ARGUS®
testing the telecom network



ADSL
VDSL
SHDSL
GigE
SFP
ISDN
POTS
Cu
TDR
Copper Box
Data
IP TV
VoIP
MOS
PESQ
PC
USB
WLAN

ARGUS® 165

» Overview of menu and test leads

valid from firmware version R2.00.00

intec
GESELLSCHAFT FÜR
INFORMATIONSTECHNIK mbH

Legend, Status, Protocol overview

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Legend General

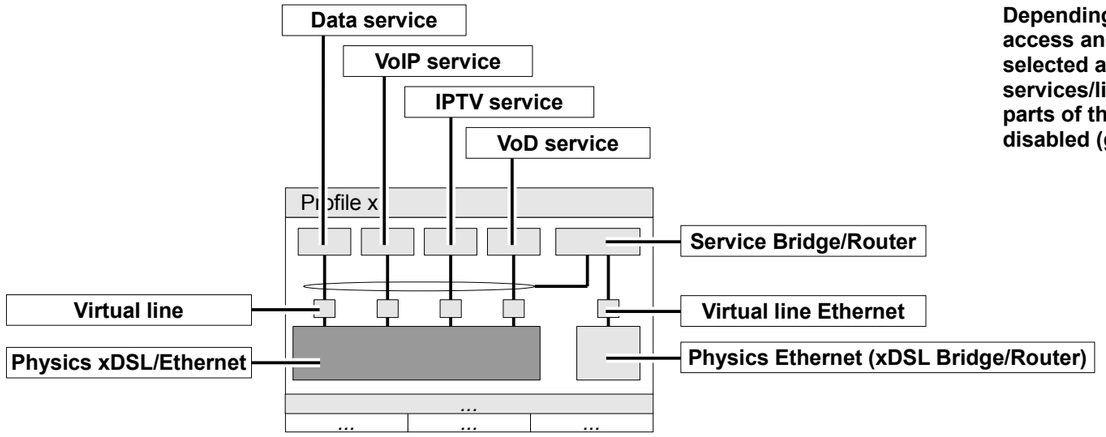
Menu
Configuration menu
Defaul Config.menu
Input menu
Default input menu

Depending on the specified interface, menu item will be shown

Menu item only matters for specified interface

Legend Status

ADSL / VDSL / SHDSL / 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 / SHDSL / Ethernet

Access			ADSL						VDSL						SHDSL														ETH		
															ATM						EFM						TDM		ITC		HDLC		
Mode			ATU-R	ATU-R Bridge		ATU-R Router		2 port access	VTU-R	VTU-R Bridge		VTU-R Router		2 port access	STU-R	STU-C	STU-R Bridge		STU-R Router		2 port access	STU-R	STU-C	STU-R Bridge		STU-R Router		2 port access	STU-R	STU-C	STU-R	STU-C	STU-R	STU-C			
Socket			Line	Line	LAN/SFP	Line	LAN/SFP	LAN/SFP	Line	Line	LAN/SFP	Line	LAN/SFP	LAN/SFP	Line	Line	Line	LAN/SFP	Line	LAN/SFP	LAN/SFP	Line	Line	Line	LAN/SFP	Line	LAN/SFP	LAN/SFP	Line	Line	Line	Line	Line	Line	LAN 1	LAN 2	SFP 1
Protocol	**ATM/Ethernet**																																			
without	-	without		**a**	**a**					**a**	**a**					**a**	**a**	**a**					**a**	**a**	**a**				**a**	**a**	**a**	**a**	**a**	**a**			
IP	-	IP					**a**		●			●	**a**							**a**		●				●	**a**							●	●	●
	Yes	EoA	●			●									●				●																	
	No	IPoA	●			●																														
PPP	Yes	PPPoE	●			●			●			●			●				●			●				●								●	●	●
	No	PPPoA	●			●																														
PPTP	-	PPTP																																●	●	●

● – Protocol configurable (see page 17)
a – Protocol set automatically

Note

The basic ARGUS *165* package includes support for at least one DSL interface (ADSL, VDSL or SHDSL) 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 / SHDSL / Ethernet

Key	ADSL / SHDSL ATM	VDSL / SHDSL EFM	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 / PRI / POTS

Key	BRI S / BRI U	PRI	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	L1 status	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 / RFC / xDSL trace

Key	ADSL / VDSL	RFC2544 tests	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
0	-	-	-
1	-	-	-
2	Zoom	-	Zoom
3	Cursor		
4	Measurement range		
5	Total power	-	Pulse width/height
6	-	-	Wire type/VoP
7	Probe		-
8	Symmetry		-
9	Time domain	Frequency domain	-
0	Peak hold (min/max)		-
#	100 Ohm Input resistance		-
✓	-	-	-
⎍	Run/Hold		Run/Hold
✳ then 7	Store		

Switch on and access menu

Cross reference:

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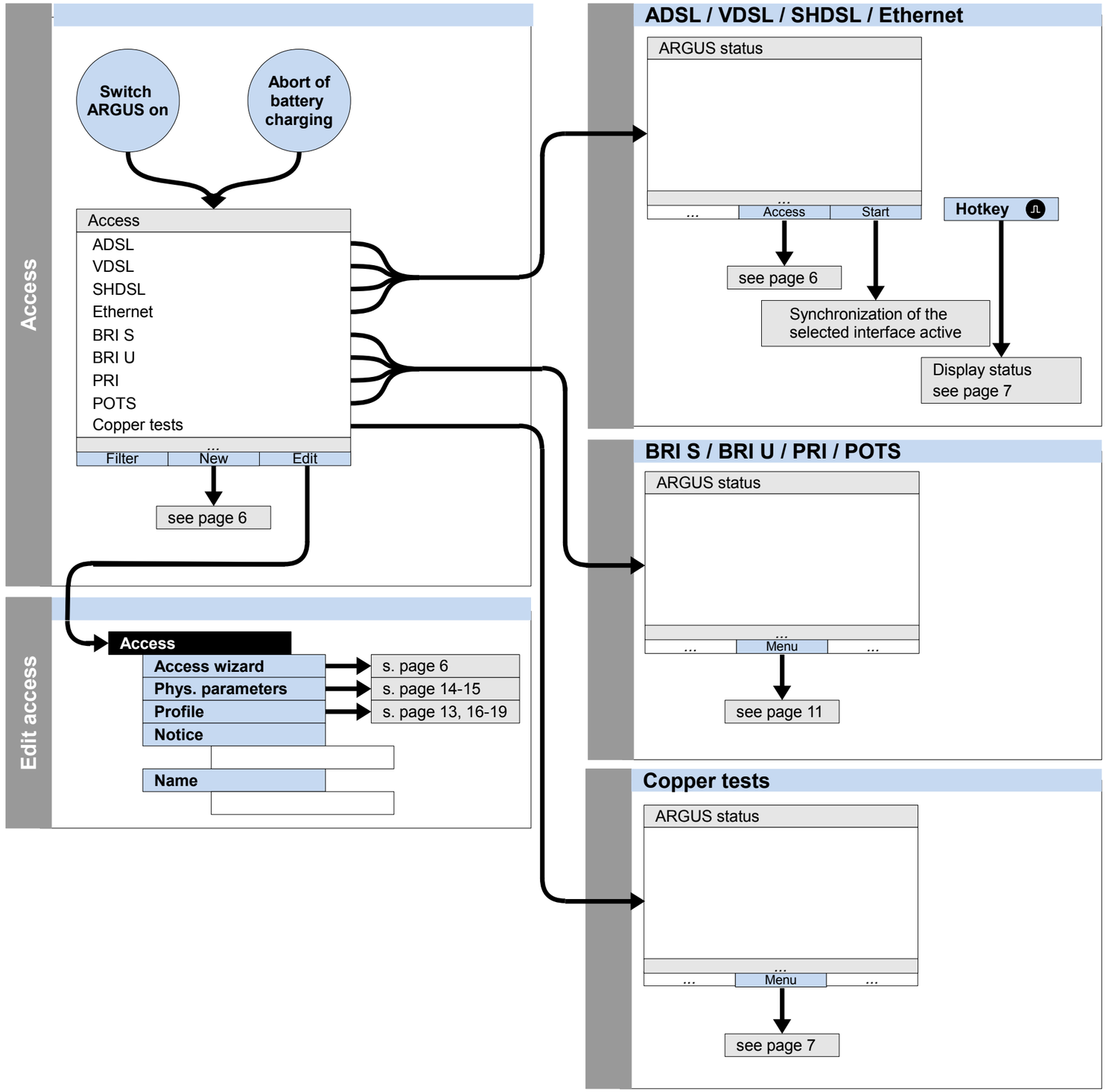
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Access wizard

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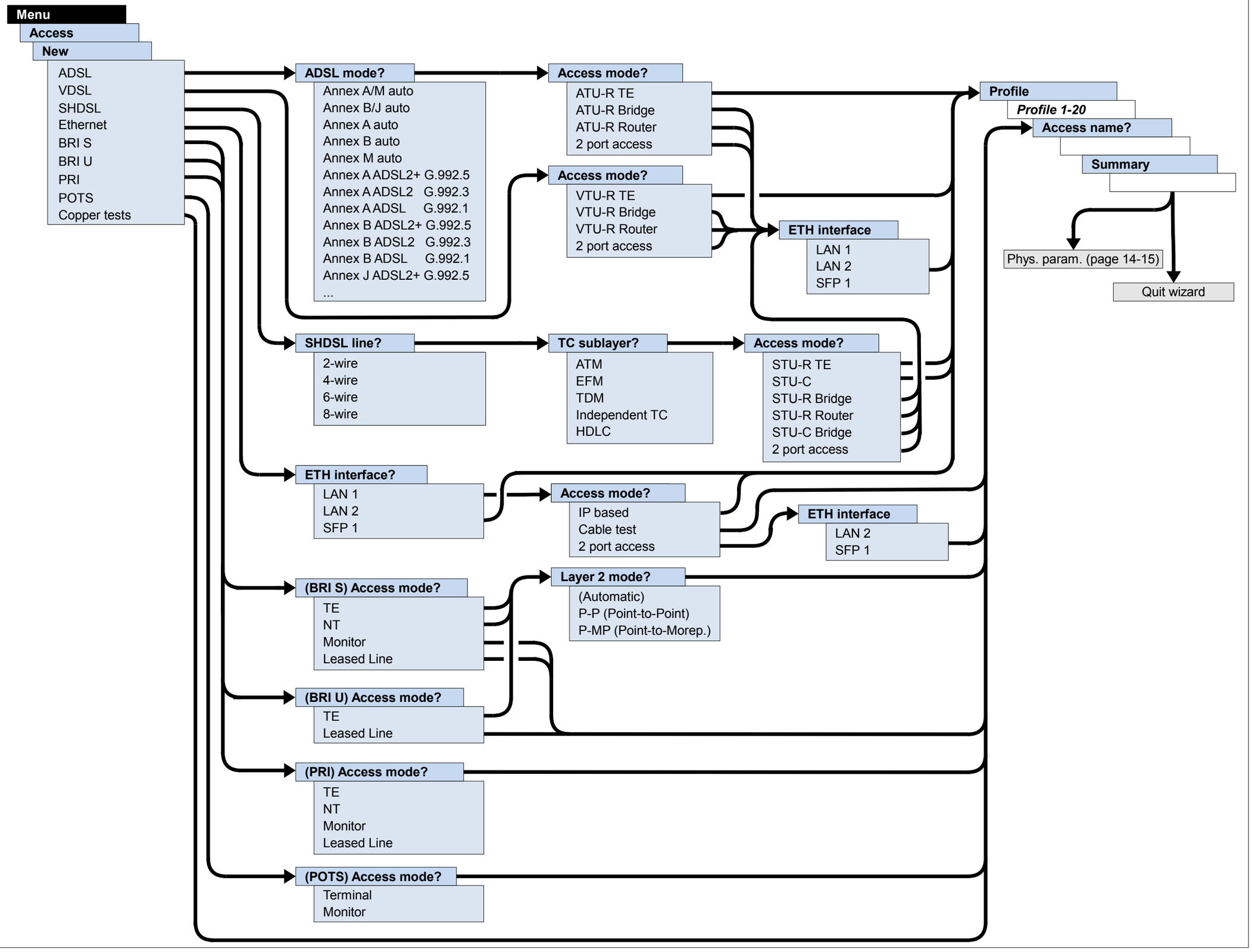
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Access wizard



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

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Main menu

ADSL / VDSL / SHDSL / ETH / Copper tests

- Menu
  - Single tests → Menu Single tests
  - Test results → Menu Test results
  - *1 Auto test → see page 10
  - Status → Display Status
  - Settings → see page 12-21
  - Access → see page 6
  - Battery (status,...)
    - Status → Display Battery status
    - Automatic char.
      - *On*
      - Off
  - Help
    - Hotkeys → see table page 4

Menu Test results

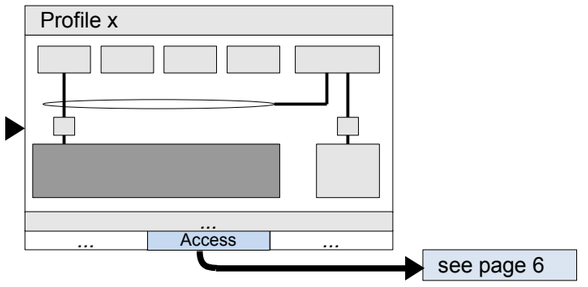
ADSL / VDSL / SHDSL / ETH / Copper tests

- Test results
  - Select test results
    - Display result → Display test results
    - Rename → Test results rename
    - Send report to PC → Send report to PC
    - Delete → Delete report

Display Status

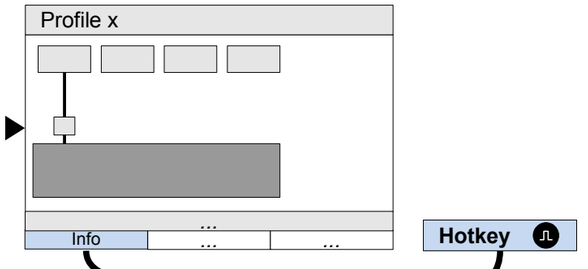
ADSL / VDSL / SHDSL / Ethernet

General



→ see page 6

Physics xDSL/Ethernet active



Hotkey

Display physical access results

Menu Single tests

ADSL / VDSL / SHDSL / ETH / Copper tests

- Single tests
  - *1 Copper Box → see page 38-39
  - *2 IP ping → see page 22
  - *2 Trace route → see page 22
  - *2 HTTP download → see page 23
  - *2 HTTP upl. (BRITT) → see page 23
  - *2 FTP download → see page 23
  - *2 FTP upload → see page 23
  - *2 FTP server → see page 23
  - *3 VPI/VCI scan → see page 24
  - *3 ATM OAM ping → see page 24
  - *2 VoIP call → see page 27
  - *2 VoIP wait → see page 27
  - *2 VoIP PESQ test → see page 37
  - *2 IPTV → see page 25
  - *2 IPTV scan → see page 25
  - *4 IPTV passive → see page 25
  - *2 Video on Demand → see page 26
  - *5 Loop → see page 28
  - *5 Traffic generator → see page 29
  - *5 RFC2544 test → see page 30
  - *6 ETH TDR/Cable t. → see page 31
  - *6 Port flash → see page 31
- Copper tests
  - Copper Box → see page 38-39
  - R measurement → see page 40
  - RC measurement → see page 40
  - Line scope → see page 41
  - TDR → see page 41

Note

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

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

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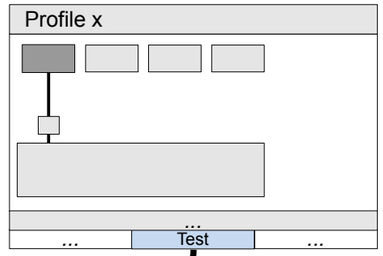
Other tests	page
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ADSL / VDSL / SHDSL / Ethernet

