Uppgjord/Prepared	Faktaansvarig - Subject responsible	Dokumentnr/Documentnr		
SEA/TB/MP Stangelberger	SEA/B/U	1537-ASB 150 02 Uen		
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SEA/TB/MP		1999-08-10	G	ASB 150 02
		Database reference		
		1537.fm		

START OF OPERATION

ASB 150 02

Uppgjord/Prepared	Faktaansvarig - Subject responsible	Dokumentnr/Documentnr	
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Contents **Page**

1 General description

These instructions are intended for setting up the ASB 150 02 system where the included units or the entire system have/has been subjected to factory end testing before delivery to the installation site.

This document covers tests for the following:

- extension lines
- trunk lines
- MDF for extension and trunk lines
- programmed functions
- information to the customer

The instructions describe the test procedures that are to be used.

The ASB 150 02 introduces with the release 9 the functionality of exchanging boards of similar type and exact configuration without the need of turning off the mains power to restart the system. This functionality is known under the term "hot swapping".

1.1 Supplementary documents

- INSTALLATION INSTRUCTION, (1531-BDV 113 08Uen
- INSTALLATION INSTRUCTION, 1531-BDV BS 101 01Uen)
- FAULT TRACING INFORMATION, 1545-ASB 150 02 Uen
- RASC User Guide EN/LZT BS 102 023

1.2 Fault locating

If a fault is discovered, the directions given in FAULT TRACING INFORMATION are to be followed.

2 Prerequisites

- The skilled technician should be familiar with the PBX in terms of location of the switches on the boards and the settings by RASC.
- The system shall be mounted. Presently two systems are available and connected in accordance with:
  INSTALLATION INSTRUCTION
  1531-BDV 113 08 Uen for the BP 250 and
  INSTALLATION INSTRUCTION,
  1531-BDV BS 101 01 Uen for the BP 50.
- A personal computer installed with the maintenance program RASC (Remote Access Supervision and Configuration, LZY 203 2250), and Integrated Cordless System Manager Software program (LZYNB 201 01) should be available.
- To connect the computer with the system, use cord set TSR 902 0448/1 (PC and printer cable).

3 Preparations

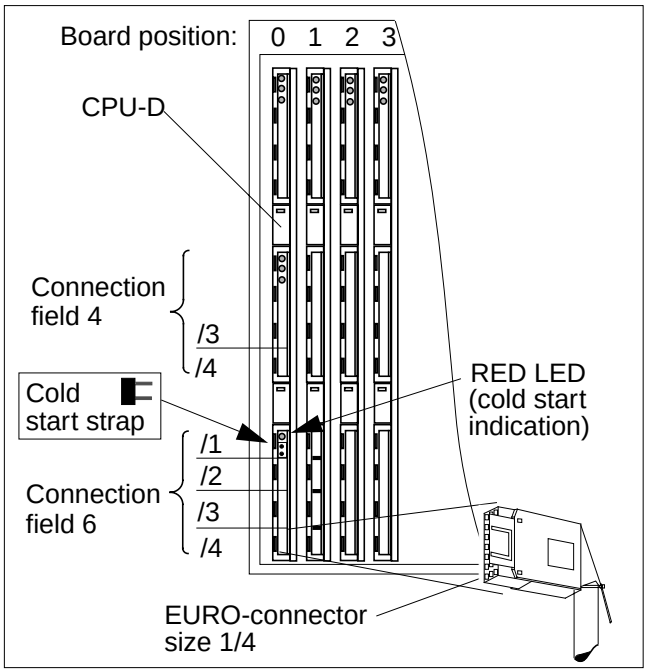
Remove the cabinet cover and verify that printed board assemblies (boards) are mounted according to the required system configuration and that appropriate cables are connected.

Use the V.24 interface cable TSR 902 0448/1 to connect the personal computer to the CPU-D$_{(_)}$ board in connection field 6/4. The computer should have the RASC program installed. Turn on the PC and start the RASC application.

RASC requires some standard settings to start working:
-the communication port must be set for 9600 baud
-the default password setting is **33333**.

Cordless System Manager Software requires:

-COM1 port default setting: 2400 baud
-the default password setting is **AAAAAA**
-printer port 2400 baud (X-on/X-off, 8 bits, 1 stop bit, no parity).



3.1 Turn power on

Verify that the exchange has a power supply installed for the correct mains voltage. Plug the power supply cord into the mains outlet and switch on the power supply or exchange.

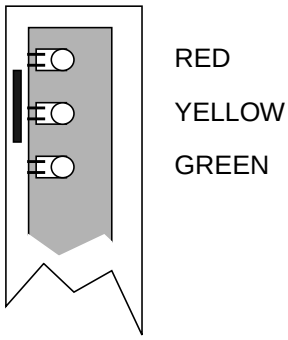
3.2 WARM START

Make sure that the restart-strap on CPU-D$_{(_)}$ at connection field 6/1 is not inserted.

When turning on power, make sure that the cabinet with the CPU-D$_{(_)}$ is turned on as **the last** cabinet, if there are more than one.

The light emitting diodes (LED) on the front of all boards should light up in a certain way (see below), to signal that the boards are working perfectly.

The LEDs at the top and front of a board



When the start-up is successfully completed, all LEDs in the figure above are turned off. Proceed to section 4 on page 5.

3.3 COLD START

Note: When invoking cold start all customer data will be lost and all the announcements stored on the VMU-D will be erased.
On the VMU-HD the announcements will be kept but infos and messages will be lost.

Insert the cold restart-strap on CPU-D$_{(_)}$ in connection field 6/1. Immediately after the power is turned on, the red LED located above the strap should light. After a few seconds the red LED at the top of the board should go off and the yellow LED starts to flash. Remove the restart-strap on CPU-D$_{(_)}$. This is to prevent losing all system data if a restart should occur.

4 PROGRAMMING THE SYSTEM

Start RASC and check if all the boards have been detected. Then load the appropriate session for your country containing the trunk's transmission levels and filter coefficients etc. (See RASC sessions for setting of tone and transmission parameters).

After programming background music or music-on-hold be sure to invoke a warm start to enable this function.

4.1 Trunk programming

Trunk boards need special programming of the settings as required by the PTT network before the exchange can be used. In the RASC tool sessions are available for the specific markets, setting certain transmission parameters and tone characteristics e.g. level, cadences. Programming is executed with RASC. The following groups of commands have to be provided with proper values:

- External line parameters (group 10)
- Answer position for trunk lines (group 11)
- Line signalling diagrams (group 12)
- Register signalling diagrams (group 13)

The default values for trunk lines are 700 and following. Route 0 is to access to trunk 700.
"9" is reserved for operator queue.

Refer to 1545-ASB15002Uen Fault Tracing Instructions showing the BTU-D start-up sequence.

4.2 Tie line programming

BTU-C/2

Verify that the correct line signalling has been selected. Refer to command **1201** and select 12 for DC-loop signalling.

If DID with DTMF or MFC is used check if a board with register function is installed.

BTU-E

Verify that the far end has the same voice connection selected (2- or 4-wire).

Verify that the correct line signalling has been selected. Refer to command **1201** and select:

8 Sweden E&M signalling
9 Continuous E&M sign., A-Format
10 Continuous E&M sign., D-Format
11 Discontinuous E&M signalling

44 CEPTL 1 (on BTU-E2)
45 CAILHO discontinuous
46 SSAC 15 - A (on BTU-E2)

If DTMF or MFC indialling is used, verify that a BTU-D or REG board is installed in the system. The same applies for the VMU-HD if the register function is activated.

4.3 Programming the VMU HD (hard disk)

The hard disk should be inserted following prerequisites stated under section 5.3.2 on page 8. After the update invoke the following commands:

4603 Enable data loading set to **YES**

4450 Load data after coldstart or board update. Not used if data is just added.

Announcement groups

The available announcement groups are 4401 to 4426 with groups 4411 to 4426 being only available on the VMU-HD.

4424 The VMU-HD has all 64 references while the VMU-D provides only 32.

When invoking cold start or update card all data and messages are deleted but not the announcements.

4.4 Number series

The completed exchange data sheets express the customer's requirements with respect to facilities and number series. Program the system to the customer's requirements. On initialisation the first ELU-_ board will acquire the extension numbers from 200 onward.

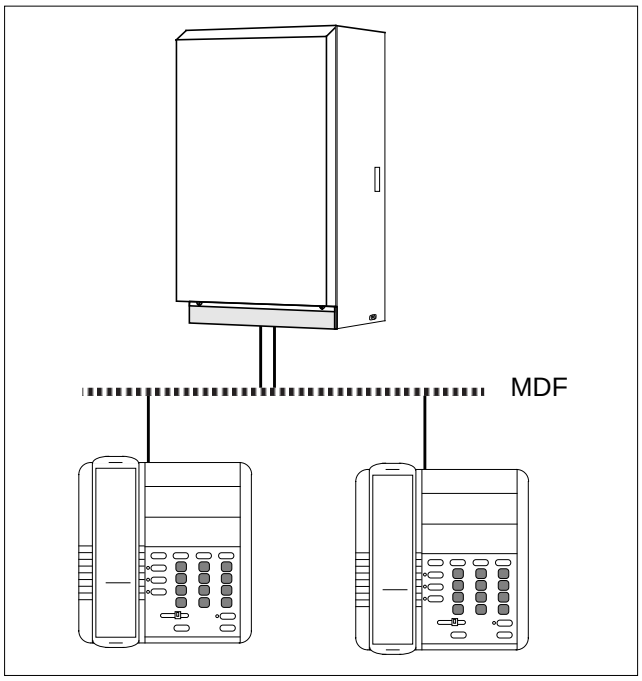
Note: If the system does not start up successfully and the red LEDs on nearly all cards are **ON** then the PROMs on the CPU-D$_{(-)}$ could be misplaced and must be corrected.

5 TEST PROCEDURES

The following test-procedures ensure the proper functionality of the exchange.

5.1 Extension lines

This test verifies that the extension lines and the telephones are connected and working.



The boards involved are:

- ELU-A
- ELU-C
- ELU-D

5.1.1 Digital Telephones with/without display

Digital telephones can be connected to either ELU-D or ELU-C boards.

Start of test

a Activity: Go to a telephone with display.

b Activity: Read the display.
Check: Does the telephone show the correct extension number?

c Activity: Lift the handset.
Check: Does a dial tone sound?

d Activity: Call an extension nearby and wait for it to ring. Pick up the other telephone and check for speech connection. Then hang up both phones
Check: Have all extensions been tested? If the answer is yes go to position f.

e Activity: Go to next telephone and continue with position b.

f End of test.

5.1.2 Analogue Telephones

Analogue telephones are connected to an ELU-A board.

To test proceed similar to the digital telephones.

5.2 Trunk lines

The test is designed to verify the connection between ASB 150 02 and the public exchange and the equipment for call metering is verified at the same time

The following functions are to be verified:

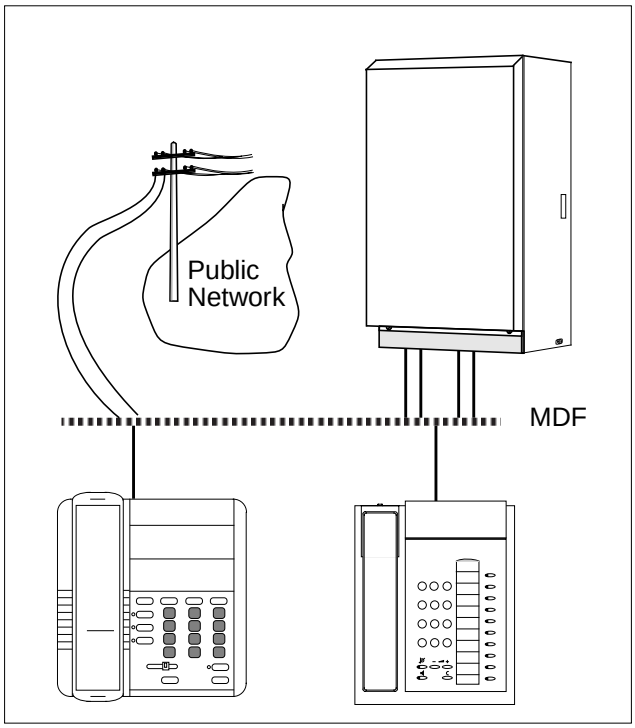
- digit transmission
- detection of external dial tone
- voice transmission
- detection of incoming call signal
- call metering

The boards involved are:

- BTU-A
- BTU-A2
- BTU-B
- BTU-C
- BTU-D
- BTU-E

5.2.1 Preparations

- Use RASC to read out the individual number of the trunks connected to the system
- Connect a system telephone with display (A), to any line in the MDF.
  The telephone is permitted to initiate calls via all trunk lines
- Connect a system telephone with display (B), to any line in the MDF. This telephone shall be programmed as answer position for incoming calls via all BTU boards.



