ARGUS43 - Manual

(This manual applies for ARGUS43s beginning with
serial number 3000)

Version: 3.0

1 Introduction

The **ARGUS 43** is a compact handheld tester for ADSL and POTS (analog) accesses.
It can be used to measure all of the relevant up and downstream line parameters and presents a graphic display of the bit distribution, depending on the version, for both ADSL-over-Pots and ADSL-over-ISDN.
On POTS accesses, the ARGUS 43 can also simulate a POTS terminal, listen-in and measure voltages.

An optional IP ping function and an Ethernet interface with an Ethernet through-mode can be added to enable the ARGUS 43 to also test Internet connections. With these, the tester can exchange data packets with Internet providers to determine the transmission quality of Internet connections. The option(s) extend the testers with support for a whole range of additional test functions, which include among others a trace-route function for displaying all of the routers involved and ADSL data throughput tests for the TFTP and http protocols. A TCP/IP dump includes the IP data and thus permits the user to perform an IP protocol analysis.

An overview of some important ARGUS functions:

- **ADSL Test**

Displays the connection's most important upstream/ downstream parameters.

Displays the upstream/downstream ATM cell errors and - in conjunction with an Alcatel ATU-C - bit error statistics

Displays the maker of the ATU-C.

Optional: Trace route test

Optional: Download test

Optional: ATM ping test

Optional: VPI/VCI scan test

Optional: Ethernet / LAN extension

- **Analog telephony function**

Can a telephone call be placed from this analog access to every other number and/or can this access receive a call?

- **POTS (analog) Functionality**

Tests CLIP and other Caller-ID services in accordance with ETS 300 659/778.

- **POTS - Line Monitoring (passive listening-in)**
- **POTS - Voltage and Polarity Measurement**
- **The Access Acceptance Report**

When the ARGUS is linked to a PC via the serial interface, it is, as an example, possible to create and print a comprehensive test report on the PC.

Should you have any further questions, please contact us:

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2 Safety Instructions

The ARGUS may only be used with the included accessories. Usage of other accessories may lead to erroneous measurements and may even cause damage to the ARGUS and the connected installation.

The ARGUS is only to be used in accordance with the instructions in this documentation. Any other usage may result in bodily injury and destruction of the ARGUS.

- To prevent electrical shocks or damage to the ARGUS, do not connect it to lines with voltages in excess of 100 V!

- Never attempt a measurement with the case open!

- The ARGUS is not watertight. Protect the ARGUS from exposure to water!

- Before replacing the battery (see page 12 Replacing the accumulators), disconnect all the test leads and switch the ARGUS off.

  Make certain that the polarity is correct when connecting the batteries!

3 Technical data

Dimensions / Weight

Height 229 mm

Width 72 mm

Depth 35 mm

Weight 350 g (without accumulators and protective case)

Keypad

21 Keys

LCD display

LCD display with switchable background lighting

4 lines with 16 characters

Memory

EEPROM Non-volatile memory: 16 K Byte

Flash program memory: 2 Mbyte

S-RAM: 512 Kbytes

with the optional IP test function an additional

Flash program memory: 4 Mbyte

SDRAM: 16 Mbyte

Inputs / Outputs

1 RJ45 for ADSL or analog (POTS) (optional)

1 jack for an external power supply

1 RJ-11 for the serial interface

1 RJ-45 10BaseT Ethernet (optional)

Temperature Ranges

Ambient-temperature:

0 °C to +50 °C

Operating temperature:

-5 °C to +55 °C

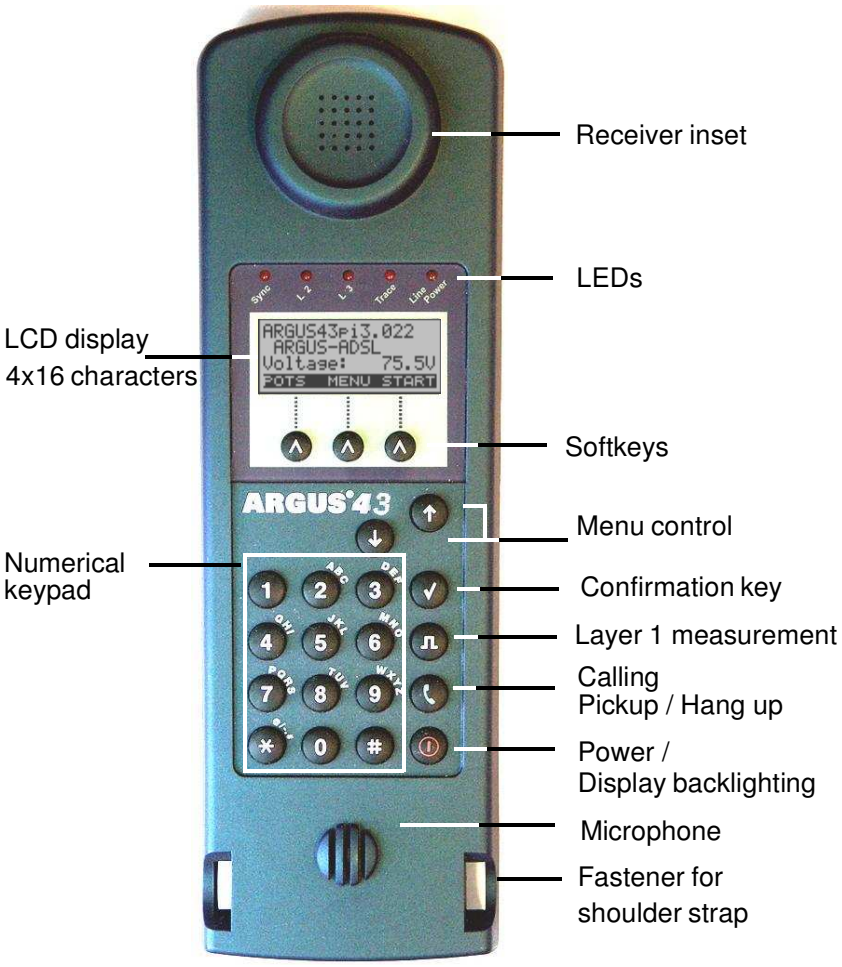
Power Supply

NiMH rechargeables

or

9 V, plug-in power supply

4 Operation - a brief guide



Power Key:

- Switch the ARGUS ON
- To start up again after a power down
- to switch on the display backlighting
  In battery mode to save power, the backlighting will switch off automatically after 5 seconds.
- To switch the ARGUS OFF
  (must be pressed somewhat longer)

Confirmation key:

- Select menu or continue

Menu control:

- Open the menu list
- Scroll through lists
- Select a menu
- Select a function in an open menu

Telephony

- Pickup or hang up
- Simplified overlap signalling: press the telephone key twice.

Voltage measurement:

Voltage measurement / Polarity display

Number Pad:

- Entry of the digits 0....9 and of the special characters *, # (e.g. the call number or numerical entry in a function)
- Direct function call

Softkeys:

The function of the 3 softkeys varies with the situation. The current function of each softkey is shown in the highlighted fourth line of the display.

Connectors on the end:

- **9 V-**

  Connection for the external power supply.
  If the plug-in power supply is connected, the ARGUS will disconnect the accumulators and, when it is switched off, the ARGUS will automatically recharge the accumulators (see Page 103).

- **Line**

Pin assignment 7/8 **POTS, ADSL**

- Connection for a POTS (analog network)
- Connection for the ADSL network

- **10BaseT (optional Ethernet/LAN extension)**

- Connection to the PC's network card via the X-crossed patch cable
  (Access mode: **PC-ARGUS-ADSL** (modem replacement or through mode))
- Connection to the Ethernet interface of the ADSL modem via the 1:1 patch cable
  (Access mode: ARGUS-Modem-ADSL (PC replacement mode))

- **V.24**

- Serial interface to connect a PC

Replacing the accumulators

The battery compartment for the three accumulators (rechargeable batteries) is located on the back of the case. Unscrew the screws to remove the cover of the case and insert the accumulators in accordance with the polarity marking.

Use only the accumulators included in the package. The state of the accumulator charge will be displayed graphically (if the tester is not connected to its plug-in power supply).

In the LCD display, a battery symbol will begin to blink, when there is still approximately 15 minutes reserve. During this period, it is possible that there may be audible interference and in rare cases even malfunctions (see “Accu servicing” on page 103.).

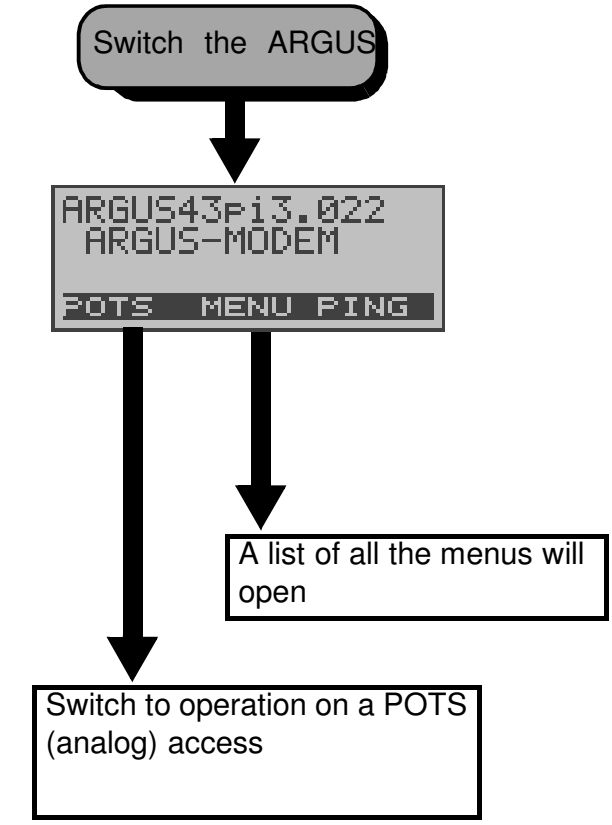
Power Down

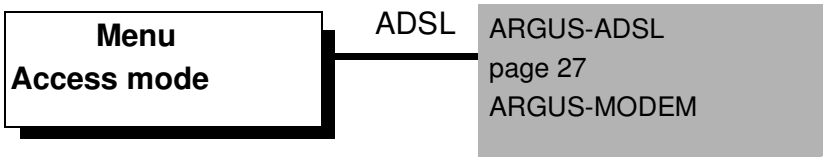
In accu/battery operation, if the ARGUS is idle for 15 minutes, it will automatically switch to the power-down mode (power-down).
The ARGUS will remain in power-down mode until the Power-Key is pressed again.

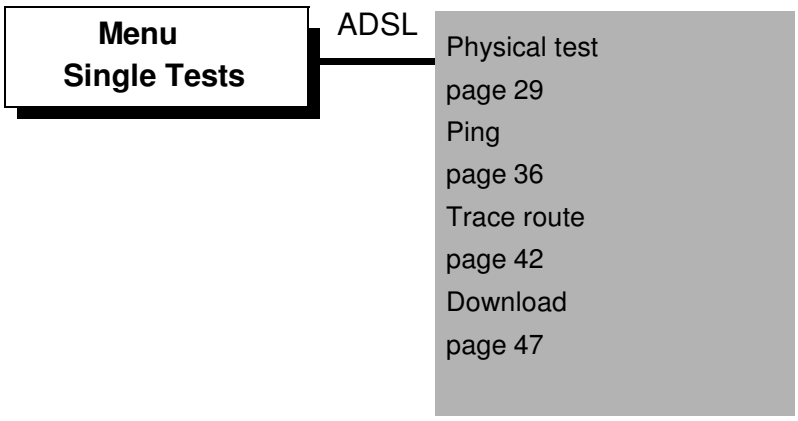
Reasonably enough, the ARGUS will **not** enter power-down mode during a test or when it is in Trace mode.

As an alternative, it is possible to operate the ARGUS using the included power supply. If the ARGUS is connected to the plug-in power supply, it will automatically disconnect the accumulators and will not enter power-down mode.

5 Menu Hierarchy







Menu
Connection

Telephony on a POTs access

Menu
Start Monitor

High-impedance listening-in on a POTS (analog) access
Page 23

Menu
Test Log

View
page 74
Test data to PC page 76
Delete page 77

The ARGUS displays among other things the saved test logs.

Menu
Level Measuring

ADSL — Measurement of the voltage on the access under test and display of the polarity

PO — Polarity Page 24

Menu
Configuration

Trace/Remote
ADSL profile
page 81
- Physic. line
- Protocol
- PPP
- PPTP
- Ping
- Trace route
- Download
- VPI/VCI scan
- ATM ping
- ATM
- LAN
- WAN
- DNS Server

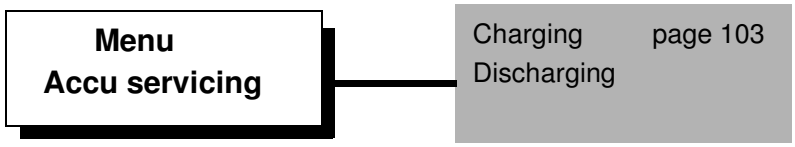
The ARGUS can be configured to suit your special requirements.
The parameters are clearly organized in submenus (e.g. the ADSL parameters are in the ADSL profile submenu)
The default (factory) settings can be restored by selecting "Reset".

POTS page 93
- POTS dial
- POTS CLIP
- DTMF parameter
- FLASH time

Unit:
page 96
- Menu language
- LCD contrast
- Date / Time
- Baud rate
- Alarm
- Software option

Call numbers page 99

Reset page 100



6 Start-Up

Using the included cable, connect the ARGUS to the access to be tested.

Power Key: Switch the ARGUS on.

ADSL access

The ARGUS displays the software's version number (e.g. 3.0), the country code (e.g. D= Deutschland), the last mode parameter selected (e.g. ARGUS-MODEM) and the state of the accumulator charge (if the tester's power supply is not plugged in).

- press it longer

POTS access

Switch to operation on a POTS (analog) access

The ARGUS displays the voltage level on the line when it is "on hook“ (not busy).

- press it longer

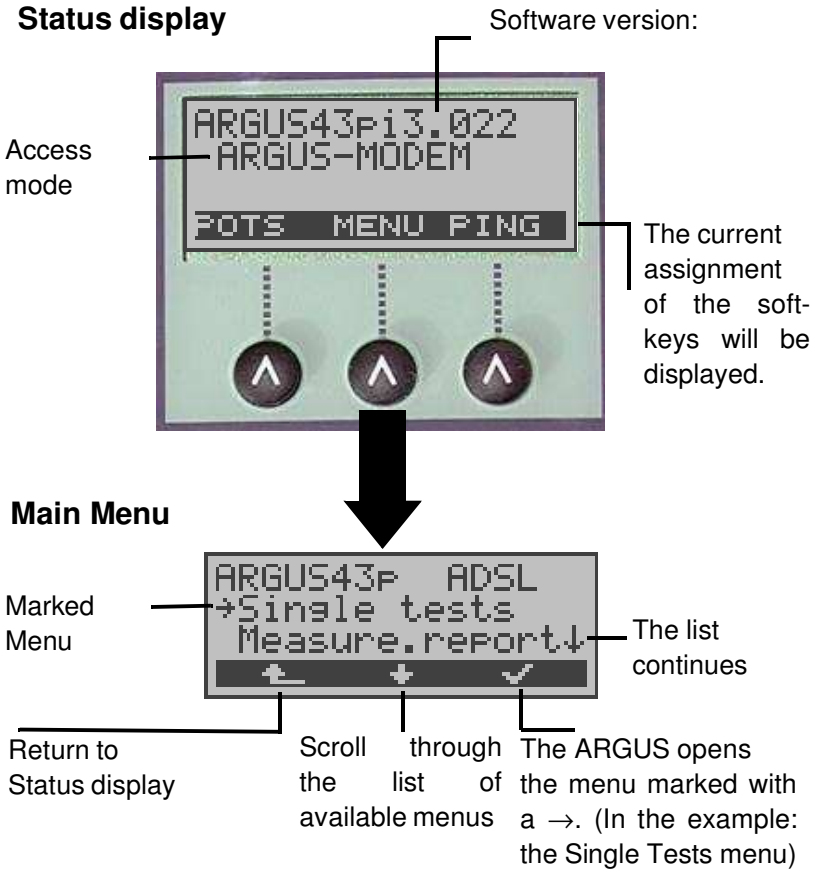
Switch to operation on an ADSL access

Softkeys:

The current assignment of the three softkeys is shown (white on black) in the lower line of the display.
The ARGUS is in largest part operated with the two ↓ ↑ -Keys, the confirmation key ✓ and the three softkeys.

On the following pages, only the softkey's meaning in the respective context is shown - enclosed in brackets **<>** , e.g. <**NO**>.
The <✓> softkey serves the same function as the ✓ confirmation key and the <↓> softkey performs the same function as the corresponding arrow key on the ARGUS keypad.

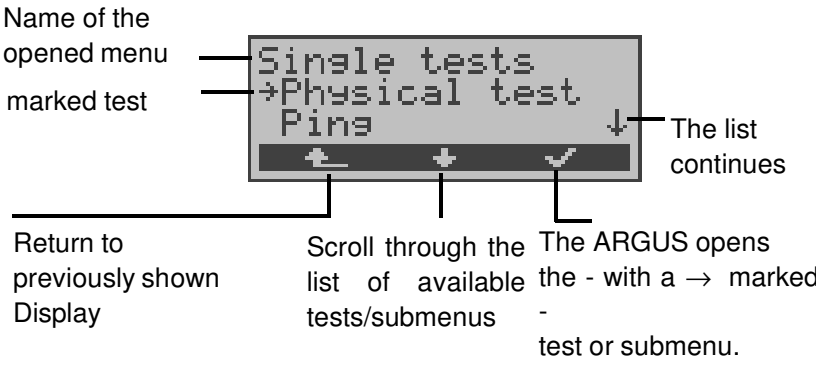
ARGUS - Main menu



Press the <↓ > to scroll though the list of menus available in the Main menu:

ADSL access	**POTS access (optional)**
Single Tests	**Connection**
Test Log	**Start Monitor**
Level Measuring	**Test Log**
Configuration	**Level Measuring**
Access mode	**Configuration**
Accu servicing	**Accu servicing**

With the <✔>, you can open the menu currently marked with the → (in the example Single Tests).



Function keys:

Using the digit keys, you can start ARGUS functions directly, regardless of the currently active menu level.

