ARGUS®
testing the telecom network



ADSL
VDSL
GigE
ISDN
POTS
Cu
TDR
LQ
Copper Box
Data 101101011011
IP TV
Vo IP
MOS
PESQ
PC
USB
WLAN

ARGUS® 152

» Overview of menu and test leads

valid from firmware version R2.20.00

intec
GESELLSCHAFT FÜR INFORMATIONSTECHNIK mbH

Legend, Status, Protocol overview

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Main menu	7, 11
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Copper tests	page
Copper Box	35-36
RC measurement	37
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Other tests	page
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Others	page
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Legend General

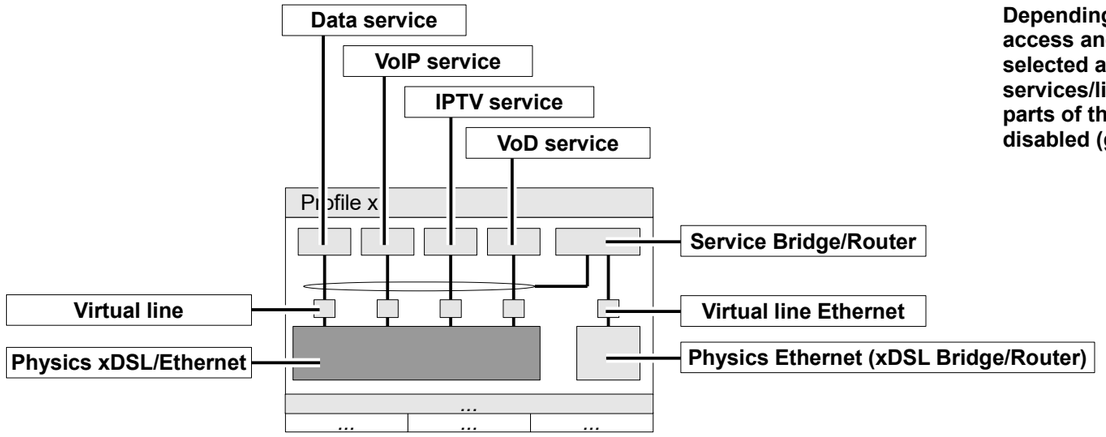
Menu
Configuration menu
Defaul Config.menu
Input menu
Default input menu

Depending on the specified interface, menu item will be shown

Menu item only matters for specified interface

Legend Status

ADSL / VDSL / Ethernet



Depending on the type of access and access mode selected as well as the services/lines configured, parts of the status may be disabled (greyed out).

Protocol overview

ADSL / VDSL / Ethernet

Access			ADSL					VDSL					ETH
Mode			ATU-R	ATU-R Bridge		ATU-R Router		VTU-R	VTU-R Bridge		VTU-R Router		
Socket			Line	Line	LAN	Line	LAN	Line	Line	LAN	Line	LAN	LAN
Protocol	**ATM/Ethernet**												
without	-	without		**a**	**a**				**a**	**a**			
IP	-	IP					**a**	●			●	**a**	●
	Yes	EoA	●			●							
	No	IPoA	●			●							
PPP	Yes	PPPoE	●			●		●			●		●
	No	PPPoA	●			●							
PPTP	-	PPTP											●

● – Protocol configurable (see page 16)
a – Protocol set automatically

Note

The basic ARGUS *152* package includes support for at least one DSL interface (ADSL or VDSL) with a variety of functions and tests for the interface(s). Support for other interfaces and functions is optional (see the options in the data sheet). Consequently, depending on the scope of the functions delivered, certain menu items may be hidden. The type of access and access mode can affect this, too.

Hotkeys

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Menu Hotkeys

ADSL / VDSL / Ethernet

Key	ADSL	VDSL	Ethernet
0	ARGUS status		
1	Help hotkeys		
2	VPI/VCI scan	-	
3	IP ping		
4	Trace route		
5	HTTP download		
6	Test status		
7	FTP download		
8	Copper Box		-
9	IPTV		
⎍	Status		
✆	VoIP call		
* then 0	Access		
* then 1	ARGUS info		
* then 2	Restore config.		
* then 3	Factory setting		
* then 6	-		
* then 7	Store		

BRI S / BRI U / POTS

Key	BRI S / BRI U	POTS
0	ARGUS status	
1	Help hotkeys	
2	Service check	-
3	Supp. Serv. test	-
4	Auto. Test	-
5	Test data to PC	
6	Test manager	-
7	Numbers	
8	-	
9	BERT start	-
⎍	Level measuring	Voltage measuring
✆	Connection	
* then 0	Access	
* then 1	ARGUS info	
* then 2	Restore config.	
* then 3	Factory setting	
* then 6	Test manager	-
* then 7	-	

Copper tests

Key	Copper tests	Copper Box autotest
0	ARGUS status	-
1	Help hotkeys	-
2	-	
3	-	
4	-	
5	Test data to PC	-
6	-	
7	-	QR code
8	Copper Box	-
9	-	
⎍	-	
✆	-	
* then 0	Access	-
* then 1	ARGUS info	-
* then 2	Restore config.	-
* then 3	Factory setting	-
* then 6	-	
* then 7	-	Store

Graphic hotkeys

ADSL / VDSL / xDSL trace

Key	ADSL / VDSL	xDSL trace
0	-	
1	-	Legend
2	Zoom	-
3	Cursor	
4	-	
5	-	
6	-	
7	-	
8	-	
9	x-axis setting	-
0	-	
#	-	
	-	
✓	Continue	-
⎍	-	
* then 7	Store	-

Test hotkeys

Copper tests

Key	Line scope (Frequency domain)	Line scope (Time domain)	TDR	Line qualification	Line symmetry
0	-				
1	-				
2	Zoom	-	Zoom		
3	Cursor				
4	Measurement range			-	Bandwith
5	Total power	-	Pulse width	-	-
6	-		Wire type/VoP	-	-
7	Probe		-	-	-
8	Symmetry		Impedance	-	Impedance
9	Time domain	Frequency domain	Averaging	x-axis setting	
0	Peak hold (min/max)		-		
#	100 Ohm Input resistance		-		
	-			Table	
✓	-			Continue	New
⎍	Run/Hold			-	
* then 7	Store				

Switch on and access menu

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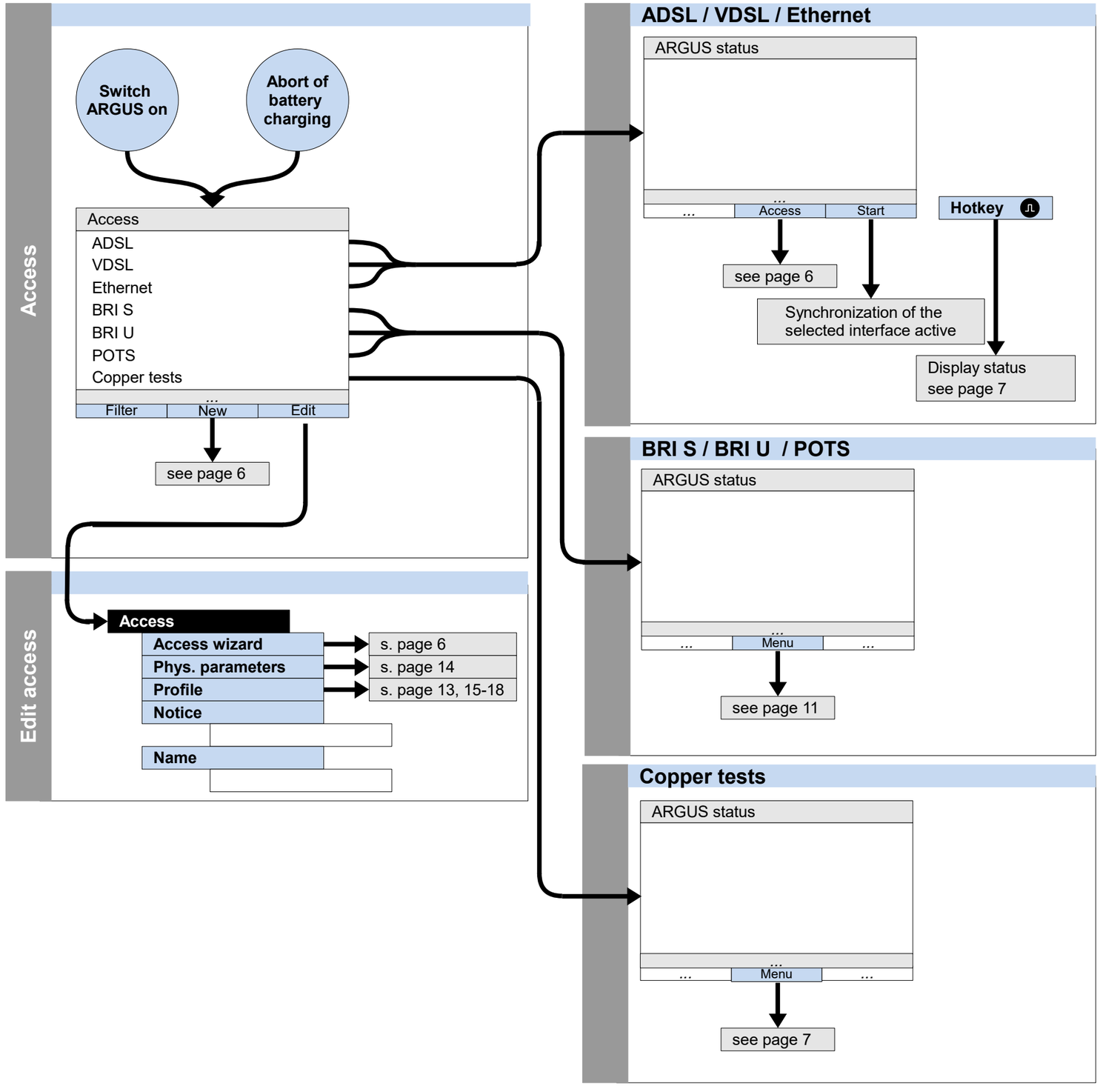
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Access wizard

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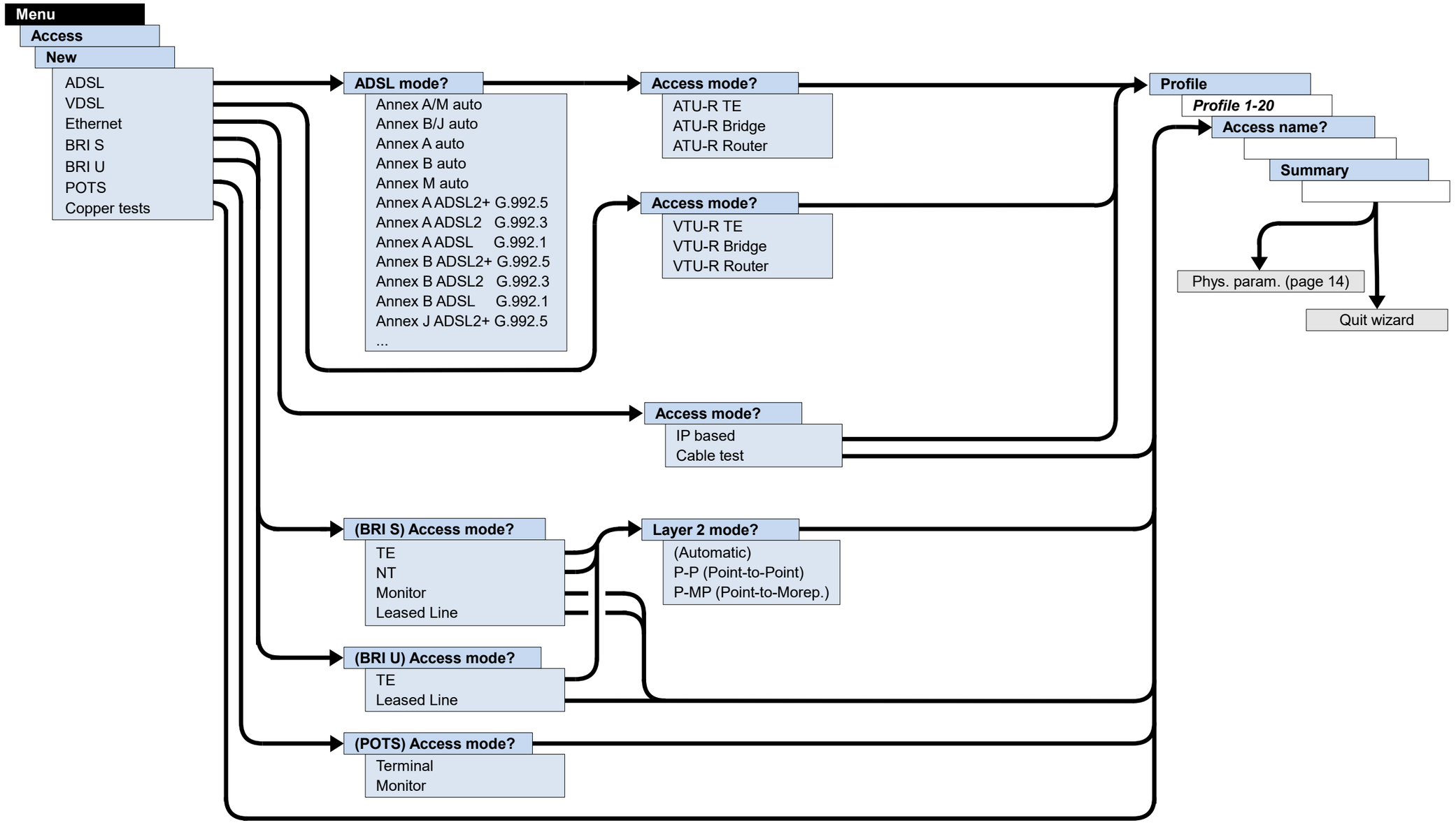
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Access wizard



Main menu, Single tests, Test results, Status
(Access: ADSL, VDSL, Ethernet, Copper tests)