For the tests, it is desirable that the trunk lines have individual call numbers in the public exchange.
If this is not the case, a line can be selected by seizing all lines with the exception of the two used for each test.

Start of test

a Activity: **A** goes off hook.
Check: **A** receives dial tone.

b Activity: **A** dials individual number of relevant trunk line.
Check: **A** receives dial tone from public exchange.

c Activity: **A** dials individual number of relevant trunk line in public exchange.
Check: **B** receives external ring signal.

d Activity: **B** answers.
Check: **A-B** speech connection established.

e Activity: **A** and **B** goes on hook.
Check: None.

f Activity: None.
Check: Have all trunk lines been utilised for both incoming and outgoing calls?
If yes, go to position h, otherwise go to position g.

g Activity: Select next trunk line. Then go to position a.
Check: None.

h Activity: None.
Check: Verify that all metering pulses have been registered on the trunk line meters on the BTU-boards by using the telephone.

i Open all trunk lines that were seized.

End of test

5.3 VMU-boards

5.3.1 Preparations for VMU-D

To avoid losing information in case of power failure, the VMU-D board should be equipped with a battery, RNV 991 942/001, connected to connection field 4. See INSTALLATION INSTRUCTION, (1531-BDV 113 08Uen.

5.3.2 Preparations for VMU-HD (hard disk)

When upgrading or replacing the VMU-D with a VMU-HD see section 5.8 on page 11 for instructions. The hard disk used on the VMU-HD is a standard PCMCIA interface hard disk type III with a storage capacity depending on the system demand.

Do not use a VMU-D and a VMU-HD in the same system. When replacing the VMU-D in the same board position with a VMU-HD follow instructions in section 5.8 on page 11. If the VMU-HD is placed in another position use RASC to update both card positions.

The following DOS directories must be created on this hard disk (use a PC):

\Info0	\message2	\anno0
\Info1	\message3	\anno1
	\message4	\anno2
	\message5	\anno3
		⋮
		\annoF

RASC menu for handling VMU-HD data files

The menu ***VMU-HD Dumping/Loading*** is located under ***OTHER***. If files are already stored on the hard disk this utility lists all available files on the screen.

With the ID button select the directory on the PC in which RASC has to search and list the VMU-HD data files. Then select by using the space bar the appropriate files to copy to the VMU-HD hard disk or delete them.

Printing: use the F4 key to make a file list printout.

Copying: select the files, press F8 to copy. Type the drive and directory. Prompts will be given if the directory is not available and should be created. Also if the file already exists to overwrite it.

Before starting to record, change by using the following commands to higher values as the storage capacity has been extended.

Commands

4302 change from default value 12 seconds to 25 seconds

4303 change from default value 12 seconds to 25 seconds

Note: Customer announcements can not be moved from a VMU-D to a VMU-HD. Note the contents before upgrading with the new board.

5.3.3 Test of VMU-_ board

This test verifies the proper function of the VMU-(H)D board(s).

Start of test

a Activity: Press the button named INFO on a telephone with display.
Check: None.

b Activity: Choose the function LEAVE.
Check: None.

c Activity: Choose the function VOICE.
Check: None.

d Activity: Speak.
Check: None.

e Activity: Choose the function PLAY.
Check: Verify that what you have said at position d is repeated by the telephone.

f Activity: Have all VMU-board(s) been tested? If yes go to position h.

End of test

Note: When VMU-(H)D board(s) is (are) activated, the green LED will be lit.

5.4 CORDLESS

Verify that the wiring to the Base Stations is correct.

Visual Checks

The power LED on every Base Station should be ON. The LEDs on the IC-CU and IC-LU boards should be OFF.

Note: Every Base Station accessible by persons other than trained personnel must have the cover mounted.

Test of the cordless

With the aid of the INTEGRATED CORDLESS SYSTEM MANAGER verify that the correct programming has been performed and using the systems menu check the status of the boards and Base Stations. The following test verifies the proper function of the INTEGRATED CORDLESS system.

Start of test

a Activity: Use a DT360 (or DT310) and dial an extension with display near by.
Check: None.

b Activity: Check that the correct calling extension number is displayed and pick up the ringing phone.
Check: If voice connection has been established.

c Activity: Put both telephone sets on hook.
Check: None.

End of test

Radio Coverage Checks

The radio coverage verification consists of two tests:

- Base Station test,
- Area coverage test.

Start of Base Station test

The purpose of this test is to check if all Base Stations are operational.

1. Put a portable in the Service Display mode (refer to the FAULT TRACING 1545-ASB15002Uen).
2. Take ground plan (map) of the building where the Base Stations are indicated with their corresponding Base Station number.
3. Move close to each Base Station and check that the portable locks to it (the Service Display should display the correct Base Station number).

After having checked that all Base Stations are operational proceed with the area coverage test.

Start of Area Coverage test

The purpose of this test is to verify that there is satisfactory field strength to enable good speech quality everywhere within the covered area (rooms, elevator shafts, staircases). This test is executed with two portables and requires two persons.

1. Place the portable in the Service Display mode and call the other portable. One user of the portable should now start moving around the covered area. Both users must check that a good speech quality is maintained everywhere. Special attention should be paid to areas such as edges of the building and areas behind metal structures where there is a possibility of reduced speech quality.
2. Mark areas where RQI is not stable on 20hex and where cracking sounds or mutes are heard. A further Base Station should be installed in this area.

Portable Checks

This test checks for each portable the complete connection from system board to PABX. Furthermore it checks that the portables' numbers have been correctly programmed. The test is performed by calling all portables from one and the same portable.

1. Put all portables together in order of extension number on a table.
2. Go off-hook with each portable and check that the dial tone is heard.
3. Call with a portable (portable A) all other portables sequentially and check that the portable with the corresponding number on its display rings when called.
4. Call portable A and check if it rings.

Feature Enabling Control Unit (FECU)

On cold start the IC-CU recognizes whether a FECU is connected and how many portables are allowed to be connected to the cordless. The FECU must not be unplugged during operation as after a certain time out only the first 8 portables are recognized (default value).

To up/down grade:

a save configuration by RASC menu 'Transfer to file'

b replace FECU

c invoke warm start (manually or by RASC)

d update HW configuration in RASC (off-line mode)

e update the RP configuration (online mode)

f IC-CU reports new amount of portables

g recover initial configuration.

5.5 CPU-D(_)

Possible connections to CPU-D$_{(_)}$ are:

- lowest V.24 (Used by RASC) and on CPU-D$_{(_)}$ two additional ports for applications are available
- audio input
- temperature probe inputs

Feature Enabling Control Unit

The CPU-D4 recognizes whether a FECU is connected and which application is enabled. The FECU must not be unplugged during operation (only the basic functionnality is available without FECU) as the system checks periodically its presence. This might cause a slight delay after plugging in until the FECU is detected.

5.5.1 Test of V.24

If a connection can be established by RASC and a PC connected to CPU-D$_{(_)}$ then the V.24 is working. Otherwise use a data line tester to check for communication faults.

5.5.2 Test of temperature probe input

Start of test

a Activity: Read the temperature on a telephone.
Check: Verify that the temperature is correct.

End of test

5.6 System clock

Set the correct time and day by using the RASC maintenance program and verify it on the display of a digital telephone set.

5.7 Handling/exchanging boards while the system is in operation

While the exchange is in operation an upgrading by new boards (system expansion) or replacment of boards with the same configuration is supported. Care must be taken to extract and replace the board without metal parts touching adjacent boards and thus causing a short circuit. This may permanently destroy electronic components on the board being extarcted or boards remaining in the system. Use RASC to verify whether the system logged the board replacement.

5.8 Upgrading or exchanging boards

When upgrading or replacing boards e.g.the VMU-D with a VMU-HD. Use RASC to take the old board out of system evidence and replace it with the new board.

Switch the system OFF and take out the board and then switch ON again to start up the exchange. Start RASC and perform board update to remove board from system. Then switch OFF exchange.

Insert VMU-HD and switch ON the exchange. Use RASC to perform board update.

The same procedure applies when replacing a subequipped board with a standard one.

5.9 CTI

5.9.1 Installation on Novell® Netware server

Note: All activities on a customer server have to be carried out by a qualified and authorized network administrator. Ericsson cannot be held responsible for failure, inoperability or unavailability of the server nor for hardware incompatibility.

To enable this function please verify that Novell® 3.x or 4.10 or higher has been installed properly on the Network.

Check that the server is installed correctly and that Novell's®Telephony Services is loaded.

The following load instruction will be performed automatically in the next release:

Load module aiocomx and choose which serial communication board is to be used by loading the module with a suitable syntax using command:

load aiocomx port=___ int=_

The hardware of the serial COM port must offer the capability of transferring data with 19.200 baud (this should be possible if the board uses the IC 16550).

Install the BP250drv.nlm and load it by using command:

load bpdrv

To make sure that the server activates this application during start-up add the two commands stated above to the autoexec.ncf on the server.

Verify that the users are registered for log on to the server. Use TAdmin to register the users for Telephony Services.

5.9.2 Setting with RASC

Verify that the cable connection from the COM port to the V.24 port of the CPU-D_/Aux_ is attached. Then enter RASC using:

command **8901** which V.24 port is active

command **6006** set to 11

command **6007** set to 1 (US-ACII)

command **6009** set to 9600 baud

command **6010** set to 1 (slave)

command **6011** set to NO

command **6012** set to CTI.

5.9.3 Installation on client PC

Install the Telephony Services for clients (necessary to provide the application with the CSTA.dll to establish communication). Refer to the Novell® handbook.

Verify that the users are registered for log on to the Telephony Services. Then log on to the telephony server.

First start Windows, then start the desired CTI application such as PhoneTastic, FastCall, PhoneMax etc.

Verify proper function by setting up a call to an extension near by.

6 FINAL WORK

Make sure the cold start-strap on CPU-D$_{(_)}$ in position 4/4 or 6/1is removed. This is to prevent losing all system and VMU-D data if a restart should occur.

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SEA/EBBMP M. Plattner	SEA/EBAX/E	1553-ROF 157 5126 Uen	
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BusinessPhone 50
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VMU-HD-TEXTS

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GENERAL INFORMATION

The PC-program WAV2VMU.EXE (LZYBS 203 2248) converts audiofiles from WAV to VMU-HD format.

Usage:

WAV2VMU <filename[.WAV]> /option1 /option2

options:	/L	converts to VMU-HD low quality format (high quality is default)
	/C	cuts frequencies below 250 Hertz
	/+	output file + 6 dB

Recording the voice prompts the name of the <filename[.WAV]> should be according to the lists in this document (see following pages).

E.g.:The voice prompt „I am absent at the moment and will be back at“ should be recorded as „D031D031.wav“ and will be converted and renamed by the program to „D031D031.001“.

After a successful conversion a file with the name

-<filename.000> Voice storage capacity: VMU-HD Low Quality (32 Kbits/sec.) or
-<filename.001> Voice storage capacity: VMU-HD High Quality (64 Kbits/sec.) =default value
will be created.

Limitations:

- Wildcards in <filename> are not allowed.
- Only certain WAV formats will be supported:
  - 8 or 16 bit samples
  - mono or stereo
  - 11.025 kHz, 22.05 kHz or 44.1 kHz sample rate
- Not supported:
  - 4 bit & 12 bit samples
  - all kind of audio codes (compressed formats)

Minimum PC configuration:

- 486DX2 66 MHz
- MS-DOS 5.0 or higher
- It is possible to use this program in a MS-DOS box from MS-Windows 3.x or higher.
- A PCMCIA (PC-CARD) type III slot is necessary for file transfer to VMU-HD.