Numeric key 5 Send the selected test log (see Page 76) to the PC

Numeric key 7 Entry of your own and remote call numbers in the speed-dialing memory

numeric key 8 Start the Remote function (optional)

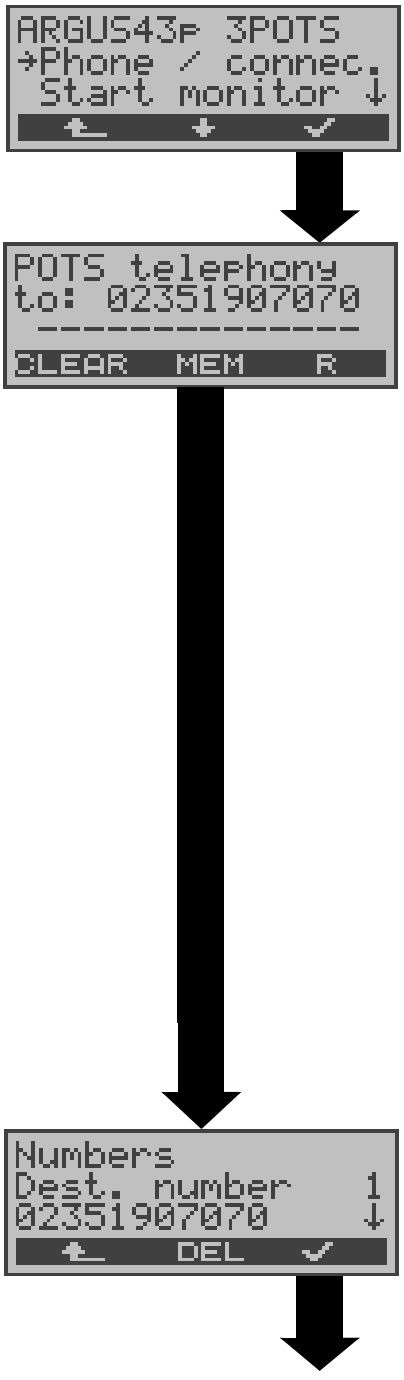
If a function is called where the ARGUS expects the entry of a digit, pressing a number key will be interpreted as the expected input.

7 Operation on a POTS access (optional)

7.1 Connection

Procedure for an Outgoing Call (POTS)

The ARGUS sets up a connection to another terminal. If the terminal is a telephone, the handset integrated in the ARGUS can be used to hold a conversation.



In the Main menu, use the <↓> to select **Connection**.

Setup the connection

Enter the number on the keypad. Each of the number's digits will be dialed individually.

The ARGUS will display the number dialed.

As soon as the remote party answers, a voice connection will be set up.

The ARGUS will display the charges due, if the information is available for the access under test.

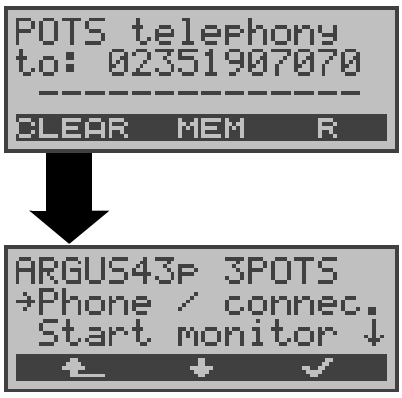
<**R**>: Generate a FLASH signal

<**MEM**>: Select the number from the call number memory or reenter the number on the keypad

Use the <**↓**> to scroll**.**

Press <**DEL**> to delete a digit.

The last number dialed will always be used as the default (simplified last number redial)



The ARGUS sends the complete dialing information together.

Disconnect

Simplified overlap signaling using the telephone key

If you press the -Key, the ARGUS will open the POTS telephony window directly from any menu. Once the call number is entered, the call will be setup.

Procedure for an Incoming Call (POTS)

The ARGUS signals an incoming call both audibly and on the display.

If the access supports CLIP, the ARGUS will display the number of the caller.

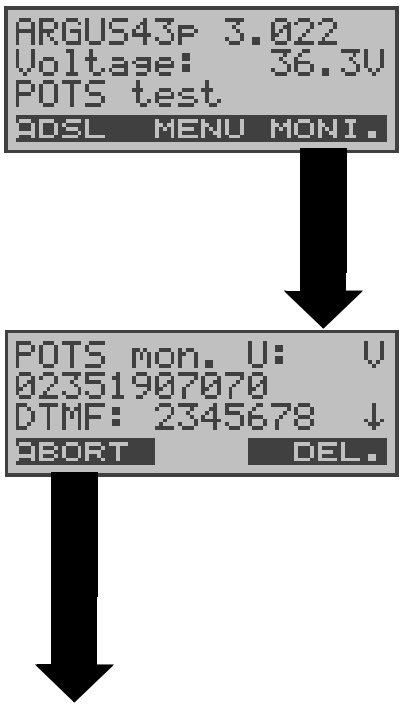
Accept the call

<R>: Generate a FLASH signal

Disconnect

7.2 POTS monitor

Essentially, the POTS (analog) monitor provides a high impedance tap that does not influence the interface. You can listen to the line with the integrated handset without having the ARGUS send on the interface.



If the line is "on hook“ (not busy), the ARGUS will first display its voltage level.

Start monitoring

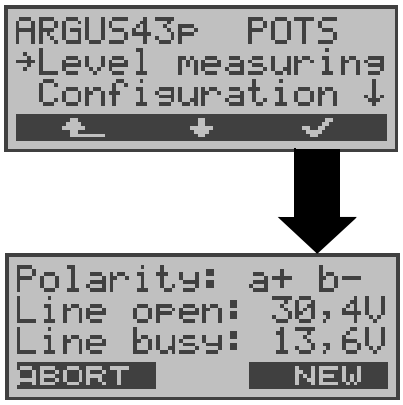
(or via "Start Monitor" in the Main menu)

The ARGUS displays the voltage (when "off hook"), the number of the caller (if CLIP is supported) and the DTMF characters dialed by both telephone subscribers and the SMSs received (optional).
Any received DTMF-characters will be appended to the line, which will shift left for each character once it is full.

An incoming call will be signalled acoustically.
Using the **<↓>** , you can view any other Information that is available (e.g. advice of charges).
Using the **<DEL>**, you can clear the display.

7.3 Level measuring on a POTS access

The ARGUS measures the voltage level in both the normal case and when the line is “busy” (trunk line).



Use the <↓> to select **Level measuring**.

Start measurement

The ARGUS will display the polarity of the 2-wire POTS line (red plug "a"; black plug "b") as well as the "on hook" and "off hook" voltage levels. Press <**NEW**> to repeat the measurement.

8 ADSL Tests

The ARGUS supports a variety of access types:

ARGUS-ADSL: Connection of the ARGUS directly to the ADSL access (before or after the splitter). The ARGUS replaces both the modem and the PC.

PC-ARGUS-ADSL (optional): Insertion of the ARGUS between the ADSL access and the PC. The ARGUS replaces the ADSL modem (Modem replacement mode).

ARGUS-MODEM (optional): Connection of the ARGUS to the ADSL modem. The ARGUS replaces the PC (PC replacement mode).

Depending on the access mode selected (and the protocol), the following ADSL tests are supported:

Access mode	
ARGUS-ADSL (PC-Modem replacement mode)	- Physical test - Ping test - Trace route test - Download test - VPI/VCI scan - ATM ping
ARGUS-MODEM (PC replacement mode)	- Ping test - Trace route test - Download test
PC-ARGUS-ADSL (Modem replacement mode)	- Physical test - Bridge mode - Router mode

The ARGUS displays the results during the test.
If desired, the ARGUS will save the test results (even if the test is aborted) together with the date and time in its internal Flash memory.
The saved results can later be sent to a PC or viewed on the display.

The ARGUS supports the following ADSL modes (depending on the national variant and the installed options)

	ADSL Mode	**Standard**
-	Annex B (DT)	T-DSL (UR2)
-	Annex B (ETSI)	ETSI DTS
-	Annex A auto	automatic Annex A detection
-	ANSI T1.413	ANSI T1.413.2
-	G.Lite	ITU-T G.992.2
-	G.DMT	ITU-T G.992.1

We must point out that the ARGUS records and stored data (e.g. in tracing IP data). The user must comply with the statutory regulations governing the collection and storage of such data and his obligation to give notice in this connection.

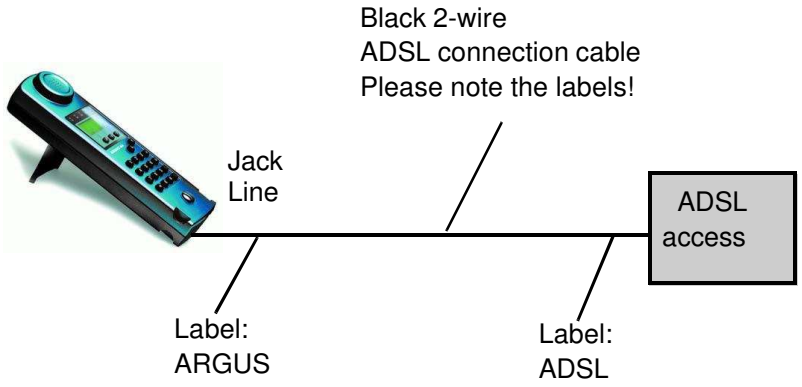
8.1 The ARGUS in Access Mode

Access Mode: ARGUS-ADSL

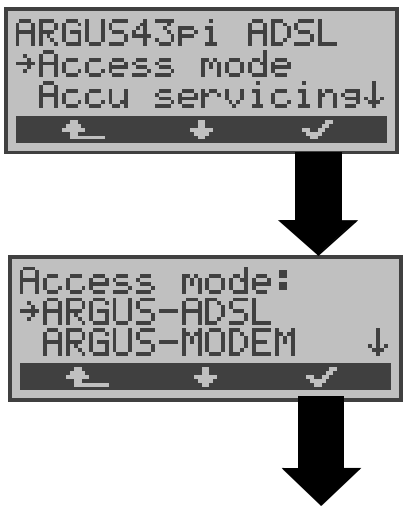
Using the ADSL 2-wire connection cable, the ARGUS is connected directly to the ADSL access (either before or after the splitter). In this case, the ARGUS replaces both the modem and the PC.

In the ARGUS-ADSL access mode, the following tests can be performed:

- **Physical test**
- **Ping test**
- **Trace route test**
- **Download test**
- **VPI/VCI scan test**
- **ATM ping test**



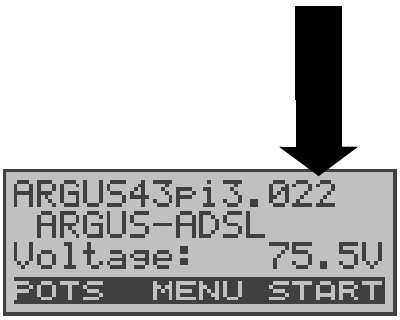
Setting the device to the ARGUS-ADSL access mode:



In the Main menu, use the <↓>to select the **Access** menu.

Open the **Access mode** menu

Using the <↓>, select **ARGUS-ADSL**.



The ARGUS will open the Status display

The ARGUS will display the selected access mode, ARGUS-ADSL, and the DC voltage on the access interface.

If the ARGUS is not yet active, you must first select a test and start it (see the following pages).

If you press the <↵>, the ARGUS will return to the previous display.

8.1.1 Physical test (ADSL line test)

The ARGUS will setup an ADSL connection and determine all of the relevant ADSL line parameters.
The ARGUS displays the results during the test and saves them in the internal FLASH memory when the test is finished or aborted.

Parameter settings:
The following parameters must/can be set in the ADSL profile for the physical test (see “Configuring ADSL profiles” on page 81):

- Physic. line: ADSL mode, Link-up time, Rated value, SNR margin DS, Shutdown mode

The ARGUS
Status display

If you press **Menu**, the ARGUS will open the Main menu. Press <**START**> to open the ADSL profile menu

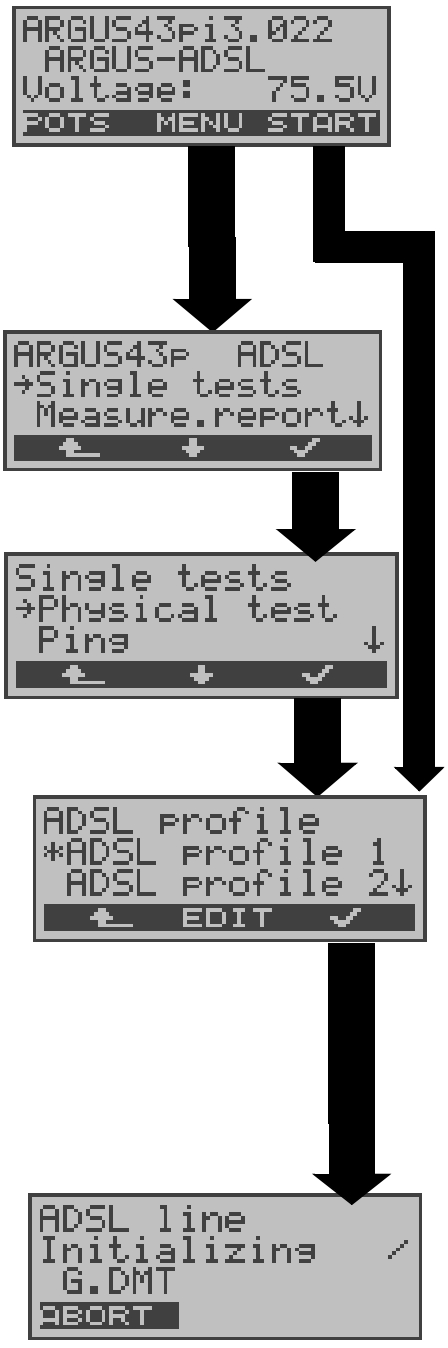
Using the <↓> , select the **Single tests** menu.

Open the Single tests menu

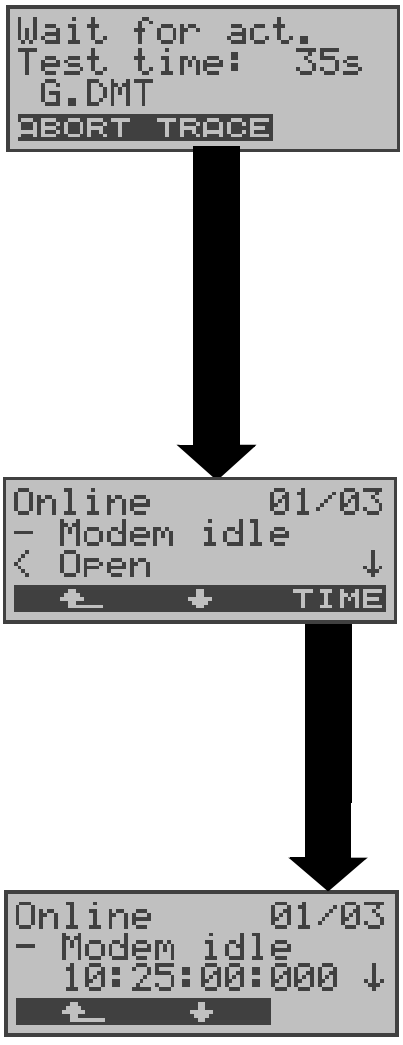
Using the <↓> , select **Physical test**.

The ADSL profile window will open.

Using the **<↓>**, select ADSL profile.
If you press on **<EDIT>**, the ARGUS will open the settings menu for the profile. In this menu, you can adjust the parameters of the selected profile to suit the respective test situation (see “Configuring ADSL profiles” on page 81).



The ARGUS synchronizes itself with the DSLAM.



While the ARGUS is attempting to setup the ADSL connection, the "SYNC“ LED will flash .

The ARGUS displays the current setup time (in the example: 35 seconds) and the ADSL mode (e.g. G.DMT).

Display trace data

The ARGUS records and displays the commands, which are received or sent by the ADSL modem and modem status:

<= command from ARGUS

> = command from modem

- = modem status

Using the **<↓>**, scroll through

Display timestamp

Time that the command was received

If you press the < ↑ >, the ARGUS will return to the previous display.

If the connection is not successfully setup within a specific time (a maximum of 2 periods of 4 minutes = “Time out”) or if an error occurs during the setup, the ARGUS will display a corresponding error message (see “Error message: ADSL connection” on page 111):

< TRACE> to have the ARGUS display the recorded trace data.

<If you press NEW> the ARGUS will make another attempt to setup the ADSL connection.

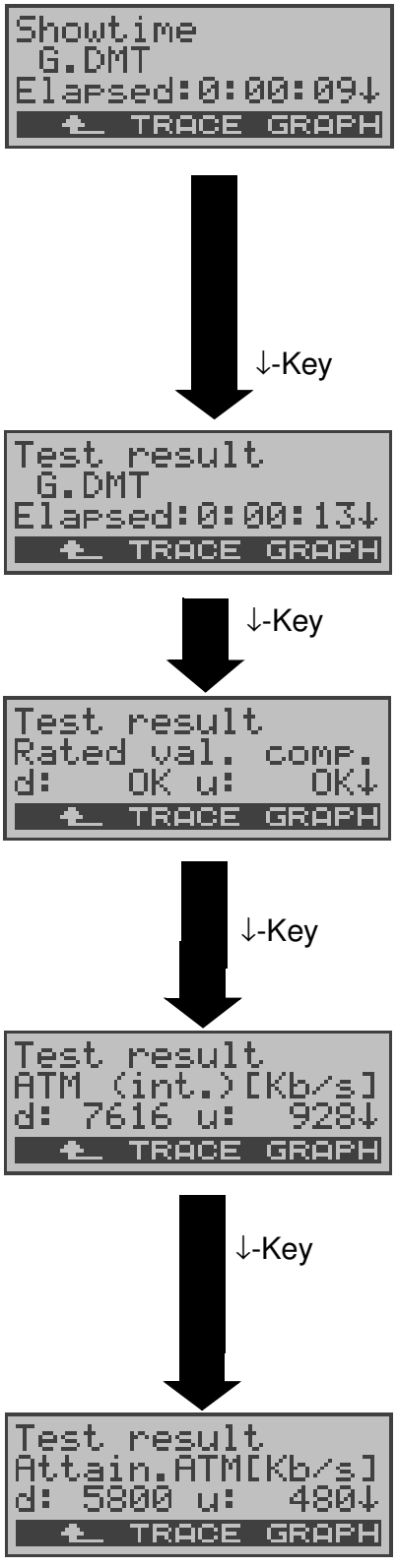
The ARGUS saves the recorded trace data in its internal Flash memory (see “Measure.report” on page 73).

Using the numeric keys enter the name under which the result should be saved (Default: AMP_1, AMP_2.... or the call number of the access under test if the number has been entered into the speed-dialing memory)
Use the softkey on the right to control the entry of characters
(entry of characters and digits - for information see Page 85)

A new test can be started afterwards without reinitializing the ADSL test software.

Once the connection has been setup (Sync LED ON constantly), the ARGUS will determine the ADSL line parameters.
After the period set for the test has elapsed (see “Link-Up Time” on page 83), the ARGUS will automatically clear down the connection (unless: the test time has been set to "continuous", in which case the test must be terminated manually by pressing <ABORT>).

The ARGUS will display the already determined results during the test.
Once the test is over, the ARGUS will automatically open the results display:



The test has run for 9 seconds.
Use the **<↓>**-Key to scroll through the results.
Use the **<↑ >** -Key **to** scroll back.
Press on **<TRACE> to** view the trace data.
Press <**GRAPH**> to view the bit distribution (Page 35)

Viewing the results

The ARGUS displays the ADSL mode (in this example G.DMT) and the current duration of the test.