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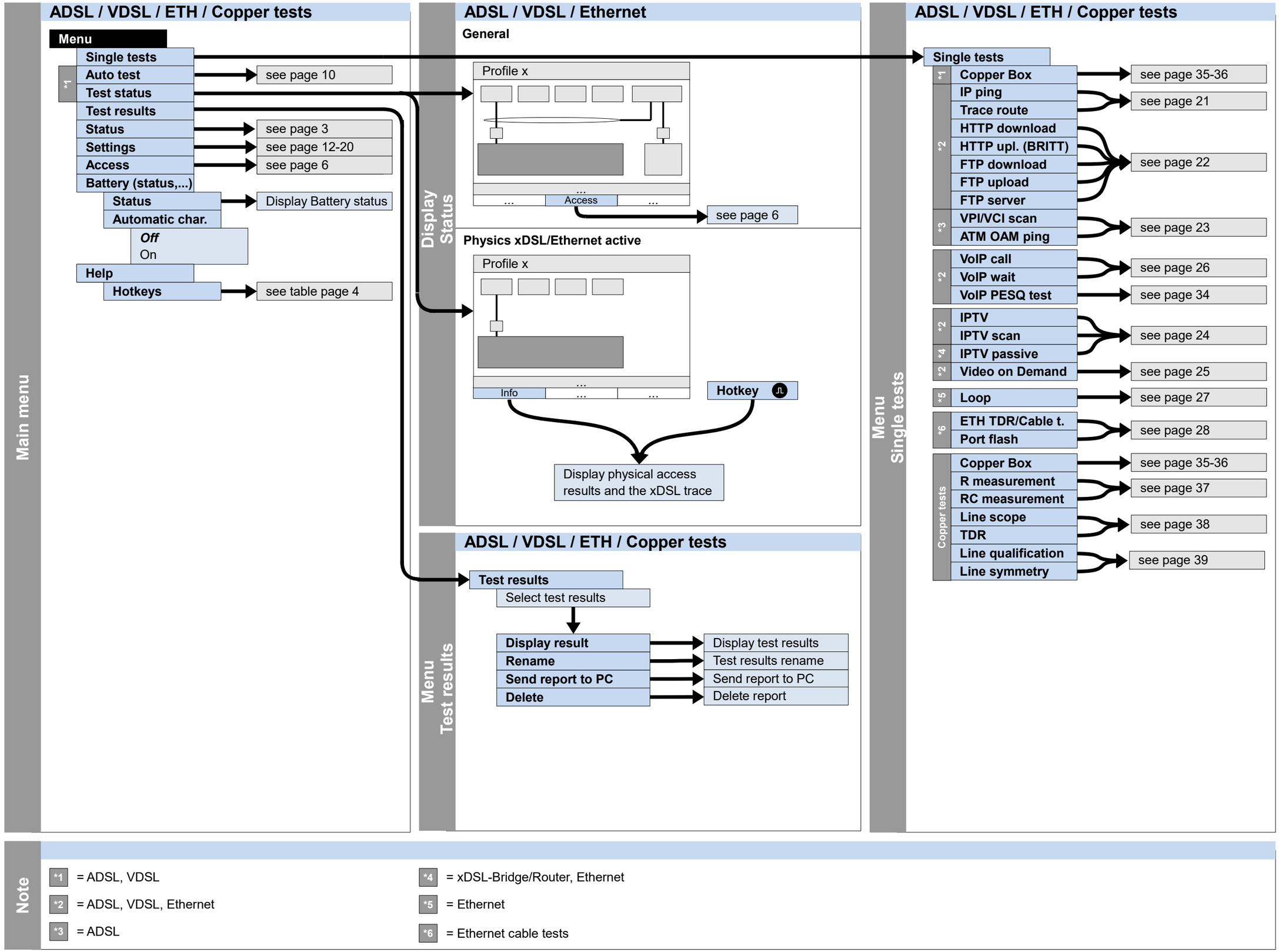
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Note

- *1 = ADSL, VDSL
- *2 = ADSL, VDSL, Ethernet
- *3 = ADSL
- *4 = xDSL-Bridge/Router, Ethernet
- *5 = Ethernet
- *6 = Ethernet cable tests

Service tests: Data tests, VoIP tests, IPTV tests, VoD tests, Bridge tests, Physic tests (Access: ADSL, VDSL, Ethernet)

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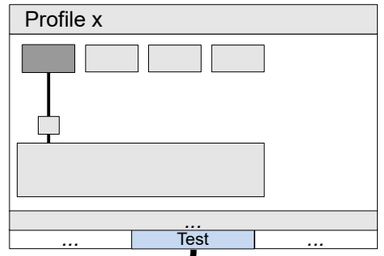
Other tests	page
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Others	page
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ADSL / VDSL / Ethernet

Service active

Display Status



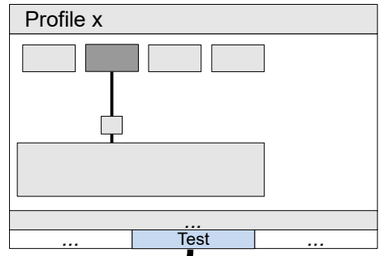
Menu Data tests

- Data tests
  - IP ping → see page 21
  - Trace route → see page 21
  - HTTP download → see page 22
  - HTTP upl. (BRITT) → see page 22
  - FTP download → see page 22
  - FTP upload → see page 22
  - FTP server → see page 22

ADSL / VDSL / Ethernet

Service active

Display Status



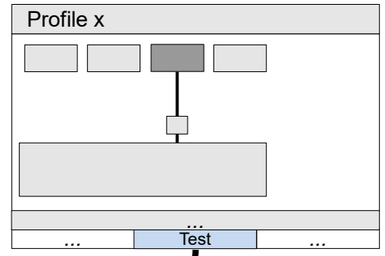
Menu VoIP tests

- VoIP tests
  - IP ping → see page 21
  - Trace route → see page 21
  - VoIP call → see page 26
  - VoIP wait → see page 26
  - VoIP PESQ test → see page 34

ADSL / VDSL / Ethernet

Service active

Display Status



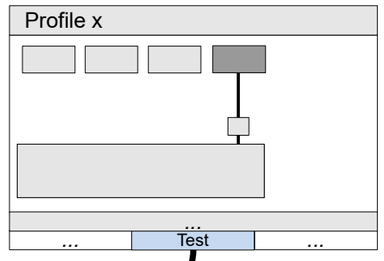
Menu IPTV tests

- IPTV tests
  - IP ping → see page 21
  - Trace route → see page 21
  - IPTV → see page 24
  - IPTV scan → see page 24
  - *1 IPTV passive → see page 24

ADSL / VDSL / Ethernet

Service active

Display Status



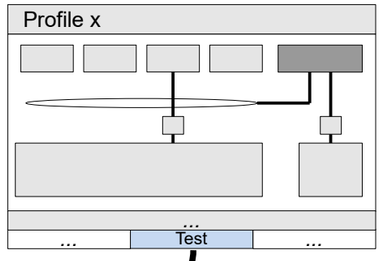
Menu VoD tests

- VoD tests
  - IP ping → see page 21
  - Trace route → see page 21
  - Video on Demand → see page 25

ADSL / VDSL - Bridge

Service active

Display Status



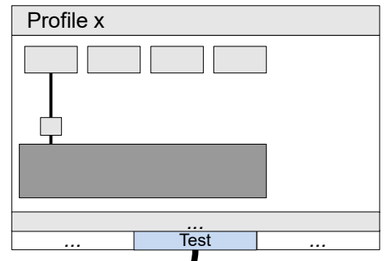
Menu Bridge tests

- Bridge tests
  - IPTV passive → see page 24

ADSL / Ethernet

Physics xDSL/Ethernet active, Services inactive

Display Status



Menu Physic tests

- Physic tests
  - *2 VPI/VCI scan → see page 23
  - *2 ATM OAM ping → see page 23
  - *3 Loop → see page 27

Note

- *1 = xDSL-Router
- *2 = ADSL
- *3 = Ethernet

Service tests: Parallel tests
Test status

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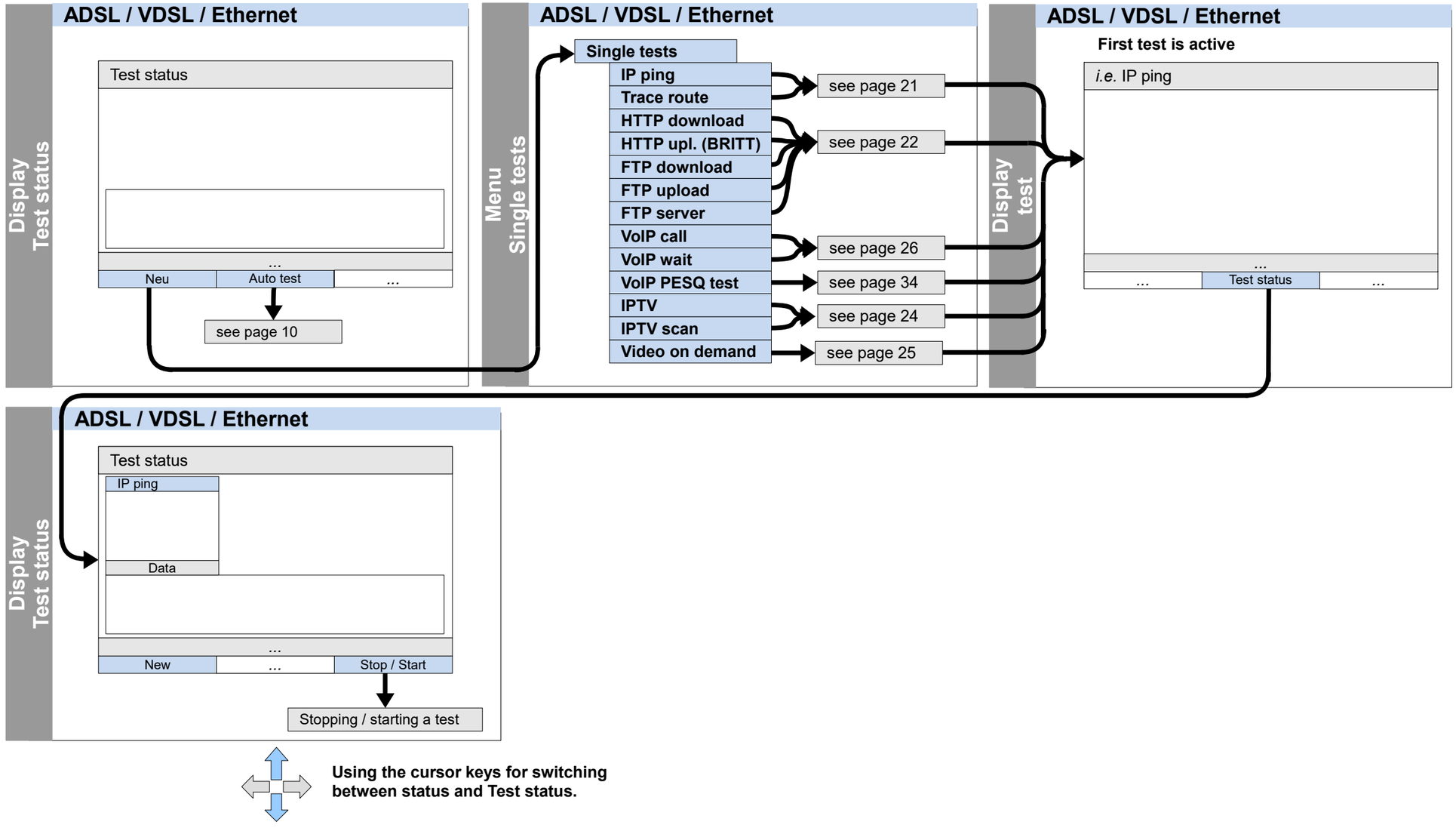
IP and ATM tests	page
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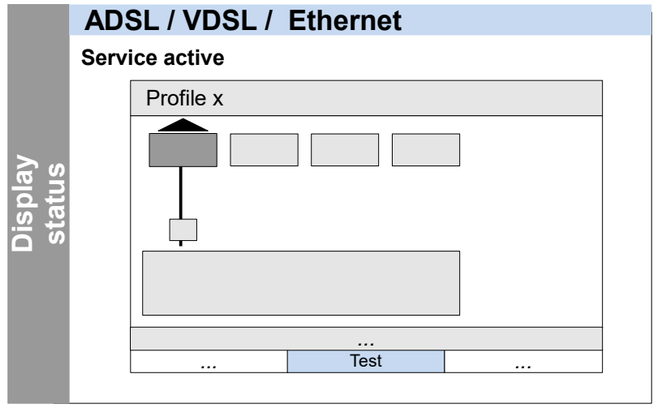
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Using the cursor keys for switching between status and Test status.



Note

The Display and operation of VoIP and IPTV tests are presented in the same way as for Data tests.

Service tests: IP auto test

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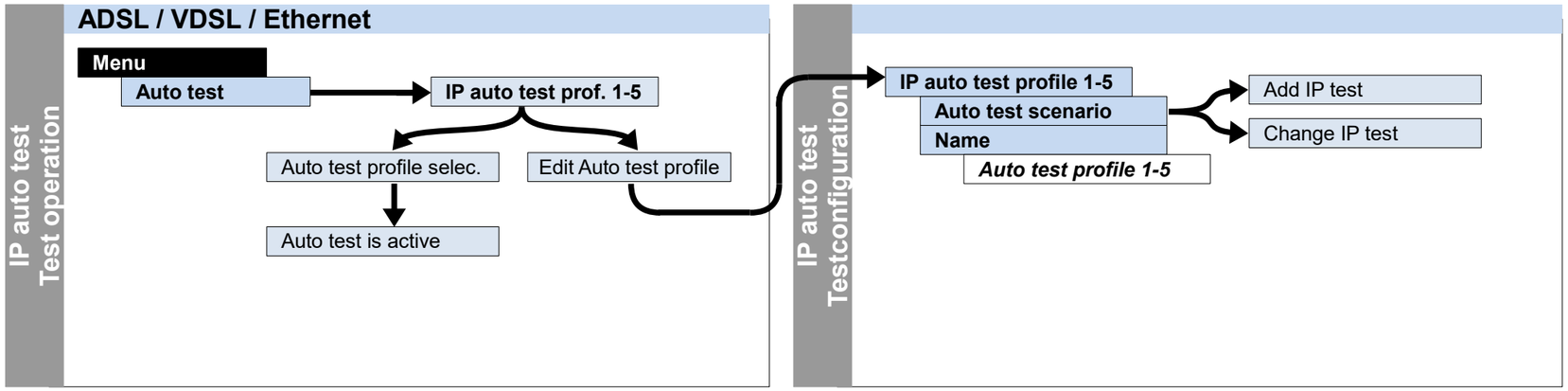
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Main menu, Single tests, Test results (Access: BRI S, BRI U, POTS)