Service active

Display Status



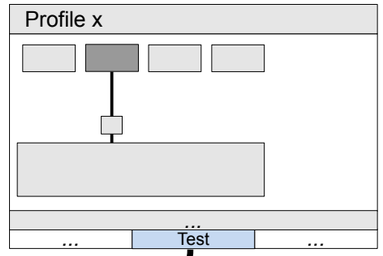
Menu Data tests

- Data tests
  - IP ping → see page 22
  - Trace route → see page 22
  - HTTP download → see page 23
  - HTTP upl. (BRITT) → see page 23
  - FTP download → see page 23
  - FTP upload → see page 23
  - FTP server → see page 23

ADSL / VDSL / SHDSL / Ethernet

Service active

Display Status



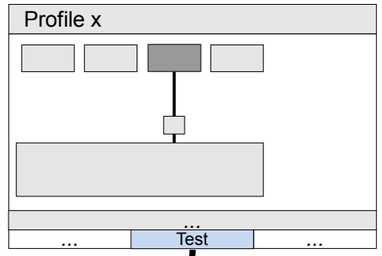
Menu VoIP tests

- VoIP tests
  - IP ping → see page 22
  - Trace route → see page 22
  - VoIP call → see page 27
  - VoIP wait → see page 27
  - VoIP PESQ test → see page 37

ADSL / VDSL / SHDSL / Ethernet

Service active

Display Status



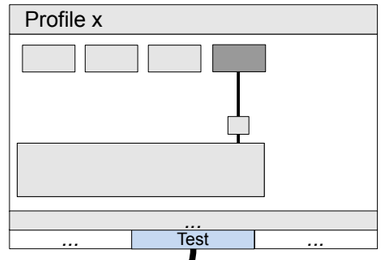
Menu IPTV tests

- IPTV tests
  - IP ping → see page 22
  - Trace route → see page 22
  - IPTV → see page 26
  - IPTV scan → see page 26
  - *1 IPTV passive → see page 26

ADSL / VDSL / SHDSL / Ethernet

Service active

Display Status



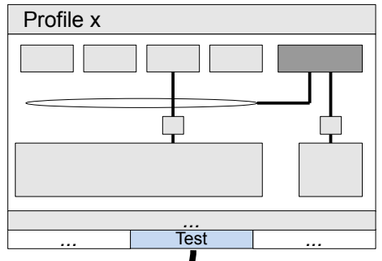
Menu VoD tests

- VoD tests
  - IP ping → see page 22
  - Trace route → see page 22
  - Video on Demand → see page 26

ADSL / VDSL / SHDSL - Bridge

Service active

Display Status



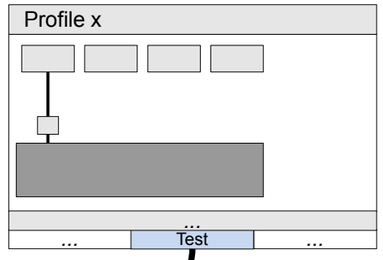
Menu Bridge tests

- Bridge tests
  - IPTV passive → see page 26

ADSL / SHDSL / Ethernet

Physics xDSL/Ethernet active, Services inactive

Display Status



Menu Physic tests

- Physic tests
  - *2 VPI/VCI scan → see page 24
  - *2 ATM OAM ping → see page 24
  - *3 Loop → see page 28
  - *3 Traffic generator → see page 29
  - *3 RFC2544 → see page 30

Note

- *1 = xDSL-Router
- *2 = ADSL, SHDSL ATM
- *3 = SHDSL ATM/EFM, Ethernet, VDSL

Service tests: Parallel tests
Test status

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Battery (status,...)	7, 11
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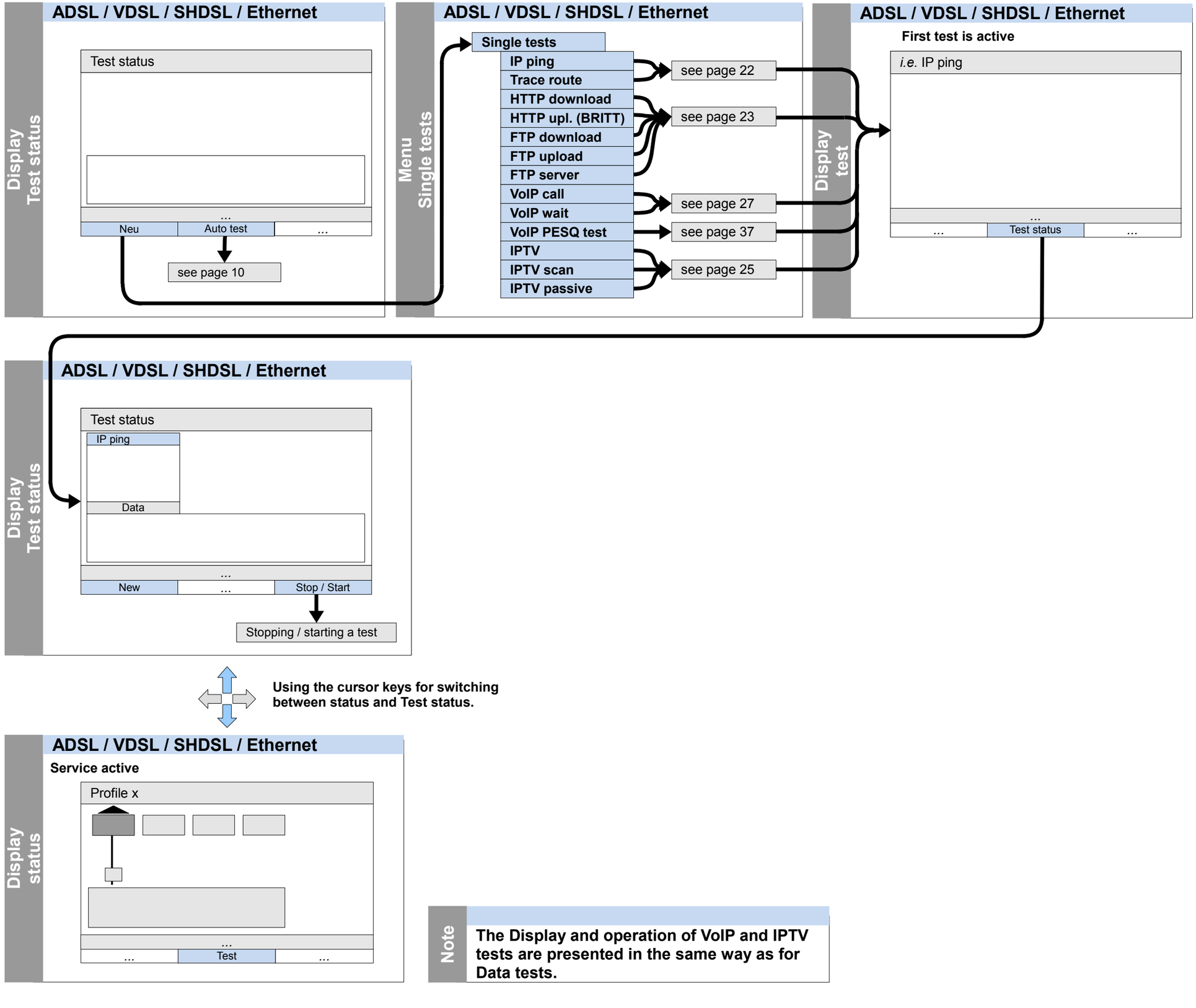
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Using the cursor keys for switching between status and Test status.

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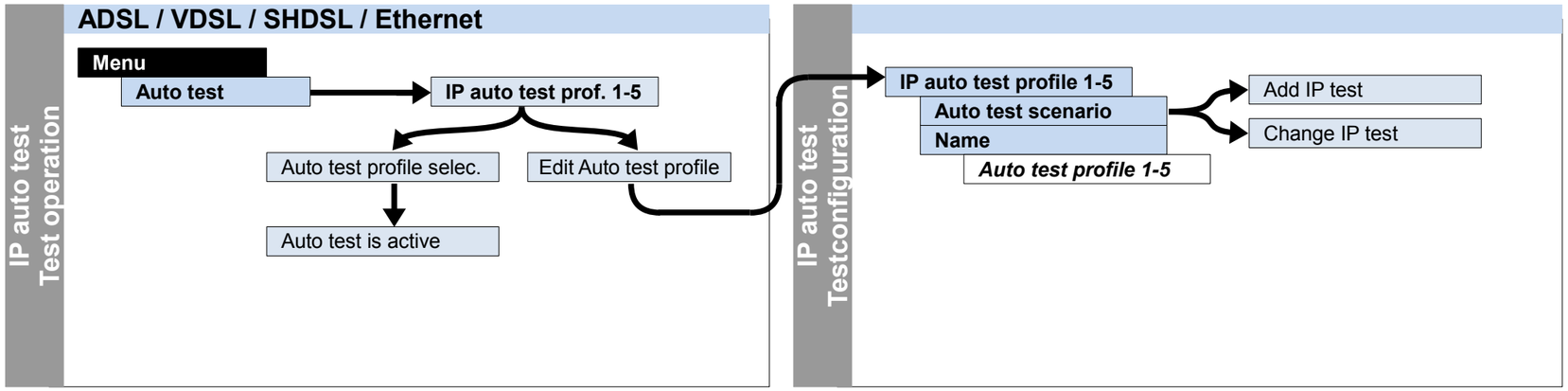
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Main menu, Single tests, Test results
(Access: BRI S, BRI U, PRI, POTS)

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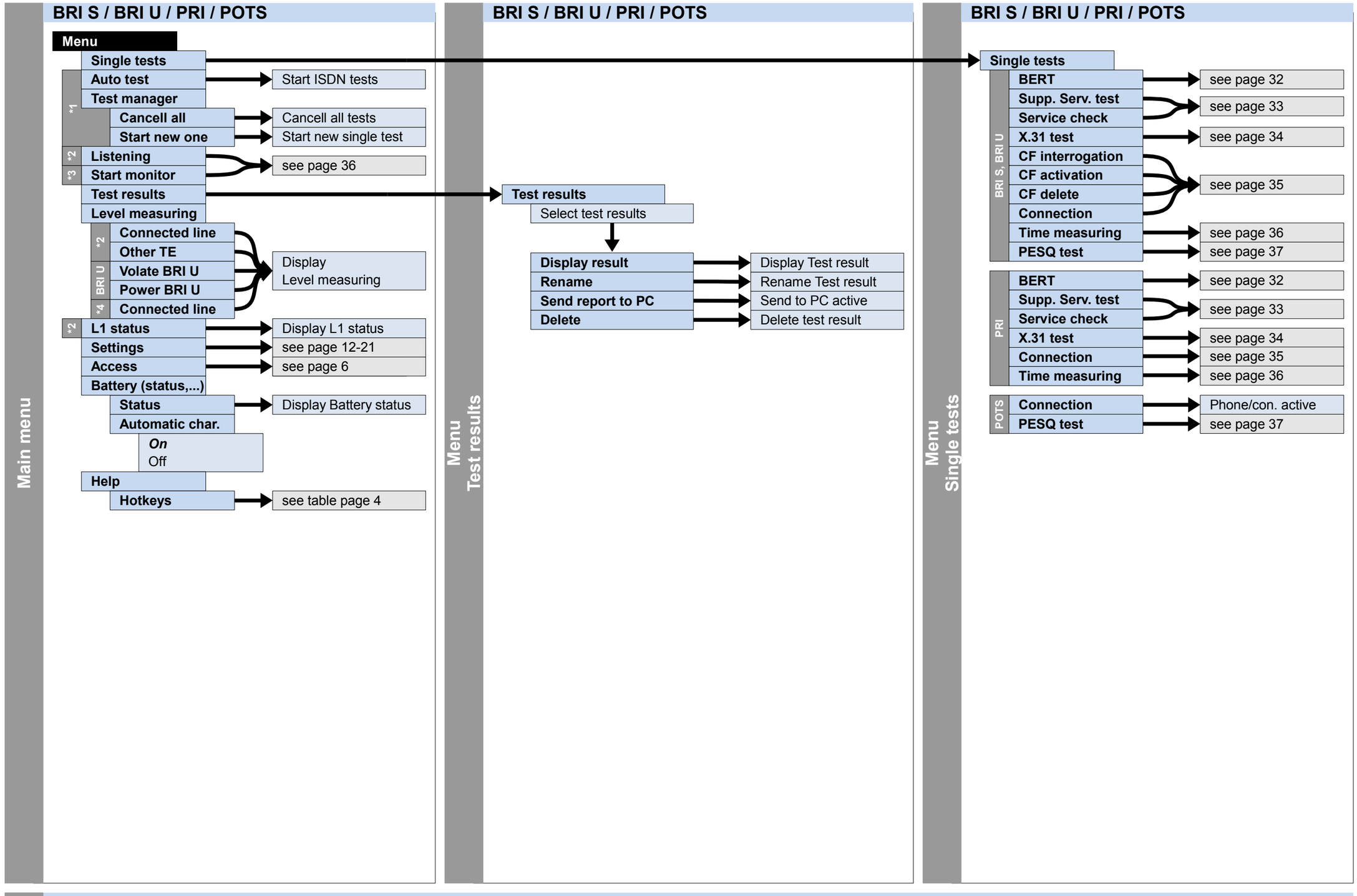
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Note

*1 = BRI S, BRI U, PRI

*2 = BRI S, PRI

*3 = BRI S, PRI, POTS

*4 = POTS

Settings and reset
Trace/remote, Device, Numbers, Backup/Restore

Cross reference:

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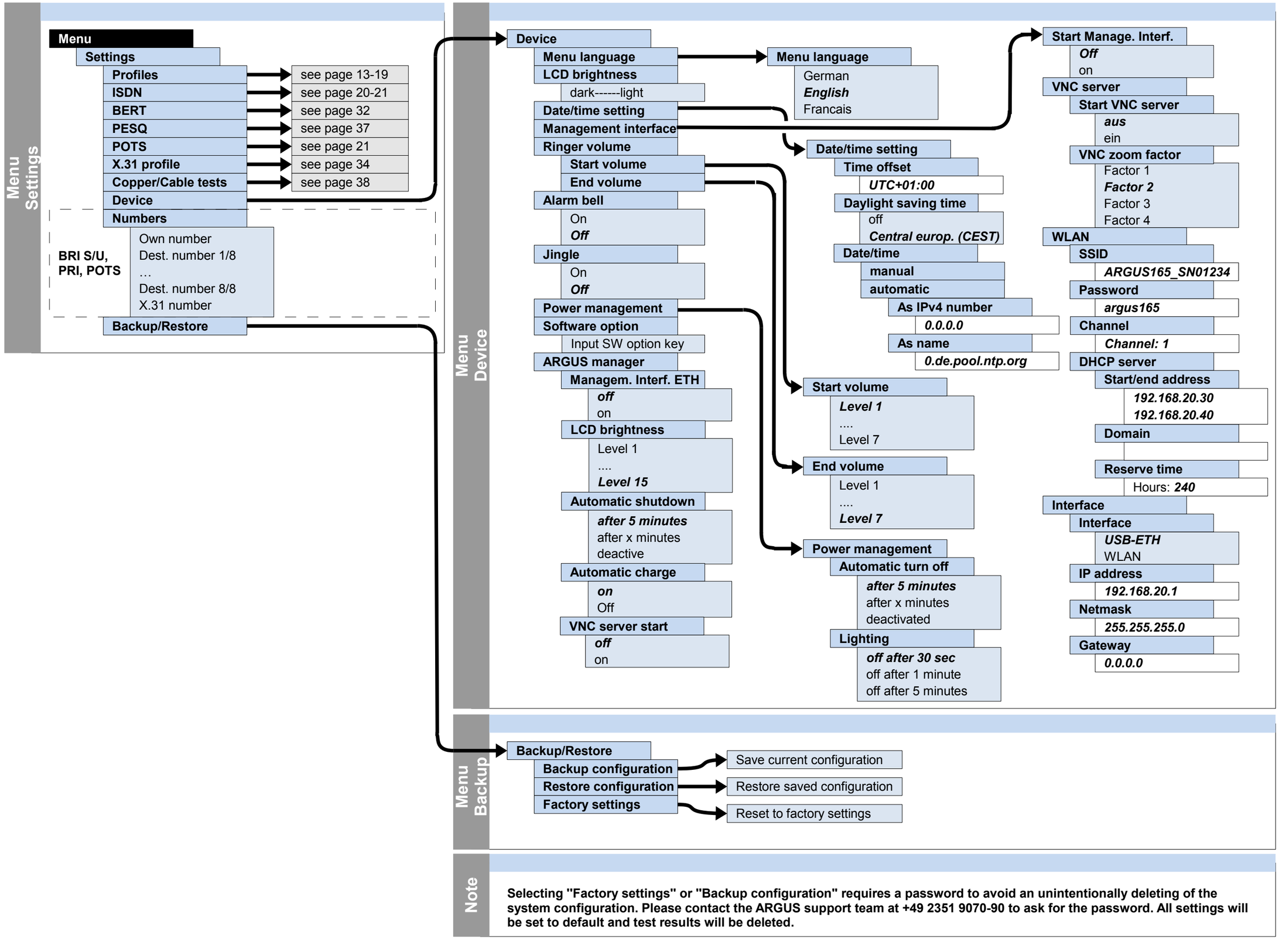
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Settings
Profile