Rated value comparison:

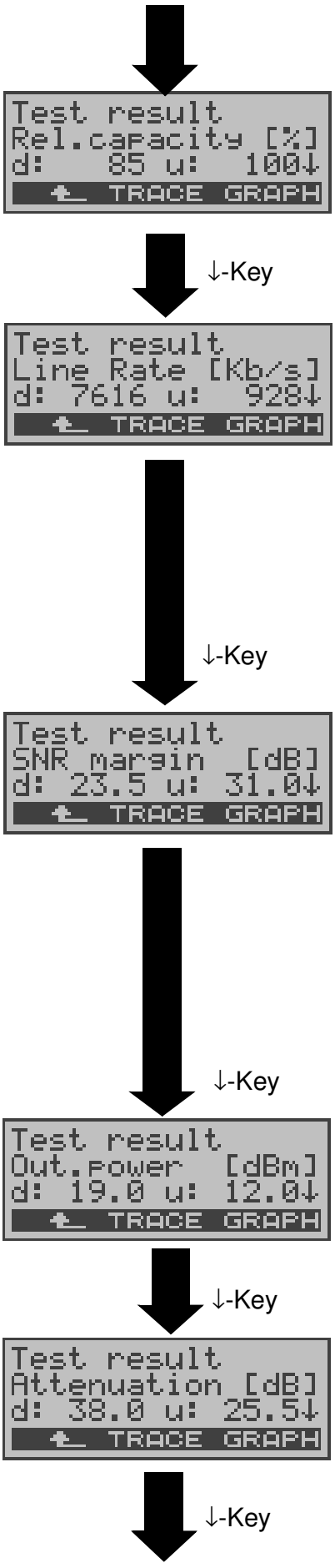
The rated value, which was set for the bit rate, is compared with the rate actually achieved (see Page 83)
d: Downstream
u: Upstream

ATM:

Actual usable ATM data rate in kBit/s for downstream and upstream. The ARGUS will indicate which mode is configured in DSLAM (Interleaved or Fast Mode) by appending either "int." (for interleaved) or "fast" (for Fast Mode).

Attainable ATM

This is the theoretically attainable ATM data rate in kBit/s.



Relative Capacity Occupation
Displays the upstream and downstream line load.

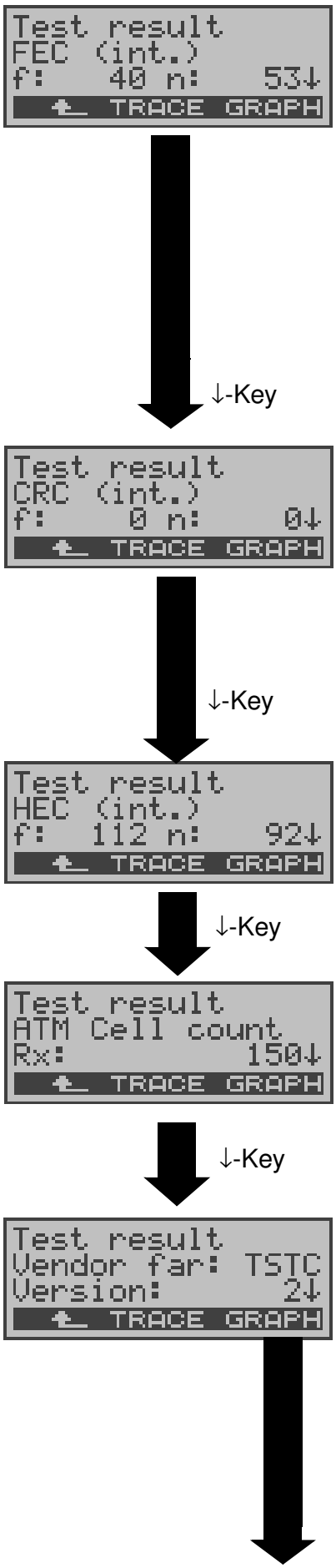
Line Rate
This is the gross data rate, which is calculated from the bits/tone spectrum. In contrast to the ATM data rate, this value also includes the overhead for the ATM header, additional framing bits and checksums.
This value is always higher than the ATM data rate!

Noise margin (SNR margin)
Signal-to-noise ratio in dB for the upstream / downstream transmission

The SNR margin or Noise margin - is a measure (in dB) of how much additional noise the transmission can withstand and still achieve a BER (Bit Error Rate) of 10^{-7}.

Output power
The output power in dBm for the upstream and downstream transmission

Attenuation
The line's attenuation in dB over the entire line for upstream and downstream transmissions



Forward Error Correction
The FEC shows the number of transmission errors corrected by using the ATM cell checkbytes.
f (far): Errors that the DSLAM has detected and informed the ARGUS.
n (near): Errors which were detected by the ARGUS in the blocks it received.

Cyclic Redundancy Check
The superframe checksum sent from the opposing end does not match the one calculated locally. Possible cause: Fault on the line.

Header Error Checksum
The HEC shows the number of ATM cells with bad header checksums.

ATM Cell count
Counter for the sent (Tx) and received (Rx) ATM cells

Vendor far
The hexadecimal ID number for the manufacturer of representation (see “Vendor identification numbers” on page 106)
SW version on the ATU-C side

↓-Key

✓-Key

Bit distribution

i.e. bits transported per carrier frequency
(y-axis: bits per carrier frequency (tones);
x-axis: carrier frequency)
Based on the bit distribution, it is possible to detect line disturbances (e.g. HDB3, HDSL, RF.....)

Return to the ADSL line parameters e.g. Vendor far

Close the results display

Press <**YES**> to have the ARGUS save the result in the first available record in the FLASH memory (see “Measure.report” on page 73).

Using the numeric keys enter the name under which the result should be saved (Default: AMP_1, AMP_2.... or the call number of the access under test if the number has been entered into the speed-dialing memory)
Use the softkey on the right to control the entry of characters (entry of characters and digits - for information see Page 85)

Press <**EDIT**> to edit the parameters of the displayed ADSL profile (see Page 81)

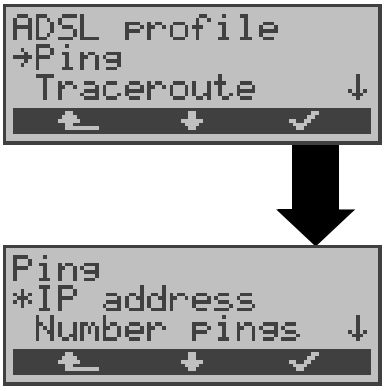
Any ADSL test desired can be started without reinitializing the ADSL test software.

8.1.2 Ping test

In the Ping test, the ARGUS checks whether it is possible to setup a connection to an Internet Service Provider (ISP) via the DSLAM and ATM network: The ARGUS sends a test packet to a predefined IP address (remote site) and then waits for a packet in reply.
Based on the received packet, it is possible to evaluate the ATM network availability and delay. It is also possible to determine the network's maximum data packet size.

The following parameters (which are stored in the ADSL profile, see Page 81) are required for the Ping test:

Protocol independent parameters

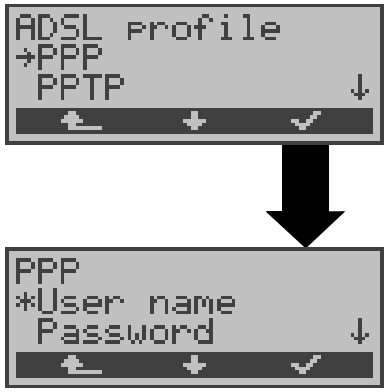


Ping - Parameter

- IP address:
  Address of remote site
- Number of pings:
  Number of test packets, sent by ARGUS
- Pause:
  Pause between sending two test packets
- IP packet size:
  Size of the test packet
- Fragmentation:
  Sets the fragmentation of the test packet

(see “Ping:” on page 86)

PPP parameters



- User name for the Internet connection
- Password

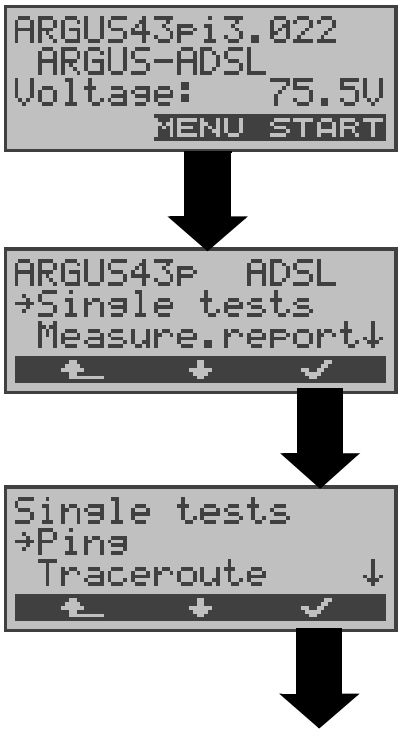
(see “PPP:” on page 84)

Protocol dependent

parameters

Protocol	PPPoE / PPPoA		IPoA / EoA
Parameter	ATM - VPI / VCI - Encapsulation		ATM - VPI / VCI - Encapsulation
	PPP - User name - Password		
	ADSL mode		ADSL mode
			WAN: - IP mode (Static IP) - own IP address - IP network mask - remote IP address
			DNS server: - DNS Server 1 - DNS Server 2

Starting a Ping test:



ARGUS displaying Status

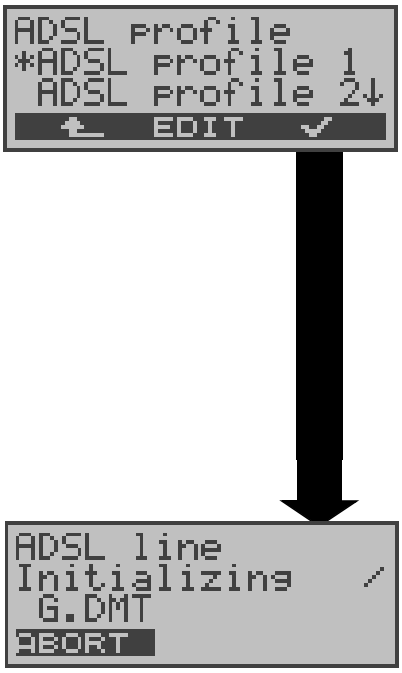
The ARGUS will return to the Main menu.

Using the **<↓>** , select the **Single tests** menu.

Open the Single tests menu

Using the **<↓>** , select **Ping test**.

The list of ADSL profiles will open.

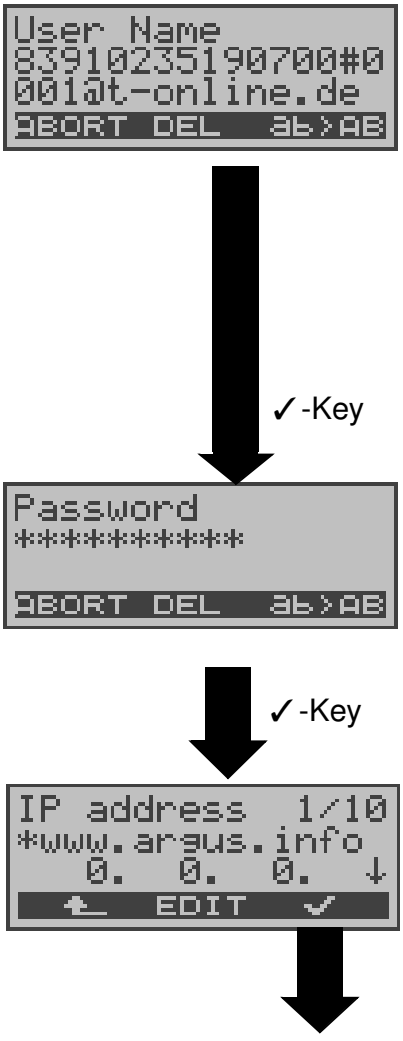


Using the **<↓>**, select an ADSL profile.
(The default profile is marked with an "*".)

If you press on **<EDIT>**, the ARGUS will open the settings menu for the profile. In this menu, you can change the parameters (see “Configuring ADSL profiles” on page 81).

Confirm selection of profile.

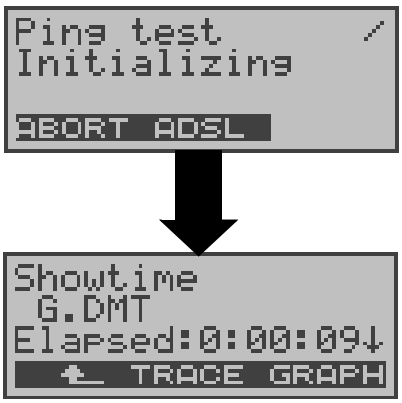
Initializing the ARGUS



At first, the ARGUS will display the user name stored for the ADSL profile.
If necessary, change the user name
(for instructions, see Page 85)

If you change the user name, you must enter the password again (see Page 85). The changes are placed in temporary storage. The ADSL profile is not modified.

The ARGUS displays the IP address stored in the ADSL profile.
To select the IP address for the Ping, use the **<↓>** (The default address is marked with an "*".)
Press **<EDIT>** **if you want to change the** IP address.
(see Page 86).



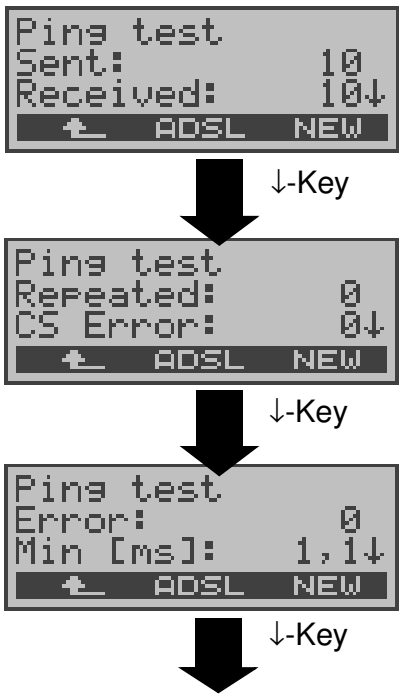
Initializing the test software

Press the <**ADSL**> or Level-Key to display the ADSL mode, ADSL line parameters (scroll through with the ↓-Key), trace data (<**TRACE**>), bit distribution (<**Graphic**>).

The ARGUS will start the Ping test

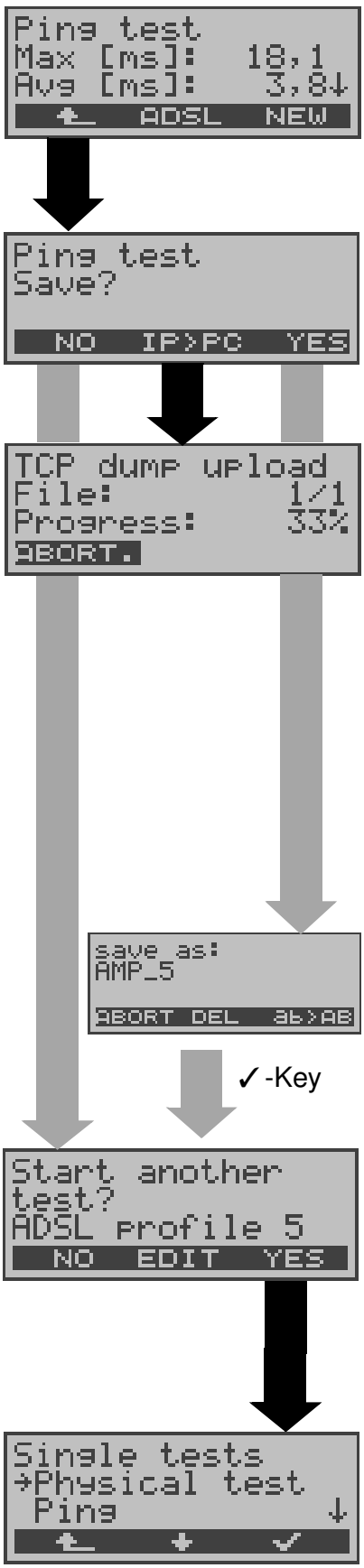
Ping test

During the test, the ARGUS will display the current number of test packets sent and the number of packets received in reply.
Depending on the access mode and protocol, the LAN, WAN, PPP and ATM statistics will also be displayed (scroll through with the ↓-Key).
If you press <**ADSL**>, the ADSL line parameters will be displayed.
Press <**ABORT**> to cancel the test. The ARGUS will display the results collected thus far and will inquire whether to save them.



Once the test is over, the ARGUS will automatically open the results display:
The ARGUS will display
- Number of packets sent
- Number of packets received
- Number of packets sent again
- Checksum errors
- Faulty received packets
- Minimum/Maximum packet round-trip delay
- Average packet round-trip delay
- Statistics.

Press the <**ADSL**> or Level-Key to



display the ADSL mode, ADSL line parameters... (see Page 29). .
Press <**NEW**> to start a new Ping test.

Saving a Ping test

Press <**YES**> to have the ARGUS save the result in the first available record in the FLASH memory (see Page 73).

The ARGUS will send the trace file to the connected PC, which must be running WINplus or WINanalyse.
The data will be saved in the standard "libpcap" format and can be decoded with a freeware tool, such as Etherreal.
(In the example, 33% of the data was already uploaded to the PC.)

Enter the name under which the results should be saved (see Page 35).

Press <**EDIT**> to edit the parameters of the displayed ADSL profile
(see “Configuring ADSL profiles” on page 81)

Any ADSL test desired can be started without reinitializing the ADSL test software.

Ping Test – Error messages

If an error occurs, the ARGUS will stop the test and display an error message.
Press <**NEW**> to start a new Ping test.

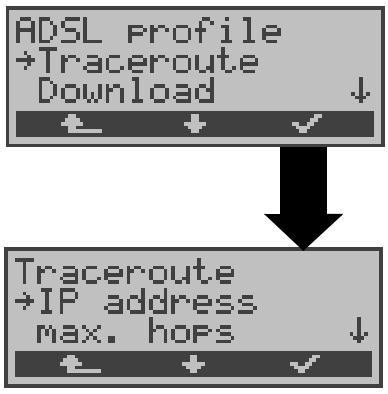
For a description of the error messages, please see the appendix.

8.1.3 Trace Route - Test

In a Trace Route test, the ARGUS sends a test packet and then displays a list of all of the network nodes (hops) and their response times on the way to the destination address. This information can then be used to precisely locate delays in the network.