Title 1:Predefined Information Texts

Command no.: 4402
Valid number range: 1 - 7
Valid filename range: D031D031.001 - D037D037.001

Number	Filename	Predefined texts	
1	D031D031.001	I'm absent at the moment and will be back at	(+ time)
2	D032D032.001	I'm on a business trip and will be back on, the	(+ date)
3	D033D033.001	I'm having lunch and will be back at	(+ time)
4	D034D034.001	I'm in a meeting and will be back at	(+ time)
5	D035D035.001	I'm on vacation and will be back on, the	(+ date)
6	D036D036.001	I'm ill. I will probably be back on, the	(+ date)

e.g.: "I'm ill. I will probably be back on, the " - "First of" - "January"
e.g.: "I'm in a meeting and will be back at" - "Eight" - "oh clock"
e.g.: "I'm absent at the moment and will be back at" - "Nine" - "oh five"

Title 2: Months

Command no.: 4403
Valid number range: 1 - 12
Valid filename range: D041D041.001 - D04CD04C.001

Title 3: Days

Command no.: 4404
Valid number range: 1 - 31
Valid filename range: D051D051.001 - D06FD06F.001

Number	Filename	Predefined texts	Number	Filename	Predefined texts
1	D041D041.001	January	1	D051D051.001	First of
2	D042D042.001	February	2	D052D052.001	Second of
3	D043D043.001	March	3	D053D053.001	Third of
4	D044D044.001	April	4	D054D054.001	Fourth of
5	D045D045.001	May	5	D055D055.001	Fifth of
6	D046D046.001	June	6	D056D056.001	Sixth of
7	D047D047.001	July	7	D057D057.001	Seventh of
8	D048D048.001	August	8	D058D058.001	Eighth of
9	D049D049.001	September	9	D059D059.001	Ninth of
10	D04AD04A.001	October	:	:	:
11	D04BD04B.001	November	:	:	:
12	D04CD04C.001	December	31	D06FD06F.001	Thirty-first of

Title 4:Hours

Language 1: Command no. 4405
Valid number range: 0 - 23
Valid filename range: D070D070.001 - D087D087.001

Language 2: Command no.: 4407
Valid number range: 0 - 23
Valid filename range: D0A0D0A0.001 - D0B7D0B7.001

Language 3: Command no.: 4409
Valid number range: 0 - 23
Valid filename range: D0D0D0D0.001 - D0E7D0E7.001

Number	Filename language 1	Predefined texts	Filename language 2	Filename language 3
0	D070D070.001	midnight	D0A0D0A0.001	D0D0D0D0.001
1	D071D071.001	one	D0A1D0A1.001	D0D1D0D1.001
2	D072D072.001	two	D0A2D0A2.001	D0D2D0D2.001
3	D073D073.001	three	D0A3D0A3.001	D0D3D0D3.001
4	D074D074.001	four	D0A4D0A4.001	D0D4D0D4.001
5	D075D075.001	five	D0A5D0A5.001	D0D5D0D5.001
6	D076D076.001	six	D0A6D0A6.001	D0D6D0D6.001
7	D077D077.001	seven	D0A7D0A7.001	D0D7D0D7.001
8	D078D078.001	eight	D0A8D0A8.001	D0D8D0D8.001
9	D079D079.001	nine	D0A9D0A9.001	D0D9D0D9.001
10	D07AD07A.001	ten	D0AAD0AA.001	D0DAD0DA.001
11	D07BD07B.001	eleven	D0ABD0AB.001	D0DBD0DB.001
12	D07CD07C.001	twelve	D0ACD0AC.001	D0DCD0DC.001
13	D07DD07D.001	thirteen	D0ADD0AD.001	D0DDD0DD.001
14	D07ED07E.001	fourteen	D0AED0AE.001	D0DED0DE.001
15	D07FD07F.001	fifteen	D0AFD0AF.001	D0DFD0DF.001
16	D080D080.001	sixteen	D0B0D0B0.001	D0E0D0E0.001
17	D081D081.001	seventeen	D0B1D0B1.001	D0E1D0E1.001
18	D082D082.001	eighteen	D0B2D0B2.001	D0E2D0E2.001
19	D083D083.001	nineteen	D0B3D0B3.001	D0E3D0E3.001
20	D084D084.001	twenty	D0B4D0B4.001	D0E4D0E4.001
21	D085D085.001	twenty-one	D0B5D0B5.001	D0E5D0E5.001
22	D086D086.001	twenty-two	D0B6D0B6.001	D0E6D0E6.001
23	D087D087.001	twenty-three	D0B7D0B7.001	D0E7D0E7.001

Title 5: 5 Minutes

Language 1: Command no.: 4406
Valid number range: 0 - 11
Valid filename range: D090D090.001 - D09BD09B.001

Language 2: Command no.: 4408
Valid number range: 0 - 11
Valid filename range: D0C0D0C0.001 - D0CBD0CB.001

Language 3: Command no.: 4410
Valid number range: 0 - 11
Valid filename range: D0F0D0F0.001 - D0FBD0FB.001

Number	Filename language 1	Predefined texts	Filename language 2	Filename language 3
0	D090D090.001	hundred hours	D0C0D0C0.001	D0F0D0F0.001
1	D091D091.001	oh five	D0C1D0C1.001	D0F1D0F1.001
2	D092D092.001	ten	D0C2D0C2.001	D0F2D0F2.001
3	D093D093.001	fifteen	D0C3D0C3.001	D0F3D0F3.001
4	D094D094.001	twenty	D0C4D0C4.001	D0F4D0F4.001
5	D095D095.001	twenty-five	D0C5D0C5.001	D0F5D0F5.001
6	D096D096.001	thirty	D0C6D0C6.001	D0F6D0F6.001
7	D097D097.001	thirty-five	D0C7D0C7.001	D0F7D0F7.001
8	D098D098.001	forty	D0C8D0C8.001	D0F8D0F8.001
9	D099D099.001	forty-five	D0C9D0C9.001	D0F9D0F9.001
10	D09AD09A.001	fifty	D0CAD0CA.001	D0FAD0FA.001
11	D09BD09B.001	fifty-five	D0CBD0CB.001	D0FBD0FB.001

Title 6: General Announcements

Command no.: 4401
Valid number range: 1 - 32
Valid filename range: D001D001.001 - D020D020.001

Possibility 1: ACD texts

Number	Filename	Predefined texts
1	D001D001.001	All agents are busy. Your call is number ... (+ position)
2	D002D002.001	... in the queue. Please hold.
3	D003D003.001	All agents are busy. Your approximate waiting time is ... (+ time)
4	D004D004.001	... minutes. Please hold.

e.g. "All agents are busy. Your call is number" - "Five" - "in the queue. Please hold"
e.g. "All agents are busy. Your approximate waiting time is" - " Ten" - "minutes. Please hold"

Possibility 2: Hotel texts

Number	Filename	Predefined texts
5	D005D005.001	You have ordered a wake-up call for ... (+ time of wake up)
6	D006D006.001	Good morning, this is your wake-up call.

e.g. "You have ordered a wake-up call for" - "eight" - "Oh five"

Possibility 3: Business texts

Number	Filename	Predefined texts
7	D007D007.001	This is your reminder call.

Title 7: Automated Attendant

Command no.: 4411
Valid number range: 1 - 42
Valid filename range: D101D101.001 - D12AD12A.001

No.	Filename	Customer specific texts
1	D101D101.001	Welcome to the Automated Attendant. Please press ONE to dial directly to the extension number. Press STAR to be connected to the operator. Please make your choice.
2	D102D102.001	Welcome to the Automated Attendant. Select from the following possibilities: Press ONE for the marketing department. Press TWO for the customer service. Press THREE for other departments. Please make your choice.
3	D103D103.001	Welcome to the Automated Attendant. Select from the following possibilities: Press ONE for the purchasing department. Press TWO for the accounts department. Press THREE for other departments. Press STAR to be connected to the operator. Please make your choice.
4	D104D104.001	Welcome to the Automated Attendant. Please dial the extension number you want to be connected to.
42	D12AD12A.001	The dialled number is wrong.

Title 8: Mailbox System - Storing & Retrieving voice message prompts

Language 1: Command no.: 4412
Valid number range: 0 - 14
Valid filename range: D130D130.001 - D13ED13E.001

Language 2: Command no.: 4413
Valid number range: 0 - 6
Valid filename range: D140D140.001 - D146D146.001

Language 3: Command no.: 4414
Valid number range: 0 - 6
Valid filename range: D150D150.001 - D156D156.001

No	Filename language 1	Predefined texts	Filename language 2	Filename language 3
0	D130D130.001	After the tone, please record your message.	D140D140.001	D150D150.001
1	D131D131.001	To replay, press ONE, - For the next message, press TWO, - To delete it and call the extension, press STAR, - to delete it, press HASH.	D141D141.001	D151D51.001
2	D132D132.001	To replay, press ONE, - For the next message, press TWO, - To delete it, press HASH.	D142D142.001	D152D152.001
3	D133D133.001	Message deleted.	D143D143.001	D153D153.001
4	D134D134.001	Call back message from: (+ number)	D144D144.001	D154D154.001
5	D135D135.001	End of messages. Good-Bye.	D145D145.001	D155D155.001
6	D136D136.001	At the moment, your mailbox is being consulted. Please call back later.	D146D146.001	D156D156.001
7	D137D137.001	To leave a message in the mailbox press NINE, or wait, - For assistance, press STAR.		
8	D138D138.001	Please enter your mailbox number, - For assistance, press STAR.		
9	D139D139.001	Enter your extension number, to access the common mailbox, - For assistance, press STAR.		
10	D13AD13A.001	The extension has no access to the common mailbox.		
11	D13BD13B.001	Welcome to mailbox ...		
12	D13CD13C.001	If this is correct, press STAR, - To select another mailbox, press HASH.		
13	D13DD13D.001	The desired extension has no mailbox.		
14	D13ED13E.001	The desired mailbox does not exist.		

Title 9: Mailbox System - Storing of individual messages

Command no.: 4415
Valid number range: 0 - 31
Valid filename range: D160D160.001 - D17FD17F.001

Number	Filename	Customer specific text
0	D160D160.001	Welcome to the mailbox-system. The desired extension ... (+ number)
1	D161D161.001	... has activated the mailbox.

Title 10: Mailbox System - Retrieving of individual messages

Command no.: 4416
Valid number range: 0 - 15
Valid filename range: D180D180.001 - D18FD18F.001

Number	Filename	Customer specific text
0	D180D180.001	Welcome to your Mailbox System.

Title 11: Mailbox System - Storing of common messages

Command no.: 4417
Valid number range: 0 - 15
Valid filename range: D190D190.001 - D19FD19F.001

Number	Filename	Predefined text
0	D190D190.001	Welcome to the common mailbox.

Title 12: Mailbox System - Retrieving of common messages

Command no.: 4418
Valid number range: 0 - 15
Valid filename range: D1A0D1A0.001 - D1AFD1AF.001

Number	Filename	Customer specific text
0	D1A0D1A0.001	Welcome to your Mailbox System.

Title 13: Mailbox System - Digits

Language 1: Command no.: 4419
Valid number range: 0 - 9
Valid filename range: D1B0D1B0.001 - D1B9D1B9.001

Language 2: Command no.: 4420
Valid number range: 0 - 9
Valid filename range: D1C0D1C0.001 - D1C9D1C9.001

Language 3: Command no.: 4421
Valid number range: 0 - 9
Valid filename range: D1D0D1D0.001 - D1D9D1D9.001

Number	Filename language 1	Predefined texts	Filename language 2	Filename language 3
0	D1B0D1B0.001	Zero	D1C0D1C0.001	D1D0D1D0.001
1	D1B1D1B1.001	One	D1C1D1C1.001	D1D1D1D1.001
2	D1B2D1B2.001	Two	D1C2D1C2.001	D1D2D1D2.001
3	D1B3D1B3.001	Three	D1C3D1C3.001	D1D3D1D3.001
4	D1B4D1B4.001	Four	D1C4D1C4.001	D1D4D1D4.001
5	D1B5D1B5.001	Five	D1C5D1C5.001	D1D5D1D5.001
6	D1B6D1B6.001	Six	D1C6D1C6.001	D1D6D1D6.001
7	D1B7D1B7.001	Seven	D1C7D1C7.001	D1D7D1D7.001
8	D1B8D1B8.001	Eight	D1C8D1C8.001	D1D8D1D8.001
9	D1B9D1B9.001	Nine	D1C9D1C9.001	D1D9D1D9.001

Title 14: Mailbox System - Common voice prompts

Command no.: 4422
Valid number range: 0 - 2
Valid filename range: D1E0D1E0.001 - D1E2D1E2.001

Number	Filename	Predefined texts
0	D1E0D1E0.001	Please enter your password.
1	D1E1D1E1.001	Password incorrect.
2	D1E2D1E2.001	The password is still incorrect. The access to the mailbox is denied. Good-Bye.