Cross reference:

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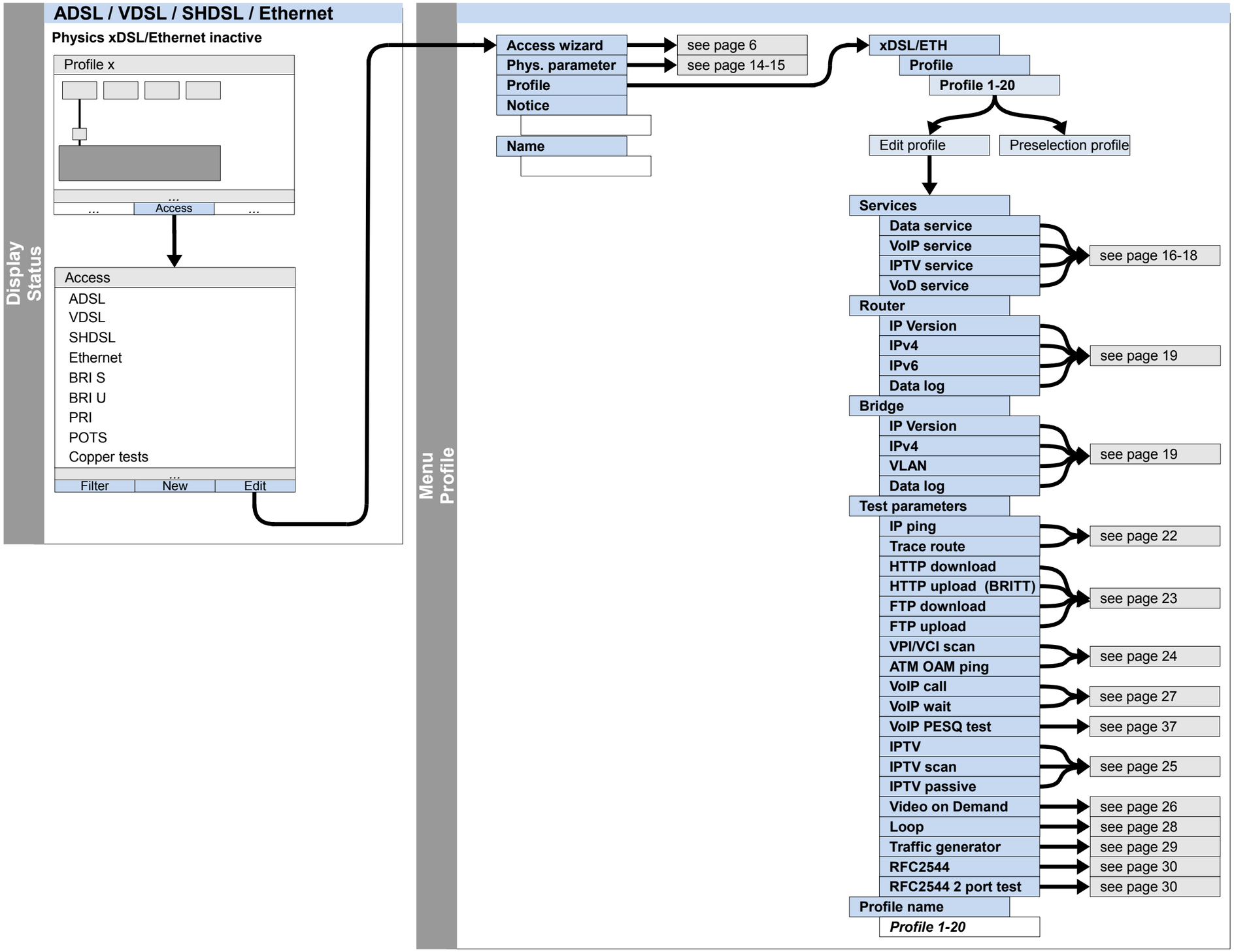
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Settings
Phys. parameters: ADSL, VDSL, Ethernet

Cross reference:

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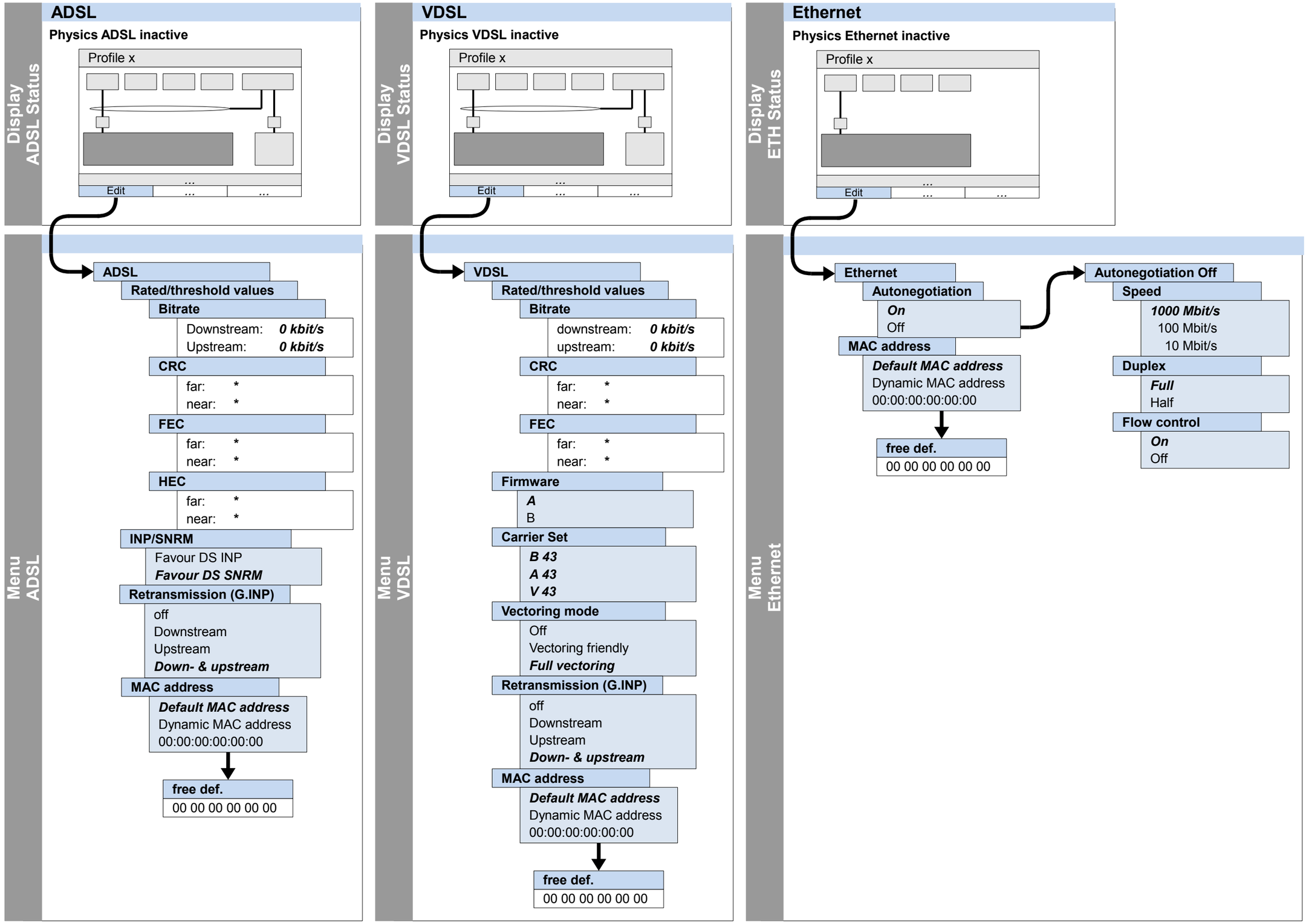
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Settings
Phys. parameters: SHDSL

Cross reference:

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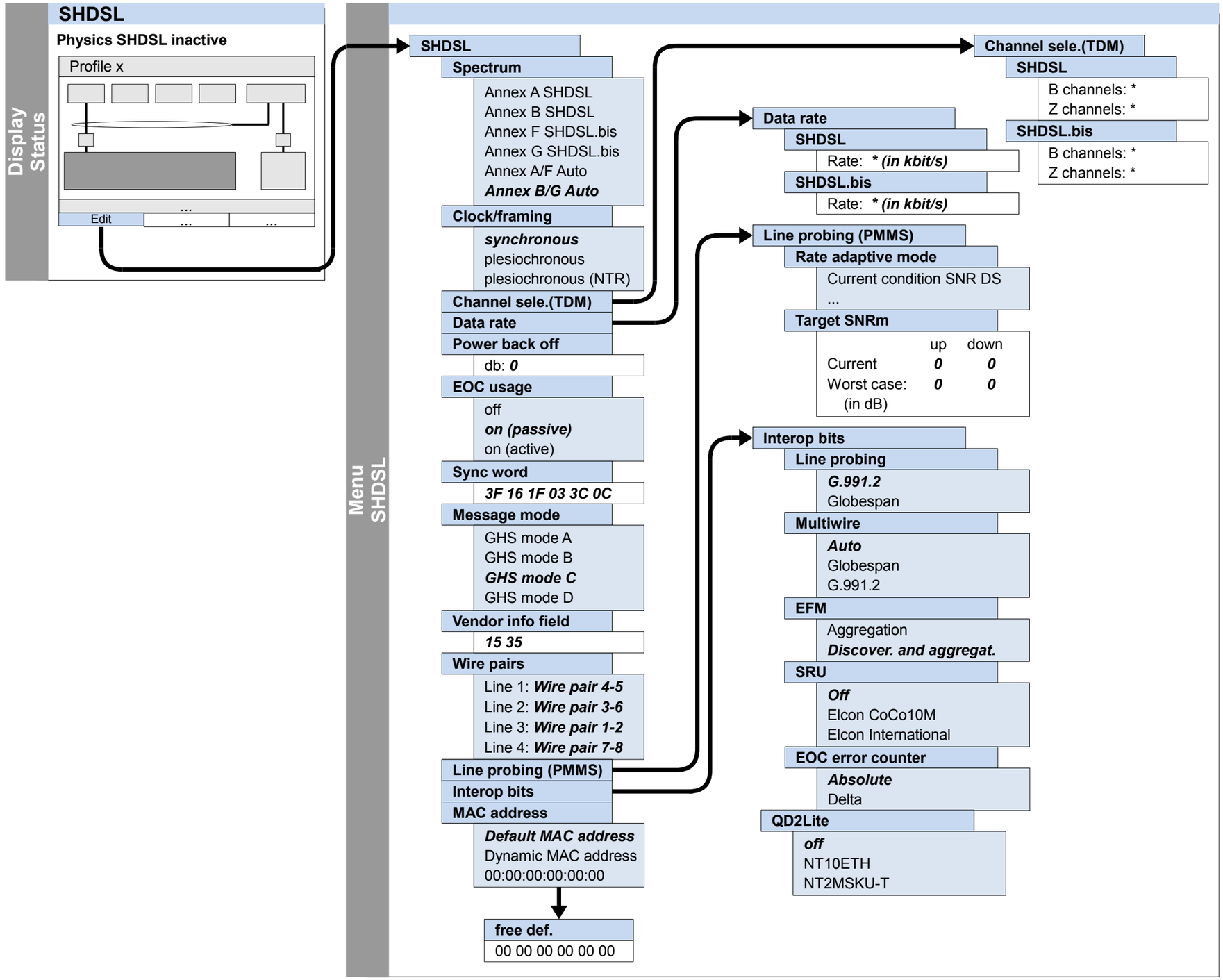
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Settings
Profile – Services (Data service, VoIP service, IPTV service, VoD service), Virt. Profile

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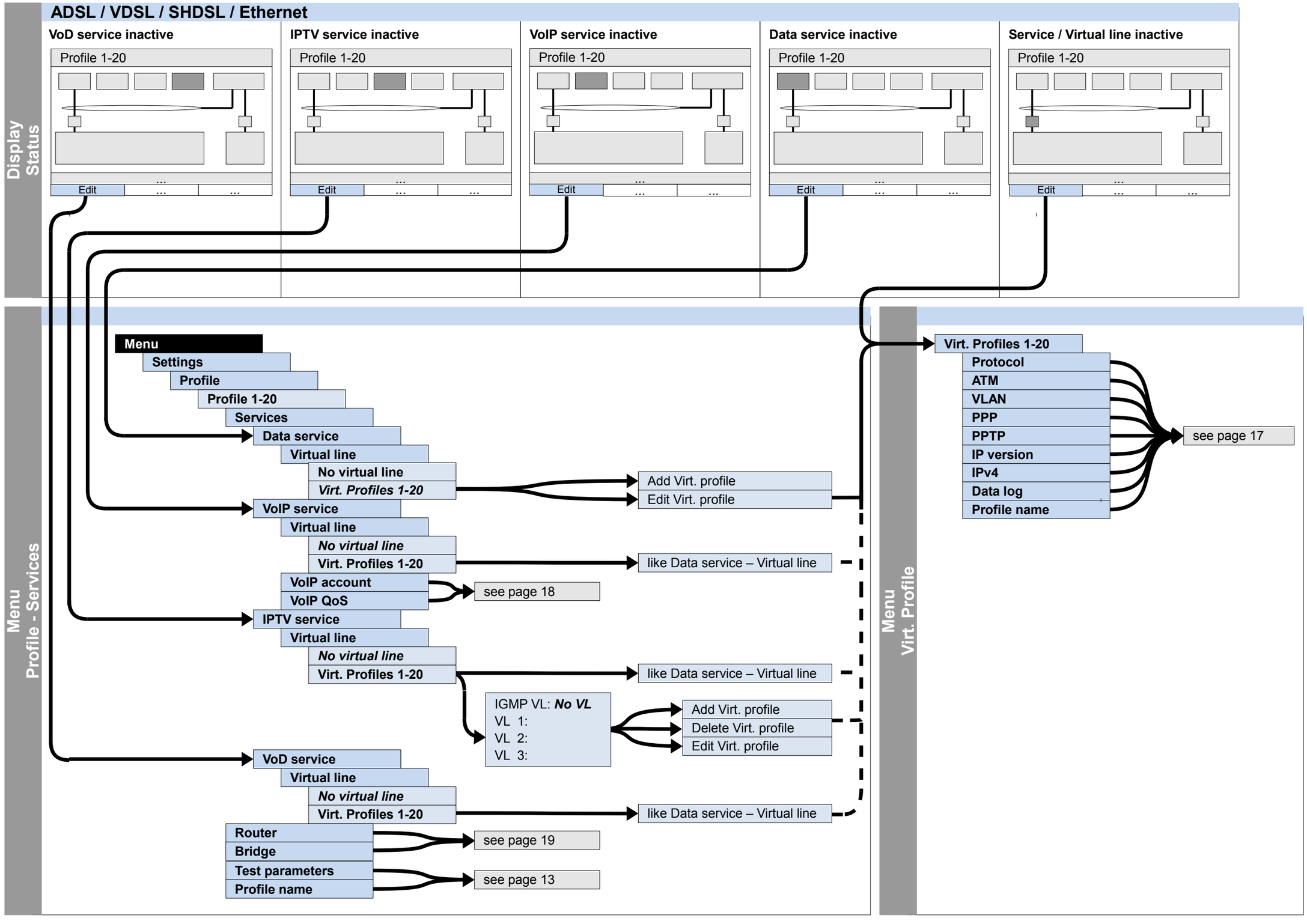
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Settings
Profiles – Virt. profile (Protocol, ATM, VLAN, PPP, PPTP, IP, Data log)