The following parameters (which are stored in the ADSL profile, see Page 81) are required for the Trace Route test:

Protocol independent parameters



- IP address:
  IP address of the destination node
- Maximum hops:
  Maximum number of network nodes, traversed on the route
- Probes:
  Number of attempts to reach a network node
- Timeout:
  Maximum time to wait for an answer from a network node

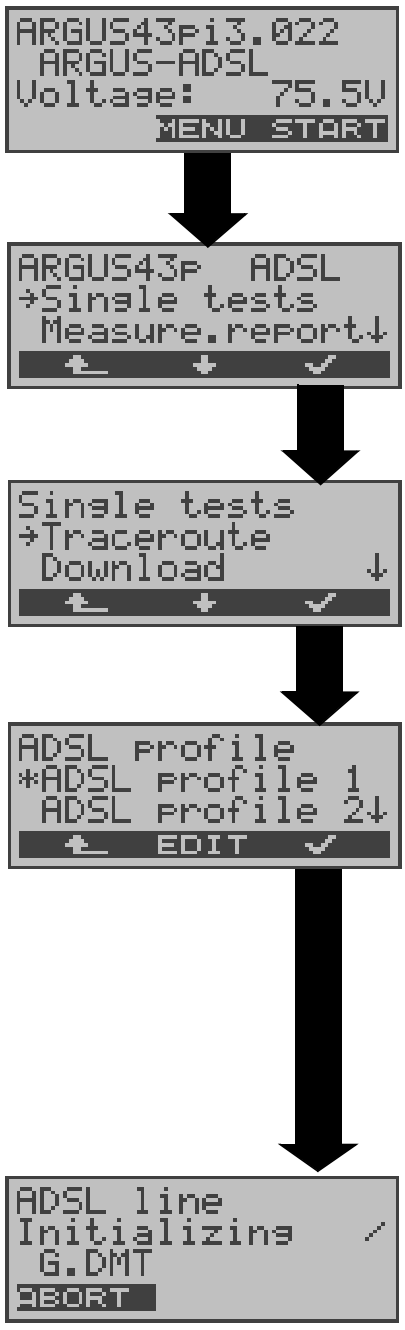
(see “Traceroute:” on page 88)

Protocol dependent parameters

Protocol	PPPoE / PPPoA	IPoA / EoA
Parameter	ATM - VPI / VCI - Encapsulation	ATM - VPI / VCI - Encapsulation
	PPP - User name - Password	
	ADSL mode	ADSL mode

			WAN: - IP mode (Static IP) - own IP address - IP network mask - remote IP address
			DNS server: - DNS Server 1 - DNS Server 2

Trace Route Test - starting



ARGUS displaying Status

The ARGUS will return to the Main Menu

Using the **<↓>** , select the **Single tests** menu.

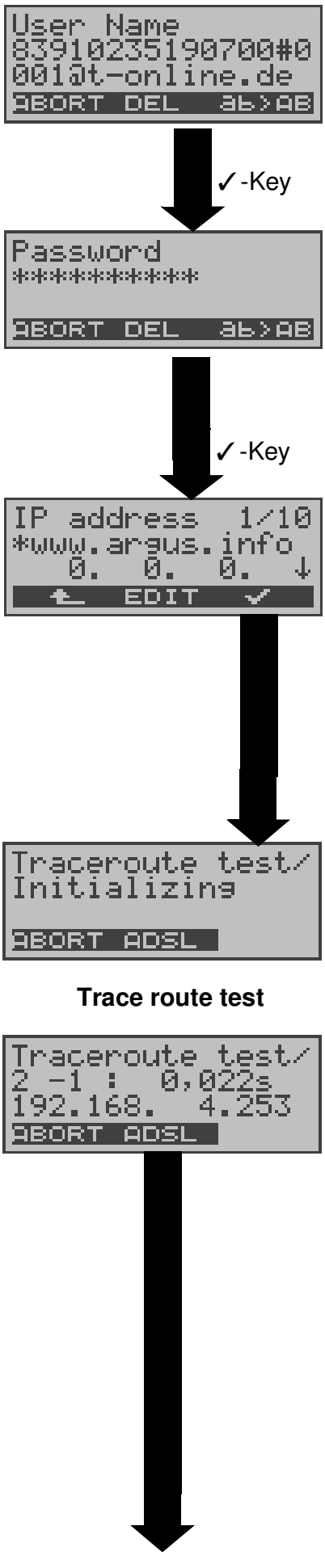
Open the **Single tests** menu

With the **<↓>, select Traceroute**

The list of ADSL profiles will open.

Using the **<↓>**, select an ADSL profile (The default setting is marked with an "*").
If you press on **<EDIT>**, the ARGUS will open the settings menu for the profile. In this menu, you can change the parameters (see “Configuring ADSL profiles” on page 81).

Initializing the ARGUS



At first, the ARGUS will display the user name stored for the ADSL profile.
Change the user name if necessary (for instructions, please see Page 85)

If you change the user name, you must enter the password again (see Page 85). The changes are placed in temporary storage. The ADSL profile is not modified.

The ARGUS displays the IP address stored in the ADSL profile.
To select the IP address for the Ping, use the **<↓>** (The default address is marked with an "*".)
Press **<EDIT>** **if you want to change the** IP address.
(see Page 86).

Initializing the test software
The Traceroute test will start automatically after the initial is at ion.

Trace route test

The ARGUS displays the current hop and probe (2 -1: 2nd hop and 1st probe),
the current response time of the hop to the current probe (0.022 seconds) and the IP address of the current hop (in the example: 192.168.4.253).

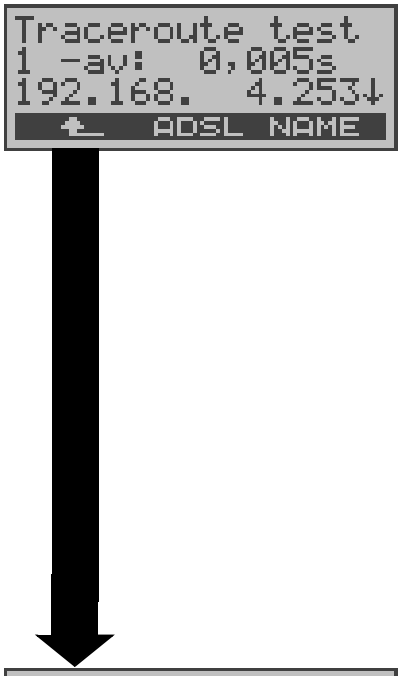
Depending on the access mode and protocol, the LAN, WAN, PPP and ATM statistics will also be displayed (scroll through with the ↓-Key)

Press **<ABORT>** to cancel the test. The ARGUS will display the results of the test thus far

and inquire whether to save them.

Display of the ADSL mode, ADSL line parameters... (see “Physical test (ADSL line test)” on page 29)

At the end of the test, the ARGUS will display the test results:

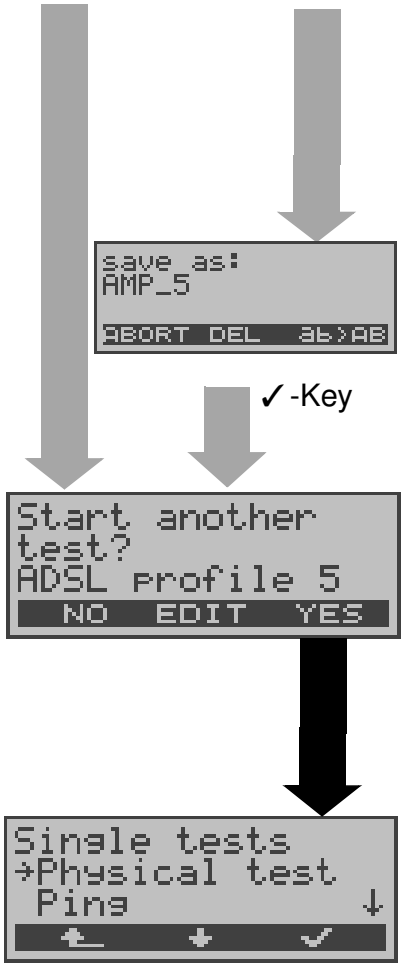


The ARGUS displays all of the hops and the average response time (calculated for all probes) and - depending on the access - the LAN, WAN, PPP and ATM statistics.
In this example: 1st hop (**1** -av) with the average response time of 0.005sec (1 -**av**) and the IP address 192.168.4.253
Use the ↓-Key to scroll through the results.
Press <**NAME**>to display the IP address of the hop as a name (if possible).

Traceroute result - saving

Press <**YES**> to have the ARGUS save the result in the first available record in the FLASH memory.
(see “Measure.report” on page 73 and Display Results on page 74)

The ARGUS will send the trace file to the connected PC, which must be running WINplus or WINanalyse.
The data will be saved in the standard "libpcap" format and can be decoded with a freeware tool, such as



Etherreal.
(In the example, 33% of the data was already uploaded to the PC.)

Enter the name under which the results should be saved (see Page 35).

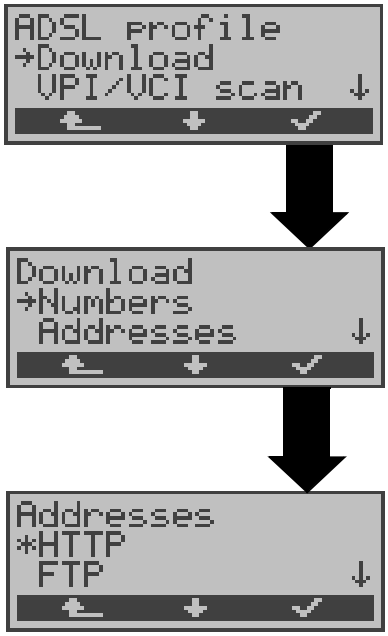
Press **<EDIT>** to edit the parameters of the displayed ADSL profile
(see "Configuring ADSL profiles" on page 81)

Any ADSL test desired can be started without reinitializing the ADSL test software.

8.1.4 Download Test

In the Download test, the ARGUS will attempt to download data from a web site or file. The Argus will display the current download rate and once the test is over the average speed (g.g. in the case of multiple download attempts).
The following parameters (which are stored in the ADSL profile, see Page 81) are required for the Download test:

Protocol independent parameters



- Number:
  How often the data from "Source“ address should be downloaded
- Address:
  First select the type of "Source“ address: HTTP (Websites or files) or FTP (files)
  Afterwards, you can enter a "Source“ address as a URL (see “Download :” on page 89)

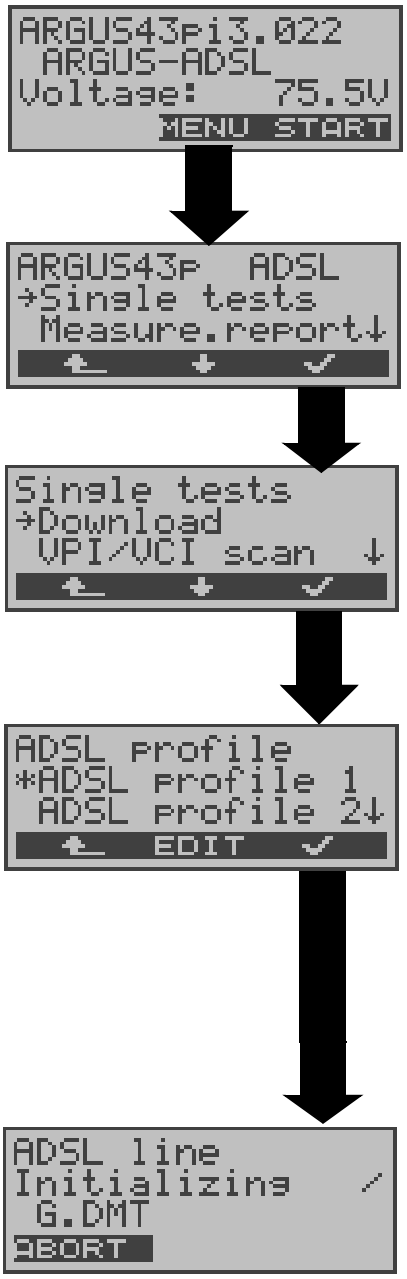
If an alias www address is entered as the "Source" address (e.g. www.argus.info/web/download/software/Software32.ZIP), the ARGUS will "only" load the HTML pages during the Download test (in the example ca. 600 bytes). The ARGUS does not evaluate the HTML code, so any link to a "true“ www address (e.g. www.isdntester.com) will be ignored. In this case, the ARGUS will not display an error message since the "Source“ address specified will have been loaded without error.
When entering the "Source“ address make certain that you use the correct notation (e.g. www.isdntester.com/web/download/software/Software32.ZIP), otherwise the ARGUS will report an Error 301 (Moved Permanently) or Error 404 (Not Found).

In the case of a Download test of less than 10 seconds, it is not possible to accurately determine the transmission speed.

Protocol dependent parameters

<table>
<tr><td>Protocol</td><td colspan="2">PPPoE / PPPoA</td><td>IPoA / EoA</td></tr>
<tr><td rowspan="5">Parameter</td><td colspan="2">ATM
- VPI / VCI
- Encapsulation</td><td>ATM
- VPI / VCI
- Encapsulation</td></tr>
<tr><td colspan="2">PPP
- User name
- Password</td><td></td></tr>
<tr><td colspan="2">ADSL mode</td><td>ADSL mode</td></tr>
<tr><td></td><td></td><td>WAN:
- IP mode (Static IP)
- own IP address
- IP network mask
- remote IP address</td></tr>
<tr><td></td><td></td><td>DNS server:
- DNS Server 1
- DNS Server 2</td></tr>
</table>

Download test - starting



ARGUS displaying Status

The ARGUS will return to the Main menu.

Using the **<↓>** , select the **Single tests** menu.

Open the Single tests menu

With the **<↓** , select> **Download**.

Open the list of ADSL profiles.

Using the **<↓>**, select an ADSL profile.
The parameters in the selected profile will be used in the Download test.
Press <**EDIT**> to edit the profile (see Page 81)

Initializing the ARGUS

At first, the ARGUS will display the user name stored for the ADSL profile.
If necessary, change the user name
(for instructions, see Page 85)

If you change the user name, you must enter the password again (see Page 85).
The changes are placed in temporary storage. The ADSL profile is not modified.

Use the ↓ -Key to select the type of "Source“ address (in the example, HTTP)

The ARGUS displays the address stored in the profile.
Use the ↓-Key to select an address to serve as the "Source“ address (The default setting is marked with an "*").
Press <**EDIT**> if you want to change the address.

Initialisation of the test software

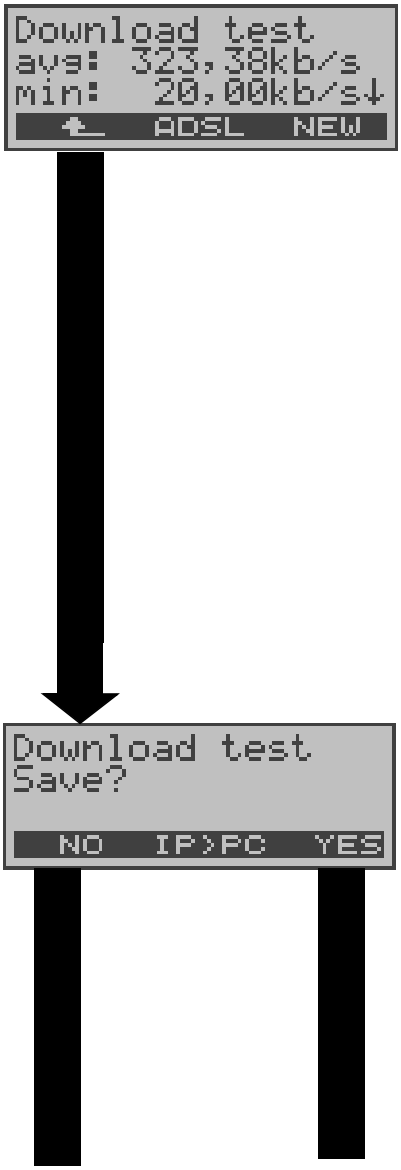
Download test

The Download test will start automatically.
The ARGUS displays the following during the test:
In the example, the first download of a total of three attempts (1/3) is shown. 73% of the data has already been loaded.
The current download rate is 360 kBits per second.

Thus far 1.92 MB has been downloaded. The total file size is 2.4 MB.
Use the ↓-Key to scroll down to view how long the download has been in process.
(in h.min.sec:msec) and the time remaining until it will be done.

Depending on the access mode and protocol, the LAN, WAN, PPP and ATM statistics will also be displayed (scroll through with the ↓-Key)

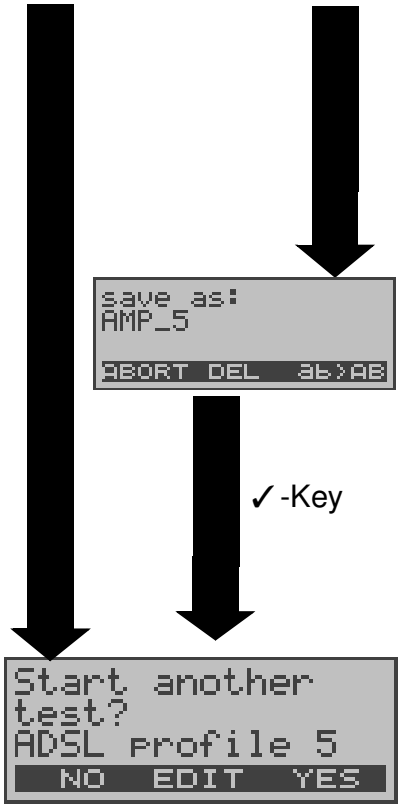
Download test
Result



At the end of the test, the ARGUS will automatically display the result.
The ARGUS will display
- the achieved average speed of the download process (323.38 kb/s)
- the minimum download rate (20.00 kb/s)
- the maximum download rate
- the size of the file downloaded
- the average time for a download
- statistics

(scroll with the ↓ -Key).
Press <**NEW**> to start a new Download test (without reinitialising).

Press <**YES**> to have the ARGUS save the result in the first available record in the FLASH memory
(see “Measure.report” on page 73 and Display Results on page 74)
Press <IP>PC> to upload the trace file to the PC.
The data will be saved in the standard "libpcap“ format



and can be decoded with freeware tools, such as Etherreal.

Enter the name under which the results should be saved (see Page 35).

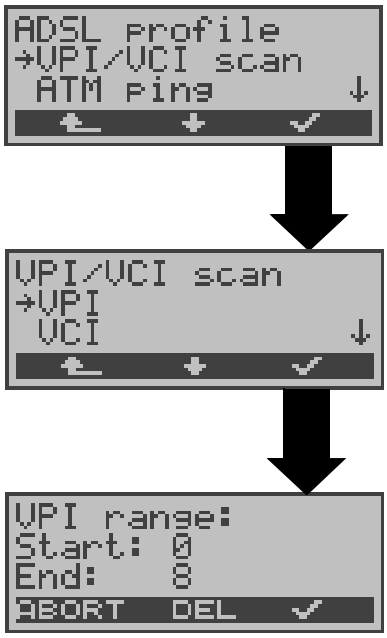
Press **<EDIT>** to edit the parameters of the displayed ADSL profile
(see “Configuring ADSL profiles” on page 81)
Any ADSL test desired can be started without reinitializing the ADSL test software.

8.1.5 VPI/VCI scan test

In the VPI/VCI scan test, the ARGUS checks which VPI/ VCI combinations are active on the access under test: The ARGUS will send a test packet for each of the possible VPI / VCI combinations and wait for a packet in response.