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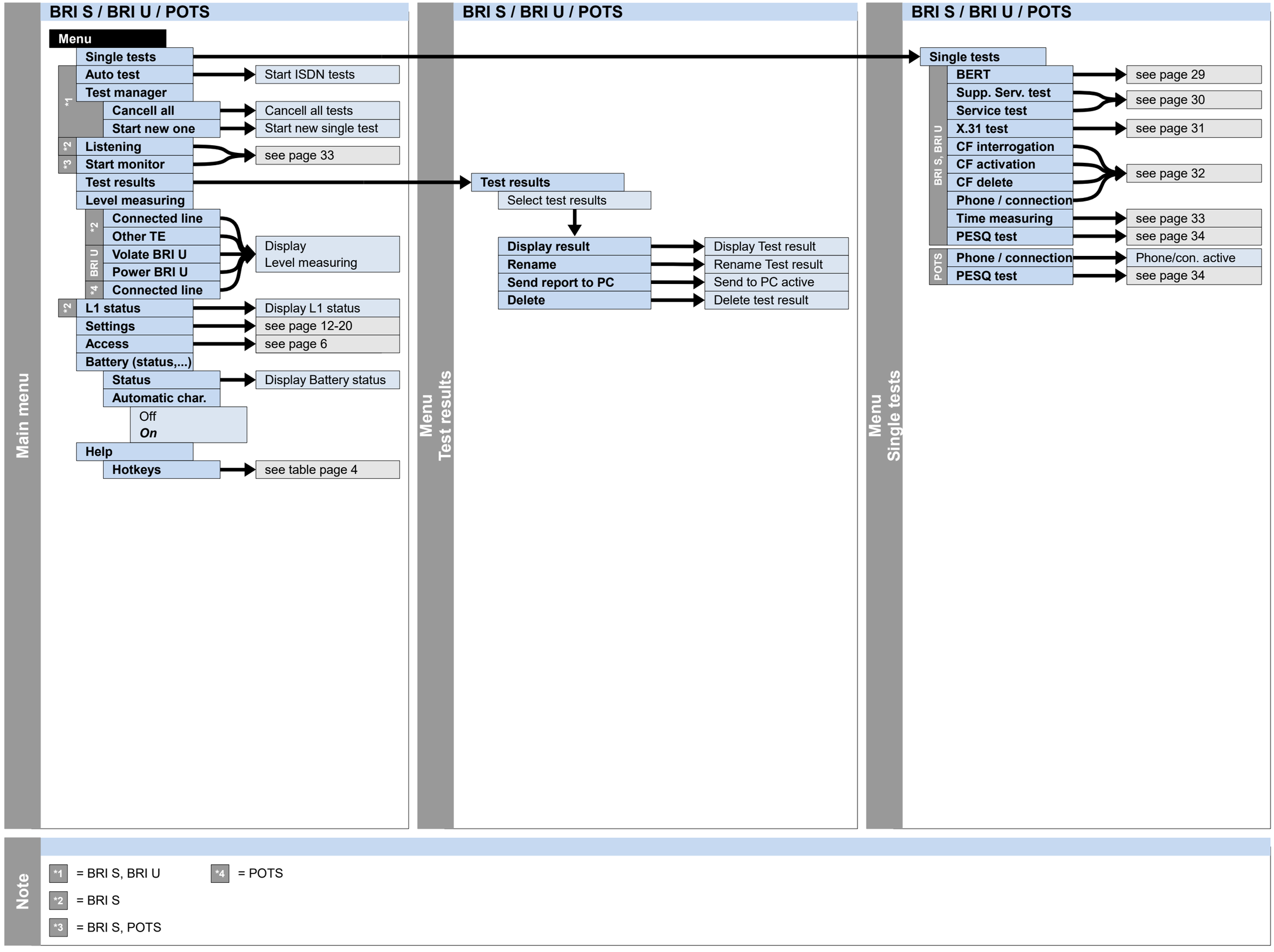
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Note

*1 = BRI S, BRI U
*2 = BRI S
*3 = BRI S, POTS
*4 = POTS

Settings and reset
Device, Numbers, Backup/Restore

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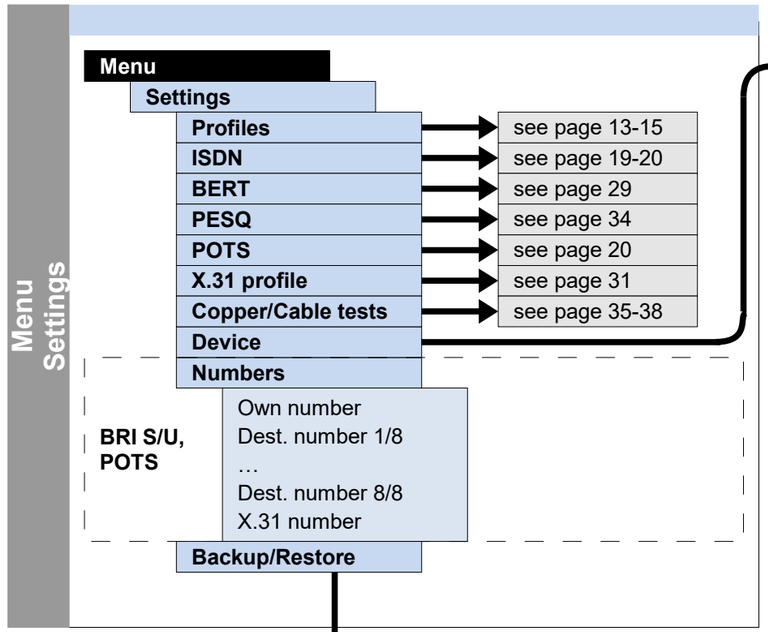
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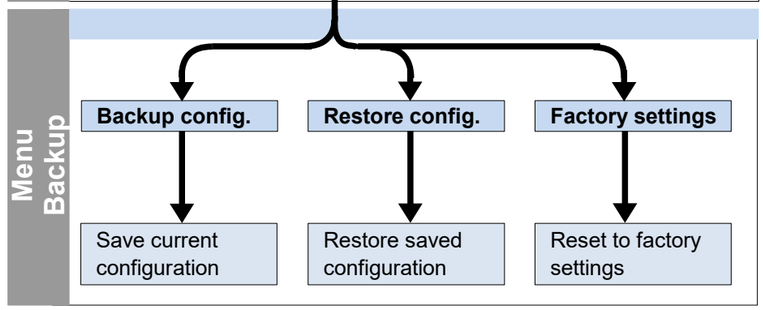
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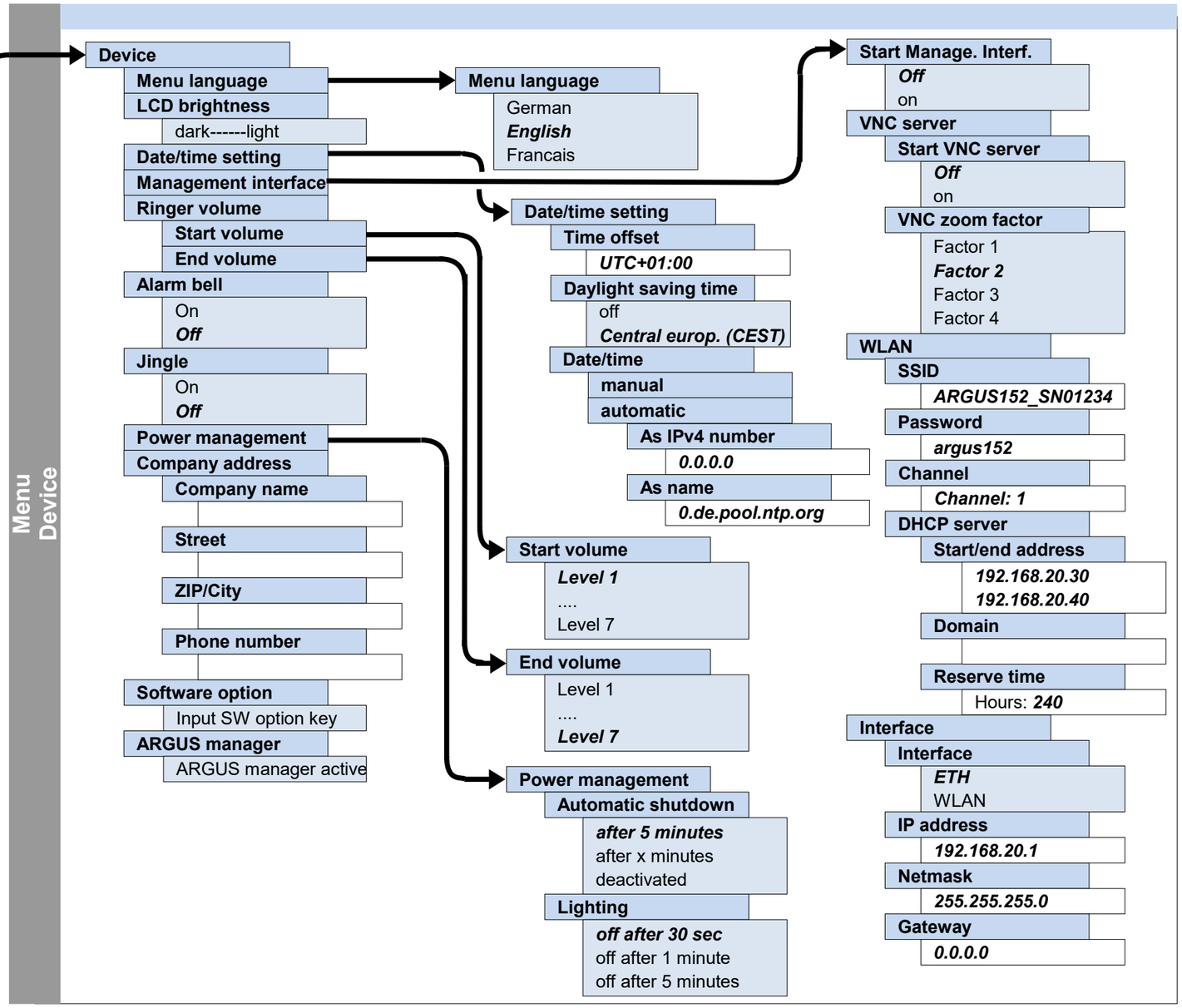
Others	page
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Note

Selecting "Factory settings" or "Backup configuration" requires a password to avoid an unintentionally deleting of the system configuration. Please contact the ARGUS support team at +49 2351 9070-90 to ask for the password. All settings will be set to default and test results will be deleted.



Settings
Profile

Cross reference:

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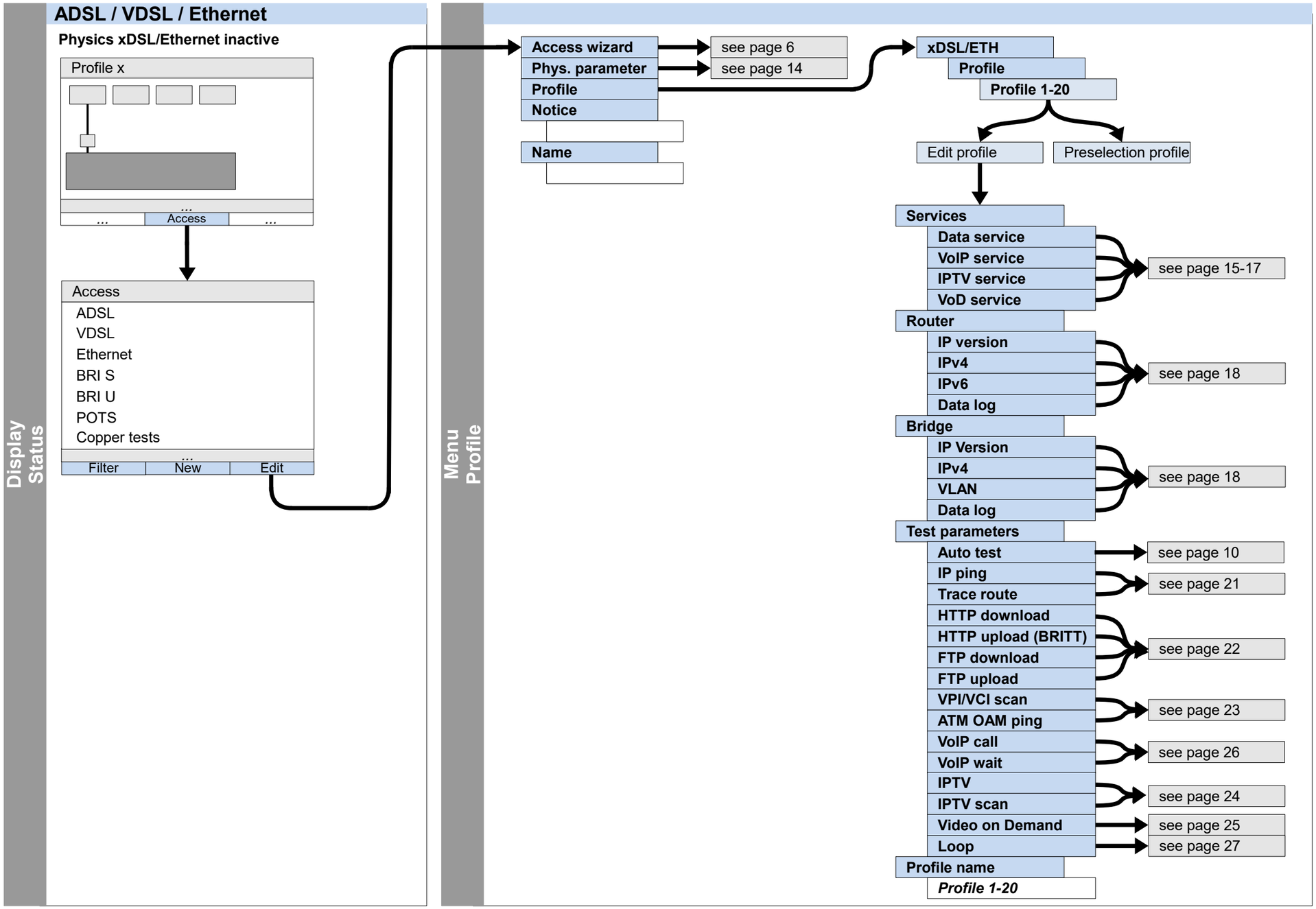
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Settings
Phys. parameters: ADSL, VDSL, Ethernet