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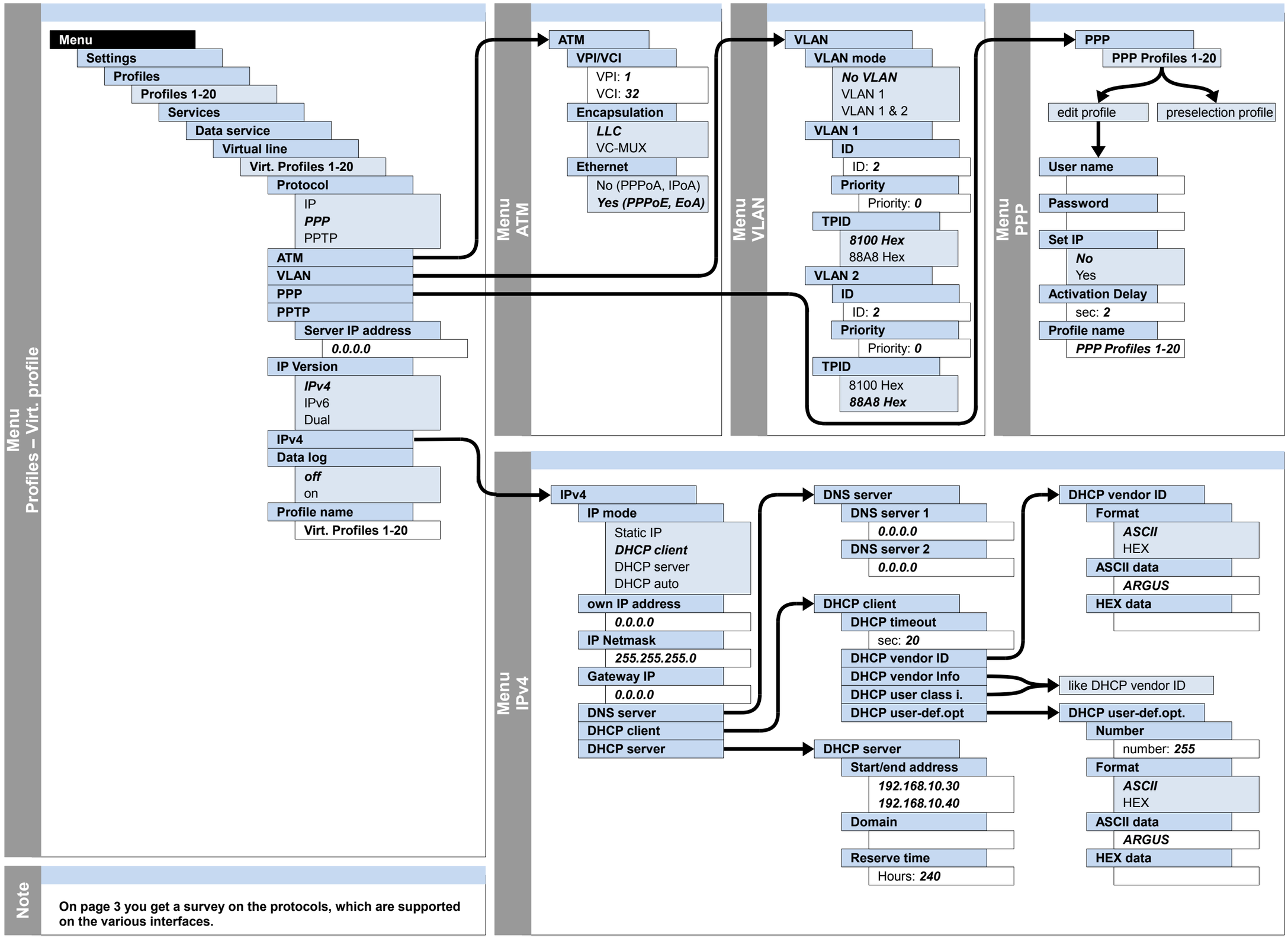
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Note

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

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ADSL / VDSL / SHDSL / 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 16
- VoIP account
- VoIP QoS

Menu VoIP Profiles

- VoIP account
- VoIP profile 1-3
- 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
- TCP fallback
  - ***No***
  - Yes
- TLS
  - ***No***
  - Yes
- SIP Domain
- Listen port
  - Port num.: ***5060***
- Remote port
  - Port num.: ***5060***
- User agent
  - ***Argus165***
- Qualify
  - ***No***
  - Yes
- Reg. expire
  - Time: ***3600 sec.***
- 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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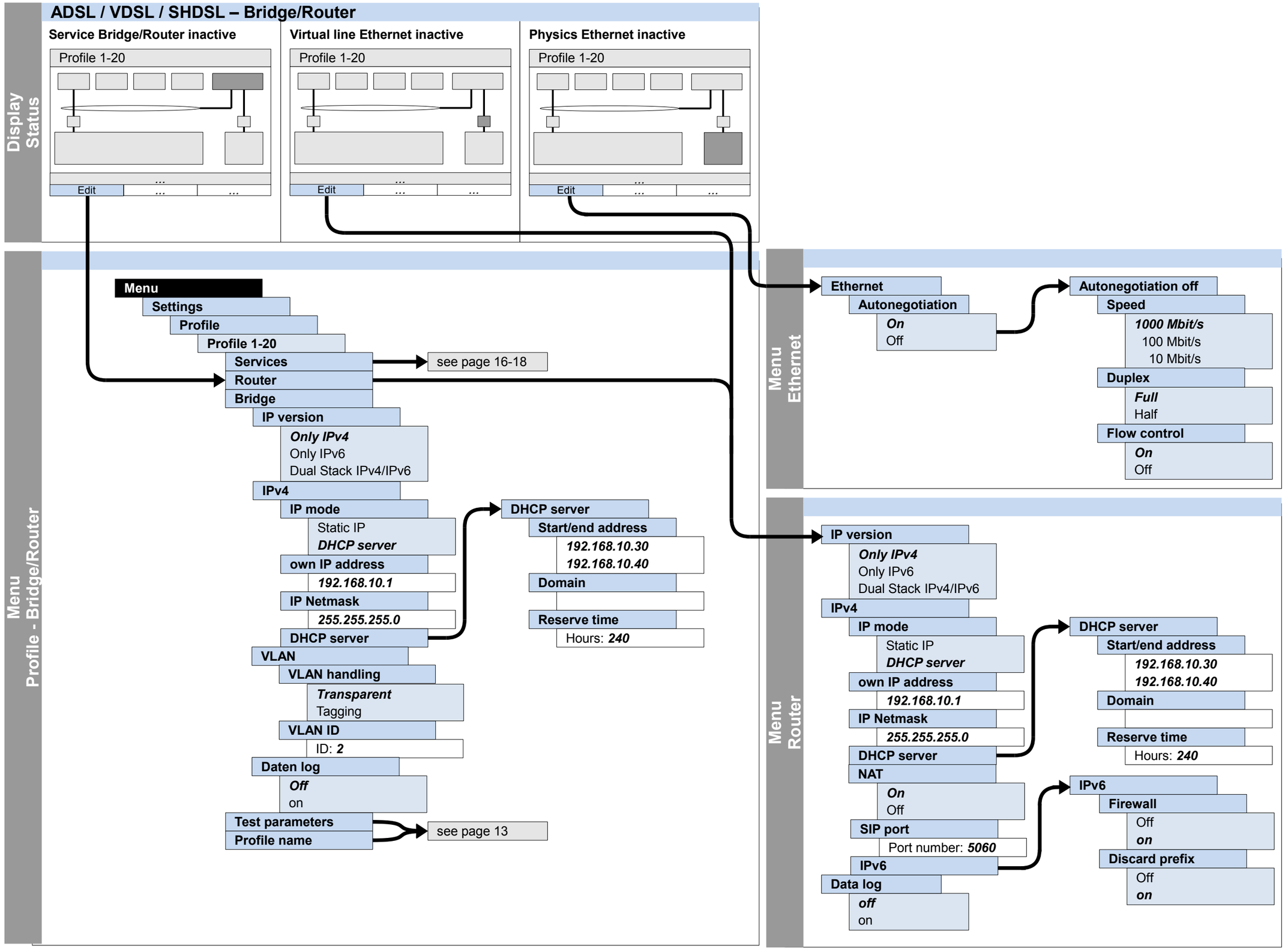
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Settings
ISDN (General, BRI S, BRI U)

Cross reference:

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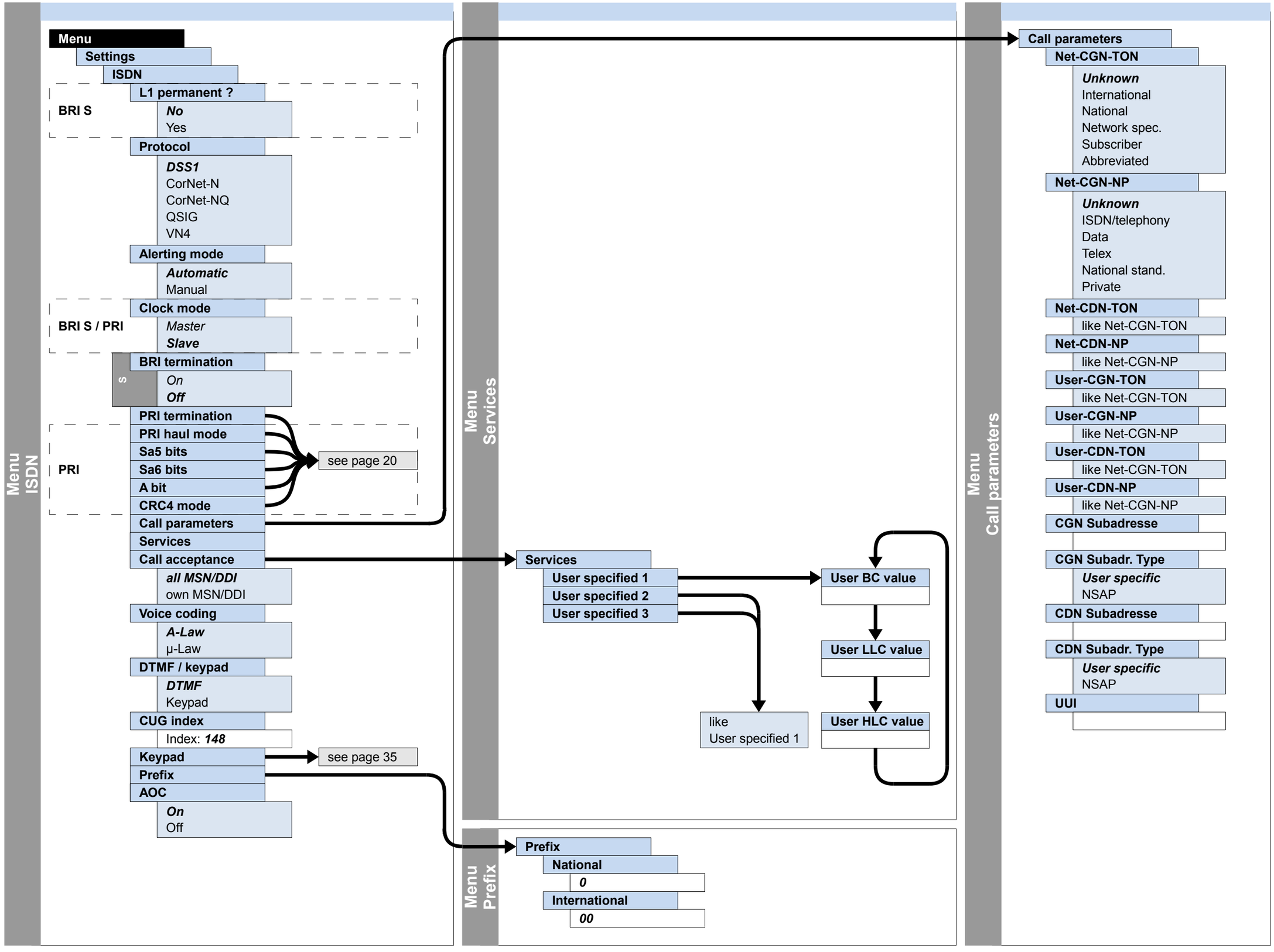
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Settings
ISDN (PRI), POTS

Cross reference:

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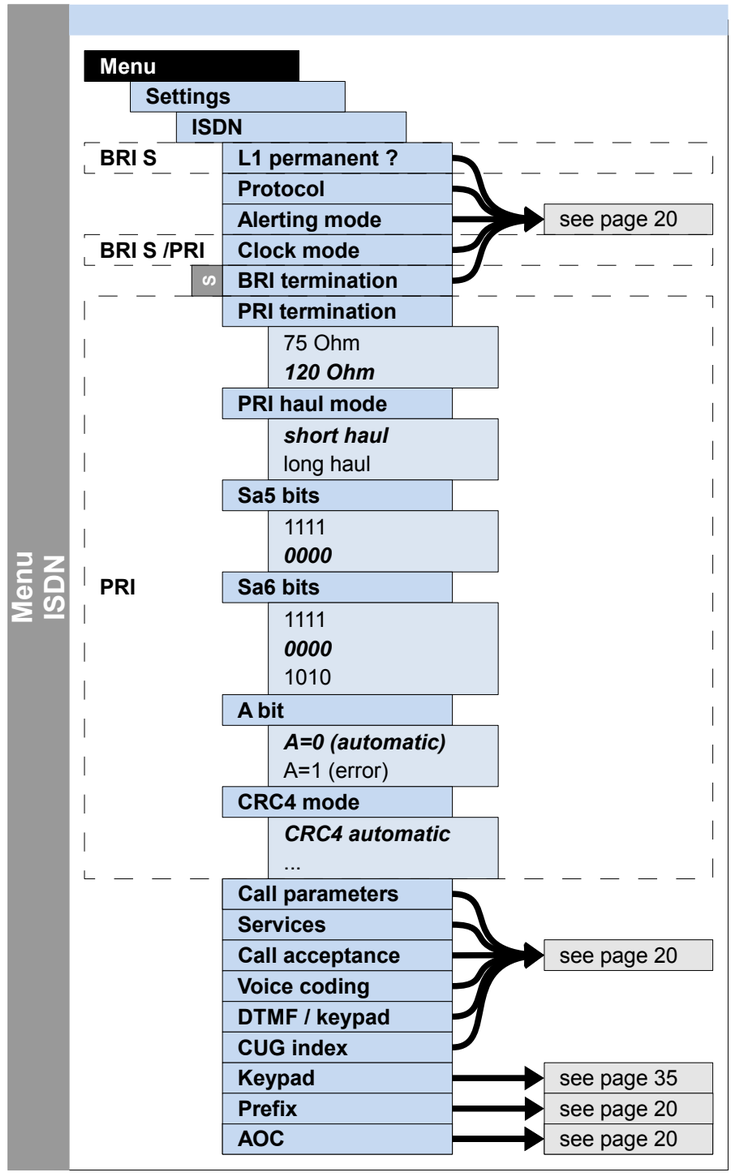
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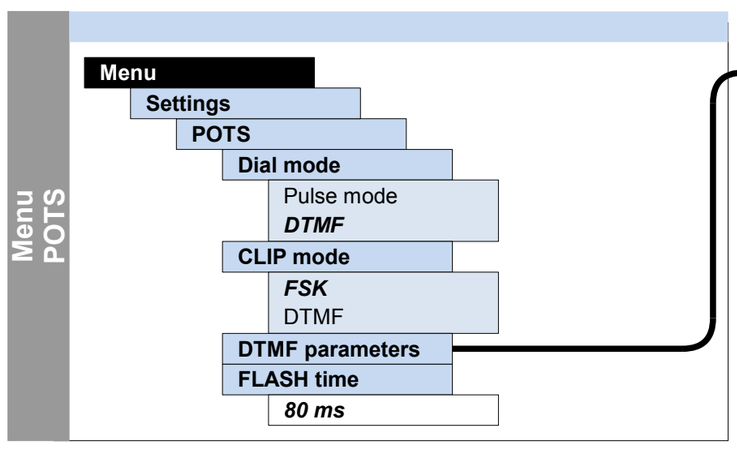
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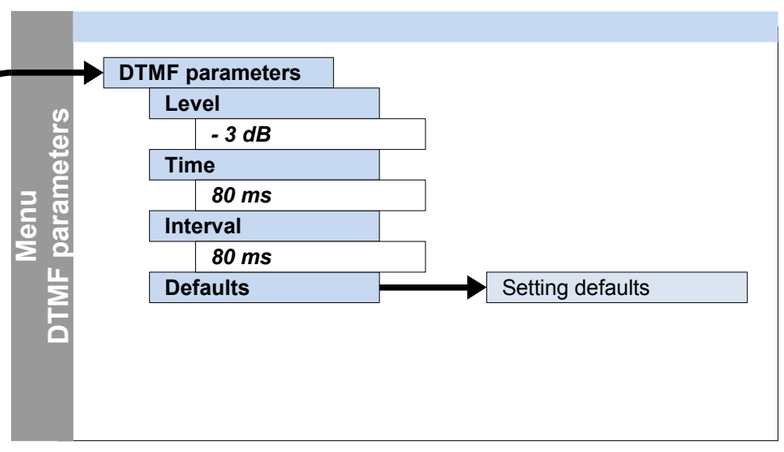
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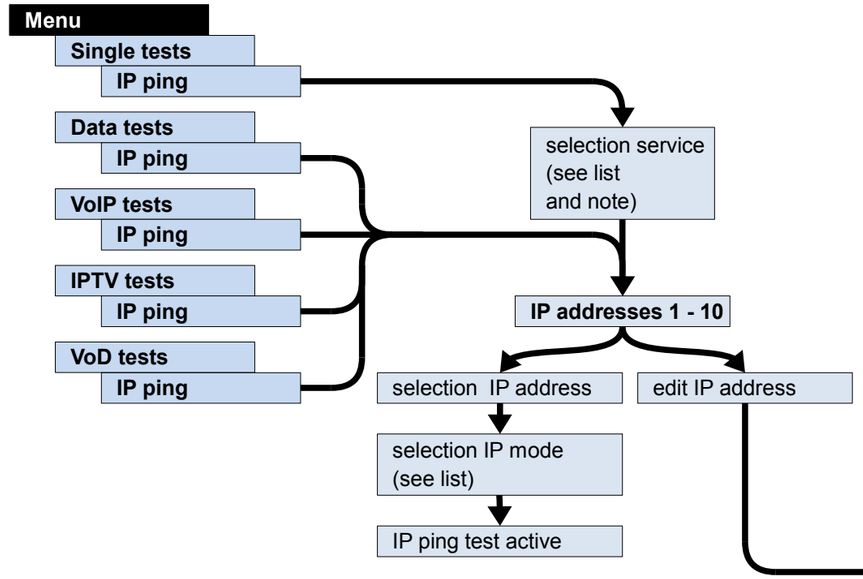
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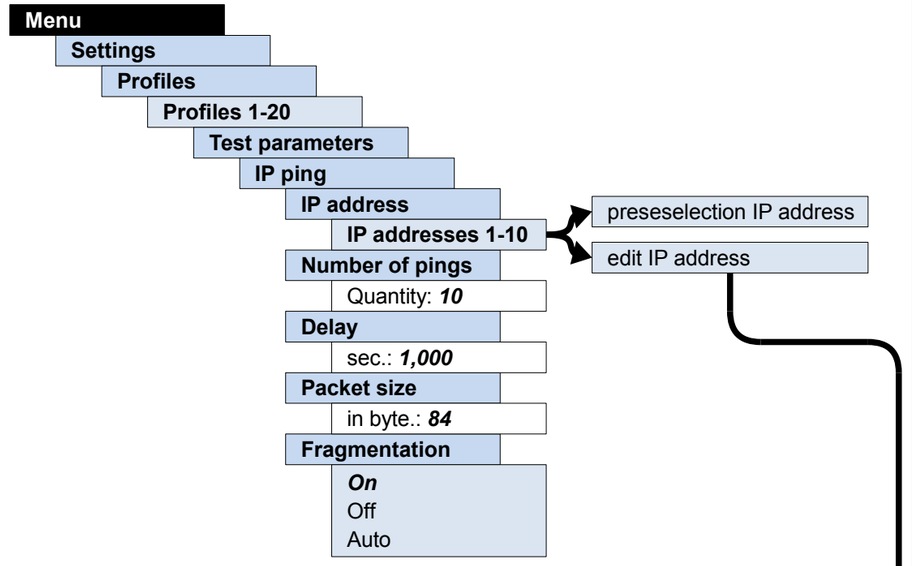
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IP ping Test operation

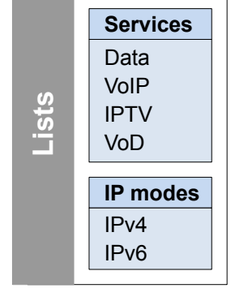
ADSL / VDSL / SHDSL / Ethernet



IP ping Test configuration

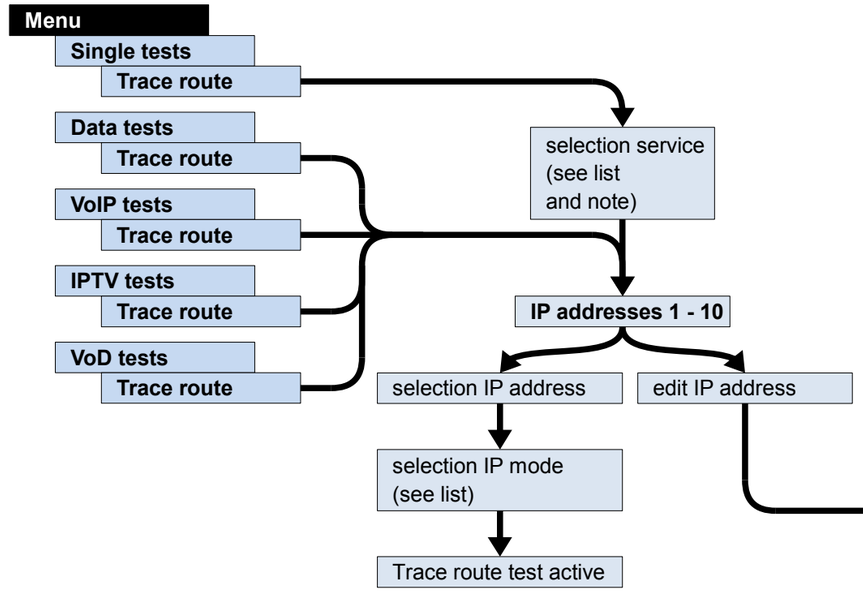


Lists

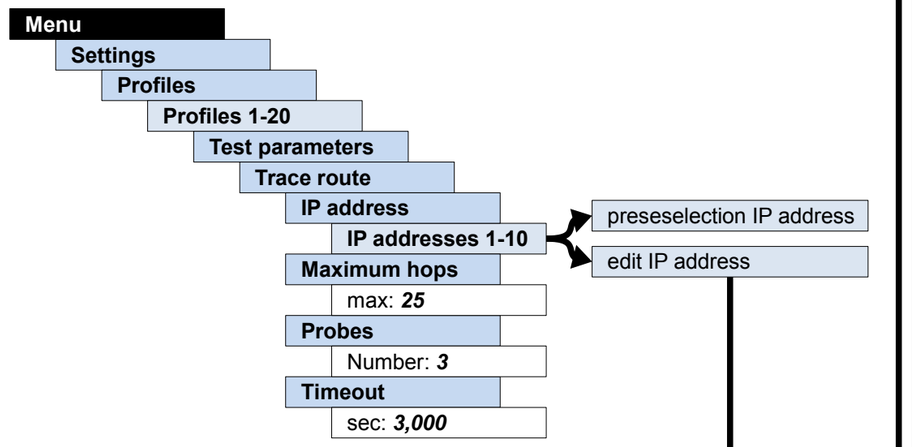


Trace route Test operation

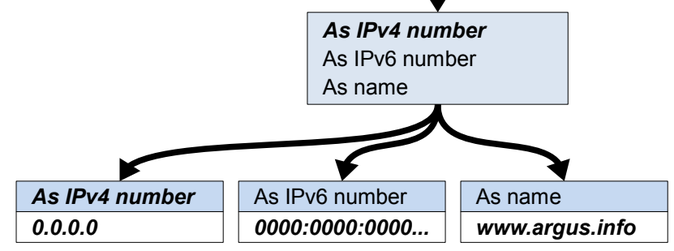
ADSL / VDSL / SHDSL / Ethernet



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.

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HTTP download/-upload Test operation

ADSL / VDSL / SHDSL / 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 / SHDSL / 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 / SHDSL / 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 / SHDSL / 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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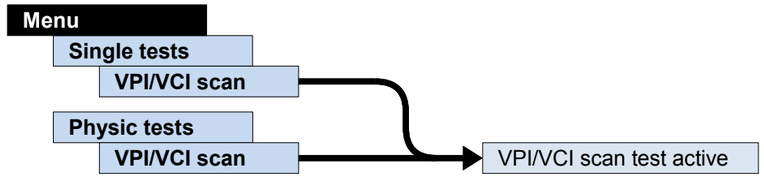
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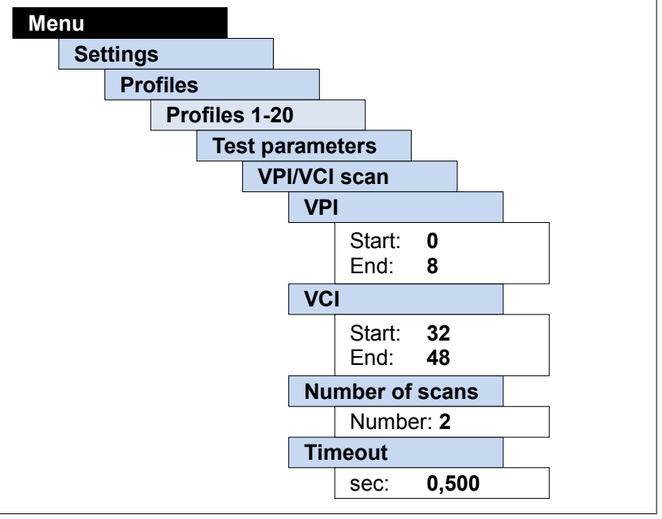
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VPI/VCI scan Test operation

ADSL / SHDSL ATM

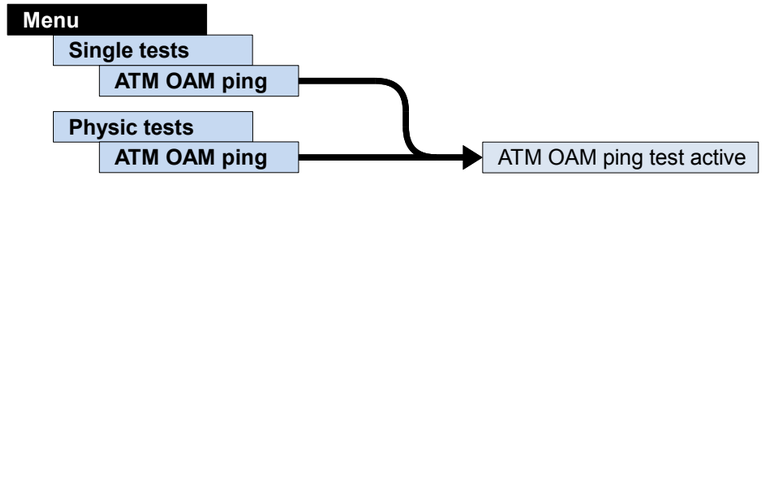


VPI/VCI scan Test configuration

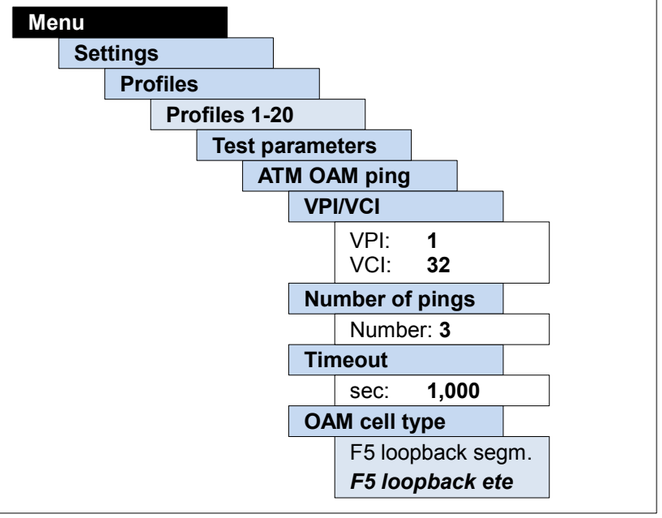


ATM OAM ping Test operation

ADSL / SHDSL ATM



ATM OAM ping Test configuration



IP

Configuration and operation
IPTV, IPTV passive, IPTV scan

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IPTV Test operation

ADSL / VDSL / SHDSL / 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 / SHDSL / 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 Test configuration

ADSL / VDSL / SHDSL / Ethernet

- **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 operation

ADSL / VDSL / SHDSL / 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 scan Test configuration