The following parameters (which are stored in the ADSL profile, see Page 81) are required for the VPI / VCI scan test:

VPI/VCI scan test parameters:



- VPI:
Sets the limits of the VPI range checked by the ARGUS.

- VCI:
Sets the limits of the VCI range checked by the ARGUS.

- Number of pings:
Sets the number of test packets to be sent by the ARGUS.

- Timeout:
Sets the maximum time to wait for a response from an ATM network node.

(see “VPI/VCI scan:” on page 89)

VPI/VCI scan test - starting

ARGUS displaying Status

The ARGUS will return to the Main menu.

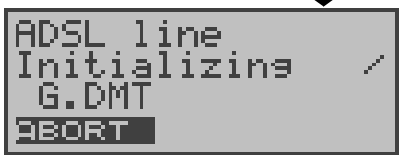
Using the **<↓>** , select the **Single tests** menu.

Open the Single tests menu

Using the **<↓>**, select **VPI/ VCI Scan**.

Open the list of ADSL profiles.

Using the **<↓>**, select an ADSL profile.
The parameters in the selected profile will be used in the VPI/VCI scan test.
Press **<EDIT>** to edit the profile (see Page 81)



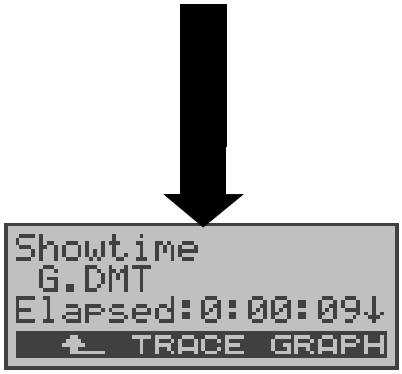
Initializing the ARGUS

Initialisation of the test software

VPI/VCI scan test

The VPI/VCI scan test starts automatically.
The ARGUS will display the currently tested VPI/VCI combination.

Depending on the access mode and protocol, the LAN, WAN, PPP and ATM statistics will also be displayed (scroll through with the ↓-Key)



Press <**ABORT**> to cancel the test. The ARGUS will display the results collected thus far and will inquire whether to save them.

Display the ADSL mode, ADSL line parameters... (see “Physical test (ADSL line test)” on page 29).

Once the test is over, the ARGUS will automatically open the results display:

The ARGUS will display the VPI/VCI combinations that are active on the access under test and the statistics (scroll through using the ↓-Key) .
Press <NEW> to start a new test.

VPI/VCI scan results - saving

Press <**YES**> to have the ARGUS save the result in the first available record in the FLASH memory (see “Measure.report” on page 73 and Display Results on page 74).

Enter the name under which the results should be saved (see Page 35).

✓-Key

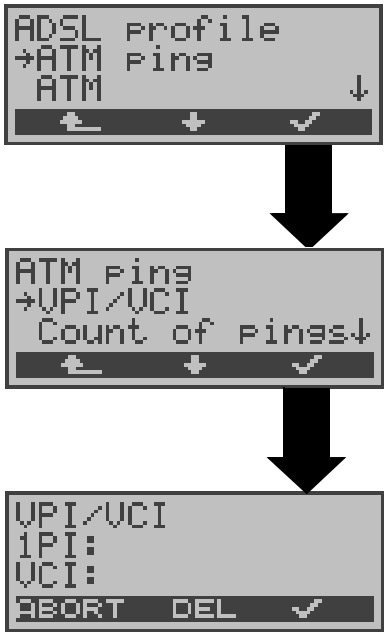
Press <**EDIT**> to edit the parameters of the displayed ADSL profile
see Page 81

Any ADSL test desired can be started without reinitializing the ADSL test software.

8.1.6 ATM Ping Test

In the ATM ping test, the ARGUS checks the availability of individual ATM network nodes or an ATM subnet.

The following parameters (which are stored in the ADSL profile, see Page 81) are required for the ATM ping test:



- VPI: Entry of the VPI

- VCI: Entry of the VCI

- Number of pings:
The number of test packets that the ARGUS will send

- Timeout:
Sets the maximum time to wait for a response from an ATM network node.
(see “ATM ping:” on page 90)

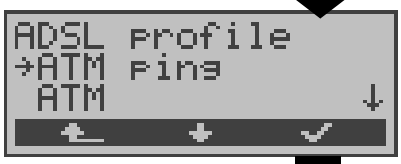
ATM ping test - starting

ARGUS displaying Status

The ARGUS will return to the Main menu.

Using the **<↓>** , select the **Single tests** menu.

Open the Single tests menu

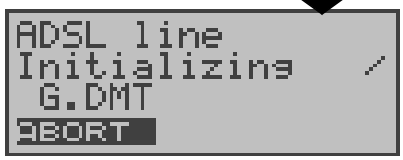


Using the **<↓ >** , select **ATM ping test**.

Open the list of ADSL profiles.

Using the **<↓>**, select an ADSL profile.
The parameters in the selected profile will be used in the ATM ping test.
Press **<EDIT>** to edit the profile (see Page 81)

Initializing the ARGUS

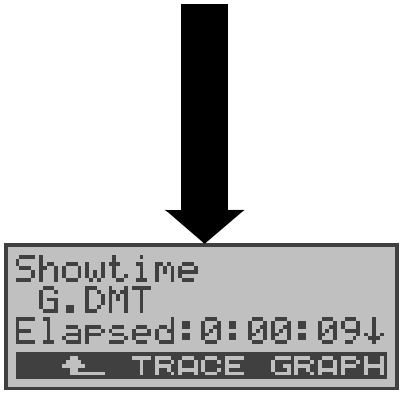


Initialisation of the test software

The ATM ping test will start automatically.

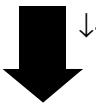
ATM ping test

The ARGUS will display the current number of test packets sent and packets received in response.



Depending on the access mode and protocol, the LAN, WAN, PPP and ATM statistics will also be displayed (scroll through with the ↓ -Key)
Press <**ABORT**> to cancel the test. The ARGUS will display the results collected thus far and will inquire whether to save them.

display the ADSL mode, ADSL line parameters... (see “Physical test (ADSL line test)” on page 29).



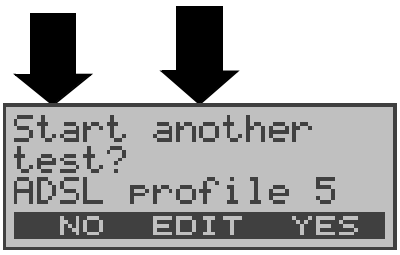
Once the test is over, the ARGUS will automatically open the results display:
The ARGUS will display
- Number of packets sent
- Number of packets received
- Number of packets lost
- Minimum/Maximum packet round-trip delay
- Average packet round-trip delay
- LAN, WAN, PPP and
- ATM statistics.

(Scroll through with the ↓-Key.)
Press <NEW> to start a new ATM ping test.

- ATM ping results - saving

Press <**YES**> to have the ARGUS save the result in the first available record in the FLASH memory.
(see “Measure.report” on page 73 and Display Results on page 74)

Enter the name under which the results should be saved (see Page 35).



Press **<EDIT>** to edit the parameters of the displayed ADSL profile
(see “Configuring ADSL profiles” on page 81)

Any ADSL test desired can be started without reinitializing the ADSL test software.

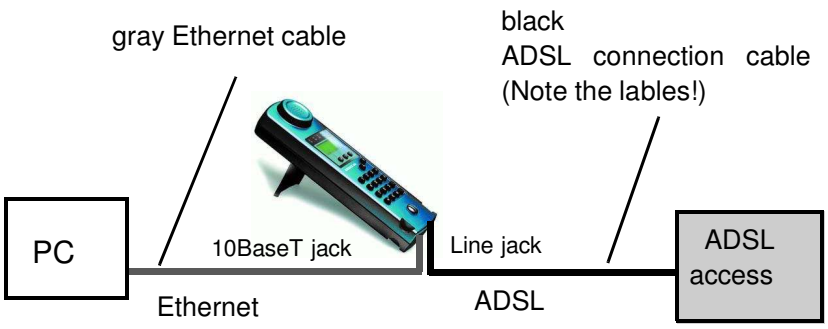
8.2 The ARGUS in Modem Replacement Mode

Access Mode: PC-ARGUS-ADSL (optional)

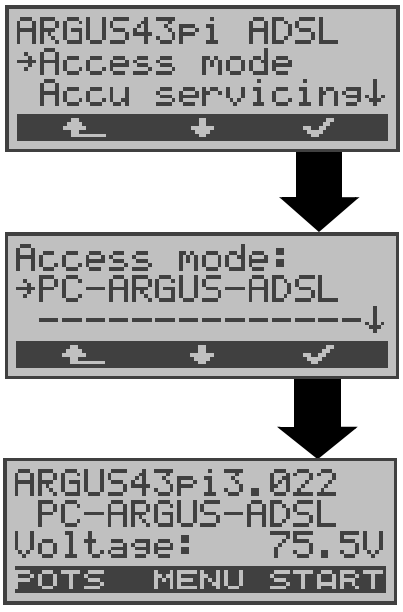
The ARGUS is connected to the PC with the (x-crossed) Ethernet cable and to the ADSL access with the black ADSL cable (Ethernet-LAN extension).
In this case, the ARGUS replaces the ADSL modem.

In the PC-ARGUS-ADSL access mode, the following tests can be performed:

- **Physical test (ADSL line test)**
- **Bridge mode**
- **Router mode**



Setting the device to the PC-ARGUS-ADSL access mode



In the Main menu, use the <↓> to select the **Access** menu.

Open the **Access mode** menu

Using the <↓>, select **PC-ARGUS-ADSL**.

The ARGUS will jump to the status display

The ARGUS displays the access mode and the DC voltage on the access under test.

If the ARGUS is not yet active, you must first select a test and start it (see the following pages).

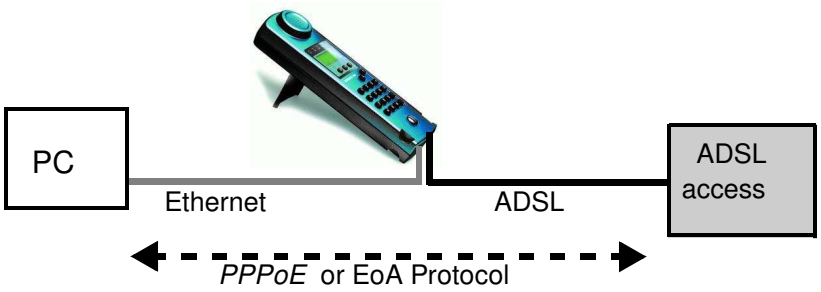
8.2.1 Physical test (ADSL line test)

The ARGUS will setup an ADSL connection and determine all of the relevant line parameters (see “Physical test (ADSL line test)” on page 29).

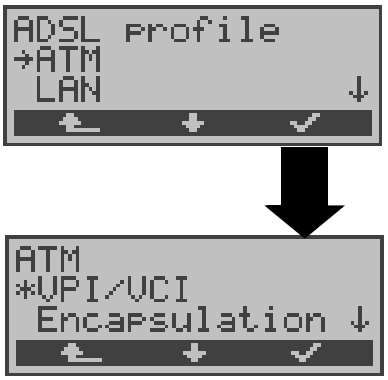
The following parameters must be set in the ADSL profile for the physical test (see “Configuring ADSL profiles” on page 81):
- Physic. line: ADSL mode, Link-up time, Rated value, SNR margin DS, Shutdown mode

8.2.2 Bridge mode

In Bridge mode, the ARGUS acts like an ADSL modem, i.e. the ARGUS passively passes all packets from the Ethernet side to the ADSL access (and vice versa). In this case, the PC is responsible for setting up the connection.



Setting the parameters:



In addition to the physical parameters (Physic. line), Bridge mode also requires that the two ATM parameters
- VPI/VCI (Page 90) and
- Encapsulation (Page 90)

be set.

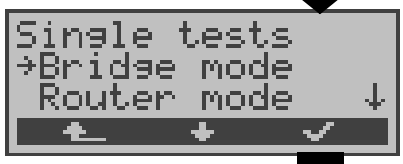
Bridge mode - setting:

Status display

The ARGUS will return to the Main menu.

Using the <↓>, select the **Single tests** menu.

Open the **Single tests** menu



Using the <↓>, select **Bridge mode**.

Using the <↓>, select an **ADSL profile**.
Press <**EDIT**> to modify the parameters.

Initializing the ARGUS

Initialising the software

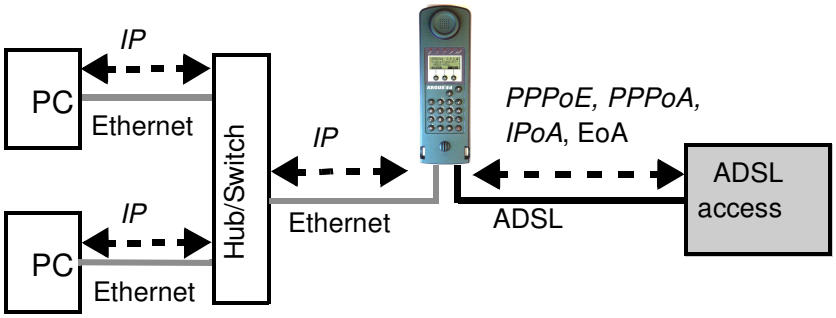
Press the <**ADSL**> or Level-Key to display the ADSL mode, ADSL line parameters... (see “Physical test (ADSL line test)” on page 29).

Deactivate Bridge mode.

Use <**IP>PC**> to download the two trace files (LAN and WAN side) to the PC.
The data will be saved in the standard "libpcap" format and can be decoded with a freeware tool, such as Etherreal.

8.2.3 Router Mode

In Router mode, the ARGUS replaces not only the modem but also the router. In this case, several PCs (connected via a hub/switch) can access the connection to the network provider.
The network IP addresses can either be assigned statically or the ARGUS can serve as a DHCP server and assign IP addresses to the connected PCs.



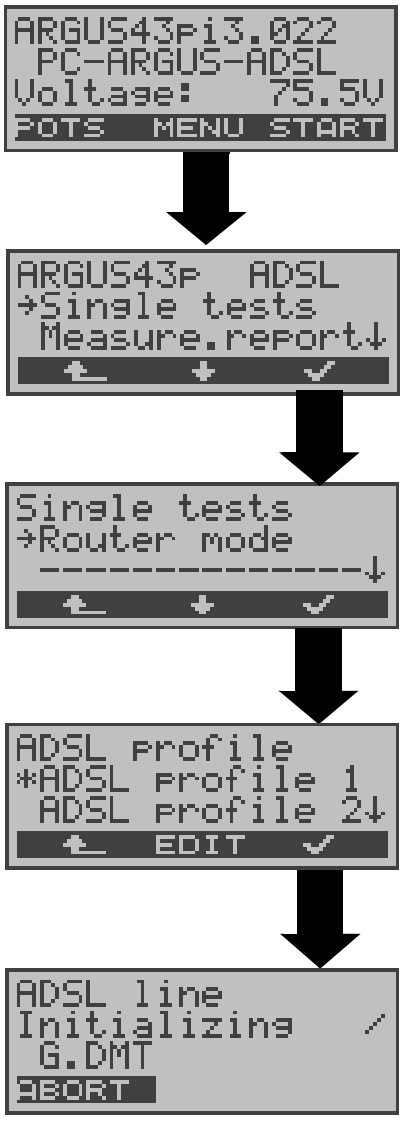
Protocol dependent parameters

Parameter settings in an ADSL profile, see Page 81

Protocol	PPPoE / PPPoA	IPoA / EoA
Parameter	ADSL mode	ADSL mode
	ATM: - VPI / VCI - Encapsulation	ATM: - VPI / VCI - Encapsulation
	PPP: - User name - Password	
	LAN: - IP mode - own IP address - IP network mask	LAN: - IP mode - own IP address - IP network mask - IP mode - DHCP server - DHCP timeout

		WAN: - IP mode (Static IP) - own IP address - IP network mask - remote IP address - DHCP timeout
		DNS server: - DNS Server 1 - DNS Server 2

Router mode - setting:



Status display: The ARGUS displays the access mode and the DC voltage on the access under test.

The ARGUS will return to the Main menu.

Using the <↓>, select the **Single tests** menu.

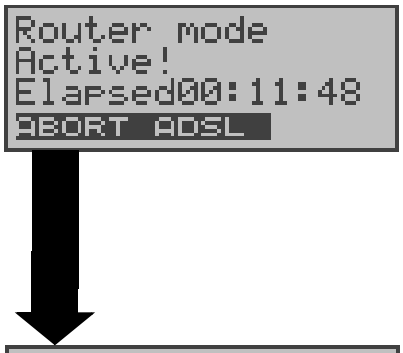
Open the **Single tests** menu

Using the <↓>, select **Router mode**.

Using the <↓>, select the **ADSL profile**.
Press <**EDIT**> to modify the parameters.

Initialising the ARGUS

Initialising the software



Press the <**ADSL**> or Level-Key to display the ADSL mode, ADSL line parameters... (see “Physical test (ADSL line test)” on page 29).

Deactivating Router mode

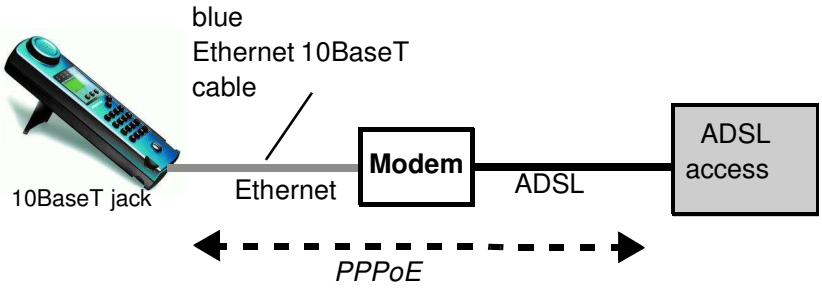
Use <**IP>PC**> to download the two trace files (LAN and WAN side) to the PC.
The data will be saved in the standard "libpcap" format and can be decoded with a freeware tool, such as Etherreal.

8.3 The ARGUS in PC Replacement Mode

Access Mode: ARGUS-MODEM (optional)

In PC replacement mode, the ARGUS serves as a replacement for the PC and is connected to the ADSL modem's Ethernet interface with the Ethernet cable (blue) (Ethernet-LAN extension).