Title 15: DISA Voice prompts

Command no.: 4423
Valid number range: 0 - 9
Valid filename range: D1F0D1F0.001 - D1F9D1F9.001

Number	Filename	Predefined texts
0	D1F0D1F0.001	Please enter the desired extension number or press STAR for assistance.
1	D1F1D1F1.001	Please enter your password.
2	D1F2D1F2.001	To classify the call, enter the account code and confirm with HASH, - Or to continue without classifying press HASH now.
3	D1F3D1F3.001	When you hear the dial tone, enter the trunk access code and the desired external number.
4	D1F4D1F4.001	The desired extension does not exist. Please try again.
5	D1F5D1F5.001	The desired extension is not allowed to use the DISA function. Thank you for calling. Good-Bye.
6	D1F6D1F6.001	The trunk line you've dialled is not related to your company.Please retry and use the correct public number for your traffic group. Thank you for calling. Good-Bye.
7	D1F7D1F7.001	Password incorrect. Please try again.
8	D1F8D1F8.001	You have entered more than 15 digits. Please try again.
9	D1F9D1F9.001	Welcome to the DISA system.

Title 16: Trunk Exit-position

Command no.: 4424
Valid number range: 0 - 31on VMU-D
0 - 63 on VMU-HD
Valid filename range: D200D200.001-D21FD21F.001 on VMU-D
D200D200.001-D23FD23F.001 on VMU-HD

Number	Filename	Customer specific texts
0	D200D200.001	Sorry, all agents are busy at the moment. Your call will be placed in a queue. Please hold.
1	D201D201.001	You're calling outside office hours. However, all agents are busy at the moment. Your call will be placed in a queue. Please hold.

Title 17: ACD greeting announcements

Command no.: 4425
Valid number range: 1 - 255
Valid filename range: D300D300.001 - D3FED3FE.001

Title 18: CTI-AA voice prompts

Command no.: 4426
Valid number range: 1 - 24
Valid filename range: D401D401.001 - D418D418.001

Title 19: Integrated Music-on-hold prompts

Command no.: 4427
Valid number range: 0 - 15
Valid filename range: D420D420.001 - D42FD42F.001

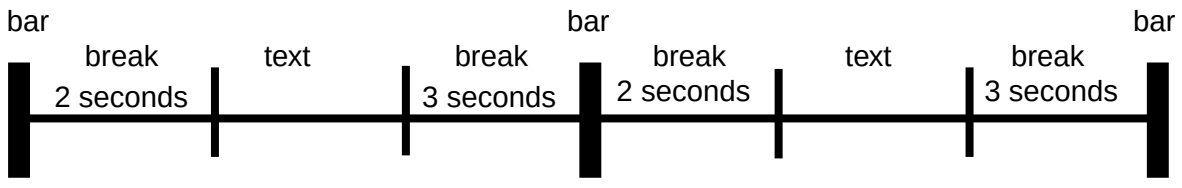
Title 20: Personal Greeting voice prompts

Command no.: 4428
Valid number range: 1 - 8
Valid filename range: D440D440.001 - D448D448.001

Number	Filename	Predefined texts
0	D440D440.001	Main Menu: - To listen to your messages, press ONE, - To configure the mailbox press TWO.
1	D441D441.001	Configuration Menu: - To configure your personal greeting, when the line is busy, press ONE, - On no reply, press TWO, - For direct diversion, press THREE, - to go back to the main menu, press Oh (0).
2	D442D442.001	Greeting Menu: - To record your personal greeting, press ONE, to finish recording, press HASH, -To listen to your personal greeting, press TWO, - To delete it, press THREE, - To go back to the configuration menu, press NINE, - Or to go back to the main menu, press Oh (0).
3	D443D443.001	This feature is currently not available, please try again later.
4	D444D444.001	Recording time exceeded. Your greeting has not been recorded.
5	D445D445.001	No greeting recorded.
6	D446D446.001	Greeting recorded.
7	D447D447.001	Greeting deleted.
8	D448D448.001	End of messages. - To go back to the main menu, press Oh (0), - to exit, hang up.

Specification for storing voice prompts from the telephone <u>without</u> using the program WAV2VMU

Start of title --- bar --- break: 2 seconds ---text--- break: 3 seconds
--- bar --- break: 2 seconds ---text--- break: 3 seconds



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START OF OPERATION

COMMUNICATION WITH APPLICATION PRODUCTS

This document describes how to connect peripheral equipment via V.24 ports to the PBX system ASB150 02 and the relevant commands to program the PBX for different applications.

Contents **Page**

1 GENERAL

The PBX system ASB 150 02 can be connected to peripheral equipment via asynchronous V.24 ports.

Local communication with peripheral computers or printers can take place on a V.24 port placed on the CPU-D_, and AUX-board.

The boards CPU-D_ (ROF 157 518/_) and AUX_ (ROF 157 5119/_) have three V.24 ports each and the boards CPU-D (ROF 157 518/1) and AUX (ROF 157 5119/1) have one V.24 port each.

The V.24 port 0 on the CPU-D_ board shall foremost be reserved for configuration and maintenance of the PBX.

A Hayes compatible modem for dialled up long distance communication can be connected to those V.24 ports.

By programming in ASB 150 02 the V.24 or RS-482 ports can be used for the following applications.

- Printout of telephone directory
- Output of call records CIL (Call Information Logging)
- Activation and registration of facilities for hotel applications
- Activation and registration of facilities for ACD (Automatic Call Distribution) applications
- Input and output of data for configuration and maintenance of the PBX

External equipment that is to be connected must comply with the requirements of the protocols and formats described in document INTERWORK DESCRIPTION (1-9/155 19-1/ASB 150 02 Uen).

1.1 Supplementary documents

Facility descriptions:

• CIL (Call Information Logging)	140/155 34-ASB 150 Uen
• Telephone directory	481/155 34-ASB 150 Uen
• Hotel computer	241/155 34-ASB 150 Uen
Interwork description	*1-9/155 19-1/ASB 150 02 Uen*

1.2 Product numbers

CALLCENTRE SUPERVISOR	
Standard	EN/ FAS BS 102 001/xxS
Basic	EN/ FAS BS 102 001/xxB
RASC, FAS 102 203	EN/LZB 103 1197

2 INSTALLATION

The boards have filters built in for suppression of electromagnetic interference (EMI). But if the suppression shall be in accordance with the stipulations for CISPR 22 class B, other types of cables for connection of peripheral equipment, mentioned later on in this document, have to be used.

The specification for V.24 allows a distance of 15m. For longer distances it is recommended to install short haul modems.

The peripheral units can be connected to the PBX via one of the following cables:

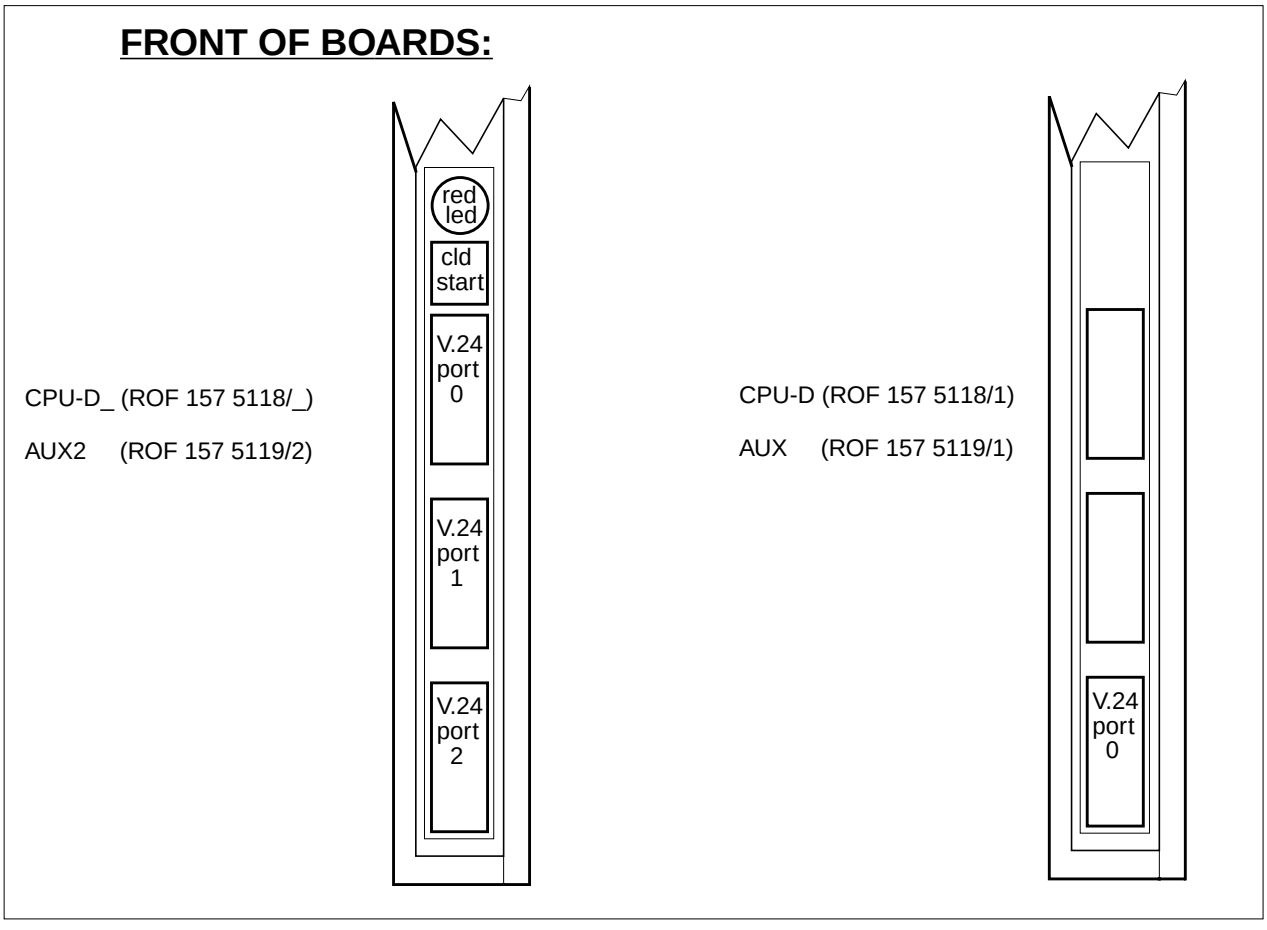
- Connection of printer TSR 902 0476/1 (length: 5 meters)
- Connection of computer TSR 902 0448/1 (length: 5 meters))
- Connection of modem TSR 902 0466/1(length: 5 meters)

Equipment connected to the RS-485 port can have a range up to 1200m.

2.1 Pin connectors for V.24 I/O-ports

Pin connectors for V.24 I/O-ports in the PBX exist on boards:

- CPU-D_ (ROF 157 5118/n)
- AUX_ (ROF 157 5119/n)



3 COMMANDS FOR PROGRAMMING OF ASB 150 02 FOR PERIPHERAL COMMUNICATION

Command groups 60 and 64 are the groups used for programming of the external communication.

The command groups consist of commands defining parameters for external communication to/from ASB 150 02 via V.24 ports.

Command groups

60xx is used for V.24 ports.

64xx is used for input/output of CIL and Hotel data.

3.1 Command overview, local connection via V.24 ports

6006 Pre-defined setting of the following functions in the V.24 port:

When the default is set = 3, the preprogrammed values below are set. These values match for a serial printer.

Circuit 105-109	Not used
Parity	Not used
Echo	Not used
Stop bits	1
Word length	8
Line protocol	x-on, x-off
Control Characters	subvolume of PBX-internal

6007 Defines the character set to be used
Default value = 1, US-ASCII

6009 Defines the speed rate for the V.24 port
Default value = 14, 9600 bit/s

6010 Decides whether the PBX is master or slave when connected to certain types of locally connected units. This command will be ignored when connecting certain types of external equipment see command
6006 in the command manual.
Default value = 0 (master)

6011 Decides whether automatic selection of the port is allowed for temporary use of services which don't have any port specified e.g. print out of telephone directory.
Default value = No, not allowed

6012 This command routes a connection request from the pheripheral unit to the desired service in the PBX.
Default values: For the boards CPU-D_ and AUX, all ports = 1.