ADSL / VDSL / SHDSL / Ethernet

- **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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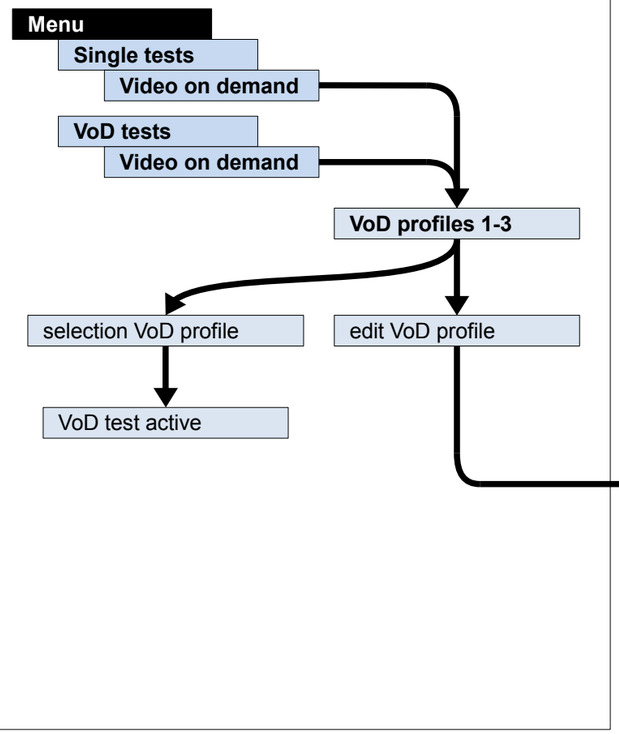
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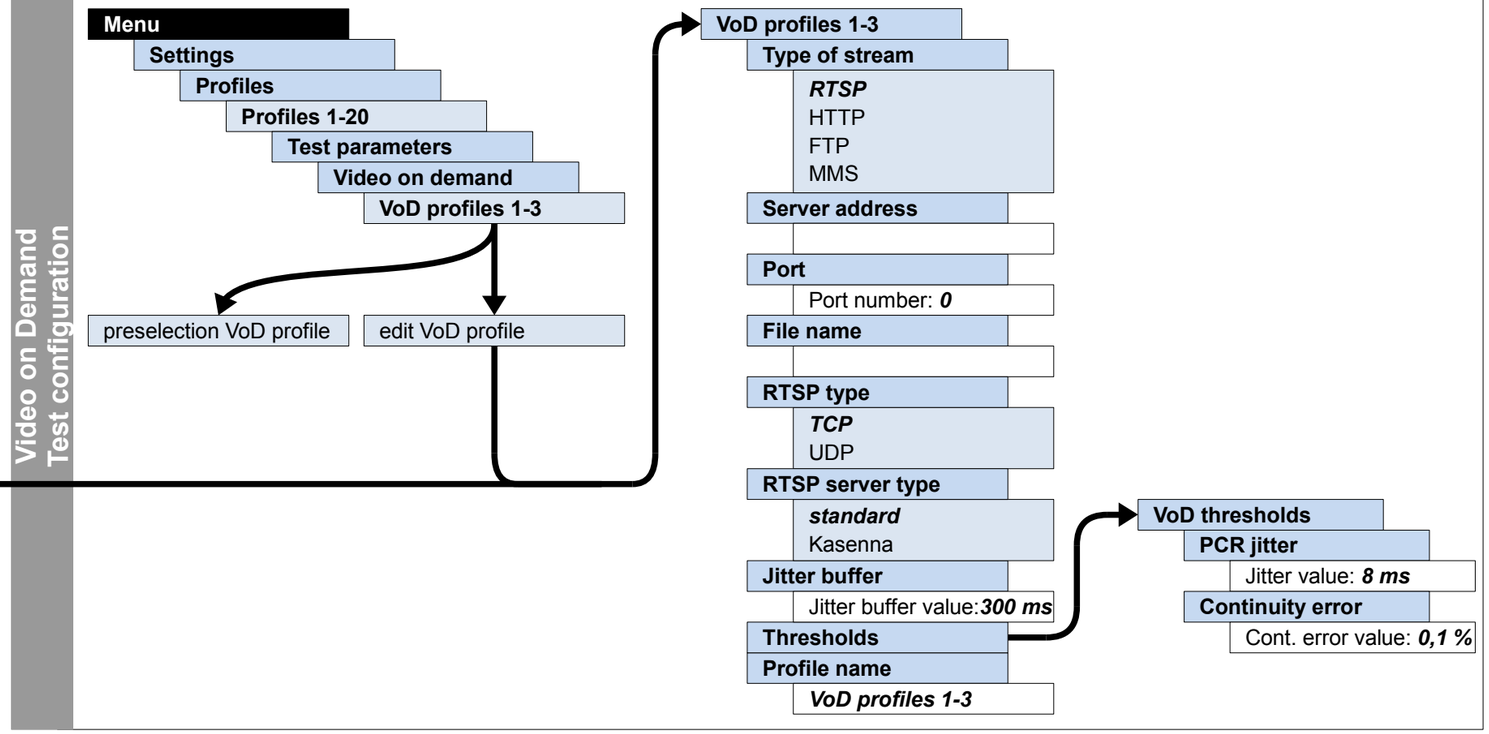
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ADSL / VDSL / SHDSL / Ethernet

Video on demand Test operation



Video on Demand Test configuration



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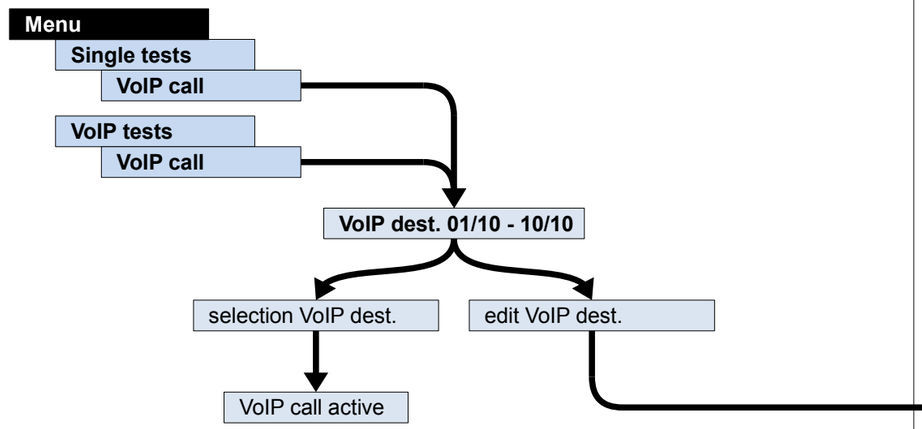
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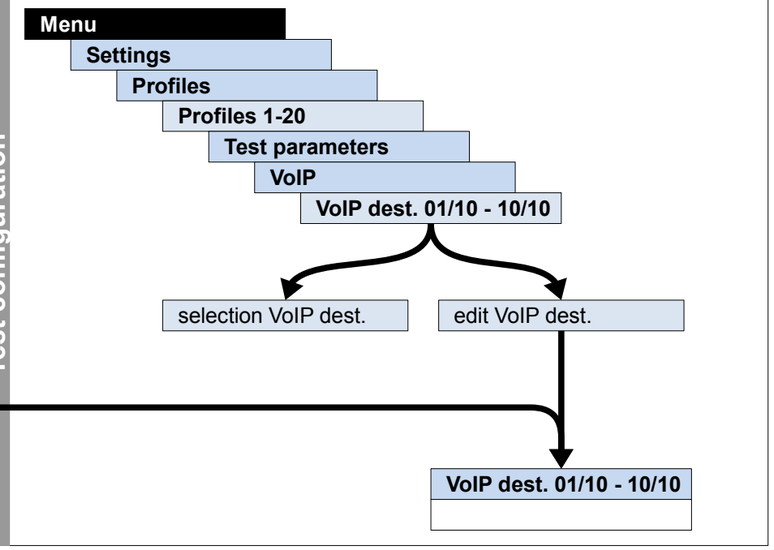
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VoIP call Test operation

ADSL / VDSL / SHDSL / Ethernet

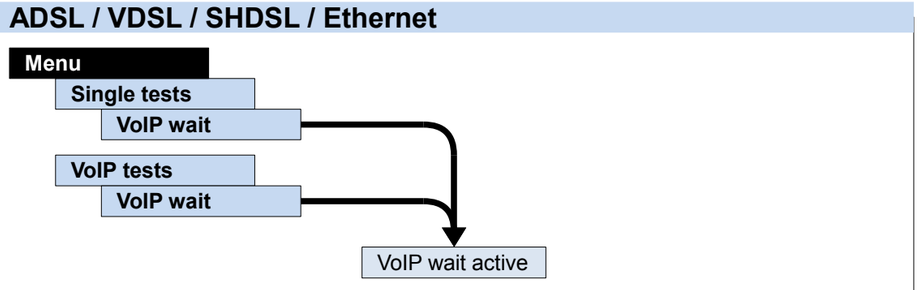


VoIP call Test configuration

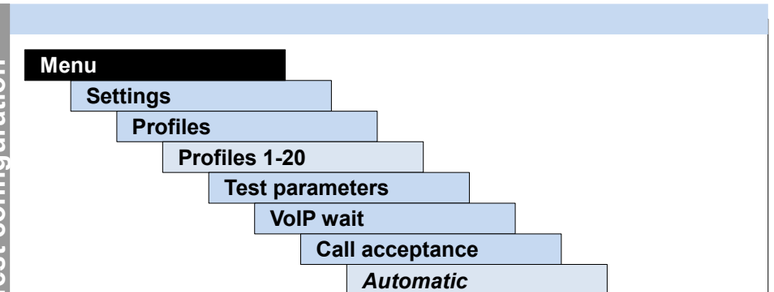


VoIP wait Test operation

ADSL / VDSL / SHDSL / Ethernet



VoIP wait Test configuration



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SHDSL ATM/EFM / VDSL / Ethernet

Test operation Loop

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

→ Loop active

Test configuration Loop

- **Menu**
  - **Settings**
    - **Profiles**
      - **Profiles 1-20**
        - **Test parameters**
          - **Loop**
            - **Layer 1**
            - **Layer 2**
              - **MAC mode**
                - ***Only own MAC***
                - Loop everything
              - **Own VPI/VCI**
                - VPI: ***1***
                - VCI: ***32***
              - **VLAN**
                - **VLAN mode**
                - ***No VLAN***
                - VLAN 1
                - VLAN 1 & 2
                - **VLAN 1**
                - **ID**
                - ID: ***2***
                - **Priority**
                - Priority: ***0***
                - **TPID**
                - ***8100 Hex***
                - 88A8 Hex
                - **VLAN 2**
                - **ID**
                - ID: ***2***
                - **Priority**
                - Priority: ***0***
                - **TPID**
                - 8100 Hex
                - ***88A8 Hex***
            - **Layer 3**
              - **Own IP mode**
                - ***Static IP***
                - DHCP client
              - **Own IP address**
                - ***0.0.0.0***

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SHDSL EFM / ATM, VDSL, Ethernet

Traffic generator
Test operation

- **Menu**
  - **Single tests**
    - **Traffic generator**
  - **Physic tests**
    - **Traffic generator**

→ Traffic generator active

Traffic generator
Test configuration

- **Menu**
  - **Settings**
    - **Profile**
      - **Profile 1-20**
        - **Test parameters**
          - **Traffic generator**
            - **Layer 1**
            - **Layer 2**
              - **Dest. MAC address**
                - ***00 00 00 00 00 00***
              - **Own VPI/VCI**
                - VPI: ***1***
                - VCI: ***32***
              - **VLAN** → Menu VLAN
            - **Layer 3**
              - **Own IP**
                - **Own IP mode**
                  - ***Static IP***
                  - DHCP client
                - **Own IP address**
                  - ***0.0.0.0***
                - **Gateway**
                  - ***0.0.0.0***
                - **Netmask**
                  - ***255.255.255.0***
                - **IP protocol**
                  - ***0x05***
              - **Dest. IP address**
                - ***0.0.0.0***
            - **Layer 4**
              - **UDP ports**
                - Source port: **10000**
                - Dest, port: **20000**
            - **Bandwith**
              - ***1000.000 Mbit/s***
            - **Mode**
              - Time
              - Frame
              - ***Endless***
            - **Frame size**
              - ***1518 Bytes***
            - **Follow-up time**
              - ***Seconds: 3***
            - **TTL**
              - ***Hops: 128***

Menu VLAN

- **VLAN**
  - **VLAN mode**
    - ***No VLAN***
    - VLAN 1
    - VLAN 1 & 2
  - **VLAN 1**
    - **ID**
      - ID: ***2***
    - **Priority**
      - Priority: ***0***
    - **TPID**
      - ***8100 Hex***
      - 88A8 Hex
  - **VLAN 2**
    - **ID**
      - ID: ***2***
    - **Priority**
      - Priority: ***0***
    - **TPID**
      - 8100 Hex
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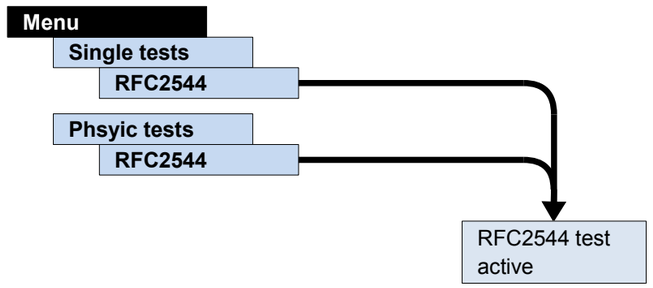
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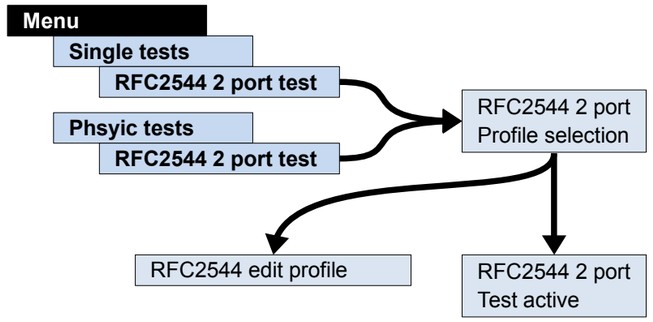
RFC2544 test Test operation

