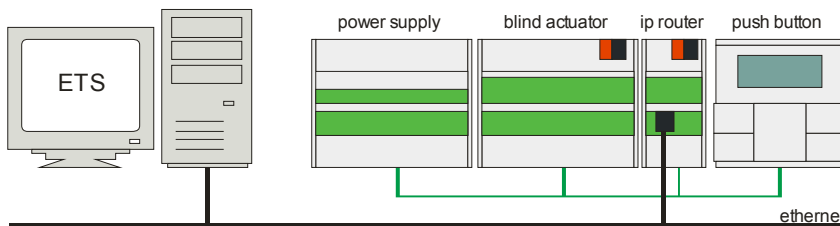
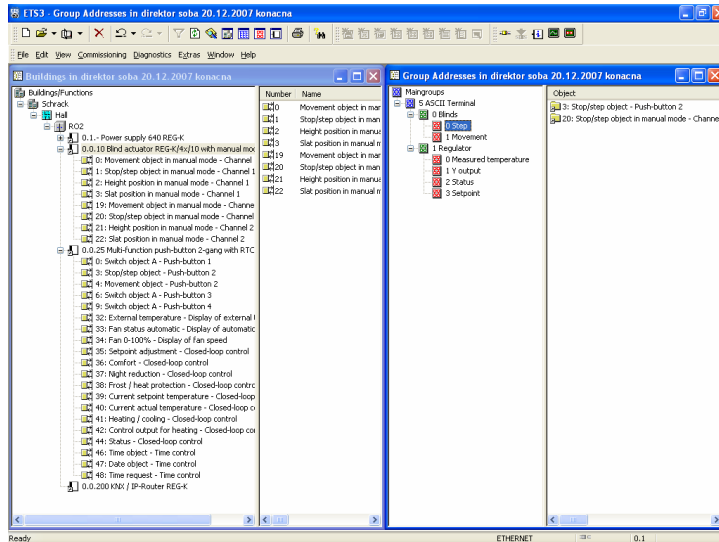
# 3. Connection



Picture shows how to connect devices together. EIB-AT needs two power sources, one for EIB (taken from bus) and second for RS232, taken from external stabilized 5V power supply. PC PS/2 port may be used instead.

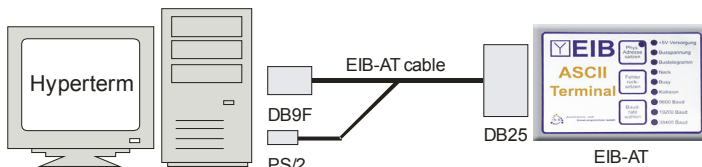
## 4. Configuration

### 4.1 EIB bus

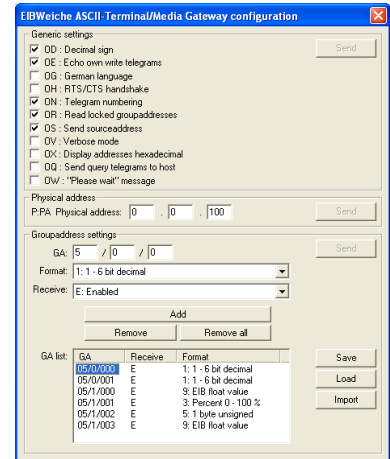


Use ETS software to assign hardware address to each EIB module.

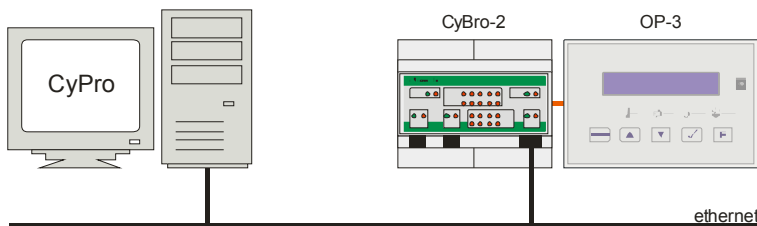
### 4.2 EIB-AT



Use terminal program (e.g. Hyperterm) to configure EIB-AT. Port settings are 38400,8,n,1. Configuration defines message format and selects desired group addresses. Use exactly the same configuration as displayed.



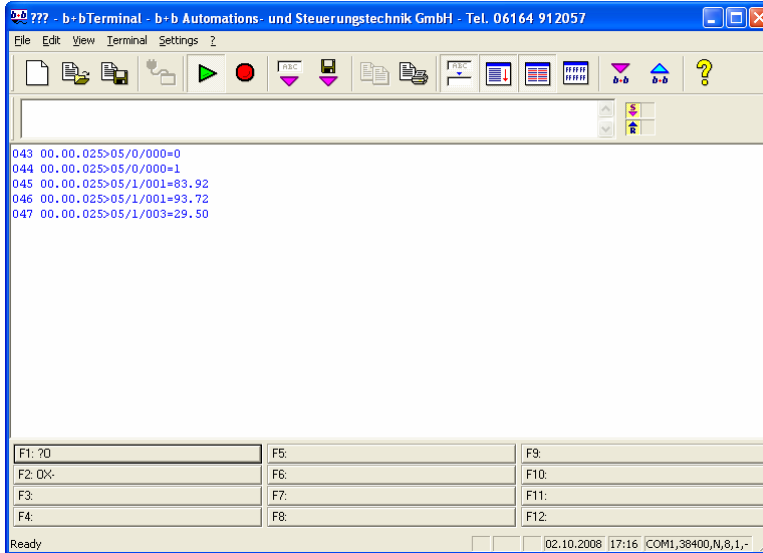
### 4.3 CyBro



Send "EIB-Integra Connection.cyp" example to CyBro.