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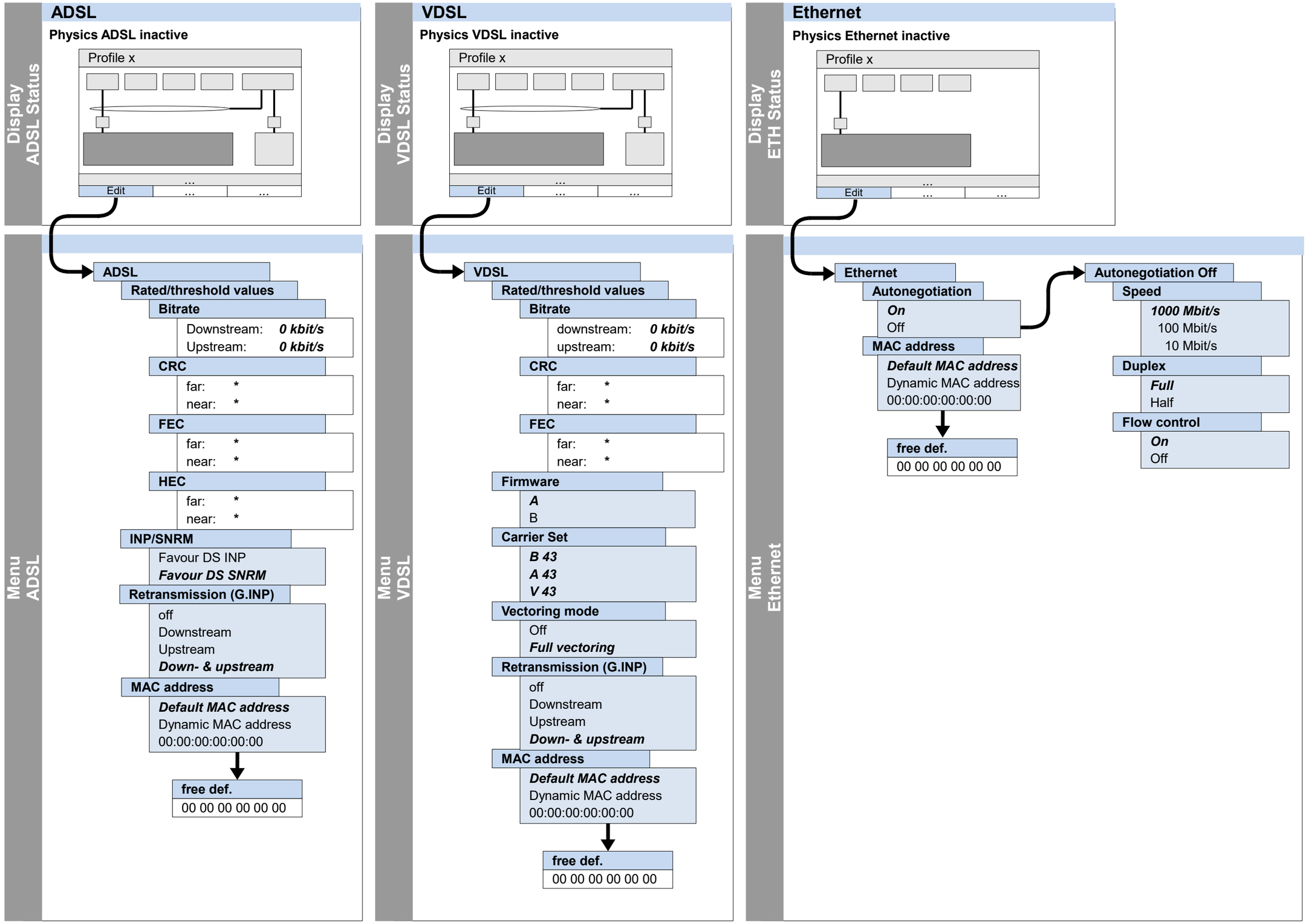
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Settings
Profile – Services (Data service, VoIP service, IPTV service, VoD service), Virt. Profile

Cross reference:

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Battery (status,...)	7, 11
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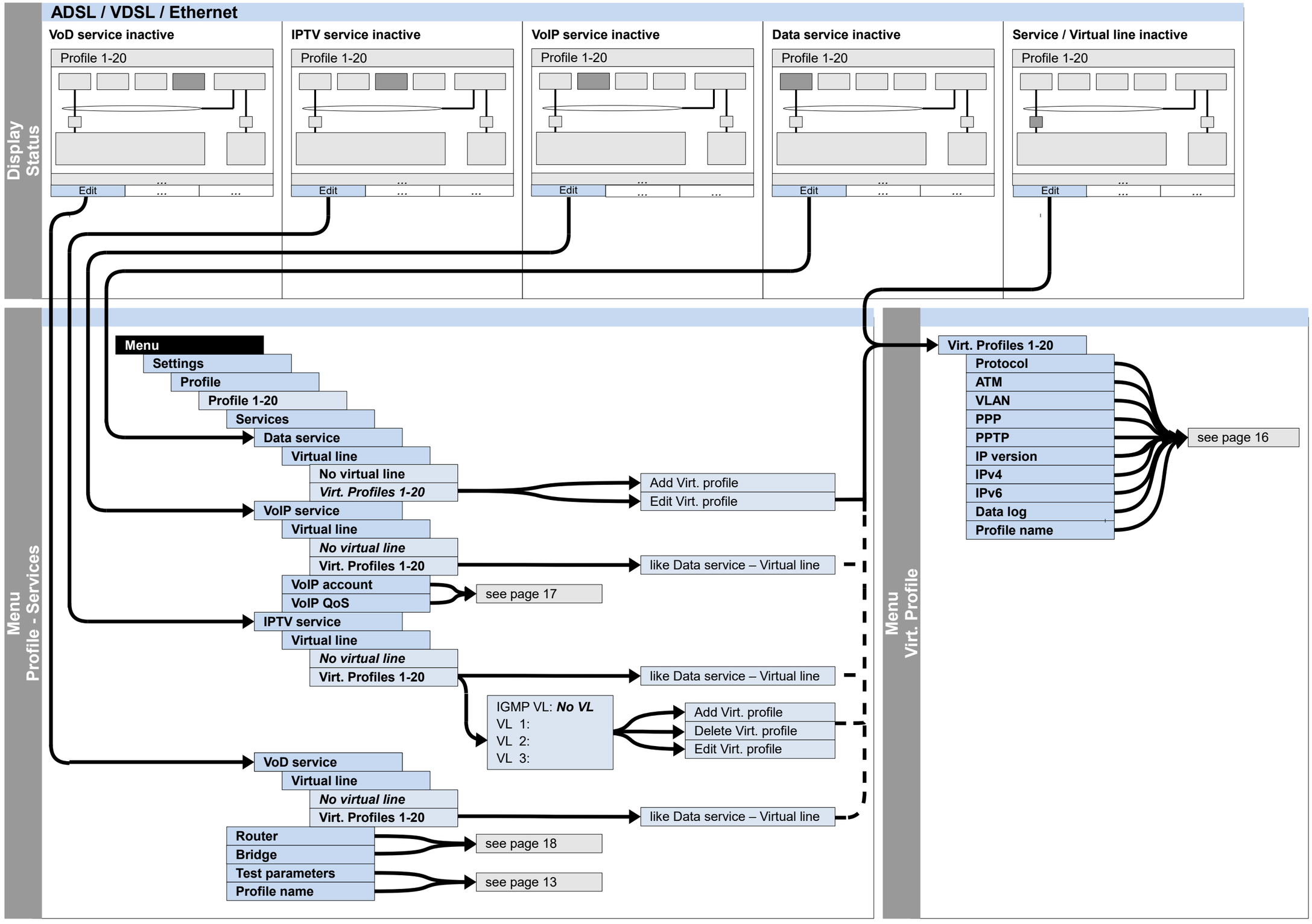
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Settings
Profiles – Virt. profile (Protocol, ATM, VLAN, PPP, PPTP, IP version, IPv4, IPv6, Data log)

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Menu Profiles – Virt. profile

- **Menu**
  - **Settings**
    - **Profiles**
      - **Profiles 1-20**
        - **Services**
          - **Data service**
            - **Virtual line**
              - **Virt. Profiles 1-20**
                - **Protocol**: IP / ***PPP*** / PPTP
                - **ATM**
                  - **VPI/VCI**: VPI: ***1*** / VCI: ***32***
                  - **Encapsulation**: ***LLC*** / VC-MUX
                  - **ATM with Ethernet**: No (PPPoA, IPoA) / ***Yes (PPPoE, EoA)***
                - **VLAN** → Menu VLAN
                - **PPP** → Menu PPP
                - **PPTP**
                  - **Server IP address**: ***0.0.0.0***
                - **IP version**: ***only IPv4*** / only IPv6 / Dual Stack Opv4/IPv6 / Dual Stack lite
                - **IPv4** → Menu IPv4
                - **IPv6** → Menu IPv6
                - **Data log**: ***off*** / on
                - **Profile name**: **Virt. Profiles 1-20**

Menu VLAN

- **VLAN**
  - **VLAN mode**: ***No VLAN*** / 1 VLAN tag / 2 VLAN tags (Q in Q)
  - **1. VLAN tag (C-VLAN)**
    - **ID**: ID: ***2***
    - **Priority**: Priority: ***0***
    - **TPID**: ***8100 Hex*** / 88A8 Hex
  - **2. VLAN tag (C-VLAN)**
    - **ID**: ID: ***2***
    - **Priority**: Priority: ***0***
    - **TPID**: 8100 Hex / ***88A8 Hex***

Menu PPP

- **PPP**
  - **PPP Profiles 1-20**
    - edit profile
      - **User name**
      - **Password**
      - **Set IP**: ***No*** / Yes
      - **Activation Delay**: sec: ***2***
      - **Profile name**: ***PPP Profiles 1-20***
    - preselection profile

Menu IPv6

- **IPv6**
  - **AFTR**
    - **AFTR mode**: **Automatic** / Static
    - **AFTR address**
  - **DHCP client**
    - **DHCP mode**: **Automatic** / Ignore RA server
    - **DHCP options**: **Automatic** / Request all options
    - **Enter. Nb. (PEN)**: ***46443***

Menu IPv4

- **IPv4**
  - **IP mode**: Static IP / ***DHCP client*** / DHCP server / DHCP auto
  - **own IP address**: ***0.0.0.0***
  - **IP Netmask**: ***255.255.255.0***
  - **Gateway IP**: ***0.0.0.0***
  - **DNS server**
    - **DNS server 1**: ***0.0.0.0***
    - **DNS server 2**: ***0.0.0.0***
  - **DHCP client**
    - **DHCP timeout**: sec: ***20***
    - **DHCP vendor ID**
      - **Format**: ***ASCII*** / HEX
      - **ASCII data**: ***ARGUS***
      - **HEX data**
    - **DHCP vendor Info**: like DHCP vendor ID
    - **DHCP user class i.**: like DHCP vendor ID
    - **DHCP user-def.opt**
      - **Number**: number: ***255***
      - **Format**: ***ASCII*** / HEX
      - **ASCII data**: ***ARGUS***
      - **HEX data**
  - **DHCP server**
    - **Start/end address**: ***192.168.10.30*** / ***192.168.10.40***
    - **Domain**
    - **Reserve time**: Hours: ***240***

Note

On page 3 you get a survey on the protocols, which are supported on the various interfaces.

Settings
Profiles – Services – VoIP service – VoIP account, VoIP QoS

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ADSL / VDSL / Ethernet

VoIP service inactive

Display Status

Profile 1-20

Edit

Menu VoIP service

Menu
Settings
Profiles
Profiles 1-20
VoIP service
Virtual line → see page 15
VoIP account
VoIP QoS

Menu VoIP Profiles

VoIP account
VoIP profile 1-10
edit VoIP profile
preselection VoIP profile
SIP settings
Phone settings
STUN server
Use STUN
No
Yes
STUN server
Rated/treshold values
Profile name
VoIP profiles 1-3
MOS rated value
Value: ***4.0***
Jitter treshold
Treshold: **** ms***
RTP loss tresh.
Treshold: ****.* %***

Menu VoIP QoS

VoIP QoS
Layer 3 DiffServ
RTP (ToS/DSCP)
ToS
DSCP
SIP (ToS/DSCP)
ToS
DSCP
Layer 2 VLAN Prio
RTP VLAN Prio
VLAN Prio: ***0***
SIP VLAN Prio
VLAN Prio: ***0***
RTP ToS
ToS: ***00***
RTP DSCP
DSCP: ***00***
SIP ToS
ToS: ***00***
SIP DSCP
DSCP: ***00***

Menu Phone settings

Phone settings
RTP port range
Start: 10000
End: 20000
Silence detection
off
on
not used
Jitter buffer
static
adaptive
Codecs
G.711 Alaw
G.711 µlaw
G.723.1
G.729 A/B
G.726
...
DTMF settings
Mode
automatic
SIP info
RFC 2833
inband
Duration
Duration: ***80 ms***
adaptive
min: ***60*** ms
init: ***60*** ms
max: ***120*** ms
static
nominal: ***60*** ms

Menu SIP settings

SIP settings
User name
Password
Authentication
Caller ID
Registrar server
Outbound proxy/SBC
SIP trunking
Transport protocol
UDP
TCP
TCP fallback
TCP/TLS
SIP Domain
Listen port
Port num.: ***5060***
Remote port
Port num.: ***5060***
User agent
Argus152
Qualify
No
Yes
Reg. expire
Time: ***3600 sec.***
Retry-After
standard
ignore
Del. exist. registrar
No
Yes

Registrar server
Use Registrar
No
Yes
Registrar server
As IPv4 number
0.0.0.0
As IPv6 number
0000:0000:0000...
As name
www.argus.info

Outbound proxy/SBC
Use proxy
No
Yes
Outb.proxy/SBC
As IPv4 number
0.0.0.0
As IPv6 number
0000:0000:0000...
As name
www.argus.info
Outb.proxy/SBC Port
Port num.: ***5060***

SIP trunking
Use SIP trunking
No
Yes
CLIR
No
Yes
Own basic number
4923519070
Own extension (DDI)
0

Settings
Profile – Bridge/Router (Ethernet, Virtual line, Router)

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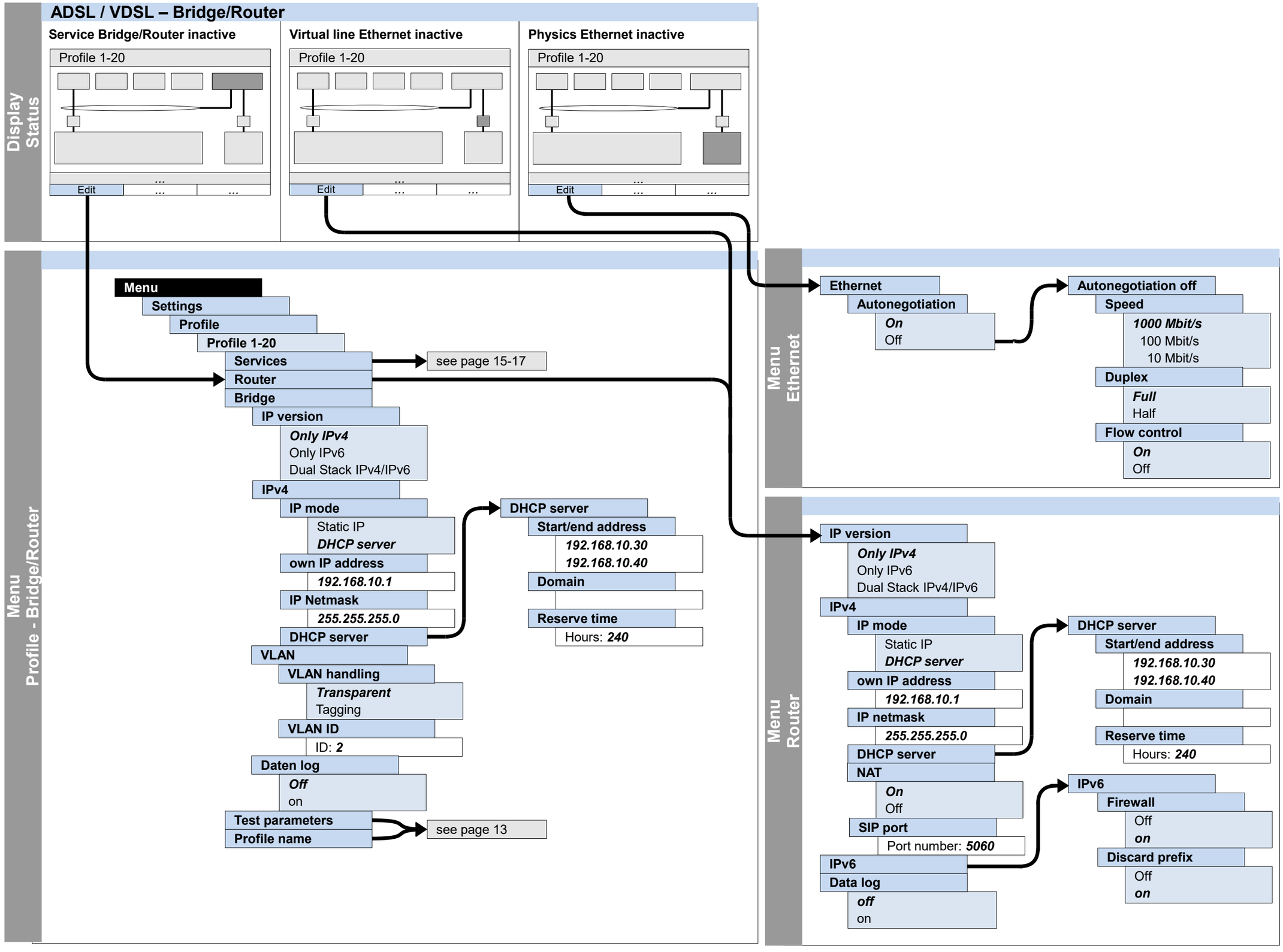
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Settings
ISDN (General, BRI S, BRI U)