SHDSL EFM / ATM, VDSL, Ethernet IP based

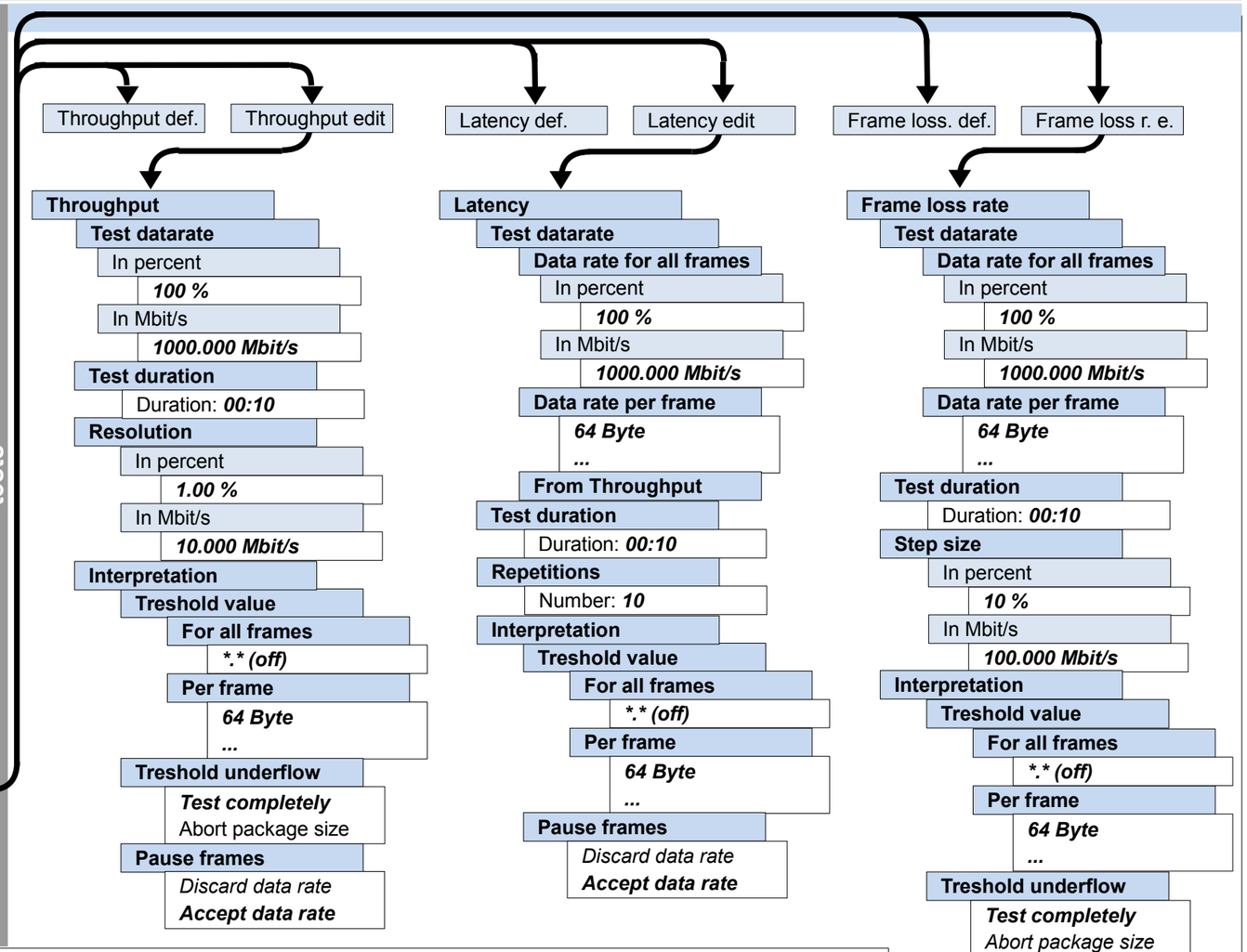


RFC2544 2 port Test operation

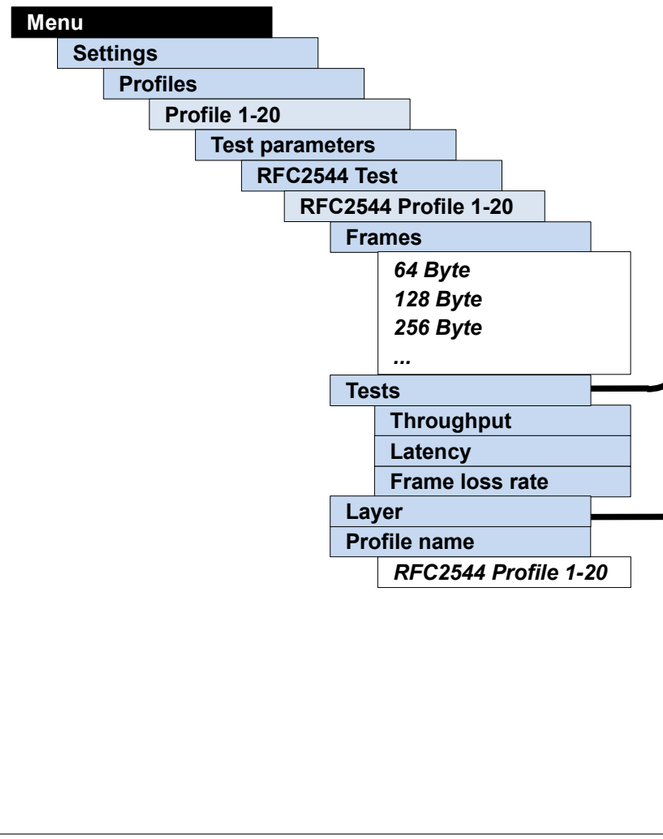
ADSL / VDSL / SHDSL / Ethernet 2 port access



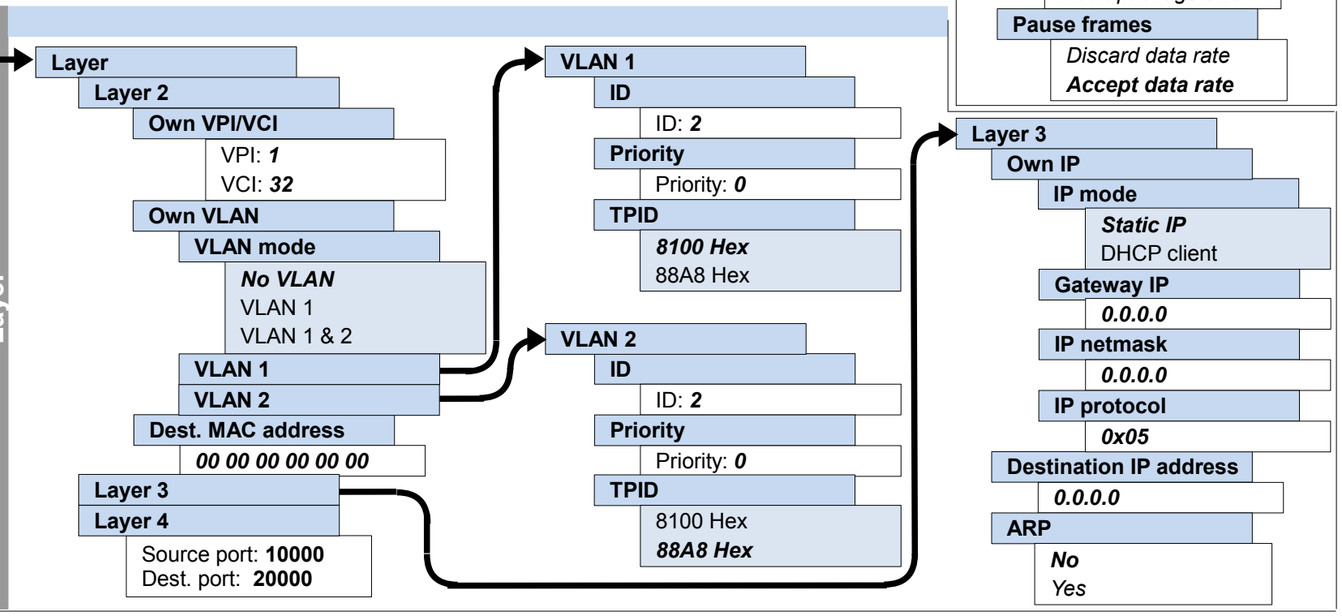
RFC2544 test / 2 port tests



RFC2544 test / 2 port Test configuration



RFC2544 test / 2 port Layer



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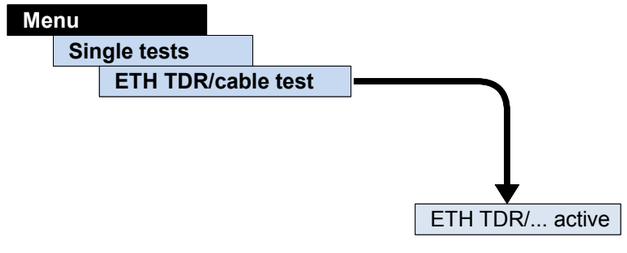
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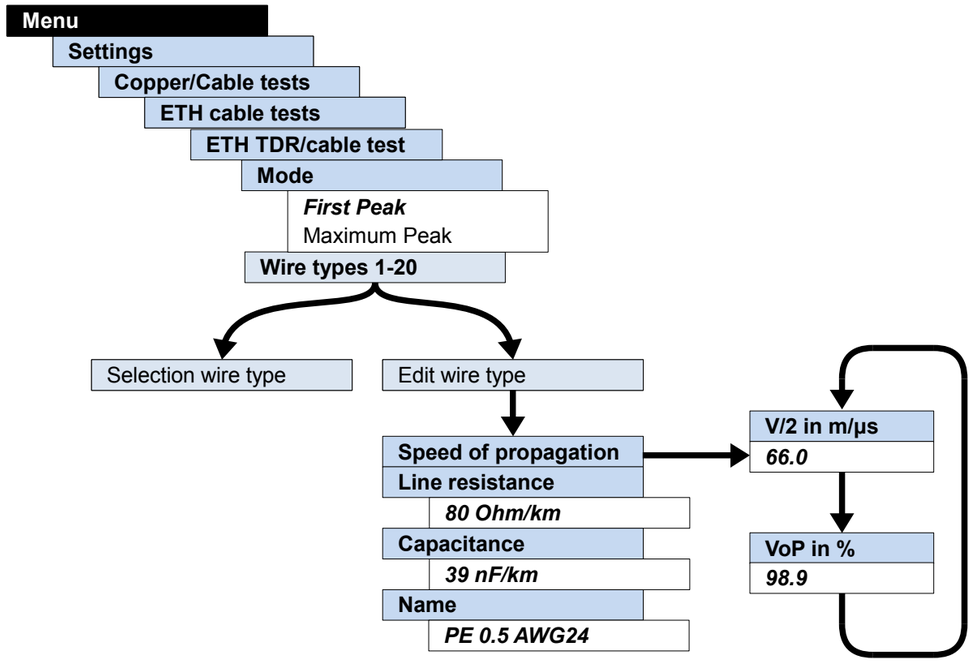
Others	page
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ETH TDR/Cable tests – Test operation

Ethernet cable tests

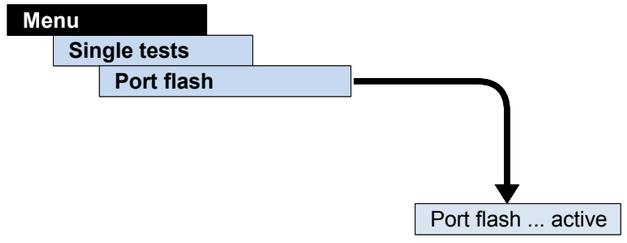


ETH TDR/Cable tests – Test configuration

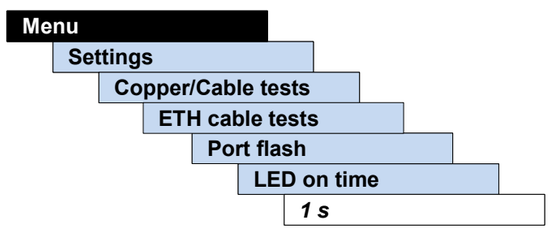


Port flash – Test operation

Ethernet cable tests



Port flash – Test configuration



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 / PRI

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

MegaBERT pattern
2^15-1
2^15-1 inverse
2^20/QRSS
2^20/QRSS/inverse
Space (0000)
Mark (1111)

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

PRI

Leased line

Menu
Single tests
BERT
BERT start
B-channel (64k)
B-channel (128k)
MegaBERT fr.
MegaBERT unfr.
D-channel
BERT wait
B-channel (64k)
B-channel (128k)
MegaBERT fr.
MegaBERT unfr.
D-channel
B-channel-loop
B-channel
all framed
all unframed

B-chan. select
1. B-chan. select
2. B-chan. select
Pattern select (see list)
B-chan. select
1. B-chan. select
2. B-chan. select
Pattern select (see list)
B-chan. select
B-channel loop wait active
BERT wait active
BERT active

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Supplementary services
Test operation

BRI S/U / PRI

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 / PRI

TE ... / NT ...

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

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

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

Cross reference:

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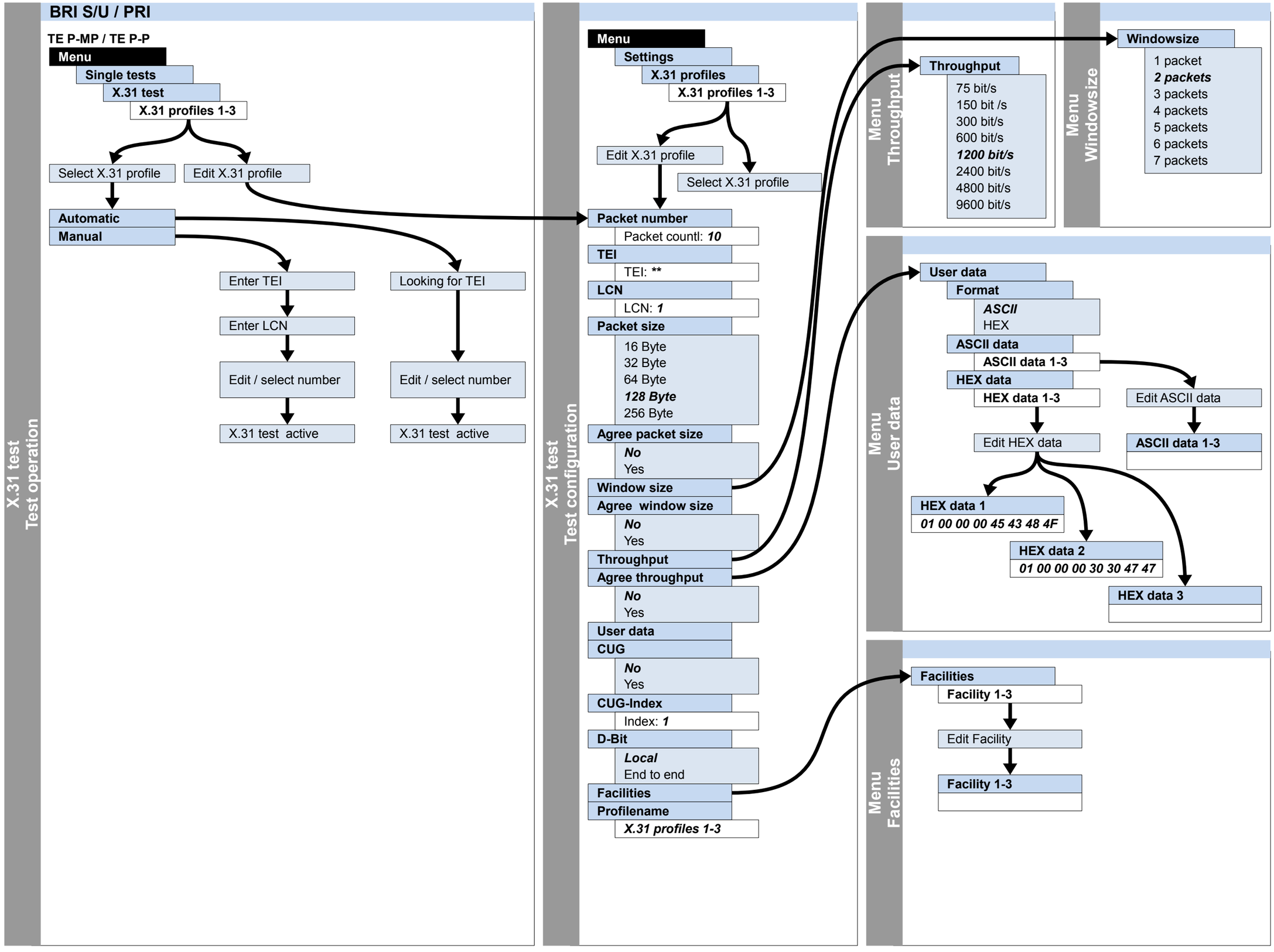
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CF interrogation Test operation

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 / PRI

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

PRI

TE ... / NT ...