3.2 Commands used for programming of ASB 150 02 for input/output of CIL and HOTEL DATA

6401 Specifies which V.24 port(s) (card No., port No.) shall be used for input/output of call and hotel data.
Default value = ⌓⌓⌓⌓ (empty). The port is switched off

6402 States whether communication channel is active or not.
Default value = NO. Not active

6403 Specifies which format shall be used. All applications use CIL2 Hotel.
Default value: MD110/standard format

6404 Number of lines per page.
Default value = 63

6405 States the time limit within which the output must have been completed, before the port will become faultmarked and an alarm will be generated.
Default value = 70s

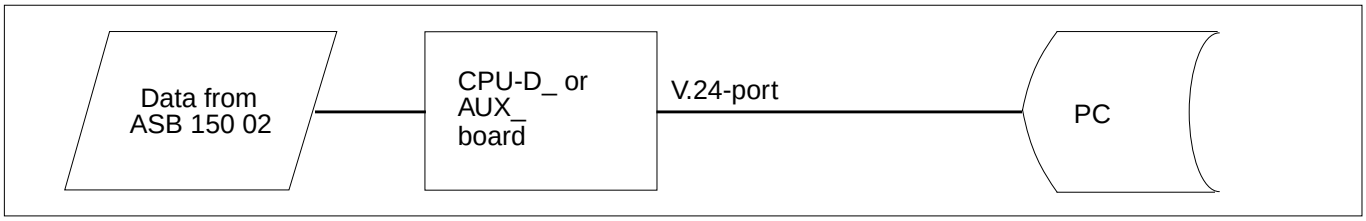
6406 Automatic activation of a faultmarked V.24 port.
Default value = 5 minutes

4 PROGRAMMING OF THE ASB 150 02 FOR COMMUNICATION WITH RASC / CMG

As default the ASB 150 02 will use the V.24 port 0 on the CPU-D_ board as communication port to RASC / Configuration Manager.

As default, RASC / CMG will use the COM1 port on the PC.

Use a cable with product number TSR 902 0448/1 for the connection ASB 150 02 ⟺ PC.



Settings in ASB 150 02

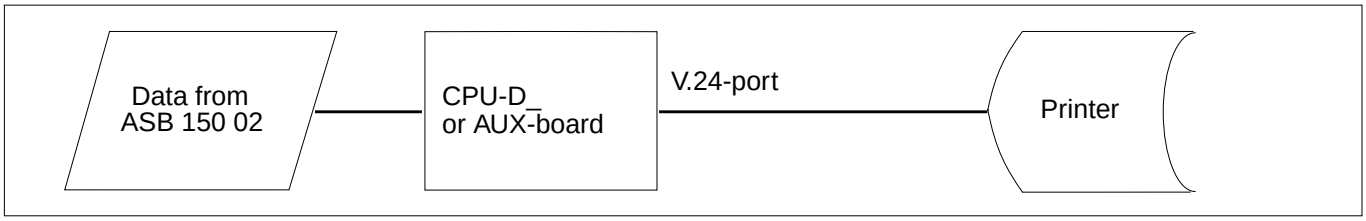
The given values in the table below are the default values.

The default values match the default settings in RASC.

COMMAND	SETTING	FUNCTION
6006	03	Setting of V.24 port to match the communication RASC <–> ASB 150 02
6007	1	Character set US-ASCII
6009	14	9600 Bit/s
6010	0	The PBX is master
6011	N	Not allowed for other services
6012	1	Operation and maintenance with RASC

5 PRINTOUT OF TELEPHONE DIRECTORY

Use a cable with product number TSR 902 0476/1 for the connection ASB 150 02 ⟺ Printer.



It is not necessary to reserve a V.24 port for this purpose.

It is possible to program V.24 port(s) to allow other services than it is primarily programmed for.

At times when the V.24 port is not used for the purpose it is programmed for, other services can use it.

The command which make the above possible is:

6011 Automatic selection of this port is allowed in local connection

If this command is programmed to YES, for instance for the port normally used for RASC, the printout of the telephone directory will take place on the same port when the printout is ordered via command 6502.

6502 This command is used to initiate printout of telephone directory on a printer and it has to be ordered from a telephone

Three different types of printouts can be ordered:

- ALL = All extensions are printed out
- GUEST = Only guest extensions are printed out
- DIR = Only non-guest extensions are printed out

Settings in ASB 150 02

The printer **must** match the values in the following commands

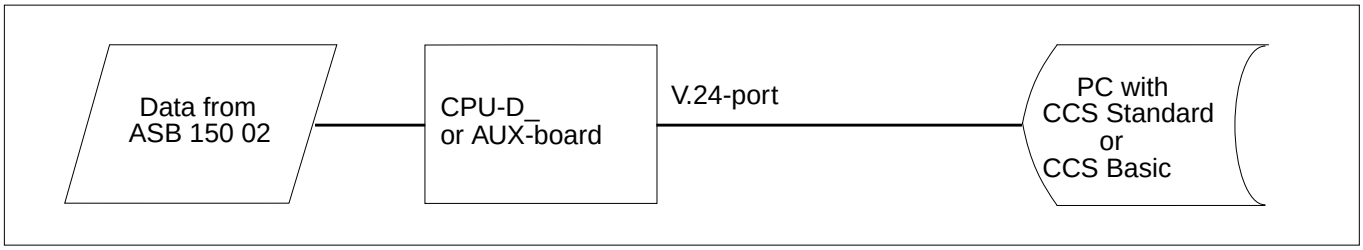
COMMAND	SETTING	FUNCTION
6006	x	Setting of V.24 port
6007	x	Character set
6009	x	Baudrate
6010	x	The PBX is master or slave

See the command description for information about the possible settings.

6 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH CALLCENTRE SUPERVISOR

The PC is by default using COM1 for the communication with ASB 150 02.

Use a cable with product number TSR 902 0448/1 for the connection PC ⟺ ASB 150 02.



NOTE: A security device must be plugged in LPT1 (parallel port)

If a printer is to be connected it must be connected to LPT1 and be switched on when the ACD program is started.

Settings in ASB 150 02

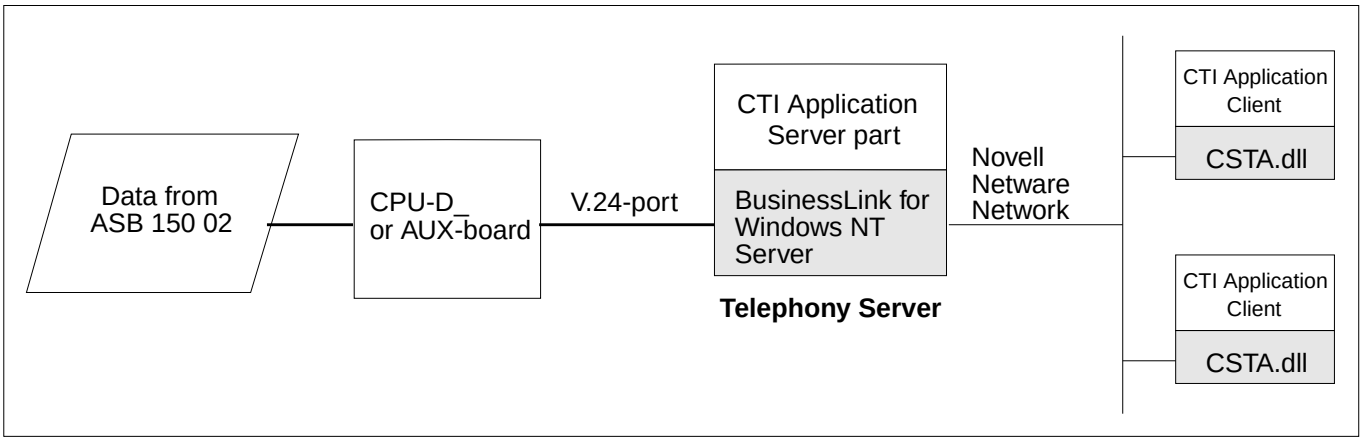
The commands in the table below **must** be programmed:

THIS SETTINGS FOR ASB 150 02 WILL MATCH THE DEFAULT SETTINGS IN THE ACD PROGRAM		
COMMAND	**SETTING**	**FUNCTION**
3708	aabbb	aa = Card No., bb = port No. (starting from 0)
6006	11	Setting of V.24 port to match the communication ACD ⟺ ASB 150 02
6007	0	The PBX internal set of characters
6009	8	1.200 Bit/s
6010	0	The PBX is master
6011	N	Automatic selection is not allowed
6012	2	ACD

7 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH BUSINESSLINK FOR NOVELL

The BusinessLink for Windows NT Server PC is by default using COM1 for the communication with ASB 150 02.

Use a cable with product number TSR 902 0448/1 for the connection PC ⇔ ASB 150 02.



NOTE: For BusinessLink for Windows NT a FECU must be plugged into specific port on CPU-D_.

Settings in ASB 150 02

The commands in the table below **must** be programmed:

THIS SETTINGS FOR ASB 150 02 WILL MATCH THE DEFAULT SETTINGS IN THE ACD PROGRAM		
COMMAND	**SETTING**	**FUNCTION**
8901	0000	Select CTI port (V.24)
3708	aabbb	aa = Card No., bb = port No. (starting from 0)
6007	1	US-ASCII set of characters
6009	14	9.600 Bit/s
6010	1	The PBX is slave
6011	N	Automatic selection is not allowed
6012	3	CTI

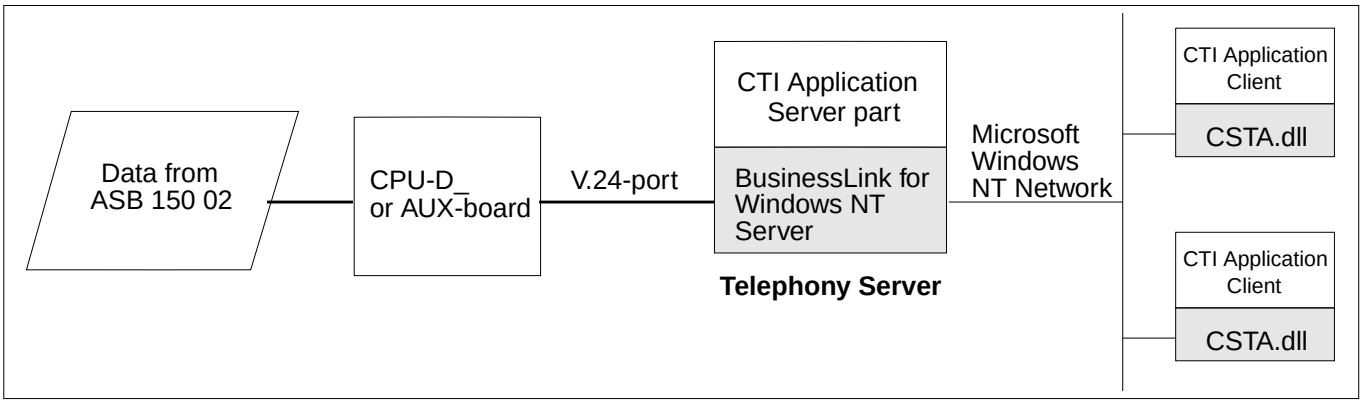
For a detailed instruction concerning the installation of the Server and the Client part please refer to the ‘Manager’s Guide‘ of BusinessLink for Novell which is located in the BusinessPhone BusinessLink for Novell Binder (EN/LZB BS 103 014).

All activites on a customer server have to be carried out by a qualified and authorized network administrator. Ericsson cannot be held responsible for failure, inoperability or unavailability of the server nor for hardware incompatibility.

8 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH BUSINESSLINK FOR WINDOWS NT

The BusinessLink for Windows NT Server PC is by default using COM1 for the communication with ASB 150 02.

Use a cable with product number TSR 902 0448/1 for the connection PC ⟺ ASB 150 02.



NOTE: For BusinessLink for Windows NT a FECU must be plugged into specific port on CPU-D_.