Cross reference:

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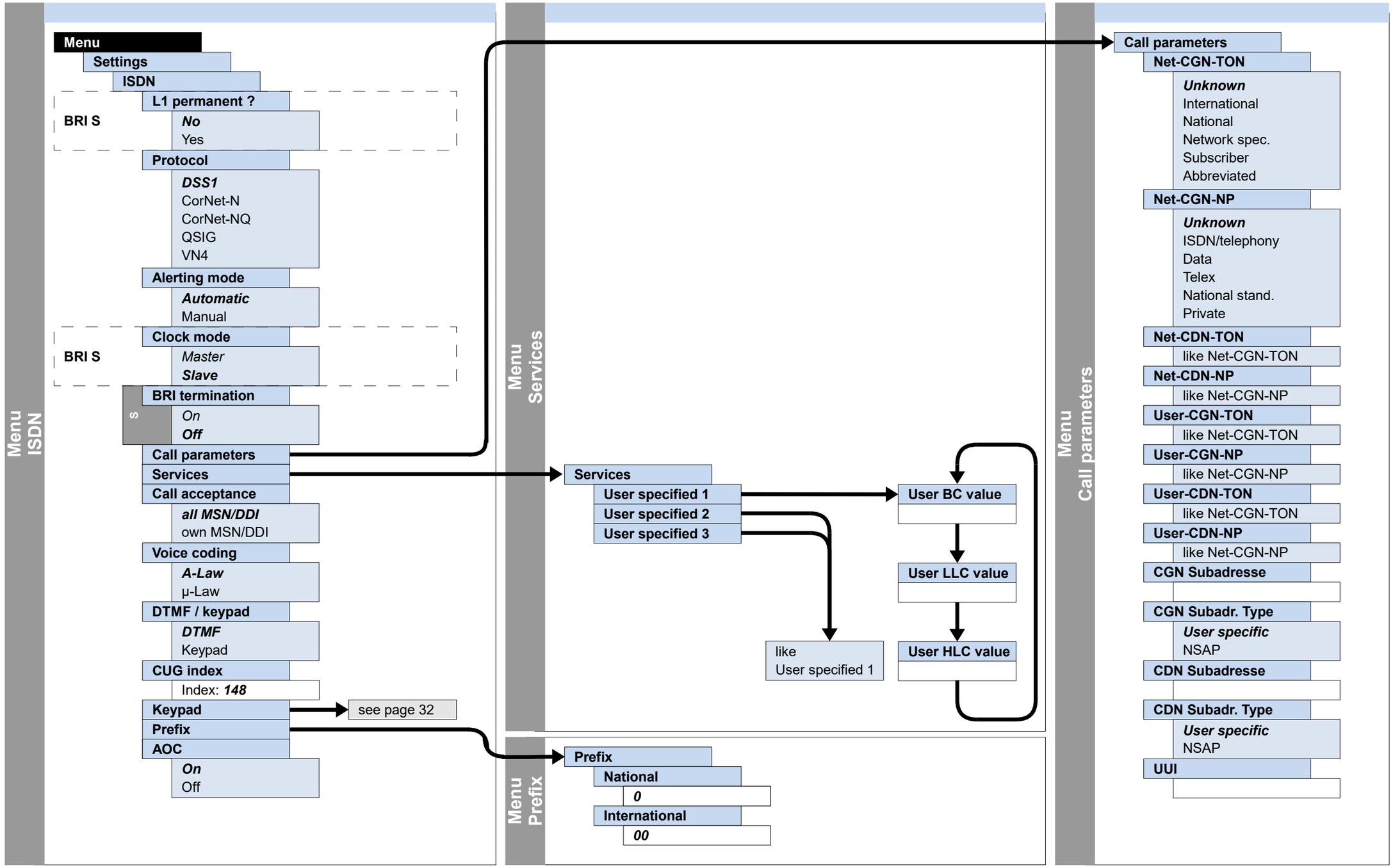
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Settings
POTS

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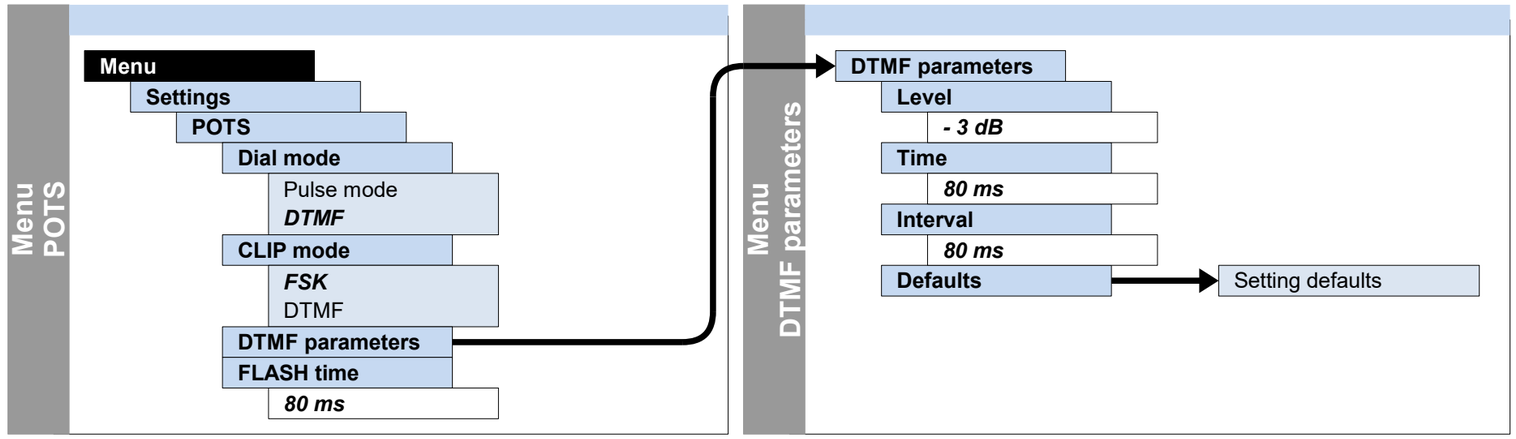
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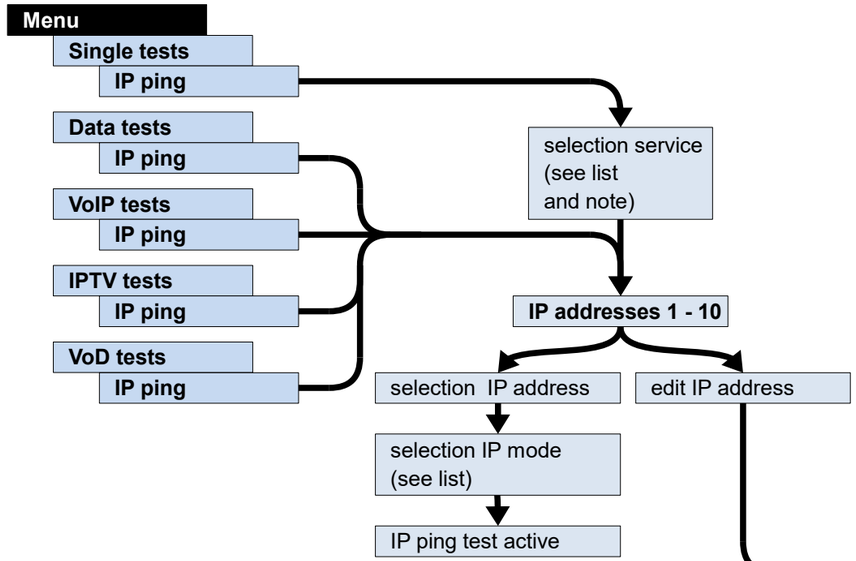
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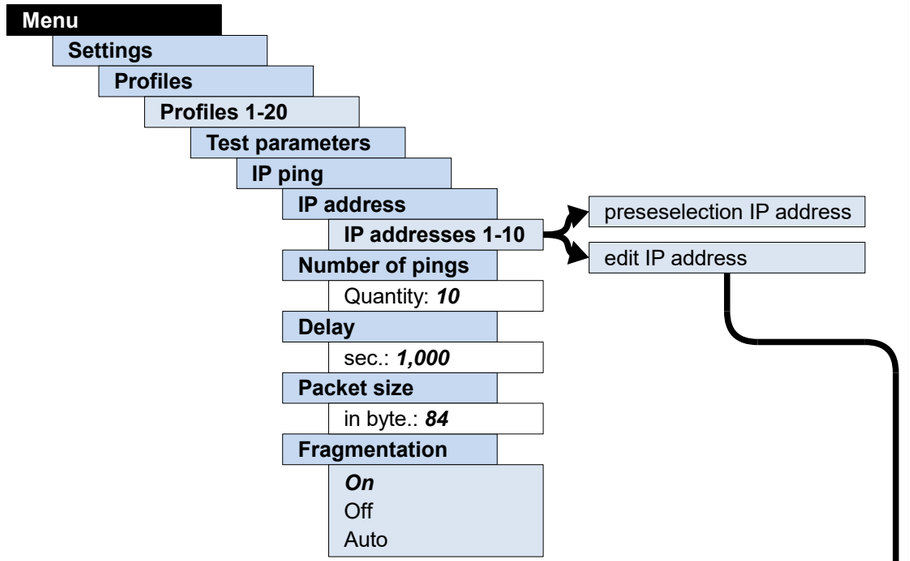
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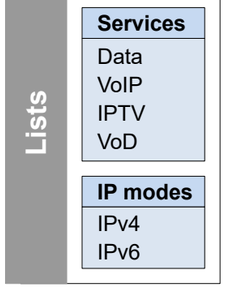
IP ping Test operation — ADSL / VDSL / Ethernet



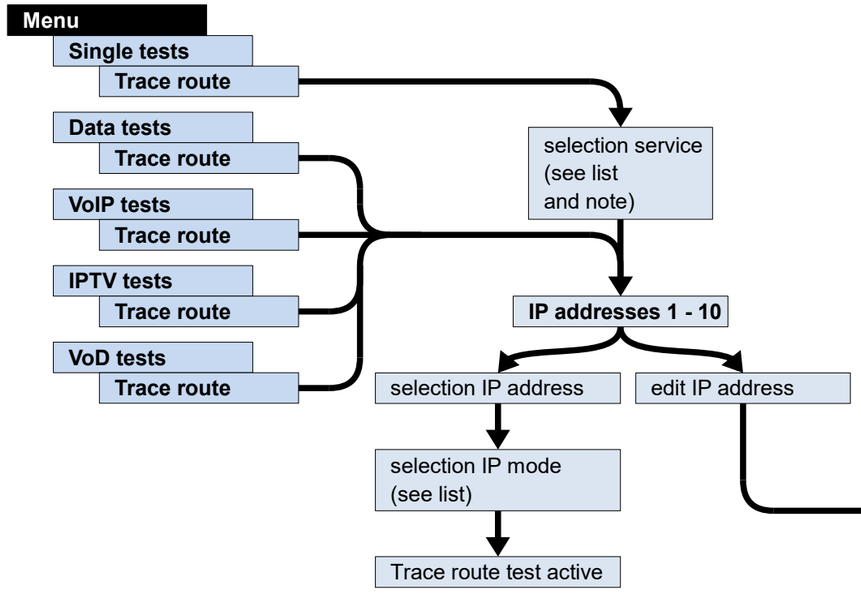
IP ping Test configuration



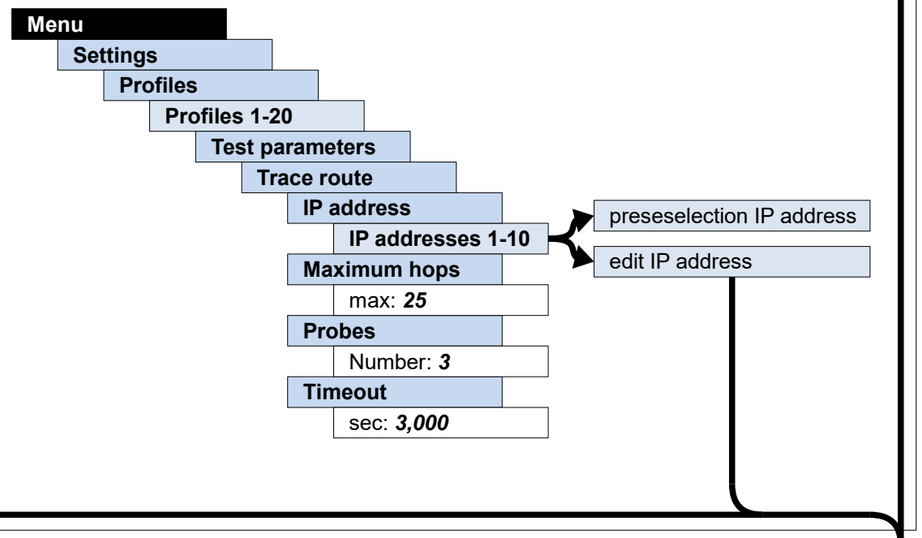
Lists



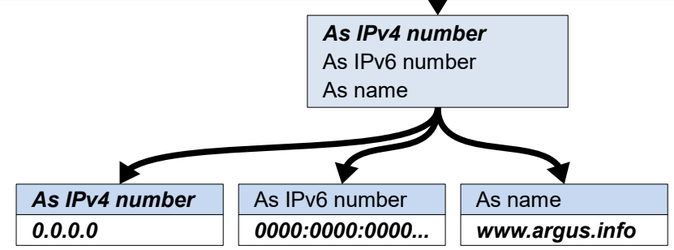
Trace route Test operation — ADSL / VDSL / Ethernet



Trace route Test configuration



Menu IP address



Note

The number of services may vary depending on the configuration of the Data, VoIP, IPTV, VoD services. If a single service has been configured, the selection will be skipped.