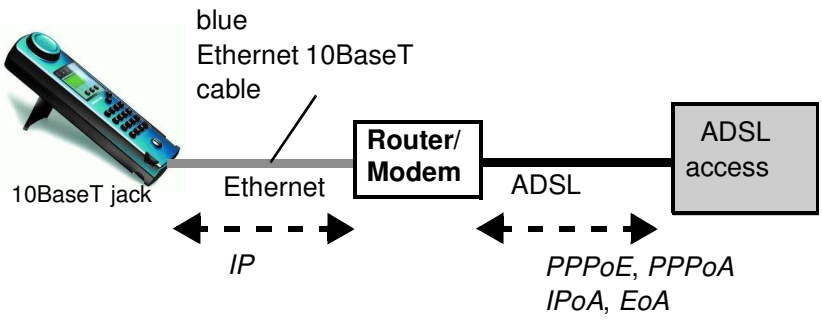
Connection to the modem:



ADSL profile settings:

- Protocol: PPPoE
- PPP parameters: User name and Password

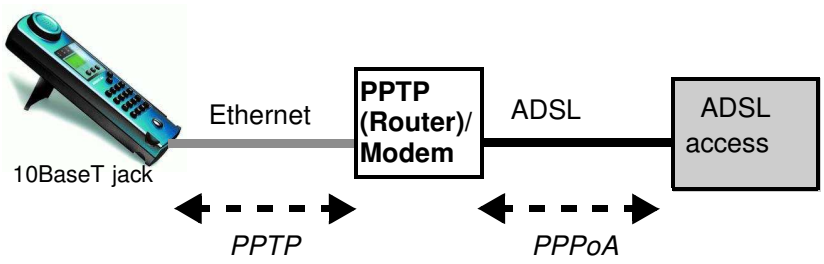
Connection to the router/modem:



ADSL profile settings:

- Protocol: IP
- LAN: IP mode, own IP address (Static IP), IP netmask (Static IP), Gateway-IP (Static IP under PPoE and PPPoA)
- DNS server: DNS Server 1 (Static IP under PPoE), DNS Server 2 (Static IP under PPoE)

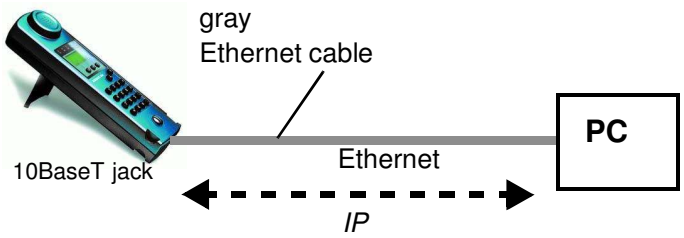
Connection to a PPTP router/modem:



ADSL profile settings:

- Protocol: PPTP
- PPTP: IP address of the PPTP modem
- PPP: User name and Password

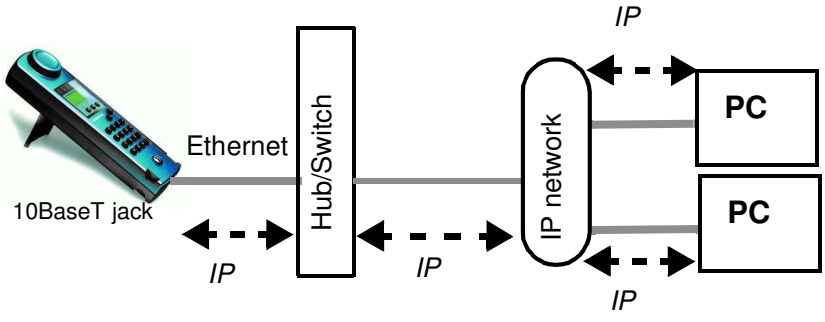
Connection to PC via IP



ADSL profile settings:

- Protocol: IP
- LAN: IP mode, own IP address (Static IP), IP netmask (Static IP), Gateway-IP (Static IP)
- DNS server: DNS Server 1, DNS Server 2

Connection to IP network



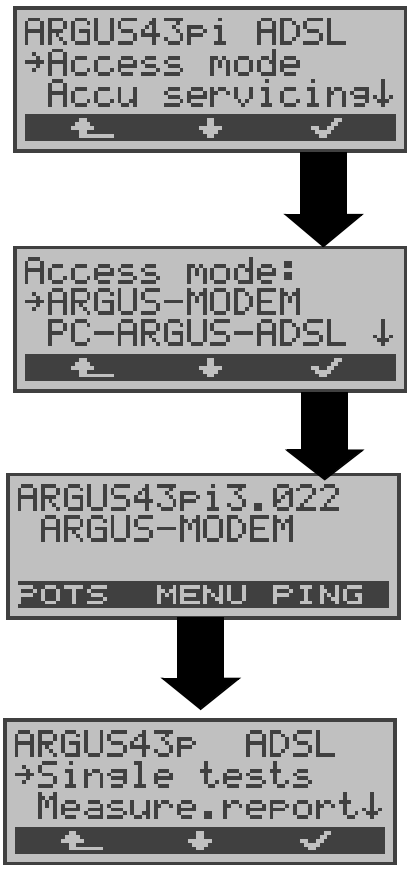
ADSL profile parameter settings:

- Protocol: IP
- LAN: IP mode, own IP address (Static IP), IP netmask (Static IP), Gateway-IP (Static IP)
- DNS server: DNS Server 1, DNS Server 2

In the ARGUS-MODEM access mode, the following tests can be performed:

- Ping test (see Page 36)
- Trace route test (see Page 42)
- Download test (see Page 47)

ARGUS-MODEM access mode settings



In the Main menu, use the <↓> to select the **Access** menu.

Open the **Access mode** menu

Using the <↓>, select **ARGUS-MODEM**.

Confirm

The ARGUS will open the Status display
Press <**NEW**> to start a new Ping test (see Page 36).

In the **Single tests** menu, start other tests

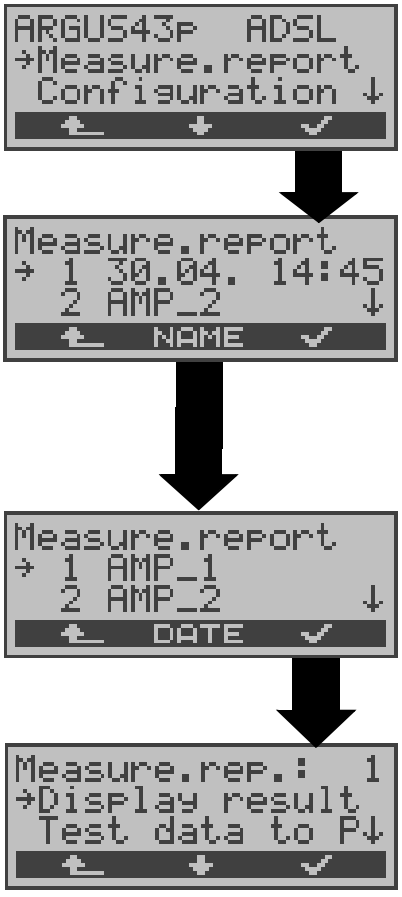
9 Measure.report

The ARGUS saves the test results of the various ADSL tests together with the date and time (from the internal clock of the ARGUS). The ARGUS will also save the call number of the access under test (only if the number has been saved in the speed-dialling memory see Page 99) or an alphanumeric name (default: AMP_1, AMP_2 ....).
The test results are not lost when the ARGUS is switched off.
The saved test results can also be shown again on the ARGUS display at any time or - using the Intec software, WINplus or WINanalyse - saved on a PC, where they can be presented in a comprehensive measurement report and printed.

The ARGUS saves the results of multiple ADSL tests (records 1,2,3...) .

Each function in the **Measure.report** menu refers to one of the tests saved as a record.

Therefore, the first step will open a dialog in which you must select the desired data record.



In the main menu, use the <↓> to select **Measure.report**.

Use the <↓>-Key to select the record holding the saved test results. The ARGUS will display for each record number the corresponding date and time. Empty records are labled as "free“.

The ARGUS will display the names of the records.

9.1 Display Results

Display result - Physical test:

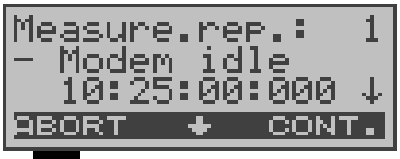
Use the <↓> to select **Display result**.

Using the <↓>, scroll through the test results.

Bit distribution display

Measurement results on an ADSL access:
For the interpretation of the measurement data, see Page 32.

Press the ✓-Key or the softkey on the right to view the trace data



Close the results display.

Display for an ADSL access Ping test:

Use the <↓> to select **Display result**.

Using the <↓>, scroll through the results of the Ping test.

ADSL Status display,
Test time,
ADSL line parameters
Use the <↓> to scroll.

Bit distribution display

Press the ✓-Key or the softkey on the right to view the trace data

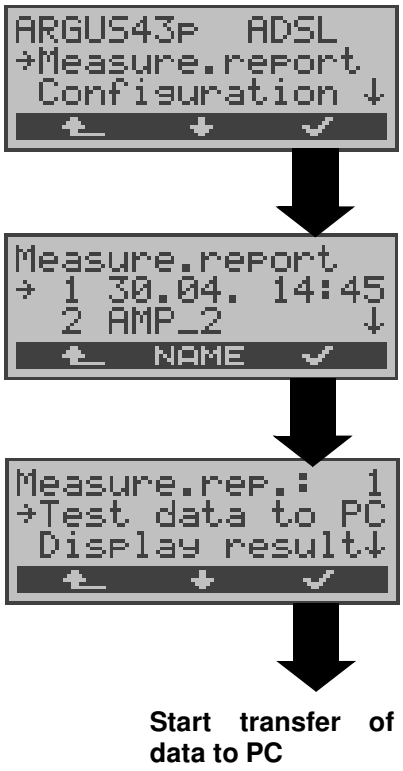
Close the results display.

The other test results (e.g.Traceroute test) are displayed in the same manner.

9.2 Sending the results of a tests to a PC

To visualize and archive the test results on the PC, the data records can be transferred to the PC via the serial interface using the included cable (labeled as PC Interface) (connect the cable between the ARGUS “V.24” jack ---- PC’s serial interface).

Connect the ARGUS to your PC and start the **ARGUS WINplus** program.

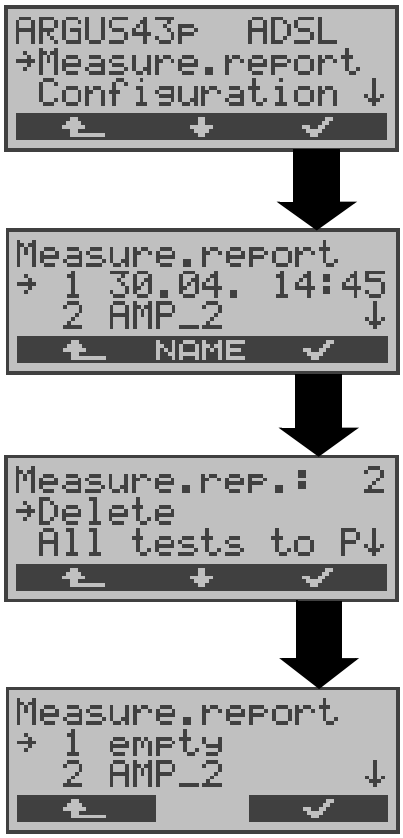


In the ARGUS Main menu, use the <↓> to select **Measure.report**.

Use the <↓>-Key to select the record (e.g. No. 1).
The selected record (measurement report) will be marked with a → .

Use the <↓> to select **Test data to PC**.

9.3 Deleting the results of a test



In the main menu, use the <↓> to select **Measure.report**.

Use the <↓>-Key to select the record (e.g. No. 1).

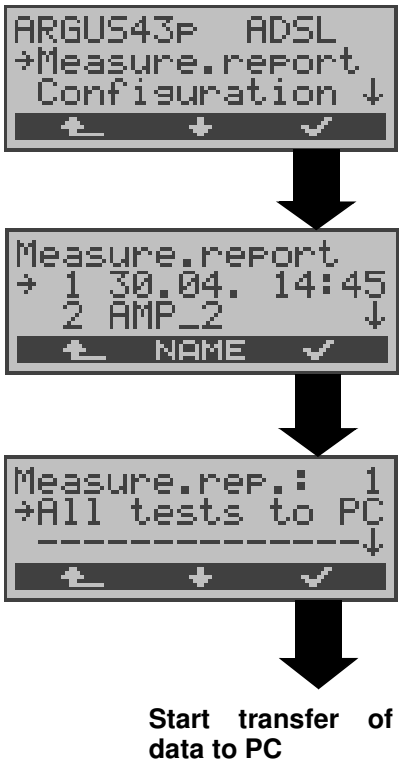
Use the <↓> to select **Delete**.

Delete record (No. 1)

For information on how to delete all **records**, please see on page 100 “Reset”.

9.4 Sending the results of all of the tests to a PC

The ARGUS will send the results of all of the tests to the PC at one time.



In the main menu, use the <↓> to select **Measure.report**.

Use the <↓>-Key to select any record .

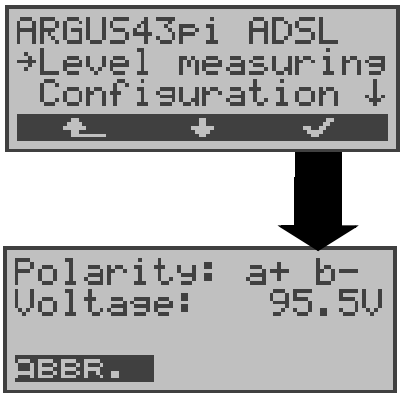
Use the<↓> to select **All test to PC**.

Start transfer of data to PC

10 Level Measuring

10.1 Level measuring on an ADSL access

The ARGUS determines the polarity and DC voltage level on the interface under test (POTS or U-interface).
The measurement will be updated continuously.



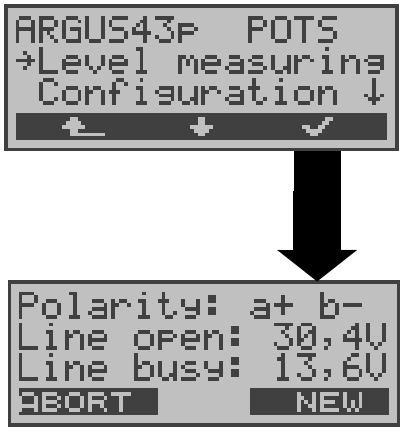
In the Main menu, use the <↓> to select **Level measuring**.

Start measurement

The ARGUS displays the polarity and the DC voltage on the access under test.

10.2 Level measuring on a POTS access

The ARGUS measures the voltage level in both the normal case and when the line is “busy” (trunk line).



In the Main menu, use the <↓> to select **Level measuring**.

Start measurement

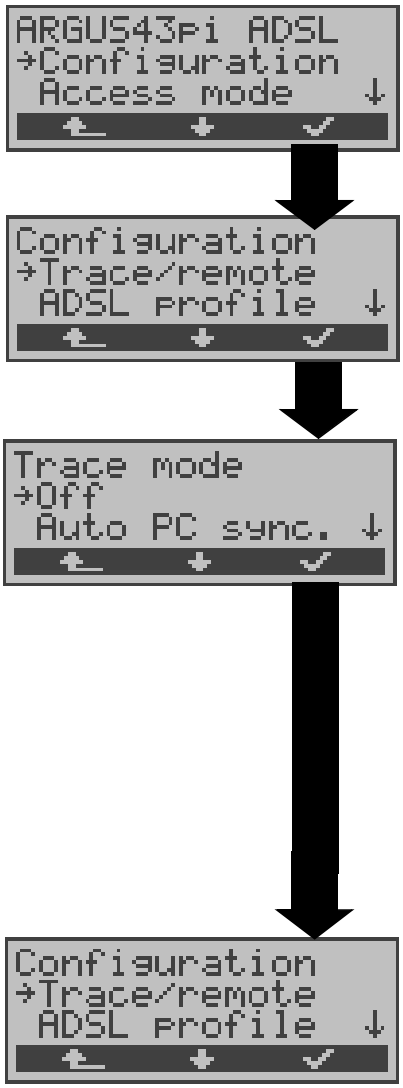
The ARGUS will display the polarity of the 2-wire POTS line (red plug "a"; black plug "b") as well as the "on hook" and "off hook" voltage levels.
Press <**NEW**> to repeat the measurement.

11 Settings

The ARGUS can be configured to suit your special requirements. The default (factory) settings can be restored by selecting "Reset“ (see page 100 Reset).

11.1 Remote (optional)

The Remote function is optional.



In the Main menu, use the <↓>
Select Configuration.

Open the Configuration menu

Use the <↓> to choose **Trace/remote**.

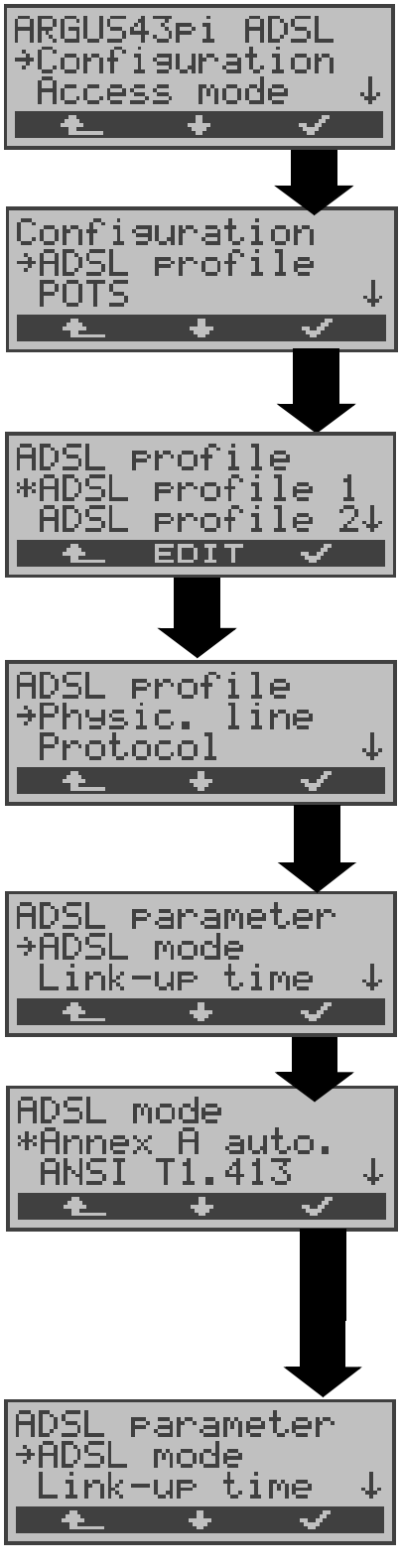
PC-conn. always: even after it is switched on again, it is still possible to remotely control the ARGUS ("Trace“ LED on continuously).
PC-conn.once: the PC can remotely control the ARGUS, but Remote mode is deactivated after the ARGUS is switched off and then on again.

Confirm the entry

If the connection to the PC is faulty, the "Trace" LED will flash at 5Hz (5 times per sec).
The currently active settings will be marked in the display with an *.

11.2 Configuring ADSL profiles

The ARGUS stores all of the parameters the various ADSL test varieties in the ADSL profiles. Up to 5 user-defined ADSL profiles can be created. An ADSL profile must be selected before an ADSL test run. Only those settings which are relevant will be used for the respective test situation.



In the Main menu, use the <↓>
Select Configuration.

Open the Configuration menu

Use the <↓> to select **ADSL profile**.

The **ADSL profile** window will open.

Use the <↓> to select **ADSL profile 1**.

Press <**EDIT**>to edit ADSL profile 1.