Settings in ASB 150 02

The commands in the table below **must** be programmed:

THIS SETTINGS FOR ASB 150 02 WILL MATCH THE DEFAULT SETTINGS IN THE ACD PROGRAM		
COMMAND	**SETTING**	**FUNCTION**
3708	aabbb	aa = Card No., bb = port No. (starting from 0)
6006	11	Setting of V.24 port to match the communication ACD ⟺ ASB 150 02
6007	1	US-ASCII set of characters
6009	16	19.200 Bit/s
6010	1	The PBX is slave
6011	N	Automatic selection is not allowed
6012	3	CTI
6013	0	Dial attempts

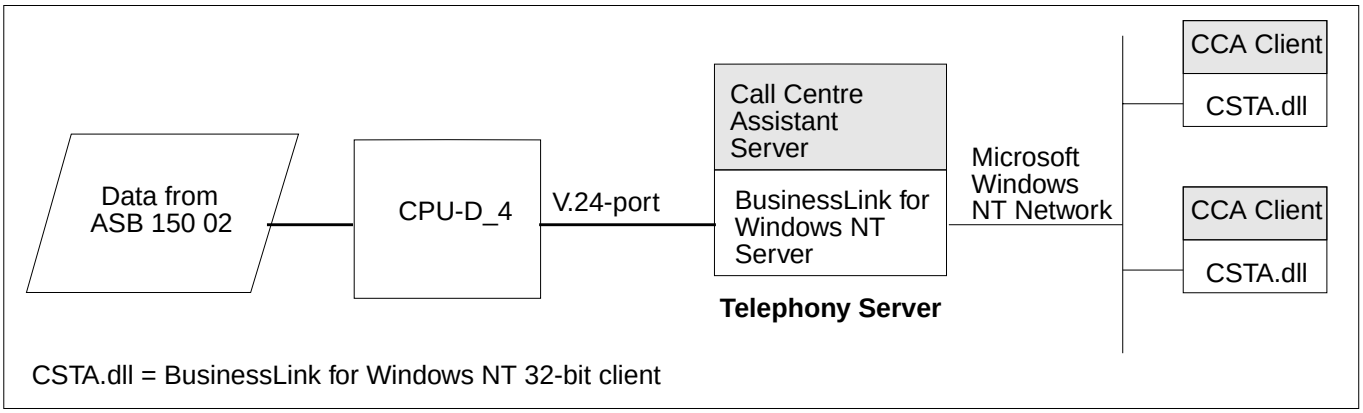
For a detailed instruction concerning the installation of the Server and the Client part please refer to the ‘Manager’s Guide‘ of BusinessLink for Windows NT which is located on the BusinessPhone BusinessLink for Windows NT product CD-ROM (EN/LZY BS 102 202/CD).

All activites on a customer server have to be carried out by a qualified and authorized network administrator. Ericsson cannot be held responsible for failure, inoperability or unavailability of the server nor for hardware incompatibility.

9 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH CALLCENTRE ASSISTANT (CCA)

The Telephony Server PC is by default using COM1 for the communication (via BusinessLink for Windows NT Server) with ASB 150 02.

Use a cable with product number TSR 902 0448/1 for the connection BusinessLink for Windows NT - PC ⟺ ASB 150 02.



NOTE: For BusinessLink for Windows NT a FECU (minimum Package 6: KDUBS 103 0x / 6) must be plugged to specific port on CPU-D_4.
For Call Centre Assistant a security device (WIBU-key) must be plugged in LPT1 (parallel port)

Before installing Call Centre Assistant, BusinessLink for Windows NT software (Server and Client part) and BusinessPhone software licensing (WIBU-key) must be installed.If a printer is to be connected it must be connected to LPT1 and be switched on when the ACD program is started.

FECU: KDUBS 103 0**x** / 6
x = 6 (ASB 150 02 R9, R10)
x = 7 (ASB 150 02 R11)

Settings in ASB 150 02

No specific commands **must** be programmed for Call Centre Assistant. For specific ACD programmings see the corresponging ACD Facility descriptions.

NOTE: BusinessLink for Windows NT requires some settings in the ASB 150 02. For detailed information see PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH BUSINESSLINK FOR WINDOWS NT

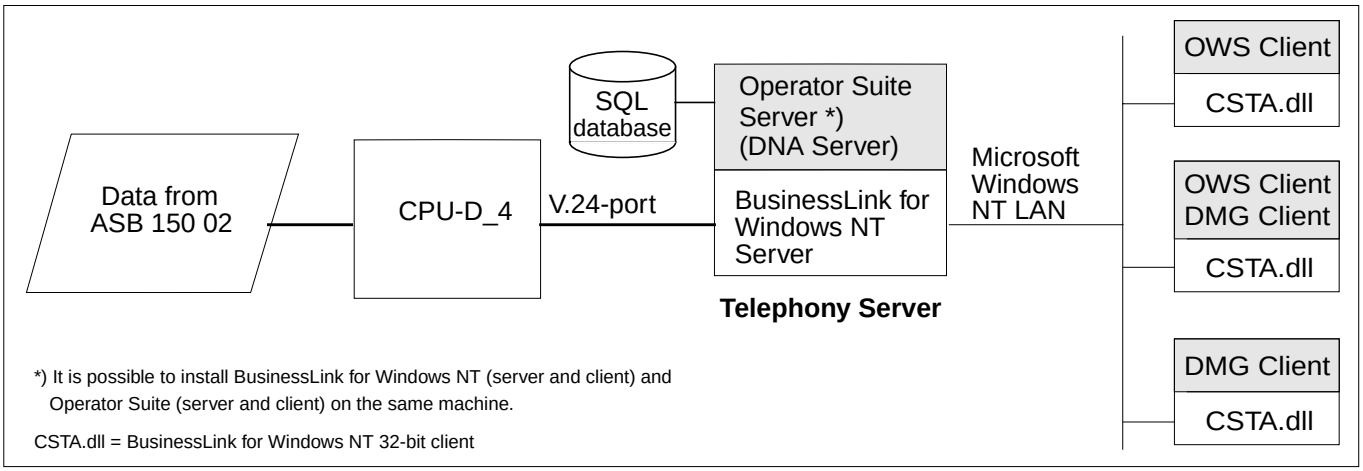
For a detailed instruction concerning the installation of the Server and the Client part please refer to the ‘Technical Guide‘ of Call Centre Assistant which is located on the BusinessPhone Call Centre Assistant product CD-ROM (FAS BS 102 204/CD).

All activites on a customer server have to be carried out by a qualified and authorized network administrator. Ericsson cannot be held responsible for failure, inoperability or unavailability of the server nor for hardware incompatibility.

10 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH OPERATOR SUITE (OPS)

The Telephony Server PC is by default using COM1 for the communication (via BusinessLink for Windows NT Server) with ASB 150 02.

Use a cable with product number TSR 902 0448/1 for the connection BusinessLink for Windows NT - PC ⇔ ASB 150 02.



NOTE: For Operator Suite a FECU (minimum Package 1: KDUBS 103 0x / 1) must be plugged to specific port on CPU-D_4.
For Operator Suite a security device (WIBU-key) must be plugged in LPT1 (parallel port). Security device (WIBU-key) requires the installation of specific software. The security device software is automatically installed by the default OPS installation.

Before installing Operator Suite, BusinessLink for Windows NT software (Server and Client part) must be installed.

FECU: KDUBS 103 0**x** / 1
x = 6 (ASB 150 02 R9, R10)
x = 7 (ASB 150 02 R11)

Settings in ASB 150 02

COMMAND	SETTING	FUNCTION
0175	Y	Use as CTI operator instrument? Command must be set to Yes for each extension used as CTI operator (free seating).

NOTE: For specific Operator programmings see the corresponding Facility descriptions (e.g. Voice Paging, Night Mode, ...).

BusinessLink for Windows NT requires some settings in the ASB 150 02. For detailed information see PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH BUSINESSLINK FOR WINDOWS NT

For a detailed instruction concerning the installation of the Server and the Client part please refer to the ‘Technical Guide‘ of Operator Suite which is located on the BusinessPhone Operator Suite product CD-ROM (FAS BS 102 205/CD).

All activites on a customer server have to be carried out by a qualified and authorized network administrator. Ericsson cannot be held responsible for failure, inoperability or unavailability of the server nor for hardware incompatibility.

11 GENERAL INFORMATION FOR CIL WITH ASB 150 02

Two V.24 ports in ASB 150 02 can be programmed for communication with a hotel computer and/or equipment for processing of CIL-data.

If the PBX is to be connected to a hotel computer, both V.24-ports or the bi-directional must be used for that communication.

If the PBX is to be connected to equipment for processing of call information logging, one V.24-port is needed. The other V.24 port can be programmed so it sends out the same information, (by programming that port with the same commands as the ordinary port).

The setting of the two ports with the commands for programming of the V.24-ports may be different.

The setting of the commands for the V.24-ports must match the setting of the V.24-ports in the external equipment to which they are connected.

Formats

The table below shows the differences between the two formats which can be used for CIL.

For complete description of the formats, see document INTERWORK DESCRIPTION (1-9/155 19-ASB 150 02 Uen

FORMAT	FUNCTION	DESCRIPTION
MD110/ standard	Queue time	Minutes
	Date	Month, day
	Directory No. -Trunk	0-9999
	Sequence number	Not included
	Message code	Not included
CILHOTEL	Queue time	Minutes, seconds
	Date	Year, month, day
	Directory No. -Trunk	Not included
	Sequence number	001-999
	Message code	2 characters
CIL2HOTEL	Dialled access code	0-9999
	Information status I	outgoing, incoming,internal
	Costs	11 digits
	Sent access code	0-9999
	Sent number	1-20 digits

ORA (On-line Ringtime Analyser)

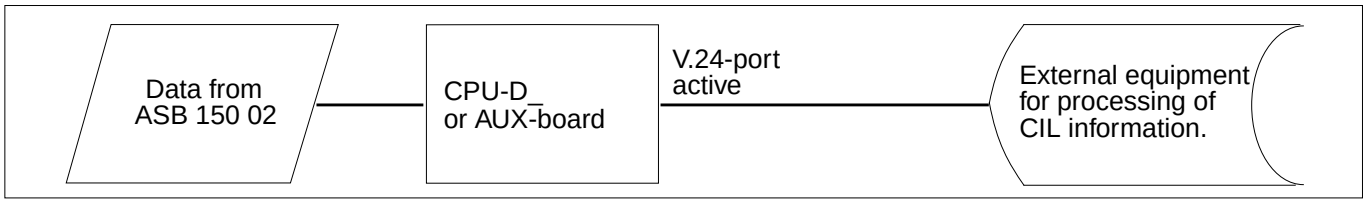
This is a facility in CAM. If it is to be used, it is advisable that command 6403 have the setting stated below. Otherwise the ringtime will be shown as minutes instead of seconds.

ASB 150 02

Command 6403 = 7

12 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION

The V.24 port which is used must be set active with command 6402.



Use a cable with product number TSR 902 0448/1 for the connection PC ⇔ ASB 150 02.

NOTE: A security device must be placed in LPT1 (parallel port) if CAM is used.

Settings in ASB 150 02

The commands in the table below **must** be programmed.

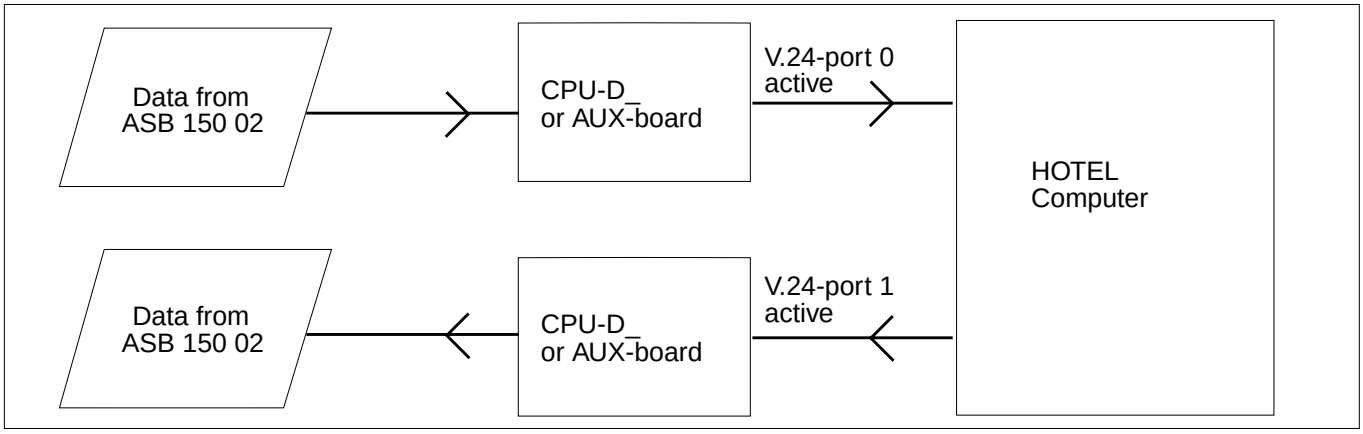
THIS SETTINGS WILL MATCH THE DEFAULT SETTINGS IN CAM		
COMMAND	**SETTING**	**FUNCTION**
6201	x	Log internal calls. This command must be set to yes if internal calls shall be logged. Default value = No
6202	x	Logging of incoming external calls. Default value = No
6301	x	Log outgoing calls. This command must be set to yes for those trunks which shall be logged. Default value = No
6006	10 or 5,6	Setting of V.24 port to match the communication with ASB 150 02
6007	3 or 1	Character set to match Softech PC-program
6009	8	1200 Bit/s
6010	0	The PBX is master
6011	N	Not allowed for other services
6401	aabbb	aa = Card No, bb = port No. (starting from 0)
6402	Yes	Activation of V.24 port
6403	CIL2HOTEL	Format to be used to match Softech's PC-program (rem: CIL2HOTEL only required in conjunction with ISDN, Least Cost Routing or if costs instead of pulses should be presented

13 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH HOTEL COMPUTER

See also chapter 7, PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH CALLCENTRE ASSISTANT (CCA) on page 10.