Configuration and operation
HTTP download/-upload, FTP download, FTP upload, FTP server

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HTTP download/-upload Test operation — ADSL / VDSL / Ethernet

Menu → Single tests → HTTP down-/upl. / Data tests → HTTP down-/upl. → Server profiles 1-10 → selection server profile / edit server profile → HTTP down-/upl. test active

HTTP download/-upload Test configuration

Menu → Settings → Profiles → Profiles 1-20 → Test parameters → HTTP down-/upl. → Server profiles 1-10 → preselection server profile / edit server profile

FTP download Test operation — ADSL / VDSL / Ethernet

Menu → Single tests → FTP download / Data tests → FTP download → Server profiles 1-10 → selection server profile / edit server profile → FTP download test active

FTP download Test configuration

Menu → Settings → Profiles → Profiles 1-20 → Test parameters → FTP download → Server profiles 1-10 → preselection server profile / edit server profile

FTP upload Test operation — ADSL / VDSL / Ethernet

Menu → Single tests → FTP upload / Datatests → FTP upload → Server profiles 1-10 → selection server profile / Edit server profile → FTP upload test active

FTP upload Test configuration

Menu → Settings → Profiles → Profiles 1-20 → Test parameters → FTP upload → Server profiles 1-10 → preselection server profile / edit server profile

FTP server Test operation — ADSL / VDSL / Ethernet

Menu → Single tests → FTP server / Data tests → FTP server → FTP server test active

Menu Server profile

Server profiles 1-10
- Server
- Download file name
- Upload file name — *file*
- Upload file size — *100* (MByte)
- User name
- Password
- Number of up-/downloads — *Number: 3*
- Num. of paral. downl. — *Number: 3*
- Profile name — *Server prof. 1-10*

Note

A test configuration of the FTP server is not necessary.

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VPI/VCI scan Test operation

ADSL

Menu
- **Single tests**
  - **VPI/VCI scan**
- **Physic tests**
  - **VPI/VCI scan**

→ VPI/VCI scan test active

VPI/VCI scan Test configuration

Menu
- **Settings**
  - **Profiles**
    - **Profiles 1-20**
      - **Test parameters**
        - **VPI/VCI scan**
          - **VPI**
            - Start: **0**
            - End: **8**
          - **VCI**
            - Start: **32**
            - End: **48**
          - **Number of scans**
            - Number: **2**
          - **Timeout**
            - sec: **0,500**

ATM OAM ping Test operation

ADSL

Menu
- **Single tests**
  - **ATM OAM ping**
- **Physic tests**
  - **ATM OAM ping**

→ ATM OAM ping test active

ATM OAM ping Test configuration

Menu
- **Settings**
  - **Profiles**
    - **Profiles 1-20**
      - **Test parameters**
        - **ATM OAM ping**
          - **VPI/VCI**
            - VPI: **1**
            - VCI: **32**
          - **Number of pings**
            - Number: **3**
          - **Timeout**
            - sec: **1,000**
          - **OAM cell type**
            - F5 loopback segm.
            - ***F5 loopback ete***

IP

Configuration and operation
IPTV, IPTV passive, IPTV scan

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IPTV Test operation

ADSL / VDSL / Ethernet

- Menu
  - Single tests
    - IPTV
  - IPTV tests
    - IPTV
  - IPTV profiles 1-3
    - selection IPTV profile
      - IPTV test active
    - edit IPTV profile

IPTV passive Test operation

ADSL / VDSL / Ethernet

- Menu
  - Single tests
    - IPTV passive
  - IPTV tests
    - IPTV passive
  - Bridge tests
    - IPTV passive
  - IPTV profiles 1-3
    - selection IPTV profile
      - IPTV passive test active
    - edit IPTV profile

IPTV scan Test operation

ADSL / VDSL / Ethernet

- Menu
  - Single tests
    - IPTV scan
  - IPTV tests
    - IPTV scan
  - IPTV scan profiles 1-3
    - selection IPTV scan profile
      - IPTV scan test active
    - edit IPTV scan profile

IPTV Test configuration

- Menu
  - Settings
    - Profiles
      - Profiles 1-20
        - Test parameters
          - IPTV
            - IPTV profiles 1-3
              - edit IPTV profile
              - preselection IPTV profile

- IPTV profiles 1-3
  - Channel selection
    - IPTV channel 1-250
      - preselection IPTV ch.
      - edit IPTV channel
  - Use IP header
    - ***No***
    - Yes
  - IGMP version
    - IGMP version: ***3***
  - Threshold
  - Profile name
    - ***IPTV profiles 1-3***

Menu IPTV thresholds

- Threshold
  - IGMP latency
    - Latency value: ***500 ms***
  - Sync error
    - ***0***
  - PCR jitter
    - ***100 ms***
  - Error indication
    - ***0***
  - CC error
    - ***0***
  - CC error ratio
    - ***0.00 %***
  - Audio bytes
    - ***0***
  - Video bytes
    - ***0***
  - RTP jitter
    - ***100 ms***
  - RTP sequence error
    - ***0***
  - Current RTP loss ratio
    - ***0.00 %***
  - Full RTP loss ratio
    - ***5.00 %***

Menu IPTV channel

- IPTV channels 1-250
  - Multicast IP
    - ***224.0.0.0***
  - Port
    - Port number: ***0***
  - TV station
    - ***IPTV channel 1-250***

IPTV scan Test configuration

- Menu
  - Settings
    - Profiles
      - Profiles 1-20
        - Test parameters
          - IPTV scan
            - IPTV scan profiles 1-3
              - preselection IPTV scan profile
              - edit IPTV scan profile

- IPTV scan profiles 1-3
  - Channel selection
    - add IPTV channel
    - remove IPTV Channel
    - edit IPTV Channel
  - IGMP Version
    - IGMP version: ***3***
  - Max. zapping time
    - Zapping time: ***5 s***
  - Profile name
    - ***Scan Profile 1-3***

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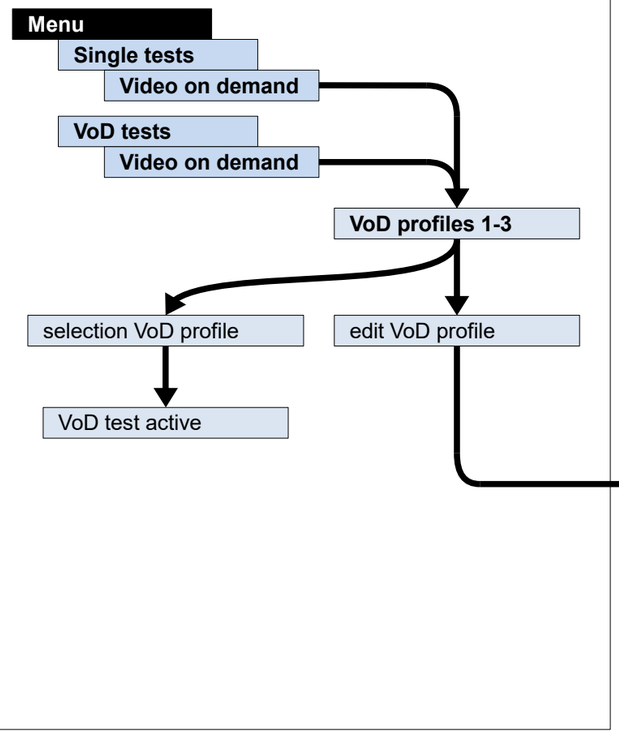
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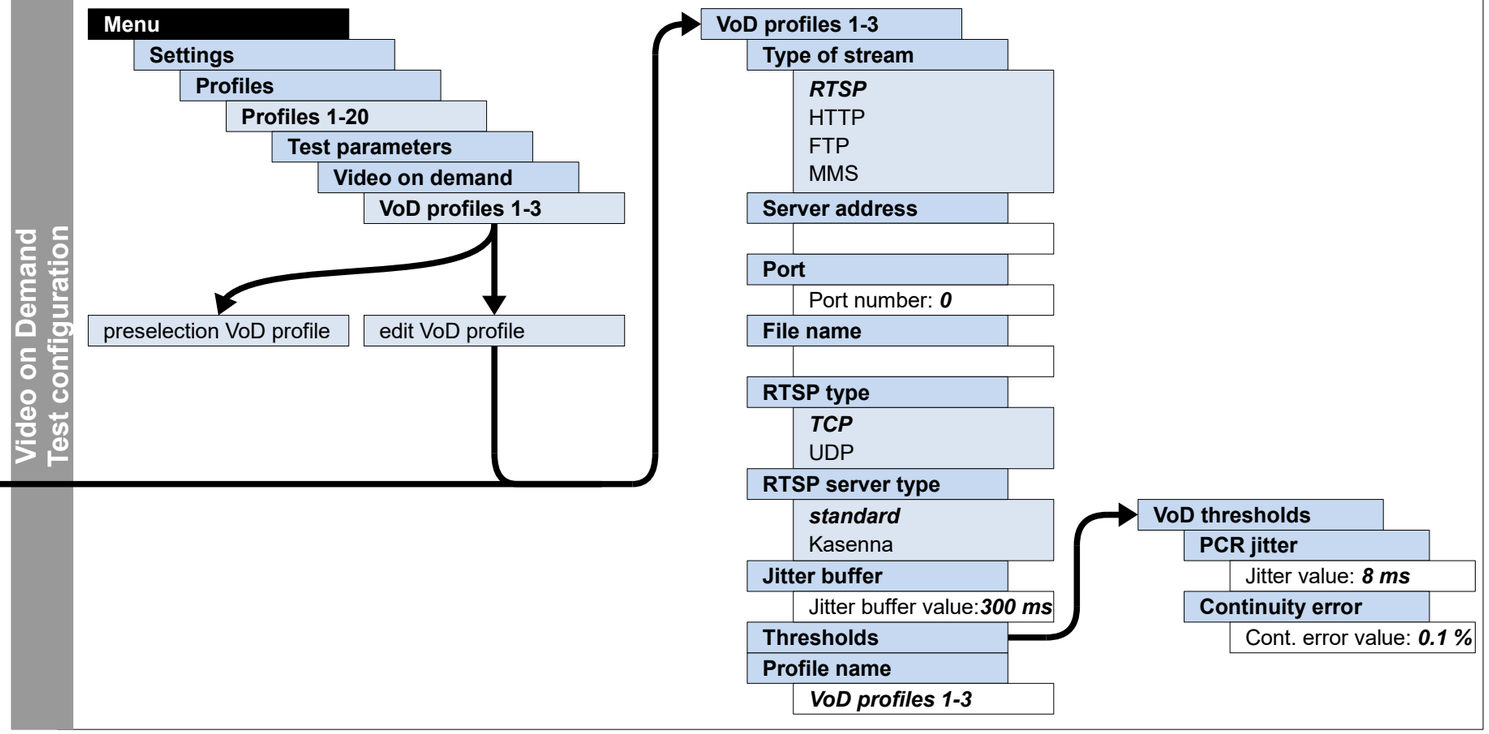
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ADSL / VDSL / Ethernet

Video on demand
Test operation



Video on Demand
Test configuration



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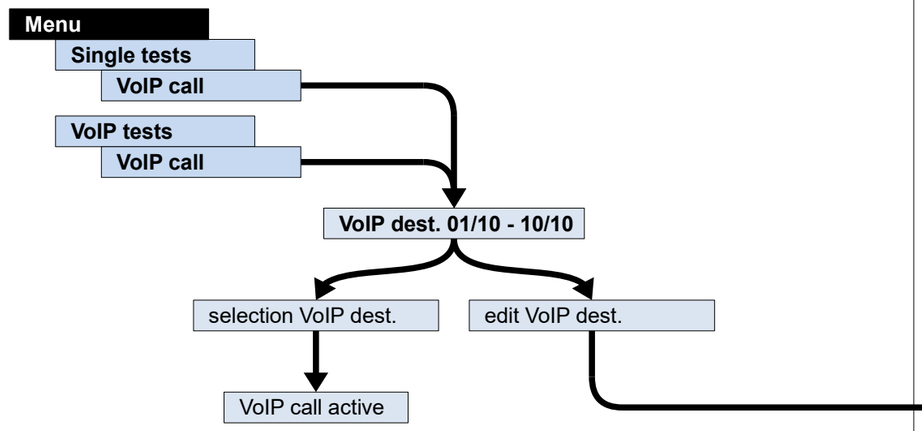
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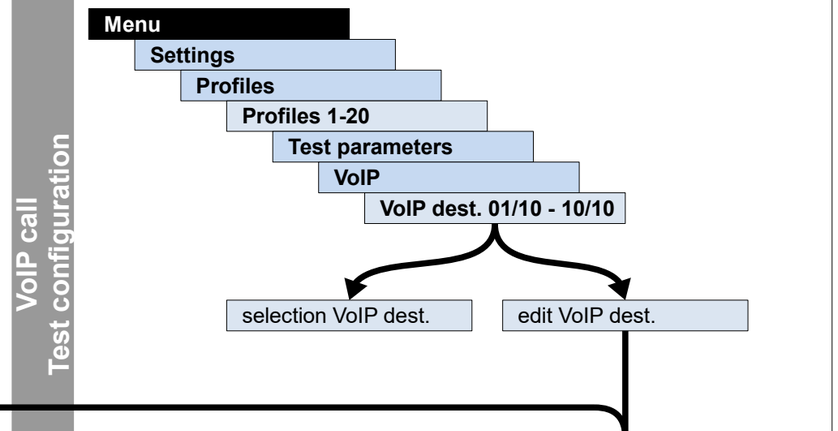
VoIP call Test operation

ADSL / VDSL / Ethernet



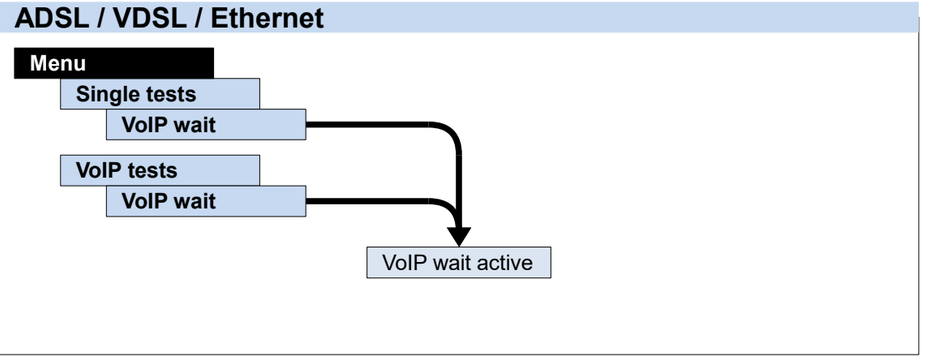
VoIP call Test configuration

ADSL / VDSL / Ethernet



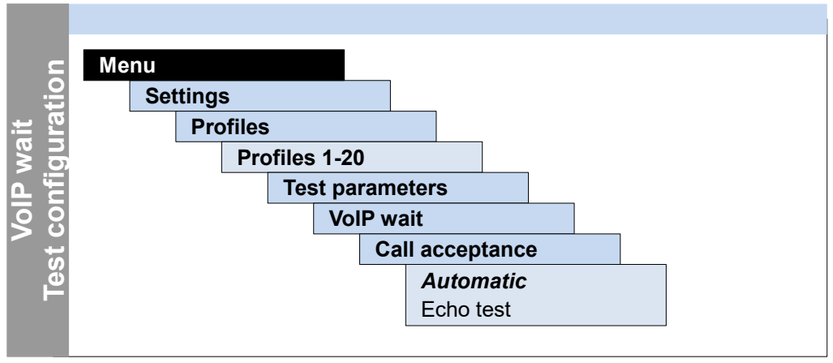
VoIP wait Test operation

ADSL / VDSL / Ethernet



VoIP wait Test configuration

ADSL / VDSL / Ethernet



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Ethernet IP based

Loop Test operation

- **Menu**
  - **Single tests**
    - **Loop**
  - **Physic tests**
    - **Loop**