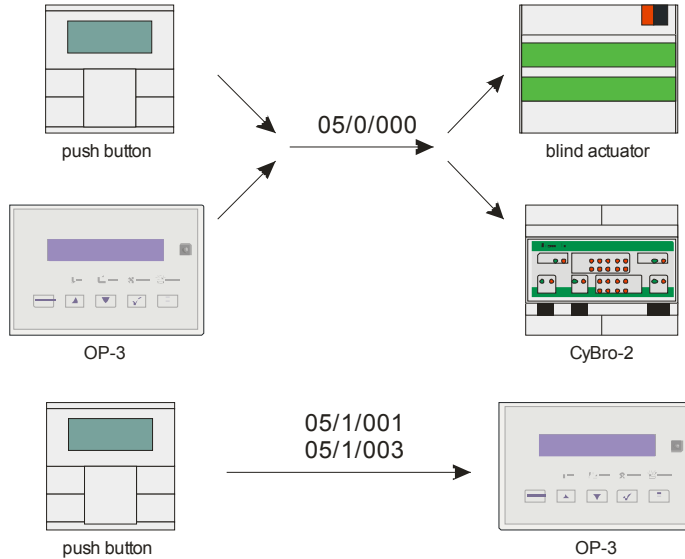
## 5. Testing

Press EIB push-button to step blinds up/down. CyBro qx00 should follow blinds direction.  
 Use EIB push button to change setpoint. OP-3 should display current setpoint and output value.  
 Press OP-3 keys up/down. Blind actuator should act accordingly. CyBro qx00 is also activated.



Use "b+b Terminal" (comes with EIB-AT) to check group messages going to and from Integra side.

## 6. Messages



Group messages defined for this demo:

- 05/0/000 - step blinds up/down
- 05/0/001 - move blinds up/down
- 05/1/000 - measured temperature
- 05/1/001 - regulator output 0-100%
- 05/1/002 - status
- 05/1/003 - regulator setpoint value

---

## 7. Program

Here is the main section of CyBro control program. It can easily be modified to support other EIB messages.

```
// initialization on first scan

if first_scan then
  com init(38400,8,0,1);
  rx start(0,13,0,0,0); // init reception of first message
end if;

// when eib message is received, parse rx buffer and analyze received data
// check format of received message (rxlength>22, rxbuf[13]='>' and rxbuf[22]='=')

if rx_status()<>0 then // reception ended
  if rx_status()=2 then // message received
    if rx count()>22 and rx bufrd(13)=62 and rx bufrd(22)=61 then

      // parse received message

      //          012345678901234567890123456789
      // fields: tel hwaddress groupadr value
      // format: *** **.**.*.*>**/*/***=***
      // sample: 001 00.00.025>05/0/000=0
      // sample: 002 00.00.025>05/1/003=100.00
      // tel      - telegram number, not used
      // hwaddress - hardware address of eib sender
      // groupadr  - group address
      // value     - value attached to group message

      eib_sender_adr:=100000*rx_strtol(4)+1000*long(rx_strtol(7))+rx_strtol(10);
      eib_group_adr:=10000*long(rx_strtol(14))+1000*long(rx_strtol(17))+rx_strtol(19);
      dotpos:=rx_strpos(23, '.'); // check if value contains decimal point
      if dotpos=-1 then
        eib_value:=rx_strtol(23); // no decimals
      else
        eib_value:=10*rx_strtol(23)+rx_bufrd(dotpos+1)-48; // read decimal digit
      end if;

      // analyze received data

      if eib_group_adr=50000 then // group message 05/0/000 - step blinds up/down
        cybro qx00:=(eib_value!=0);
      elsif eib_group_adr=51001 then // group message 05/1/001 - regulator output 0-100%
        output:=eib_value;
      elsif eib_group_adr=51003 then // group message 05/1/003 - regulator setpoint
        setpoint:=eib_value;
      end if;

    end if;
  end if;
  rx start(0,13,0,0,0); // init reception of next message
end if;

// when key is pressed, send message to eib bus

if not tx_active() then
  if fp(op00_key_up) then
    dprns(0,0,0,'W5/0/0=0\r'); // group message 05/0/000 - step blinds up, direction=0
    tx start(9);
  elsif fp(op00_key_dn) then
    dprns(0,0,0,'W5/0/0=1\r'); // group message 05/0/000 - step blinds down, direction=1
    tx start(9);
  end if;
end if;
```