This application needs two V.24 ports or one bi-directional, one for each direction. In the direction ASB 150 02 to Hotel computer it will be sent information such as CIL data and guestroom status.

In the direction Hotel computer to ASB 150 02 it will be sent information such as check in, check out and wake up.



Use a cable with product number TSR 902 0448/1 for the connection PC ⇔ ASB 150 02.

V.24 PORT USED FOR COMMUNICATION FROM ASB 150 02 TO FDM		
COMMAND	**SETTING**	**FUNCTION**
6201	x	Log internal calls. Default value = No
6202	x	Logging of incoming external calls. Default value = No
6301	x	Log outgoing calls. This command must be set to yes for those trunks which shall be logged. Default value = No
6006	10	Setting of V.24 port to match the communication FDM ⇔ ASB 150 02
6007	x	Character set
6009	8	1200 Bit/s
6010	0	The PBX is master
6011	N	Automatic selection is not allowed
6401	aabbb	aa = Card No, bb = port No. (starting from 0)
6402	Yes	Activation of V.24 port
6403	CIL-HOTEL	Format to be used to match Softech's PC-program
6405	70	I/O time supervision in seconds
6406	5	Auto I/O activation in minutes

V.24 PORT USED FOR COMMUNICATION FROM FDM TO ASB 150 02		
COMMAND	**SETTING**	**FUNCTION**
6006	10	Setting of V.24 port to match the communication FDM ⟺ ASB 150 02
6007	x	Character set
6009	8	1200 Bit/s
6010	1	The PBX is slave
6011	N	Automatic selection is not allowed
6401	aabbb	aa = Card No, bb = port No. (starting from 0)
6402	Yes	Activation of V.24 port
6403	CILHOTEL (in)	Format to be used to match Softech PC-program
6405	70	I/O time supervision in seconds
6406	5	Auto I/O activation in minutes

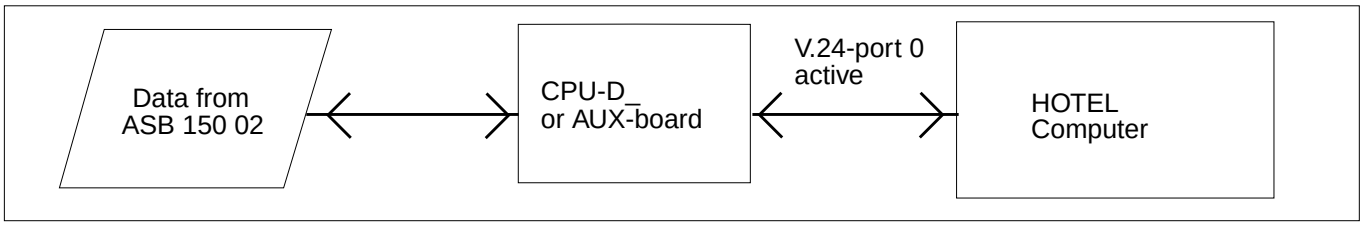
14 PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH HOTEL COMPUTER (V.24 INTERFACE Bi-DIRECTIONAL)

See also chapter 7,PROGRAMMING OF ASB 150 02 FOR COMMUNICATION WITH CALLCENTRE ASSISTANT (CCA) on page 10.

This application needs one V.24 ports, one port for both directions. This port can only be installed in an CIL-port 0. Use RASC command 6401 and activate.

In the direction ASB 150 02 to Hotel computer it will be sent information such as CIL data and guestroom status.

In the direction Hotel computer to ASB 150 02 it will be sent information such as check in, check out and wake up.



Use a cable with product number TSR 902 0448/1 for the connection PC ⇔ ASB 150 02.

Communication ASB150 02 ⇔ Hotel computer

If the hotel computer is used, ASB 150 02 normally uses the following formats. They are programmed with command 6403.

The following formats are available for hotel functions:

ASB 150 02 to Hotel computer

ASB 150/ht (bi)

MD 110/ht (bi)

HIS(bi)

CILHOTEL(bi)

CIL2HOTEL(bi)

For further information about the formats, see document INTERWORK DESCRIPTION (1-9/155 19-1/ASB 150 02 Uen).

The bi-directional V.24 for CIL Hotel can only be istalled on port 0 (cmd 6401). Activate port 0 with YES.

In this case the port 1 is used as backup. This means this port can not be used for any other application.

V.24 PORT USED FOR COMMUNICATION FROM ASB 150 02		
COMMAND	**SETTING**	**FUNCTION**
6201	x	Log internal calls. Default value = No
6202	x	Logging of incoming external calls. Default value = No

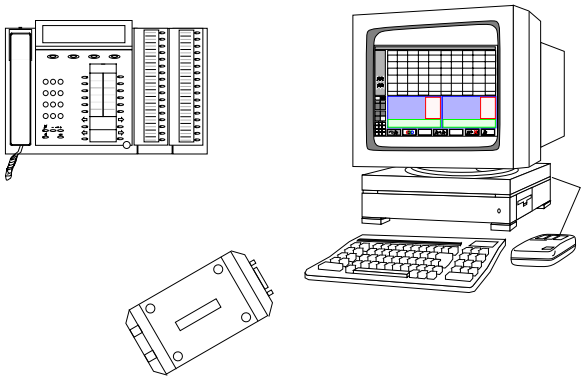
V.24 PORT USED FOR COMMUNICATION FROM ASB 150 02		
COMMAND	**SETTING**	**FUNCTION**
6301	x	Log outgoing calls. This command must be set to yes for those trunks which shall be logged. Default value = No
6006	13	Hotel computer, bi-directional V.24 (Type 4)
6007	x	Character set
6009	x	Baudrate
6010	1	The PBX is slave
6011	N	Automatic selection is not allowed
6401	aabb	aa = Card No, bb = port No. (starting from 0)
6402	Yes	Activation of V.24 port
6403	CIL2-HOTEL(bi)	Format for bi-directional V.24
6405	70	I/O time supervision in seconds
6406	5	Auto I/O activation in minutes

Prepared	Subject responsible	Documentnumber		
SEA/EBMP Stangelberger	AT/SEA/EBAU	3/1537-ASB 150 02 Uen		
Doc. respons/Approved / Kontr./Checked		Date	Rev	Reference
SEA/EBMP		1998-05-29	E	ASB 150 02
		Database reference		
		3/1537-ASB 150 02Uen-1-E.fm		

START OF OPERATION

PC OPERATOR V1.2

Contents **Page**



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		3/1537-ASB 150 02 Uen		
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		1998-05-29	E	

1 GENERAL

PC OPERATOR V1.2 is a PC application that runs under MS-WINDOWS® and provides all functions of a PBX operator console. People working with this application should be familiar with MS-WINDOWS®. Both the operator telephone and the PC screen show the ongoing call situation. The PC screen displays the extension field, information fields and action keys. The OPERATOR telephone DBC 3214 or DIALOG 2663 is connected by an extension line via the Desktop Adapter to the ELU-D. The PC has to have two V.24 interfaces (COM ports). One interface for connection to the CPU-D4 and one interface for connection to the Desktop Adapter. The handset of the OPERATOR and the optional headset is used for voice communication.

The system consists of the following parts:

- PC OPERATOR V1.2 (FAS 102 207/xx) connected to the CPU-D4
- AUX3 (ROF 157 5119/3) for the second or third PC-OPERATOR
- an ELU-D (ROF 157 5116/1) or ELU-D3 (ROF 157 5130/_)
- Desktop Adapter (ZAT BS 505 120)
- Connection cables (TRS 902 0448/1, TRS 190 05/2000, TRS 984 05/0 and TRS 984 08/0)

.

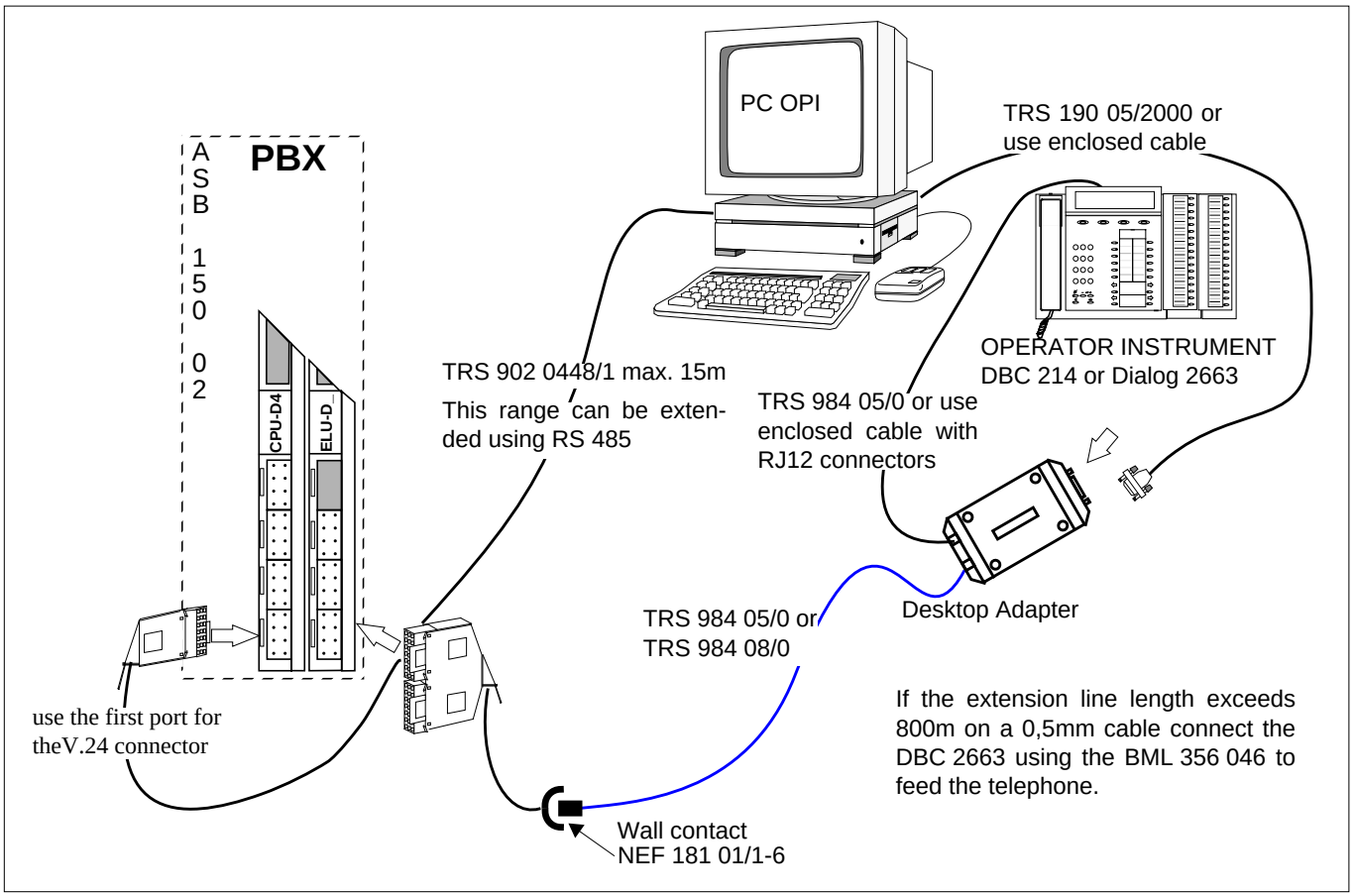

Figure 1 Electrical connections for PC OPERATOR equipment

2 UNPACKING

Check the delivery note to make sure that everything has been received and refer to section 1 to see that no cables are missing.

For further information refer to the

PC OPERATOR V 1.2

package FAS 102 207/__
(01 - English - standard international or
14 - German - for Austria)

containing:

- the USER'S MANUAL
- the SW INSTALLATION GUIDE
- four 3.5" installation disks.