Use the <↓> to select a parameter (e.g Physic. line) of ADSL profile 1.

Display the physical line parameter

Use the <↓> to select ADSL mode.

Use the <↓> to select the desired ADSL mode.

Press **<** ↵ **>** and the ARGUS will return to the previous display without changing this parameter in the profile.

Save this selection in the profile.

ADSL settings:

Display Name on the ARGUS	**Comment**
Physic. line:	The following ADSL line parameters are grouped under this heading:
ADSL mode	Different ADSL modes can be selected depending on the national variant of the ARGUS. The selected ADSL mode must be compatible to ATU-C (network-side). ADSL Mode — Standard - Annex B (DT) — T-DSL (UR2) - Annex B (ETSI) — ETSI DTS - Annex A auto — automatic detection - ANSI T1.413 — ANSI T1.413 .2 - G-Lite — ITU-T G.992.2 - G.DMT — ITU-T G.992.1 If the ADSL mode “Annex A Auto” is selected, the ARGUS will automatically determine the configuration of the DSLAM (G.DMT or ANSI) and set itself accordingly.

Link-Up Time	Once the connection to the DSLAM is setup (Sync-LED ON constantly), the ARGUS will continually measure the data for the selected period of time. During this ADSL link up time, the ARGUS will display “Showtime”. Once the measurement time has elapsed, the connection will be automatically cleared. If the link-up time was set to “Continuous”, the connection to the DSLAM must be cleared manually.  When the link-up time is set to “Continuous”, we recommend that you operate the ARGUS on the power supply to save the accumulators (rechargeable batteries).
Rated value	Use the keypad to enter the upstream und downstream comparison value for ATM [Kb/s].

SNR margin DS	Setting for the SNR margin DS. This parameter can be set to "6 dB" or "3 dB". In the activating phase the CPE-side (Argus) requests that the CO-side (DSLAM) reduce its transmit power until the Target Noise Margin of 6 dB or 3 dB is achieved. Some DSLAMs do not support this. Either they will not reduce the transmit power at all or only to a certain value, e.g. half the maximum transmit power. In this case, the current transmit power is less than the maximum. In this case the Noise Margin is still higher than the Target Noise Margin (e.g. 31 dB instead of 6 dB or 3 dB). The "max. dB" setting The max. dB setting on the CPE-side (Argus) does not influence the transmit power of the CO-side (DSLAM). The CO-side transmits at maximum power and the Noise Margin also reaches the maximum possible value.
Shutdown mode	The type of disconnect used for the ADSL connection.
Protocol:	This setting is used to define which protocol should be used by the ARGUS in the ADSL test.
PPP:	PPP parameter for the Internet connection:

User name

Entry of the assigned (by the network operator) user name. Use the keypad to enter the user name.

When the right softkey is pressed it assumes a different meaning and thus influences the entries made from the keypad (letters or digits) :

<12>ab> : entry of the digits 0 to 9 plus * and #
<ab>AB> : entry of the lowercase characters and @, /,- and . (e.g. to a "c“ press the "2" on the keypad three times)
<AB>12> : entry of the uppercase characters and @, /, - and .
To move the cursor right or left, use the ↑,↓-Keys.
Press **<DEL>** to delete the digit before the cursor.
✓-Key to save the user name
<ABORT> : Do **not** save user name

Password

Entry of the assigned (by the network operator) password:

For instructions, see User name
✓-Key: Save password
<ABORT> : Do **not** save password

PPTP:	PPTP parameter

Server IP address	Use the keypad to enter the Server IP address. To move the cursor right or left, use the ↑,↓-Keys. Press **<DEL>** to delete the digit before the cursor.
Ping:	
IP address	Address of the remote side. The ARGUS can save up to 10 IP addresses. The saved IP addresses are available to all of the profiles.

The ARGUS is displaying the memory location holding the first IP address of a maximum of 10 IP addresses (1/10).
Press the <↓> to scroll to the next IP address.

Open the first IP address to edit it.

The address can be entered as an IP address (number) and/or name.

Enter the name of the IP address.
Use the keypad to enter the address. Use the softkey on the right to shift the keypad (the softkey on the right assumes a different meaning when pressed):

<12>ab> : entry of the digits 0 to 9 plus * and #
<ab>AB> : entry of the lowercase characters (e.g to enter a "c" press the "2" on the keypad three times) and @, /,- and .
<AB>12> : entry of the uppercase characters and @, /,- and .
Press **<DEL>** to delete the digit before the cursor.

Press the <✓> to set the marked the IP address as the default address.

Use the keypad to enter the numbers of the IP address.
To move the cursor right or left, use the ↑,↓-Keys.
Press **<DEL>** to delete the digit before the cursor.

Number of pings	Enter the number of test packets that the ARGUS should send to the IP address. If you enter "0", the ARGUS will send packets continuously until the test is stopped manually.
Pause	This setting determines the amount of time that the ARGUS will wait between sending test packets.
Packet size	This setting determines the size of the test packets. By varying the size, it is possible to determine the maximum data packet size and the relationship between size and response time.
Fragmentation	This parameter sets the fragmentation: **ON**: Depending on the network (or router), test packets may be divided into multiple packets. **OFF**: Fragmentation is not permitted, i.e. the test packets may be rejected by the network (or router). In this case, the ARGUS will not receive a packet in reply. **Auto**: The ARGUS determines the maximum packet size for the path to the destination address (Path-MTU) and splits the test packet into smaller packets. These can then be sent with the minimum of delay (since the network/router need not fragment the test packet).
Traceroute:	
IP address	IP address of the destination node: This can be entered as an IP number or as a name (for instructions, see Ping/ IP address).
max. HOPS	This sets the maximum number of hops that will be taken in the path to the destination node.
Probes	This sets the number of attempts that will be made to get a response from a network node.

Timeout	This sets the maximum amount of time that the ARGUS will wait for a response from a network node.
Download :	
Qty	This sets how often the ARGUS will download the data from the "Source“ address.
Addresses	Entry of the "Source“ addresses: The ARGUS can save up to three HTTP/FTP addresses.

Press the <↓> to select the type of "Source“ address (http or ftp). Depending on the type of server and the data: for websites, http; for files http or ftp.

The ARGUS displays the first (the first memory location) of three possible addresses.
↓ -Key: Scroll to the desired memory location [address].

Entry or editing of the address (Caution - see Page 47 regarding the entry of alias www addresses)
(for instructions, see Ping: IP address)

✓ -Key

Save address

Press the <✓> to set the top address as the default.

VPI/VCI scan:	
VPI	This sets the VPI range, which the ARGUS should check with the VPI/VCI scan test.
VCI	This sets the VCI range, which the ARGUS should check with the VPI/VCI scan test.

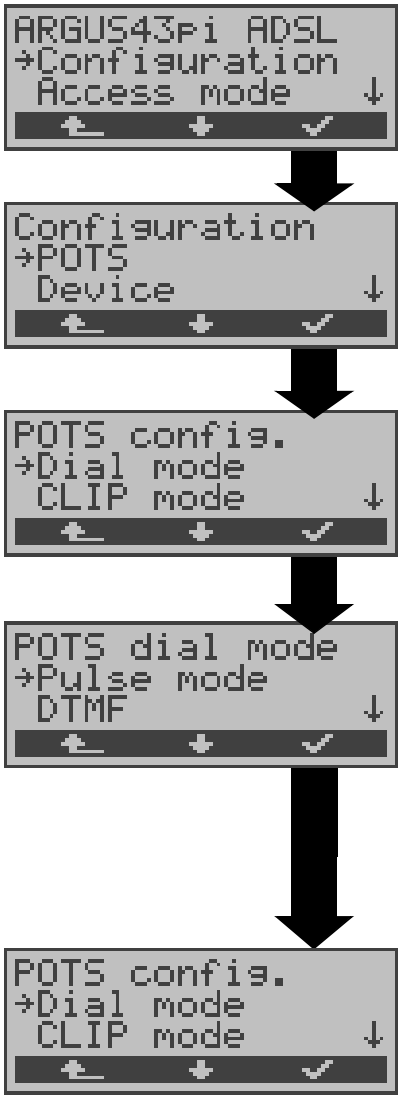
Number of pings	This sets the number of test packets that the ARGUS will send. If you enter "0", the ARGUS will send packets continuously until the VPI/VCI scan test is stopped manually.
Timeout	This sets the maximum amount of time that the ARGUS will wait for a response from an ATM network node to a test packet (ping) which it sent.
ATM ping:	
VPI	Entry of the VPI
VCI	Entry of the VCI
Number of pings	This sets the number of test packets that the ARGUS will send. If you enter "0", the ARGUS will send packets continuously until the ATM Ping test is stopped manually.
Timeout	This sets the maximum amount of time that the ARGUS will wait for a response from an ATM network node to a test packet (ping) which it sent.
ATM:	
VPI / VCI	The identifier of the virtual channel in the ATM cells - Virtual Path (Channel) Identifier
Encapsulation	This sets the encapsulation of the packets to be sent (LLC or VC-MUX).
LAN:	

IP mode	This is used to set the assignment of IP addresses: Static IP: fixed IP addresses DHCP-Client: Assigned by the server DHCP-Server: Assigned by the ARGUS DHCP-Auto: The ARGUS will check whether there is a DHCP server in the network. If yes, the address will be assigned by this server. Otherwise, the ARGUS will assign the address.
Own IP address	This is the IP address (of the ARGUS) of the LAN side
IP network mask	LAN IP network mask
GW-IP	Gateway IP address in the LAN network
DHCP server	Settings for the DHCP server: Start and End IP addresses The period for which the IP addresses are reserved Domain Name
DHCP timeout	This sets the amount of time that a client should wait for an IP address (relevant for the IP mode DHCP client)
MAC address	This displays the LAN MAC address of the ARGUS.
WAN:	
IP mode	This is used to set the assignment of IP addresses.
Own IP address	This is the IP address (of the ARGUS) of the WAN side
IP network mask	WAN IP netmask
Remote IP address	Gateway IP address in the WAN network
DHCP timeout	This sets the amount of time that a client should wait for an IP address (relevant for the IP mode DHCP client)

MAC address	This displays the WAN MAC address of the ARGUS.
DNS server:	
DNS Server 1	IP address of the DNS server
DNS Server 2	IP address of the DNS server
Profile name:	Enter the profile names, which should later be displayed by the ARGUS.

11.3 Configuration: POTS

The operation is the same for all configurations and will be illustrated with a single example:



In the Main menu, use the <↓>
Select Configuration.

Open the Configuration menu

Use the <↓> to select **POTS**.

POTS configuration menu *.*

Using the <↓>, select a setting (e.g. Dial mode).

Use the <↓>-Key to select the desired dialing mode (e.g. Pulse mode).

< ↵ **>**: The ARGUS will return to the POTS config. menu without making any changes.

Confirm selection

Settings on a POTS access:

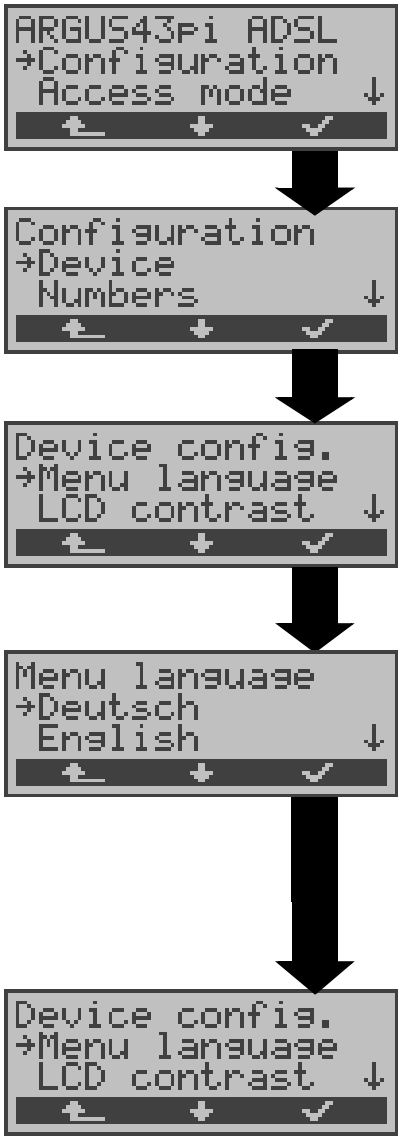
Display on ARGUS	**Comment**
Analog dial mode	Selection of the dialing mode: DTMF or pulse dialing

POTS CLIP	Select the transfer procedure used to pass the call number: **FSK:** CLIP via a procedure similar to a modem (for Germany and some other places in Europe) **DTMF**: CLIP via DTMF (for Scandinavia and the Netherlands) The ARGUS will automatically detect that a CLIP was sent using DTMF with the polarity reversal and will set itself accordingly (e.g. Netherlands).
DTMF parameter	Settings for the three parameters Level, Duration and Interval of the DTMF signals generated during POTS (analog) operation.
Level	Setting the DTMF level: The level can take any value ranging from -21dB to +12 dB and can be raised (**<↑>** or ↑-Key) or lowered (↓ -Key) by 3 dB steps. Default setting: 0 dB
Duration	Setting the DTMF time: The duration of the signal can take a value between 40ms and 1s (default: 80ms). The value can be raised or lowered using the ↑,↓-Keys: In the range 40 - 200ms in 10ms increments In the range 200 - 300ms in 20ms increments In the range 300 - 1000ms in 100ms increments When the upper limit is reached (1000ms), the softkey **<↑>** will automatically change to a **<↓>** and vice versa when the lower limit (40ms) is reached.

DTMF interval	Setting the interval between two DTMF characters: The duration of the signal can take a value between 40ms and 1s (default: 80ms). The value can be raised or lowered using the ↑,↓-Keys: In the range 40 - 200ms: in 10ms increments In the range 200 - 300ms: in 20ms increments In the range 300 - 1000ms: in 100ms increments When the upper limit is reached (1000ms), the softkey **<↑>** will automatically change to a **<↓>** and vice versa when the lower limit (40ms) is reached.
Reset to	Restores the default settings: Level = 0 dB, Time = 80 ms Interval = 80 ms
FLASH time	Sets the length of a FLASH. This setting is needed in order to use special features of a PBX. The FLASH time can take a value between 40ms and 1s. The value can be raised or lowered using the ↑,↓-Keys: In the range 40 - 200ms: in 10ms increments In the range 200 - 300ms in 20ms increments In the range 300 - 1000ms: in 100ms increments When the upper limit is reached (1000ms), the softkey **<↑>** will automatically change to a **<↓>** and vice versa when the lower limit (40ms) is reached.

11.4 Configuration: ARGUS

The operation is the same for all configurations and will be illustrated with a single example:



In the Main menu, use the <↓> to select **Configuration**.

Open the Configuration menu

Use the <↓> to select **Device**.

Open the **Device config.** menu
Use the <↓> to select a setting (e.g. **Menu language**).

Use the <↓> to select a language (e.g. Deutsch).

< ↰ **>**: The ARGUS will return to the Device config. menu without making any changes.

Confirm selection

Settings on the ARGUS:

Display on ARGUS	**Comment**
`Menu language`	Selection of the menu language

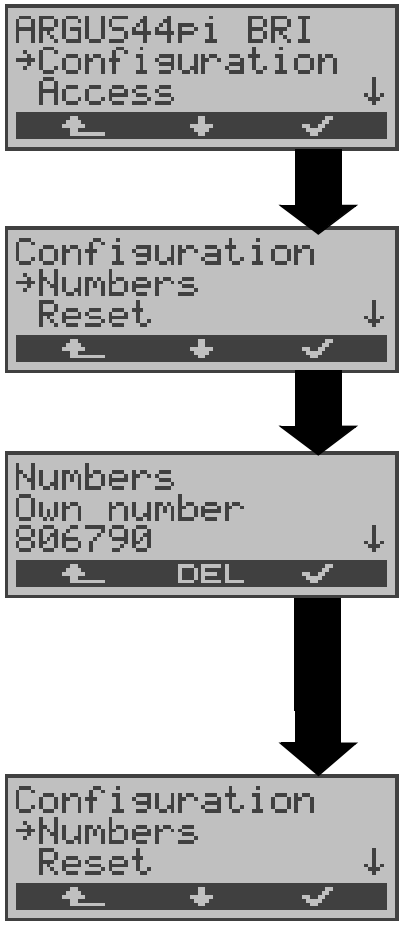
LCD contrast	Setting the display contrast (The contrast can be changed in 16 steps).  The contrast can be increased or decreased using the ↑,↓-Keys: The display shows a vertical arrow, which shows the current setting on a scale from low to high contrast.
Enter date / time	Enter the date and time. (Initialisation of the internal clock) via the keypad.  Use the ↓ -Key to scroll to the next line. The entered time will be continuously updated by the ARGUS's real time clock as long as the power is not switched off. When the power is switched off (the ARGUS switched off without batteries), the clock will run a few more weeks on its internal supply. If the backup supply is exhausted, the time will be undefined and must be set again.
Baud rate	Sets the maximum Baud rate to be used by the ARGUS to communicate with a PC.
Alarm bell	The ARGUS signals with an alarm in a variety of situations. When this parameter is set to "off", all audible alarms are suppressed.

Software option	To enable a software option (e.g. additional functions), you must first enter a software key via the keypad.

11.5 Saving Call Numbers

Ten call numbers with a maximum of 24-places can be entered in the speed-dialing memory.

In the "Remote No.1-9" memory locations, you can save remote call numbers.



In the Main menu, use the <↓> **Select** Configuration.

Open the Configuration menu

Use the <↓> to select **Numbers**.

Using the keypad, enter the number of the access under test.
Press <**DEL** > to delete the digit before the cursor.
Using the <↓,> scroll through the speed-dialing memory.

Save the call number.

11.6 Reset

The ARGUS will reset all of the parameters to their default values.

The speed-dialing memory with the call numbers, PPP user name, PPP password, IP addresses, Download addresses and all of the test results stored in the ARGUS (e.g. Measurement reports) will be deleted.