→ Loop active

Loop Test configuration

- **Menu**
  - **Settings**
    - **Profiles**
      - **Profiles 1-20**
        - **Test parameters**
          - **Loop**
            - **Layer 1**
            - **Layer 2** → Layer 2
            - **Layer 3** → Layer 3

Layer 2

- **Layer 2**
  - **MAC mode**
    - ***Only own MAC***
      Loop everything
  - **own VPI/VCI**
    - VPI: ***1***
      VCI: ***32***
  - **own VLAN**
    - **VLAN mode**
      - ***No VLAN***
        1 VLAN tag
        2 VLAN tags (Q in Q)
    - **1. VLAN tag (C-VLAN)**
      - **ID**
        - ID: ***2***
      - **Priority**
        - Priority: ***0***
      - **TPID**
        - ***8100 Hex***
          88A8 Hex
    - **2. VLAN tag (S-VLAN)**
      - **ID**
        - ID: ***2***
      - **Priority**
        - Priority: ***0***
      - **TPID**
        - 8100 Hex
          88A8 Hex

Layer 3

- **Layer 3**
  - **Own IP mode**
    - ***Static IP***
      DHCP client
  - **Own IP address**
    - ***0.0.0.0***

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ETH TDR/Cable tests
Test operation

Ethernet cable tests

Menu
Single tests
ETH TDR/cable test
ETH TDR/... active

ETH TDR/Cable tests
Test configuration

Menu
Settings
Copper/Cable tests
ETH cable tests
ETH TDR/cable test
Mode
First Peak
Maximum Peak
Wire types 1-20
Selection wire type
Edit wire type
Speed of propagation
66.0
Line resistance
80 Ohm/km
Capacitance
39 nF/km
Name
PE 0.5 AWG24
V/2 in m/µs
VoP in %
98.9

Port flash
Test operation

Ethernet cable tests

Menu
Single tests
Port flash
Port flash ... active

Port flash
Test configuration

Menu
Settings
Copper/Cable tests
ETH cable tests
Port flash
LED on time
1 s

Note

The wire type settings are the same settings which are used for the copper tests.

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BERT Test operation

BRI S/U

TE ... / NT ...

Menu
- **Single tests**
  - **BERT**
    - **BERT start**
    - **BERT wait**
    - **B-channel loop**

Select number → Select service (see list) → Select B-channel → BERT active

BERT wait active

B-channel loop wait active

BERT Test configuration

Menu
- **Settings**
  - **BERT**
    - **BERT time**
      - Durat.: ***00:01*** (hh:mm)
    - **Bit pattern S / U**
      - (2^15)-1
      - ***(2^11)-1***
      - User defined
    - **Pattern PRI**
      - like S/U
    - **Error level**
      - Threshold: ***1E-06***
    - **HRX value**
      - Value: ***15 %***

User defined
Enter (binary):
0000000000000000

Lists

Services
- Speech
- UDI 64 kBit
- 3.1 kHz audio
- 7 kHz audio
- DFU-TA
- Telephony ISDN
- Fax G3
- Fax G4
- Mixed Mode
- Teletex
- Videotex
- Telex
- OSI
- Telephony 7 kHz
- Video telephony 1
- Video telephony 2
- User specified 1
- User specified 2
- User specified 3

BRI S/U

Leased line

Menu
- **Single tests**
  - **BERT**
    - **BERT start**
      - **B-channel (64k)**
      - **B-channel (128k)**
      - **D-channel**
    - **BERT wait**
      - **B-channel (64k)**
      - **B-channel (128k)**
      - **D-channel**
    - **B-channel loop**
      - **B-channel**
      - **all framed**

B-chan. select → BERT active

B-chan. select → BERT wait active

B-chan. select → B-channel loop wait active

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Supplementary services Test operation

BRI S/U

TE P-MP / TE P-P

Menu
→ **Single tests**
→ **Supp. serv.test**
→ Enter own number
→ Service select (see list)
→ B-channel select
→ Supp. Services select (see list)
→ Supp. Services test active

Service test Test operation

BRI S/U

TE ... / NT ...

Menu
→ **Single tests**
→ **Service test**
→ Enter own number
→ Select B-channel
→ Service test active

Lists

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- Speech
- UDI 64 kBit
- 3.1 kHz audio
- 7 kHz audio
- DFU-TA
- Telephony ISDN
- Fax G3
- Fax G4
- Mixed Mode
- Teletex
- Videotex
- Telex
- OSI
- Telephony 7 kHz
- Video telephony 1
- Video telephony 2
- User specified 1
- User specified 2
- User specified 3

Supp. services

- TP test
- HOLD test
- CLIP test
- CLIP / CLIR
- COLP/COLR
- DDI test
- MSN test
- CF test
- CFU
- CFB
- CFNR
- CW test
- CCBS test
- CCNR test
- MCID test
- 3PTY test
- ECTtest
- CUG test
- CD test
- AOC test
- SUB test
- UUS test

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BRI S/U

X.31 test Test operation

TE P-MP / TE P-P

Menu
Single tests
X.31 test
X.31 profiles 1-3

Select X.31 profile
Edit X.31 profile

Automatic
Manual

Enter TEI
Enter LCN
Edit / select number
X.31 test active

Looking for TEI
Edit / select number
X.31 test active

X.31 test Test configuration

Menu
Settings
X.31 profiles
X.31 profiles 1-3

Edit X.31 profile
Select X.31 profile

Packet number
Packet countl: ***10***
TEI
TEI: **
LCN
LCN: ***1***
Packet size
16 Byte
32 Byte
64 Byte
128 Byte
256 Byte
Agree packet size
No
Yes
Window size
Agree window size
No
Yes
Throughput
Agree throughput
No
Yes
User data
CUG
No
Yes
CUG-Index
Index: ***1***
D-Bit
Local
End to end
Facilities
Profilename
X.31 profiles 1-3

Menu Throughput

Throughput
75 bit/s
150 bit /s
300 bit/s
600 bit/s
1200 bit/s
2400 bit/s
4800 bit/s
9600 bit/s

Menu Windowsize

Windowsize
1 packet
2 packets
3 packets
4 packets
5 packets
6 packets
7 packets

Menu User data

User data
Format
ASCII
HEX
ASCII data
ASCII data 1-3
HEX data
HEX data 1-3
Edit ASCII data
ASCII data 1-3
Edit HEX data
HEX data 1
01 00 00 00 45 43 48 4F
HEX data 2
01 00 00 00 30 30 47 47
HEX data 3

Menu Facilities

Facilities
Facility 1-3
Edit Facility
Facility 1-3

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CF interrogation Test operation

BRI S/U

TE P-MP / TE P-P

Menu
→ Single tests
→ CF interrogation
→ CF interrogation test active

CF activation Test operation

BRI S/U

TE P-MP / TE P-P

Menu
→ Single tests
→ CF activation
→ Select service (see list services (CF))
→ Select Cfx type (see list Cfx types)
→ Enter own number
→ Enter / select remote number
→ CF activation test active

CF delete Test operation

BRI S/U

TE P-MP / TE P-P

Menu
→ Single tests
→ CF delete
→ Select service (see list services (CF))
→ Select Cfx type (see list Cfx types)
→ Enter own number
→ CF delete test active

Phone / connection Test operation

BRI S/U

TE ... / NT ...

Menu
→ Single tests
→ Phone / connection
→ Overlap sending
→ Enblock
→ Redialing
→ Keypad dial
→ Keypad info 1-3
→ Edit Keypad Info
→ Select keypad info
→ Edit / select number
→ Select service (see list)
→ Select B-channel
→ connection test active

Leased line

Menu
→ Single tests
→ Phone / connection
→ Select B-channel
→ Connection test active

Menu Keypad

Menu
→ Settings
→ ISDN
→ Keypad
→ Keypad info 1-3
→ Select keypad info
→ Edit keypad info
→ Keypad info 1-3

Lists

Services

speech
IDU 64 kBit
3.1 kHz audio
7 kHz audio
IDU TA
Telephony ISDN
Fax G3
Fax G4
Mixed Mode
Teletex
Videotex
Telex
OSI
Telephony7 kHz
Videotelephony 1
Videotelephony 2
User specified 1
User specified 2
User specified 3

Services (CF)

All
Spch
DFU
A3K1H
A7kHz
Tel31
TTX
FaxG4
ViSyB
ViTel
FaxG3
Tel7k

CFx types

CFU
CFB
CFNR

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Time measuring Test operation

BRI S/U

TE ... / NT ... / Leased line

Menu
→ **Single tests**
→ **Time measuring**
→ **Conn. setup time** / **B-channel delay** / **Interchannel delay**

Conn. setup time	B-channel delay	Interchannel delay
Edit / select number	Edit / select number	Edit / select number
Select service (see list)	Select service (see list)	Select service (see list)
	Select B-channel	Select B-channel
Conn. setup test active	B-Channel delay test active	Interchannel delay test active

Listening Test operation

BRI S

Monitor

Menu
→ **Listening**
→ **Net side (NT)** / **Terminal (TE)** / **Both sides**
→ Select B-channel
→ Listening active

Monitor Test operation

BRI S / POTS

Monitor

Menu
→ **Start monitor**
→ Monitor active

Auto. test Test operation

BRI S / BRI U

TE P-MP / TE P-P

Menu
→ **Test reports**
→ **Test no. 1-50**
→ **Start**
→ Enter test name
→ Enter own number
→ Edit / select number
→ Select service (see list)
→ Auto. test active

Leased line

Menu
→ **Test reports**
→ **Test no. 1-50**
→ **Start**
→ Enter test name
→ Select B-channel
→ Auto. test active

List

Services
Speech
IDU 64 kBit
3.1 kHz audio
7 kHz audio
IDU TA
Telephony ISDN
Fax G3
Fax G4
Mixed Mode
Teletex
Videotex
Telex
OSI
Telephony 7 kHz
Videotelephony 1
Videotelephony 2
User specified 1
User specified 2
User specified 3

Cross reference:

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PESQ Test operation

BRI S/U / POTS

Menu → Single tests → PESQ test → PESQ test active

ADSL / VDSL / Ethernet

Menu → Single tests → VoIP PESQ test → VoIP PESQ test active

Menu → VoIP tests → VoIP PESQ test → VoIP PESQ test active

PESQ Test configuration

Menu → Settings → PESQ → Mode → *ARGUS Loop* / Send → Call number POTS → Call number ISDN → VoIP destination

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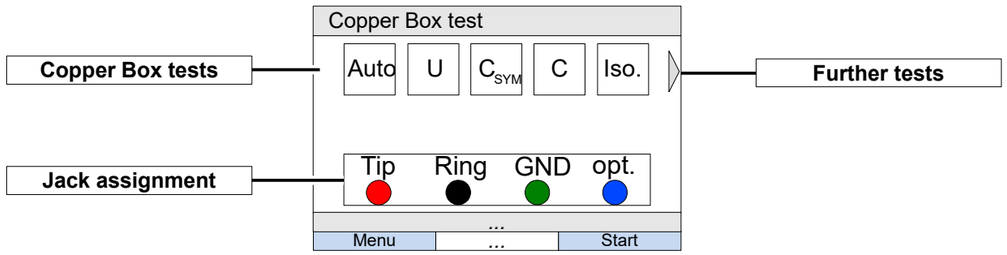
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Legend status

ARGUS Copper Box



Menu hotkeys

ARGUS Copper Box

Key	Auto test	Voltage measurement	Capacitve symmetry measurement	Capacitance measurement	Isolation resistance measurement	Resistance symmetry measurement	Loop resistance measurement	DC current measurement	Unbalance	Near-end crosstalk	Termination detection	Remote control of loop assistant
0	-	Reset	-	Reset		-	Reset				-	
1	Auto test prof.	-										
2	-											
3	-				Polarity	-						
4	-				Meas. range	-						
5	-				Meas. voltage	-						
6	Wire types	-	Wire types		-	Wire types	-					
7	QR code	-										
8	-		Susceptibility				-					
9	-	Display mode	-	Display mode		-	Display mode				-	
⎍	-											
#	-	Input resistance	-									
✆	Information bell											
✳ then 0	-											
✳ then 1	Copper Box info											
✳ then 2	-											
✳ then 3	-											
✳ then 6	-											
✳ then 7	Store											-