3 SUPPLEMENTARY DOCUMENTS

INSTALLATION INSTRUCTION TAU-D
(47/1531-APD 101 02)

DESCRIPTION TAU D (1551-ZAT BS 505 120)

4 SYSTEM REQUIREMENTS

4.1 PC HW Requirements

An **IBM® PC** or compatibles with a **486DX 66MHz** processor or higher with an installed operating system such as: MS-WINDOWS 3.1®, MS-WINDOWS for Workgroups 3.11®, MS-WINDOWS 95® or MS-WINDOWS NT4.0®

- At least 16 MB memory RAM
- A 3-button mouse compatible with MS-WINDOWS®.
- 2 **free** serial ports should be available that are configured properly (IRQ-settings, Base I/O address) to be used within the MS-WINDOWS® environment to connect the CPU-D4 and the Desktop Adapter.
- A graphic subsystem, supported by MS-WINDOWS®, capable of using one of the following resolutions with 256 colours:

  640 x 480 pixels
  800 x 600 pixels
  1024 x 768 pixels
- A 3.5" 1.44 MB floppy drive.
- A sound card, compatible to an MS-WINDOWS® MT interface
- Free hard disk space of about 15 MB for the PC OPERATOR program.
- Additional disk space for the bitmap pictures, if they are used in the directory books. The requirement may differ depending on the number of entries stored in the directory book. In general, about 15 kB are required for one bitmap picture in the stated resolutions.
- Free disk space for the directory book that uses at least 64 kBytes or multiples of this value depending on the number of entries in the directory book.

4.2 ASB 150 02 Requirements

To connect the PC to the ASB150 02 system the following boards are required:

- **ELU-D** or **ELU-D3** (when using the DBC 3214)
- **CPU-D4.** If more than one PC-OPERATOR is used the equivalent additional number of AUX3 (ROF 157 5119/3) boards are needed
- DIALOG DBC 3214 or DIALOG 2663 OPERATOR console.

4.2.1 Desktop Adapter (ZAT BS 505 120)

The Desktop Adapter is situated between the operator telephone and the ELU-D_. The Desktop Adapter converts the visual display information of the OPERATOR telephone to an asynchronous data protocol for the PC OPERATOR program.

Connectors on the Desktop Adapter:

- RS-232-C port for V.24-connection to a PC

- modular jack for telephone line from the ASB 150 02

- modular jack for the OPERATOR telephone.

A LED on the Desktop Adapter shows operation/fault condition of the unit.

4.2.2 OPERATOR Console (OPI)

DIALOG DBC 3214 or DIALOG 2663 OPERATOR console is designed for use as an OPERATOR telephone for ASB 150 02.

The OPI possesses:

- 5x40-character tiltable display on the DIALOG DBC 3214 and 4x40-character tiltable display on the DIALOG 2663
- up to 71 programmable function keys on the DIALOG DBC 3214 and 20 programmable function keys on the DIALOG 2663, each with one LED
- 18 fixed function keys with 15 LEDs on the DIALOG DBC 3214 and 23 fixed function keys with 8 LEDs on the DIALOG 2663
- 4 menu keys
- handset with mute button or optional headset
- tone ringer with adjustable volume and signal characteristics.

Connectors:

- jack connection for an incoming line from ASB 150 02 or the Desktop Adapter

- jack connection for a handset/headset cord

- in the handset, jack connection for the cord.

Supplementary documents:

- User's Guide EN/LZT BS 102 197

- Facility Description 155 34-ASB 150 02

4.3 Electrical Connections

- Connect supplied V.24 cable between the Desktop Adapter and the PC.
- Connect V.24 cable (TRS 902 0448/1) between the PC and the AUX3. The standard length of the cables is 5m. The cables are available with lenghts up to 15 meters.
- Use TRS 984 05/0 with modular plugs on both ends or TRS 984 08/0 furnished for a wall socket to connect the OPERATOR and the Desktop Adapter.

5 SW-INSTALLATION

Start up the PC and run MS-WINDOWS®.

a Insert the installation disk in drive A, and start the File Manager

b Activate disk A:\ and execute **setup.exe**. Then you are prompted for a couple of settings.

c Select target directory

d Configure application:

- Select COM ports to connect the Desktop Adapter and the CPU-D4
- Select:
  - PC OPERATOR V1.2 (basic installation)
  - PC OPERATOR V1.2 **sound support** (if a sound card is installed)
  - PC OPERATOR V1.2 **photos** (if you want pictures in the operator field)
- Select the preferred language
- Select start-up/pop-up/connect properties
- Configure the info system according to ASB15002 programming

e PC OPERATOR files are transferred to the appropriate directories.

f Setup is now complete. To activate the changes restart MS-WINDOWS®.

When starting PC OPERATOR for the first time an **internal** and then an **external telephone directory** will be created.

6 START OF OPERATION

1. Make sure the electrical connections have been done as shown in figure 1 on page 2.

2. Start up the exchange if it has not been powered up yet. As soon as the Desktop Adapter has started up, the **"*state LED*"** lights.

3. Start MS-WINDOWS® on the PC.

4. Depending on the configuration the PC OPERATOR V1.2 application can start automatically and if the busy lamp information was stored previously, it starts by prompting

"RESTORE PREVIOUSLY SAVED BUSY LAMP INFORMATION" ?.

Confirm if this data is to be loaded again.
The application is now ready for operation.

NOTE: Usually the middle mouse button is not used in MS-WINDOWS® applications. Verify the switch setting on the mouse. Change from 2 to 3-button mouse operation and try answering an incoming call to the operator with the middle mouse button. If this fails, the correct mouse driver is not installed. Install a mouse driver supporting 3-button operation.

7 MAINTENANCE

Most operational disturbances can be related to communication problems or screen faults. If the fault relates to the display of the PC OPERATOR V1.2, try changing the screen resolution or select large or small font size. If the fault does not disappear contact the person responsible for operation of the PBX and provide her or him with the information about:

- the MS-WINDOWS® version
- which screen resolution is used
- which font size is used
- which graphics adapter is installed
- which software version of the ASB 15002 is installed
- which type of OPERATOR instrument is connected.

If the fault relates to communication problems between the exchange and the PC OPERATOR V1.2, continue with:

1. Check if the exchange is operating properly and all external units are supplied with power.

2. Verify proper cable connection according to figure 1.

3. If you suspect a communication error try connecting the OPERATOR console directly to the exchange.

4. If this was successful reconnect the OPERATOR console via the Desktop Adapter and power up the Desktop Adapter (see section 5 par. 2). If the Desktop Adapter was connected, unplug it for 5 seconds so that the device performs a complete restart.

5. If the fault remains and the above units function check the V.24 lines for communication and the COM-settings and/or try replacing the Desktop Adapter.

If the fault still exists, contact the person responsible for operation of the PBX.

8 FUNCTION KEYS

KEY	OPERATOR FUNCTION
ESC	Cancels Setup mode
0...9	Digits 0...9
*	*
/	#
A...T, a...t	Programmable keys A...T
F1	F1
F2	F2
F3	F3
F4	F4
F5	SAVE
F6	METER
F7	INFO
F8	MESSAGE
F9	LOOP 1
F10	LOOP 2
F11	LOOP 3
F12	MONITOR
RETURN	ENTER
shift-F1	OFF-DUTY
shift-F2	NIGHTSWITCH
shift-F3	MENUE
INSERT	NOTIFY
HOME	SERIAL
PG UP	BYPASS
DELETE	CLEAR LEFT
END, SPACE	IDENTIFY
PG DN	CLEAR RIGHT
UP	TRANSFER
LEFT	SPEECH LEFT
RIGHT	SPEECH RIGHT
DOWN	CONFERENCE
+/-	VOLUME CONTROL
(↵) ENTER	LOUDSPEAKING
BACKSPACE	SHIFT

9 PC OPERATOR V1.2 MAIN SCREEN

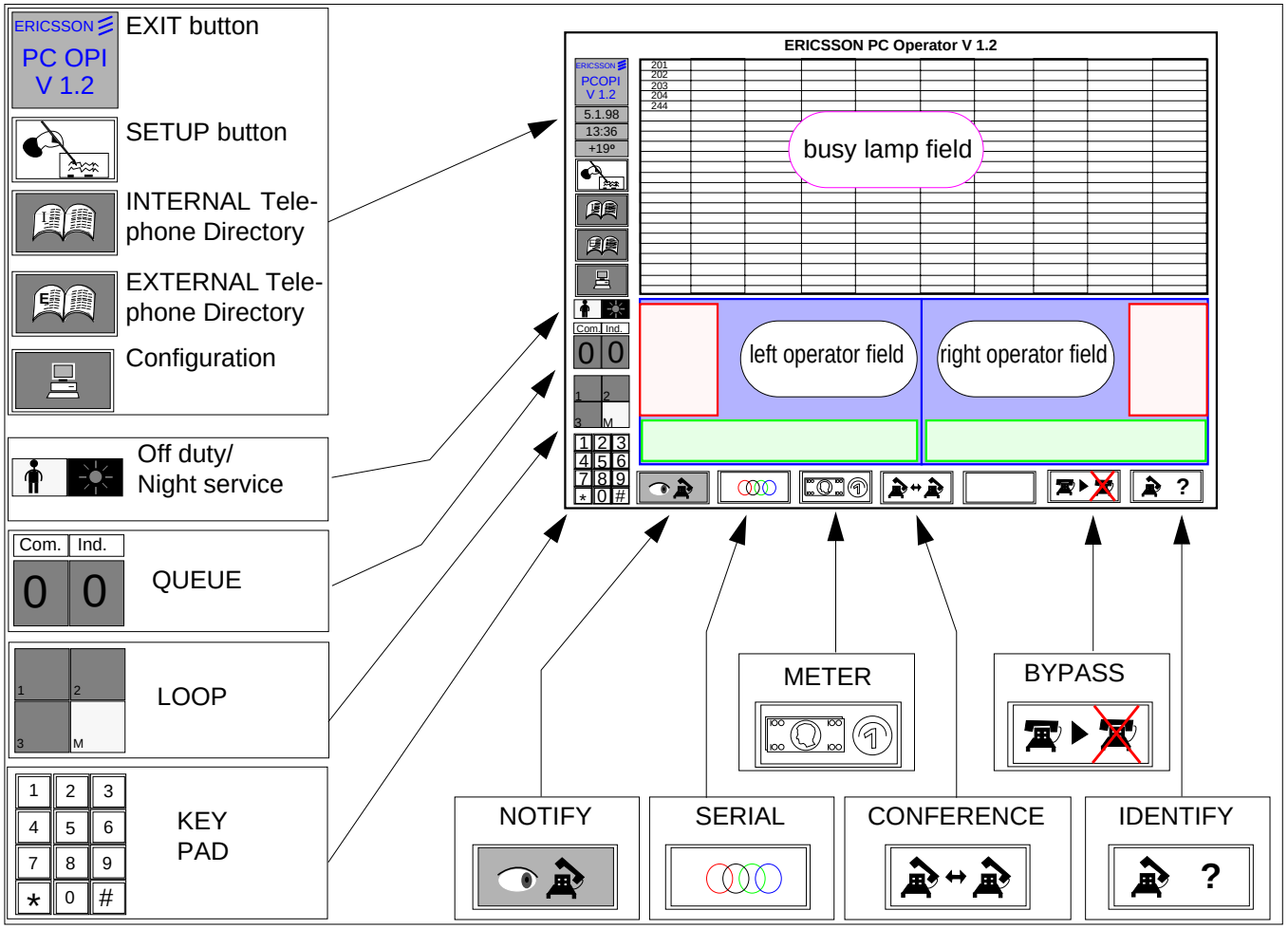

Figure 2 PC OPERATOR Main Screen

Application Tips

- Click the KEY PAD with the right mouse button to expand the KEY PAD on the screen.
- Set night service with the programmable function key "T" ("C" on DBC 214). Enable this function by programming a name call with " ***8 #** ".
- A picture related to an individual extension should have a width of 85 pixels and a height of 110 pixels with 256 colours.

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		3/1537-ASB 150 02 Uen		
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10 TECHNICAL DATA

10.1 Desktop Adapter (ZAT BS 505 120)

DIMENSIONS

-Length	152 mm
-Width	75 mm
-Height	33 mm
-Weight	0.8 kg

-Power consumption	1 W

V.24 DATA INTERFACE

-Data format	Asynchronous
-Circuits used	102,103 and 104
-Data bits	8
-Start bits	1
-Stop bits	1
-Parity	None
-Bit rate	9600 bps
-Line length to OPI/TAU	15 m

Use a short-haul modem to extend the range up to 600m.

ENVIRONMENT

-Temperature	0-40° C
-Humidity	10-90% RH