The following settings are possible:

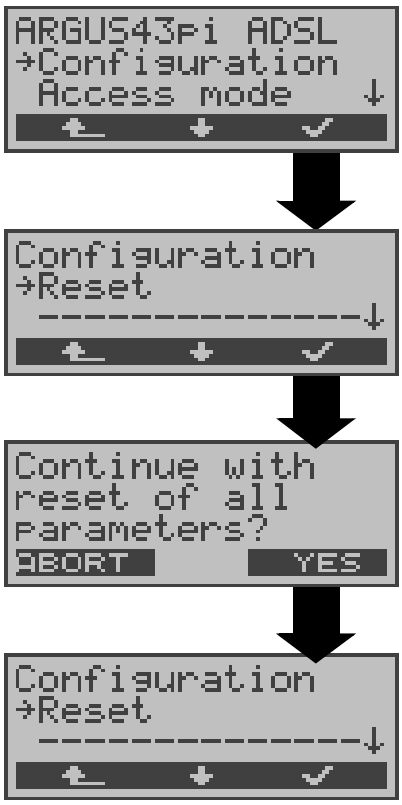
	Default
ADSL profile:	
ADSL mode	depending on the country and ARGUS variant
Link-Up Time	10sec
Rated value	0/0
Protocol	PPPoE
PPTP server IP addr.	0.0.0.0
Ping IP address	1
Number of pings	10
Ping pause	1 sec.
Ping packet size	84 Bytes
Ping fragmentation	on
Traceroute IP address	1
Traceroute max. hops	30
Traceroute probes	3
Traceroute timeout	3000
Download number	3
Download address (Type)	http
Download address http (Index)	1
Download address ftp (Index)	1
VPI range in a VPI/VCI scan	0 to 8
VCI range in a VPI/VCI scan	32 to 48
Number of pings in a VPI/VCI scan	3

Timeout in a VPI/VCI scan	0.1 sec.
VPI in an ATM ping	1
VCI in an ATM ping	32
Number of pings in an ATM ping	3
Timeout in an ATM ping	1 sec.
ATM VPI/VCI	1/32
ATM Encapsulation	LLC
LAN IP mode	static
LAN own IP address	0.0.0.0
LAN IP network mask	255.255.255.0
LAN DW-IP	0.0.0.0
LAN DHCP-Server Start / End address	0.0.0.0 / 0.0.0.0
LAN DHCP-Server Domain	none
LAN DHCP-Server Reserv. time	10 hours
LAN DHCP-Server Timeout	20 sec.
WAN IP mode	static
WAN own IP address	0.0.0.0
WAN IP network mask	255.255.255.0
WAN remote IP address	0.0.0.0
WAN DHCP timeout	20 sec.
DNS Server 1	0.0.0.0
DNS Server 2	0.0.0.0

POTS settings (optional):

POTS dialing mode	DTMF
POTS CLIP	FSK
POTS AOC pulse	depending on country version
Analog FLASH time	80 msec
DTMF parameter	
Level	0dB
Duration	80ms
DTMF interval	80ms

Device settings	
Menu language	depending on country version
LCD contrast	Average value
Date	1.1.2000 / 12:00
Baud rate	57.600
Alarm bell	Off



In the Main menu, use the <↓> **Select** Configuration.

Open the Configuration menu

Use the <↓> to select **Reset**.

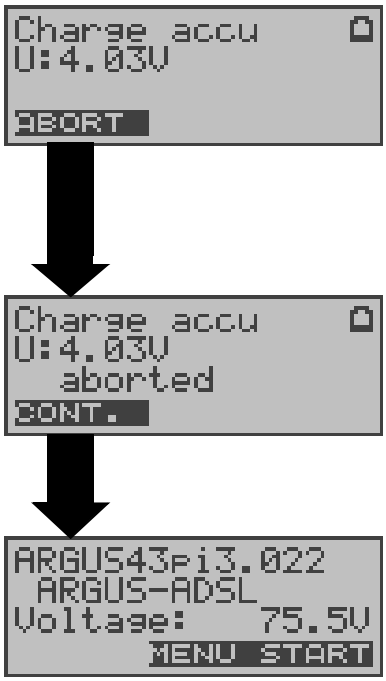
Security query

Reset to the default values

12 Accu servicing

Automatic recharging of the accumulators when the ARGUS is switched on

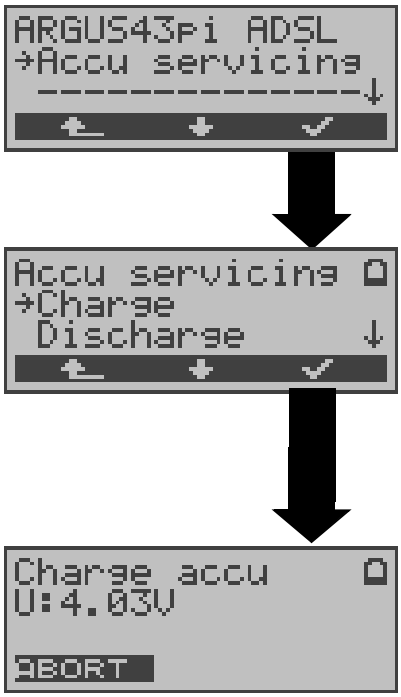
The ARGUS automatically recharges the accumulators, if the ARGUS is connected to the plug-in power supply and the accumulator voltage is less than 3.90 volts (only use the supplied accumulators).



The LED "Line Power“ flashes while the accumulators are recharging.
If you press and hold the power switch, the ARGUS will switch off before the accumulators are recharged.
Otherwise, the ARGUS will switch itself off automatically as soon as the accumulators are recharged.

Accu servicing

The ARGUS will display the current charge of the accumulators, if no power supply is connected.
When the power supply is connected, the accumulators in the ARGUS can be completely discharged or immediately (without being first discharged) recharged. The discharge procedure takes up to 6 hours. The ARGUS will automatically begin recharging the accumulators after a break of about 30 minutes (depending on the capacity of the accumulators, it can take up to 7 hours to recharge them).



In the Main menu, use the <↓> to **select** Accu servicing.

Open the **Accu servicing** menu

Use the <↓> to select, for example, **Charge**.

Start charging the accumulators (the plug-in power supply must be connected)

The ARGUS will display the level of the charge and the voltage while charging the accumulators.

Discharging the accumulators
The accumulators will first be fully discharged and then - after a brief pause - automatically recharged.

13 Appendix

A) ADSL Acronyms

ADSL	Asymmetric Digital Subscriber Line
ANT	ADSL Network Termination Unit
ANSI	American National Standards Institute
ATM	Asynchronous Transfer Mode (network-side transmission protocol)
ATU-C	ADSL Transceiver Unit - Central Office (network-side/DSLAM)
ATU-R	ADSL Transceiver Unit - Remote (ADSL modem)
BER	Bit Error Rate
CRC	Cyclic Redundancy Check (checksum)
CTRL-E	Control External
DMT	Discrete Multi-Tone
DRA	Dynamic Rate Adaptation
EOC	Embedded Operations Channel
ES	Errored Seconds
FEC	Forward Error Correction
HEC	Header Error Control
LOCD	Loss of Cell Delineation
LOF	Loss of Frame
LOP	Loss of Power
LOS	Loss of Signal
LT	Line Termination
ME	ADSL Management Entity
MIB	Management Interface Base
NIC	Network Interface Card (network adapter card)
NT	Network Termination (network-side)
OAM	Operations, Administration and Maintenance
OBC	On Board Controller
POTS	Plain Old Telephone Service (Analog)
PSD	Power Spectral Density
QOS	Quality of service
RA	Rate Adaptation
SAR	Segmentation and Reassembly Unit
SER	Severely Errored Seconds
SNR	Signal-to-Noise Ratio

B) Vendor identification numbers

0000	not allocated
0001	not allocated
0002	Westell, Inc.
0003	ECI Telecom
0004	Texas Instruments
0005	Intel
0006	Amati Communcations Corp.
0007	General Data Communications, Inc.
0008	Level One Communications
0009	Crystal Semiconductor
000A	Lucent Technologies
000B	Aware, Inc.
000C	Brooktree
000D	NEC
000E	Samsung
000F	Northern Telecom, Inc.
0010	PairGain Technologies
0011	Paradyne
0012	Adtran
0013	INC
0014	ADC Telecommunications
0015	Motorola
0016	IBM Corp.
0017	Newbridge Network Corp.
0018	DSC
0019	Teltrend
001A	Exar Corp.
001B	Siemens Telecom Networks
001C	Analog Devices
001D	Nokia
001E	Ericsson Information Systems
001F	Tellabs Operations, Inc.
0020	Orckit Communications, Inc.
0021	AWA
0022	Alcatel Network Systems, Inc.
0023	National Semiconductor Corp.
0024	Italtel

0025	SAT - Société Anonyme de Télécommunications
0026	Fujitsu Network Trans. Systems
0027	MITEL
0028	Conklin Corp.
0029	Diamond Lane
002A	Cabletron Systems, Inc.
002B	Davicom Semiconductor, Inc.
002C	Metalink
002D	Pulsecom
002E	US Robotics
002F	AG Communications Systems
0030	Rockwell
0031	Harris
0032	Hayes Microcomputer Products, Inc.
0033	Co-optic
0034	Netspeed, Inc.
0035	3-Com
0036	Copper Mountain, Inc
0037	Silicon Automation Systems, Ltd
0038	Ascom
0039	Globespan Semiconductor, Inc.
003A	STMicroelectronics
003B	Coppercom
003C	Compaq Computer Corp.
003D	Integrated Technology Express
003E	Bay Networks, Inc.
003F	Next Level Communications
0040	Multi-Tech Systems, Inc.
0041	AMD
0042	Sumitomo Electric
0043	Philips M&N Systems
0044	Efficient Networks, Inc.
0045	Interspeed
0046	Cisco Systems
0047	Tollgrade Communications, Inc.
0048	Cayman Systems
0049	FlowPoint Corp.
004A	I.C.COM
004B	Matsushita

004C	Siemens Semiconductor
004D	Digital Link
004E	Digitel
004F	Alcatel Microelectronics
0050	Centillium Corp.
0051	Applied Digital Access, Inc.
0052	Smart Link, Ltd.

C) ARGUS Error Messages

Fault Number	Fault Class	Cause.	Description
0	E	Network	The network is not in a state defined for DSS1 or 1TR6. It may be that this state is normal for a PBX.
1 to 127	B,C,D,E	Network	DSS1 or 1TR6 causes
150	E	ARGUS	An error occurred during the supplementary service test. Frequent cause: no response from network
152	B	ARGUS	The CF-Test was started with the wrong own number. .
153	E	ARGUS	no HOLD is available, but HOLD is required to test the supplementary service (ECT, 3pty)
154	E	ARGUS	CLIR or COLR could not be tested, since CLIP or COLP is not available
161	B	ARGUS	The party called did not answer within the prescribed time (approx.10 sec)
162	B	ARGUS	A call was setup to a remote subscriber, instead of being setup – as was expected – to your own number.
163	E	ARGUS	The Auto-Test could not setup a connection and therefore the AOC/D supplementary service could not be tested.
199	B	ARGUS	A call number was entered.
201	A	ARGUS	Network did not confirm acceptance of the call (CONN sent, no CONN_ACK received from network)
204	A	ARGUS	- Layer 2 connection was cleared-down - No response to SETUP (call setup) - Layer 2 connection could not be setup
205	A	ARGUS	Reestablish the Layer 2 Connection

210	A	ARGUS	No response to the clear-down (REL sent, no REL_CMP/REL_ACK received from network)
220	A	ARGUS	Remote end signaled that it is in State 0.
245	E	ARGUS	Keypad sent via ESC, but no response was received from network
250	E	ARGUS	FACility was sent, but no response was received from network

D) Error message: ADSL connection

ARGUS Error Message	Meaning of the Error Message
Incomp.linecon.	Incompatible line conditions: One or more of the following conditions could not be met on the line: ATM data rate, signal-to-noise ratio or transmit power.
No lock possib.	No lock possible: A connection to ATU-C is not possible.
Protocol error	An error occurred during the activation phase.
Message error	During the activation, a message arrived from the ATU-C side that could not be understood. (possibly the wrong format or a CRC error)
Spuri. ATU det.	Spurious ATU detected: This error will be displayed when: 1. An activation signal has been detected on the line, but it is not from the ATU-C. (Fault on the line) 2. An error occurred before the ARGUS received a complete message with a correct CRC sum.
Forced silence	The idle (silent) phase (1 minute) initiated by the ATU-C side was not kept. During this period, an activation may not be initiated.
Unsel.op.mode	Unselectable operation mode: Operation mode not supported.
Cancelled	The test was interrupted or timed out.

E) Error message: PPP connection

Display on ARGUS	Description
No error	No PPPD error occurred.
Fatal error	Fatal PPPD error occurred. Possible cause: system or memory error
Option erro	The PPPD options are faulty: wrong parameters for PPP setup
PPP: not root	The PPPD must be called by the Linux "root" user.
No PPPD support	Operating system does not support PPP connections.
Rec.sig.error	The PPP setup was canceled by a SIGINT, SIGTERM or SIGHUP signal, e.g. canceled by the user or because the waiting time has elapsed.
Port lock error	PPPD communications error Serial port could not be locked.
Port open error	PPPD communications error. Serial port could not be opened.
Con.script err.	Error when calling the connection script.
Command erro	Not possible to start with the PPPD's pty option
Negotiation err	Cannot negotiate the network protocol for PPPD, so the remote site is not reachable.
Idle release	Connection was terminated, since there was no activity.
Time out rel	Connection was terminated, since the maximum connection time elapsed.
PPP Callback	Callback was initiated, an incoming call is expected soon.
Echo req. error	Remote site did not answer echo requests so the connection has been terminated. (PPP connections are tested at regular intervals by sending echo requests to the remote site.)
Hanging up rel	Disconnected by remote site.
Loopback erro	The setup of the PPP connection was cancelled, since a loopback was detected.
Init script err.	Error caused by the PPPD's init script.
Authent. Error	Authentication error: Wrong user name or password - rejected by remote site.

PADO timeout	No PADO packet received.
PADS timeout	No PADS packet received.

F) Error message: Download test

Display on ARGUS	Description
Download OK	No error occurred.
Buffer overflow	Buffer overflow when using base64 encoding.
Process error	Error when setting up the Exit handler.
Buffer too small	Buffer too smallBuffer too small for the extra_header.
Continue error	Download cannot be continued without specifying a file.
File fstat error	File system error when calling fstat().
Http redir.error	Fault: Too many HTTP redirects.
Http no response	No answer from HTTP server.
Http serv.error	HTTP server has returned an error. (for details see the table below "HTTP Error Messages")
Http encod.error	Due to an encoding problem, data transfer with HTTP is not possible.
Ftp open error	Error when opening the FTP connection.
Ftp login error	FTP login error: Wrong user name or password or anonymous login not supported.
Ftp passiv err.	FTP server does not support passive transmission mode.
Ftp rec. error	FTP receive error.
File write error	File system error when calling fwrite().
Network error	Network error
Ftp error	General FTP error.
URL error	Fault: No HTTP or FTP URL specified.
Socket error	Error when opening a socket.
Socket error 2	Error when connecting a socket. The server's HTTP service is not available.
FDopen error	Error when opening a file.
Http Head.error	Error in the header of the requested HTTP file.
Ftp no file	FTP download error: No such file or directory found.

Unknown address	Unknown host address. Possible cause: Error in the address entered, DNS resolution not working or network not accessible.
Unknown dl error	Unknown download error

HTTP Error Messages

Display on ARGUS: **Code No.**	**Meaning**
100	Client should continue its request.
101	The protocol is being changed at the Client's request.
200	The Client's request has succeeded.
201	The Client's request that a new document be created was successful.
202	The Client's request has been accepted for processing.
203	The Client's request will be answered with information from a source other than the server.
204	The Client's request was successful. The server sends [no content] only the HTTP header.
205	The Client's request was successful. The server [resets content] sends a new HTTP body.
206	The Client's request was successful. The server sends only part of the requested document [partial content].
300	The request was not precise enough so multiple documents have been returned.
303	The requested resource has been found at a different URI and should be retrieved from there.
304	The requested document has not been changed in the interim.
305	The requested document must be retrieved from a proxy instead of from the server.

307	The requested resource has been temporarily relocated to a different URI [temporary redirect].
400	Syntax error in the Client's request [Client error].
401	The request requires user authentication.
402	Payment is required to process this request.
403	The Client's request has been refused. (e.g. because authentication failed.)
404	The requested document was not found (e.g. because of an error in the URL entered or while the document is no longer available).
405	The method specified by the Client in its request is not allowed by the server.
406	The requested document in a format that is not supported by the Client.
407	The request requires that the Client authenticate itself with a proxy.
408	The Client did not place its request within the time allowed by the server [Request Timeout].
409	Due to a conflict (e.g.another request) the Client's request cannot be completed by the server.
410	The requested URL is [gone] no longer available on the server.
411	The Client sent data to the server without a defined Content Length.
412	The preconditions in the Client's request could not be satisfied by the server.
413	The Client's request has been refused by the server because the request entity is too large.
414	The Client sent a URL to the server that is too large. (e.g. because of the form values contained.)
415	The Client's data is not supported by the server.
416	The range (in a document) requested by the Client [is not satisfiable] does not exist.

417	The server could not (or did not wish to) satisfy the Client's expectation given in the Expect request header field.
424	For aesthetic reasons, the requested document will not be sent by the server.
500	Due to an unexpected condition, the server cannot fulfill the Client's request (e.g. faulty configuration, missing or wrong CGI program).
501	The server does not support the function required to fulfill the Client's request.
502	The server received an invalid response from an upstream server or proxy which it accessed in attempting to fulfill the request.
503	The server is currently unable to handle the request due to a temporary overloading of the server.
504	The Client's request (of a gateway or proxy) did not receive a response within the specified time.
505	The server does not support the HTTP protocol version that was used in the Client's request.

G) General Error Messages

Display on ARGUS	Description
Mode not supp.	Mode currently not supported. The following modes are supported: PC_REPLACEMENT_MODE, PC_MODEM_REPLACEMENT_MODE, MODEM_REPLACEMENT_MODE
Prot. not supp.	The protocol (IP, PPPoE, etc.) is not supported in the selected mode.
Test not supp.	The test (Ping, Traceroute, etc.) is not supported for the selected mode and protocol.
Unknown error	Unknown error occurred.
No PPP connec.	No PPP connection can be setup. (for details see Page 112)
Test aborted	Test aborted by user.
Pingstart error	Error when starting the Ping test.
Unexp. IP down	Unexpected termination of the PPP connection. (for details see Page 112)
Unexp. PING end	Unexpected termination of the Ping test.
Interface error	Error while starting/terminating the network interface. (for details see the error codes of the interface script)
No TR answer	Error when starting the Traceroute test.
TR timeout	The test timed out since the traceroute answer packet did not arrive within the specified time.
DHCP timeout LAN	DHCP Client timeout (LAN)
DHCP NAK err LAN	The DHCP server refused the DHCP client (LAN)
Download timeout	Error when starting the Download test.
No DL answer	Error while performing the Download test (for details see Page 114).
MASQ error	Error while starting/terminating the routing rules. (for details see the error codes of the routing rules)

TR unreachable	The destination host cannot be reached with UDP packets from traceroute. Possible cause: Router or firewall is discarding UDP packets
DHCP timeout WAN	DHCP client timeout (WAN)

H) ARGUS Messages - Script Errors

Display on ARGUS **Error Code**	**Description**
0	No error occurred.
33	Wrong parameter. Possible parameters: PRE_UP, UP or DOWN
44	Mode not supported for selected parameter.
55	Protocol not supported for selected parameter and mode.
66	Selected modem replacement mode is not supported. Possible modes: BRIDGE or ROUTER

I) ARGUS Messages - Routing Rules

Display on ARGUS **Error Code**	**Description**
0	No error occurred.
77	Wrong parameter. Possible parameter: START and STOP
88	Packet filter mode is not supported. Possible modes: STRICT and ALL
99	Error in the selection of dynamic or static. Possible selection: DYNAMIC or STATIC