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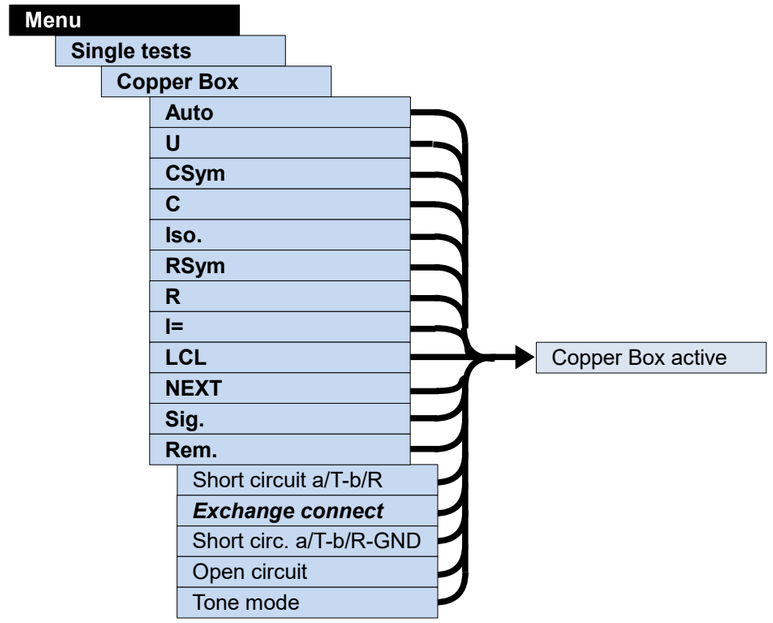
Copper tests	page
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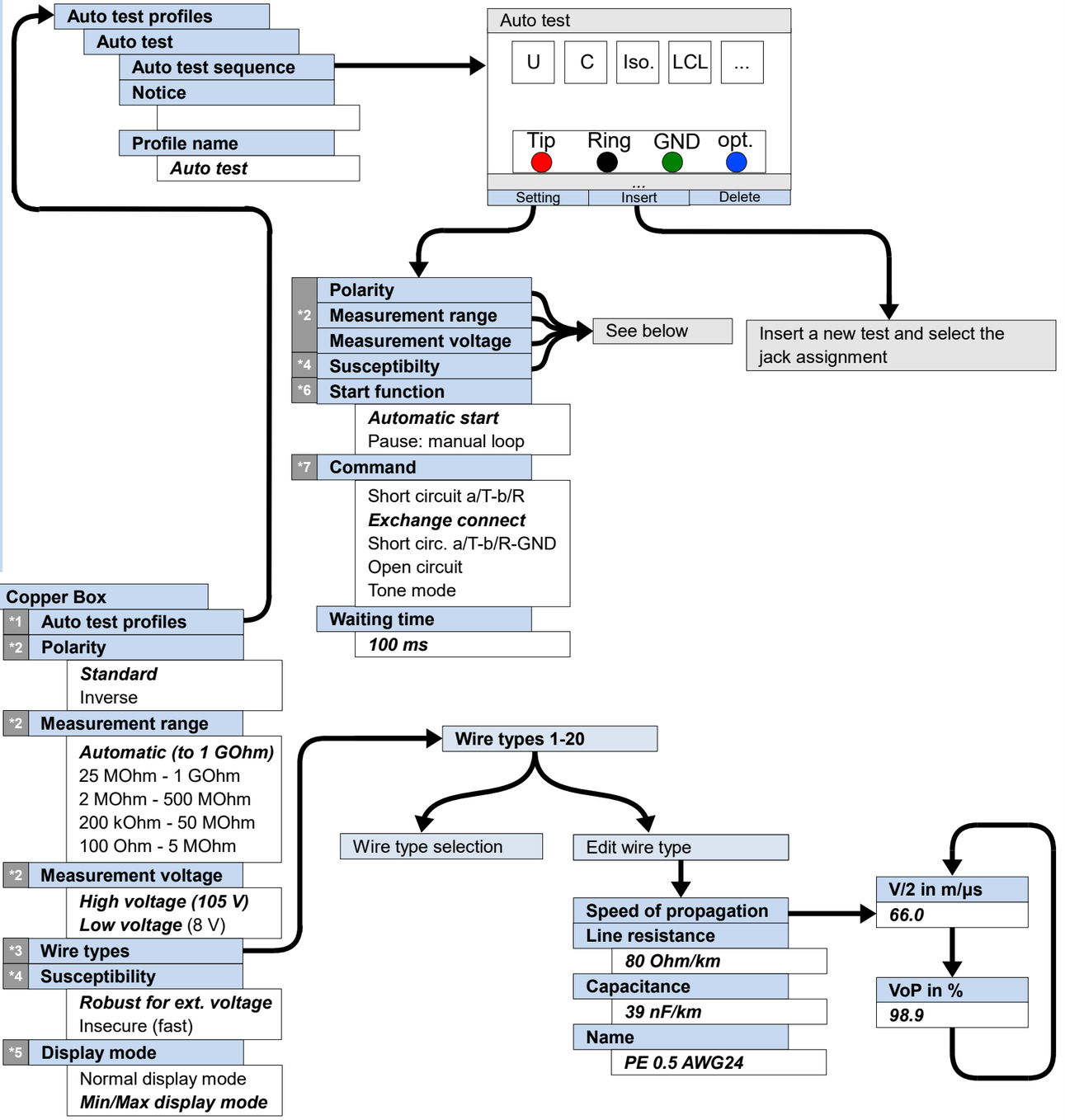
Other tests	page
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Copper Box

Copper Box Test operation





Copper Box Test configuration

Note

*1 = Autotest
*2 = Iso.
*3 = Auto test, CSym, C, RSym, R
*4 = CSym, C, Iso., RSym, R,
*5 = U, C, Iso., R, I=, LCL, NEXT
*6 = RSym, R
*7 = Rem.

Cross reference:

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R measurement Test operation

Copper tests

Menu
Single tests
R measurement
R measurement active

R measurement Test configuration

Menu
Settings
Copper/Cable tests
Copper tests
Wire types/VoP
Wire type 1-10
Selection wire type
Edit wire type
Speed of propagation
Line resistance
80 Ohm/km
Capacitance
39 nF/km
Name
PE 0.5 AWG24
V/2 in m/µs
66.0
VoP in %
98.9

RC measurement Test operation

Copper tests

Menu
Single tests
RC measurement
RC measurement act.

RC measurement Test configuration

Menu
Settings
Copper/Cable tests
Copper tests
Wire types/VoP
Wire type 1-10
Selection wire type
Edit wire type
Speed of propagation
Line resistance
80 Ohm/km
Capacitance
39 nF/km
Name
PE 0.5 AWG24
V/2 in m/µs
66.0
VoP in %
98.9

Cross reference:

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Line scope Test operation

Copper tests

Menu → Single tests → Line scope → Line scope active

TDR Test operation

Copper tests

Menu → Single tests → TDR → TDR active

TDR Test configuration

Menu → Settings → Copper/Cable tests → Copper tests → Wire types/VoP → Wire type 1-10

- Selection wire type
- Edit wire type
  - Speed of propagation → V/2 in m/µs: *66.0* → VoP in %: *98.9*
  - Line resistance: *80 Ohm/km*
  - Capacitance: *39 nF/km*
  - Name: *PE 0.5 AWG24*

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Line qualification Test operation

Copper tests

Menu
- **Single tests**
  - **Line qualification**
    - **LQ slave mode** → Slave mode active
    - **LQ master mode** → Master mode active

Line symmetry Test operation

Copper tests

Menu
- **Single tests**
  - **Line symmetry** → Line symmetry active

Line qualification / Line symmetry Test configuration

Menu
- **Settings**
  - **Copper/Cable tests**
    - **Copper tests**
      - **Line qualification**
        - **Bandwidth**
          - 1.1 MHz (ADSL)
          - ***2.2 MHz*** ***(ADSL2+)***
          - 8.8 MHz (VDSL2)
          - 12.0 MHz (VDSL2)
          - 17.6 MHz (VDSL2)
          - 30.0 MHz (VDSL2)
        - **Bandplan**
          - *1
            - ***Annex A*** ***(ADSLx)***
            - Annex B (ADSLx)
          - *2
            - ***998-M2x-A*** ***(VDSL2)***
            - 998-M2x-B (VDSL2)
            - 998ADE17-M2x-A (VDSL2)
            - 998ADE17-M2x-B (VDSL2)
          - *3
            - ***998ADE17-M2x-A*** ***(VDSL2)***
            - 998ADE17-M2x-B (VDSL2)
          - *4
            - ***998ADE30-M2x-NUS0-A*** ***(V)***
            - 998ADE30-M2x-NUS0-M (V)
        - **Impedance**
          - *100 Ω*
          - 120 Ω
          - ***135 Ω***
        - **Transmit level**
          - 12 dBm
          - 6 dBm
          - ***0 dBm***

Note

The displayed bandplan menu items depends on the bandwidth that has been set.

- *1 = 1.1 MHz, 2.2 MHz
- *2 = 8.8 MHz, 12.0 MHz
- *3 = 17.6 MHz
- *4 = 30.0 MHz

Test leads and pin assignments
ADSL, VDSL

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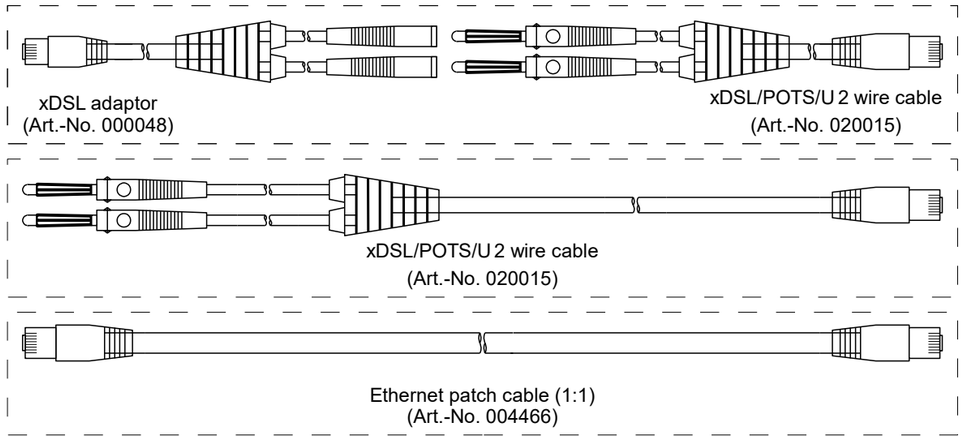
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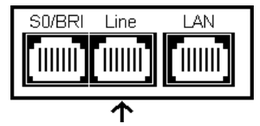
ADSL / VDSL



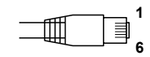
RJ11	Ban.	RJ45
3	rd	4
4	blk	5

Ban.	RJ45
rd	4
blk	5

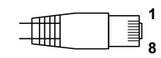
RJ45	RJ45
1-8	1-8



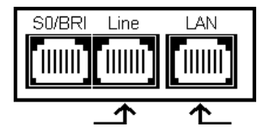
RJ11



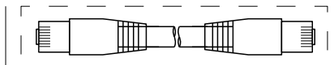
RJ45



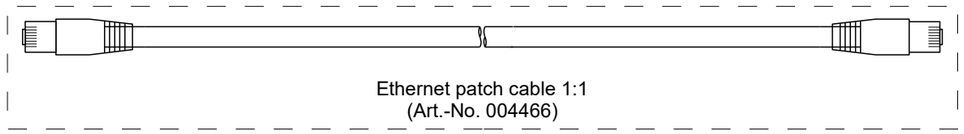
ADSL / VDSL – Bridge / Router



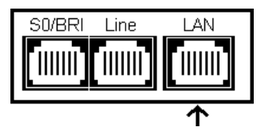
RJ45	RJ45
1-8	1-8


Ethernet patch cable (1:1)
(Art.-No. 004466)

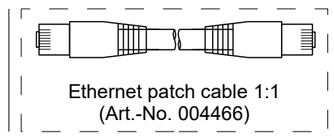
Ethernet


Ethernet patch cable 1:1
(Art.-No. 004466)

RJ45	RJ45
1-8	1-8



RJ45	RJ45
1-8	1-8


Ethernet patch cable 1:1
(Art.-No. 004466)

Test leads and pin assignments
BRI S, BRI U, POTS

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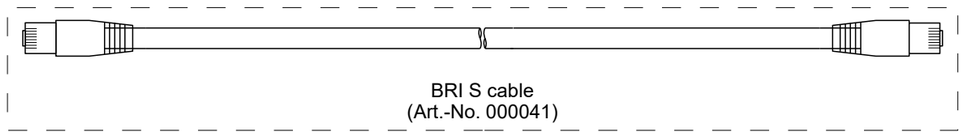
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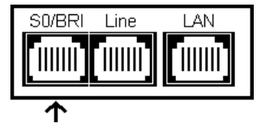
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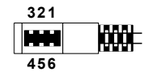
BRI S



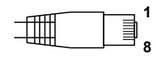
RJ45	RJ45
3/6	3/6
4/5	4/5



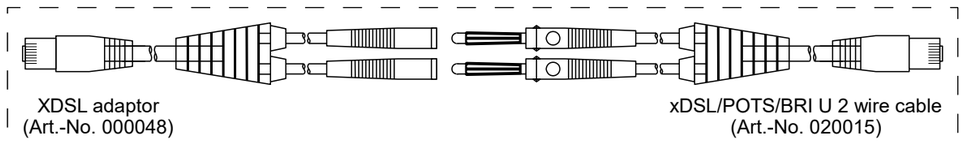
TAE

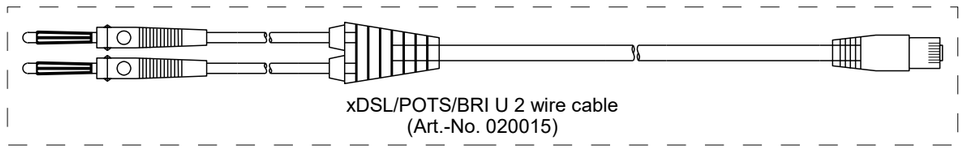


RJ45



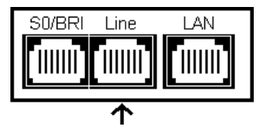
BRI U / POTS





RJ11	Ban.	RJ45
3	rd	4
4	blk	5

Ban.	RJ45
rd	4
blk	5



Test leads and pin assignments
Copper tests

Cross reference:

Menu	page
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Single tests Data-, VoIP-, IPTV-, VoD-, Bridge-, Physic tests	7-11
Test results	7, 11
Status	7
Parallel-, auto tests	9, 10
Settings	12-20
Device	12
Profile, Virt.-Profile VoIP-Account	13-18
ISDN / POTS	19-20
Battery (status,...)	7, 11
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IP and ATM tests	page
IP ping / Trace route	21
HTTP / FTP downl. FTP upload / server	22
VPI/VCI scan ATM OAM ping	23
IPTV / passive /scan	24
Video on Demand	25
VoIP call / wait	26

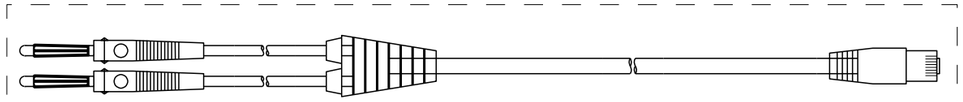
ISDN tests	page
BERT	29
Supp. Serv. test Service test	30
X.31	31
CF-Tests, Connect.	32
Time measuring Auto. Test	33

Copper tests	page
Copper Box	35-36
RC measurement	37
Line scope, TDR	38
LQ, Line symmetry	39

Other tests	page
Loop	27
Connection (POTS)	11
Monitor (POTS)	33
PESQ	34
ETH cable tests	28

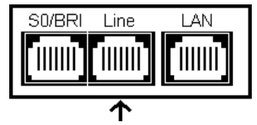
Others	page
Legend Protocol-overview	3
Hotkeys	4
Test leads	39-41

Copper tests: R measurement / RC measurement / Line scope / TDR



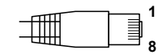
xDSL/POTS/BRI U 2 wire cable
(Art.-No. 020015)

Ban.	RJ45
rd	4
blk	5



The copper tests are performed using pin 4/5 of the line interface. Alternatively, the test can be carried out with every other test leads that is using pin 4/5.

RJ45

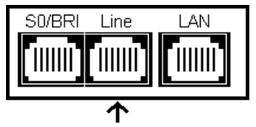


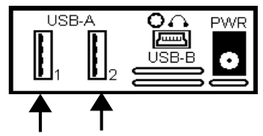
Copper tests: Line scope



Active Probe II
(Art.-No. 015091)

Ban.	RJ45
blk	4
blk	5





The Active Probe II needs to be powered by the USB-A interface. The power supply can be enabled in the settings or according tests.

Notes

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Hotkeys	4
Test leads	39-41

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