Menu → Single tests → Time measuring → Conn. Setup time → Edit/ select number → Select service (see list) → Select B-channel → Conn. setup 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

Listening Test operation

BRI S

Monitor

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

PRI

Monitor

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

Monitor Test operation

BRI S / PRI / POTS

Monitor

Menu → Start monitor → Monitor active

Auto. test Test operation

BRI S / BRI U / PRI

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

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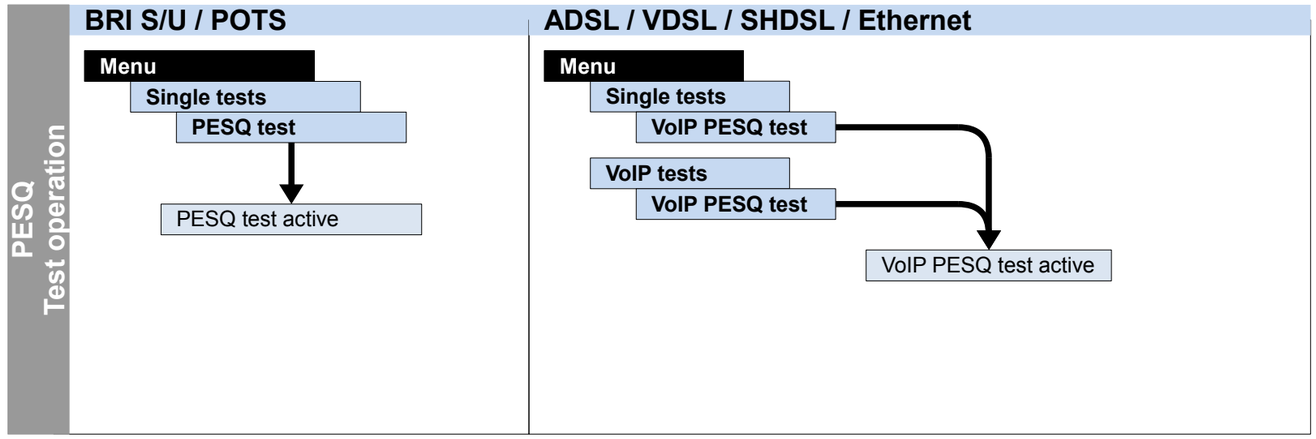
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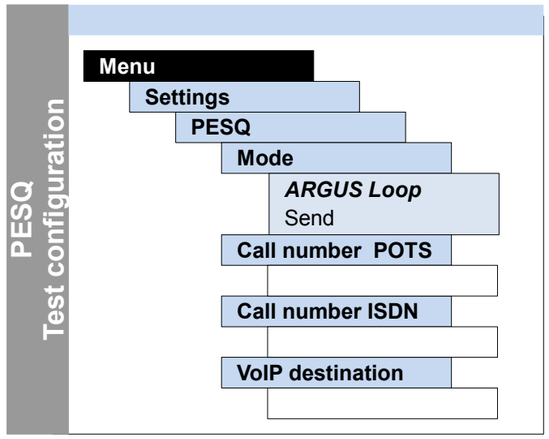
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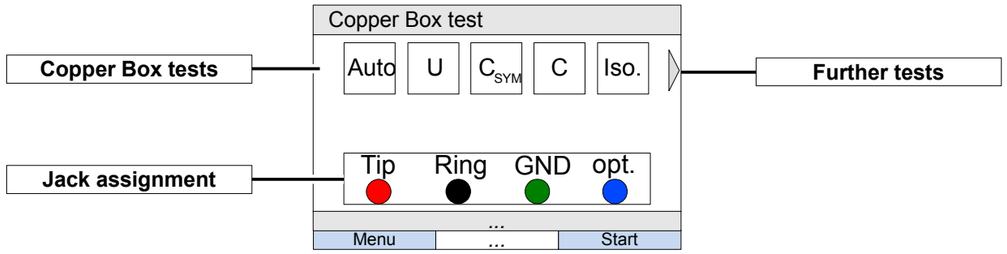
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Legend status

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	-											
1	Auto test prof.	-										
2	-											
3	-				Polarity	-						
4	-				Threshold 105 V	-						
5	-				Meas. voltage	-						
6	Wire types	-	Wire types		-	Wire types		-				
7	-											
8	-		Susceptibility					-				
9	-	Display mode	-	Display mode		-	Display mode		-			
⎍	-											
#	-	Input resistance	-									
* then 0	-											
* then 1	Copper Box info											
* then 2	-											
* then 3	-											
* then 6	-											
* then 7	-											

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Copper Box

Copper Box Test operation

Menu
Single tests
Copper Box
Auto
U
CSym
C
Iso.
RSym
R
I=
LCL
NEXT
Sig.
Rem.
Short circuit a/T-b/R
Exchange connect
Short circ. a/T-b/R-GND
Open circuit
Tone mode

→ Copper Box active

Auto test profiles
Auto test
Auto test sequence
Notice
Profile name
Auto test

Auto test
U | C | Iso. | LCL | ...
Tip | Ring | GND | opt.
Setting | Insert | Delete

Polarity *2
Range limit *2
Measurement voltage *2
Susceptibilty *4
Start function *6
Automatic start
Pause: manual loop
Command *7
Short circuit a/T-b/R
Exchange connect
Short circ. a/T-b/R-GND
Open circuit
Tone mode
Waiting time
100 ms

→ See below

→ Insert a new test and select the jack assignment

Copper Box Test configuration

Menu
Single tests
Copper Box
Auto
U
CSym
C
Iso.
RSym
R
I=
LCL
NEXT
Sig.
Rem.

Copper Box
Auto test profiles *1
Polarity *2
Standard
Inverse
Range limit *2
1 MOhm
10 MOhm
100 MOhm
1000 MOhm
Measurement voltage *2
High voltage (105 V)
Low voltage (8 V)
Wire types *3
Susceptibility *4
Robust for ext. voltage
Insecure (fast)
Display mode *5
Normal display mode
Min/Max display mode

→ **Wire types 1-20**
→ Wire type selection
→ 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
66.0
VoP in %
98.9

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.

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Loop	28
Traffic generator	29
RFC2544 test	30
Connection (POTS)	11
Monitor (POTS)	36
PESQ	37
ETH cable tests	31

Others	page
Legend Protocol-overview	3
Hotkeys	4
Test leads	42-45

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
66.0
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
66.0
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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Test results	7, 11
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Parallel-, auto tests	9, 10
Settings	12-21
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IP and ATM tests	page
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VPI/VCI scan ATM OAM ping	24
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ISDN tests	page
BERT	32
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CF-Tests, Connect.	35
Time measuring Auto. Test	36

Copper tests	page
Copper Box	38-39
RC measurement	40
Line scope, TDR	41

Other tests	page
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Traffic generator	29
RFC2544 test	30
Connection (POTS)	11
Monitor (POTS)	36
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Others	page
Legend Protocol-overview	3
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Test leads	42-45

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
66.0
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

Test leads and pin assignments
ADSL, VDSL

Cross reference:

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Access wizard	6
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Single tests Data-, VoIP-, IPTV-, VoD-, Bridge-, Physic tests	7-11
Test results	7, 11
Status	7
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HTTP / FTP downl. FTP upload / server	23
VPI/VCI scan ATM OAM ping	24
IPTV / passive /scan	25
Video on Demand	26
VoIP call / wait	27

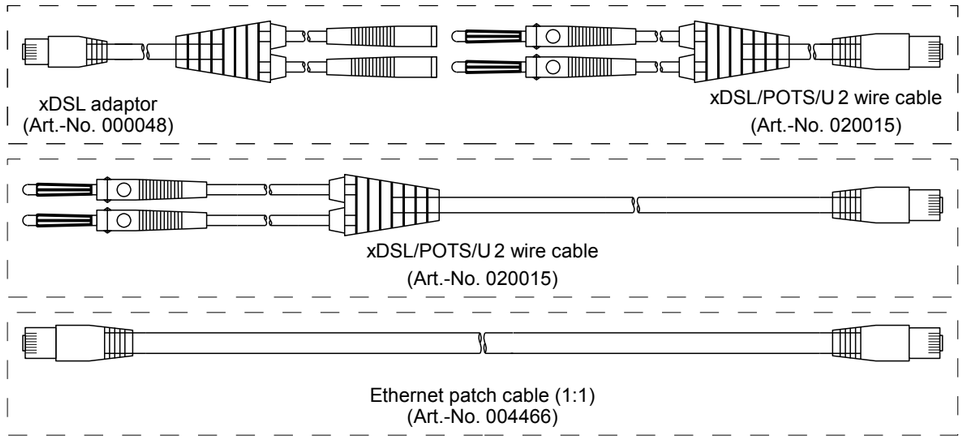
ISDN tests	page
BERT	32
Supp. Serv. test Service check	33
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CF-Tests, Connect.	35
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Copper tests	page
Copper Box	38-39
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Monitor (POTS)	36
PESQ	37
ETH cable tests	31

Others	page
Legend Protocol-overview	3
Hotkeys	4
Test leads	42-45

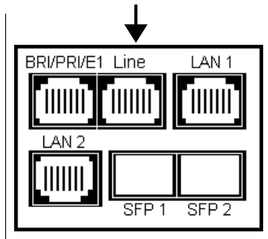
ADSL / VDSL



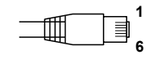
RJ11	Ban.	RJ45
3	rd	4
4	blk	5

Ban.	RJ45
rd	4
blk	5

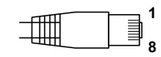
RJ45	RJ45
1-8	1-8



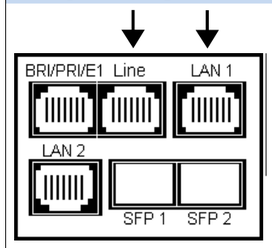
RJ11



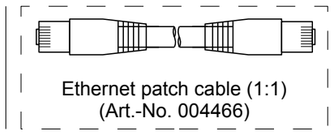
RJ45



ADSL / VDSL – Bridge / Router



RJ45	RJ45
1-8	1-8



Test leads and pin assignments
SHDSL, Ethernet

Cross reference:

Menu	page
Access	5
Access wizard	6
Main menu	7, 11
Single tests Data-, VoIP-, IPTV-, VoD-, Bridge-, Physic tests	7-11
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VoIP call / wait	27

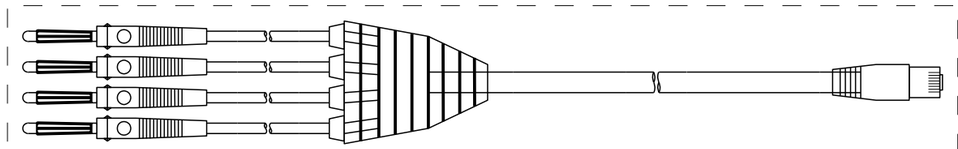
ISDN tests	page
BERT	32
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X.31	34
CF-Tests, Connect.	35
Time measuring Auto. Test	36

Copper tests	page
Copper Box	38-39
RC measurement	40
Line scope, TDR	41

Other tests	page
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Traffic generator	29
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Connection (POTS)	11
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ETH cable tests	31

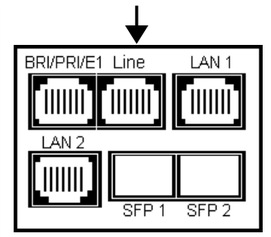
Others	page
Legend Protocol-overview	3
Hotkeys	4
Test leads	42-45

SHDSL 2 / 4 wire

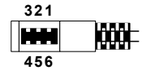


SHDSL 4 wire cable
(Art.-No. 000076)

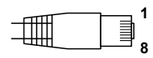
Ban.	RJ45
rd (L2)	3
rd (L1)	4
blk (L1)	5
blk (L2)	6



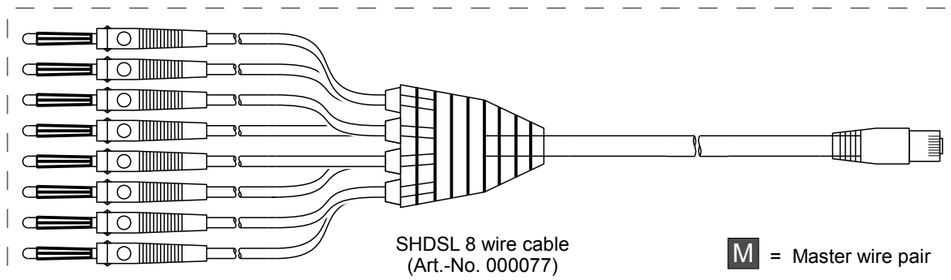
TAE



RJ45



SHDSL 2 / 4 / 6 / 8 wire

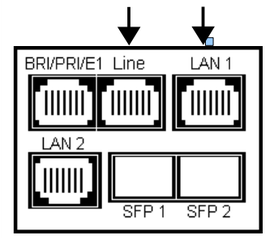


SHDSL 8 wire cable
(Art.-No. 000077)

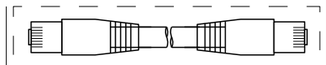
M = Master wire pair

	Ban.	Line	RJ45
M	rd	Pin 4	4/5
M	blk	Pin 5	
	rd	Pin 3	3/6
	blk	Pin 6	
	rd	Pin 1	1/2
	blk	Pin 2	
	rd	Pin 7	7/8
	blk	Pin 8	

SHDSL 2 / 4 / 6 / 8 wire – Bridge / Router

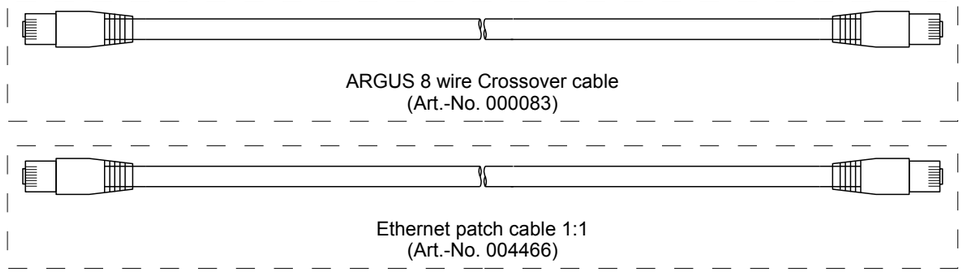


RJ45	RJ45
1-8	1-8



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

SHDSL 8 wire



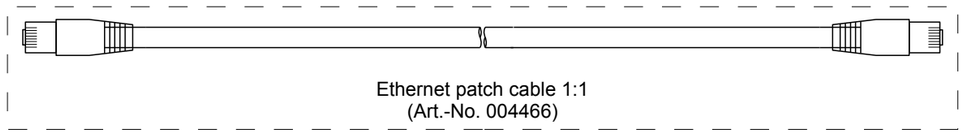
ARGUS 8 wire Crossover cable
(Art.-No. 000083)

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

Line	RJ45	RJ45
1	1/2	4/5
2	4/5	1/2
3	3/6	3/6
4	7/8	7/8

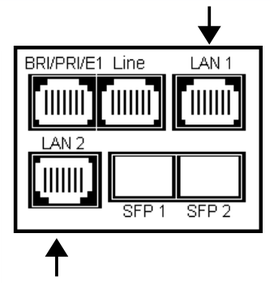
RJ45	RJ45
1-8	1-8

Ethernet

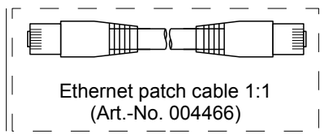


Ethernet patch cable 1:1
(Art.-No. 004466)

RJ45	RJ45
1-8	1-8



RJ45	RJ45
1-8	1-8



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

Notice

For the use of the SFPs, please contact your dealer or the intec support.

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

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Battery (status,...)	7, 11
Help	7, 11

IP and ATM tests	page
IP ping / Trace route	22
HTTP / FTP downl. FTP upload / server	23
VPI/VCI scan ATM OAM ping	24
IPTV / passive /scan	25
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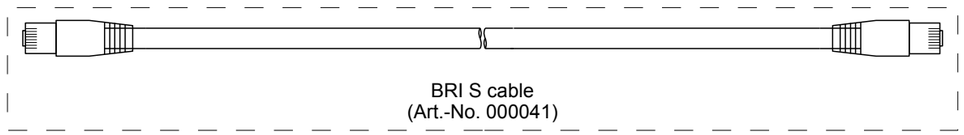
ISDN tests	page
BERT	32
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Copper tests	page
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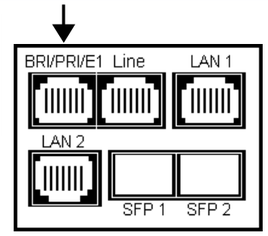
Others	page
Legend Protocol-overview	3
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BRI S

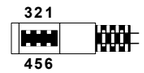


BRI S cable
(Art.-No. 000041)

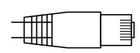
RJ45	RJ45
3/6	3/6
4/5	4/5



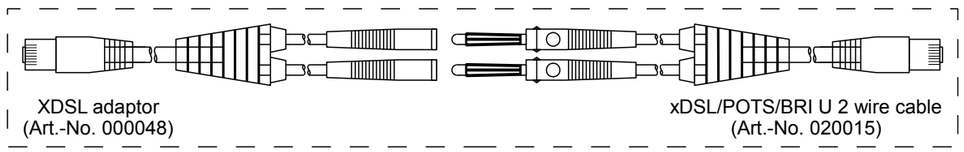
TAE



RJ45

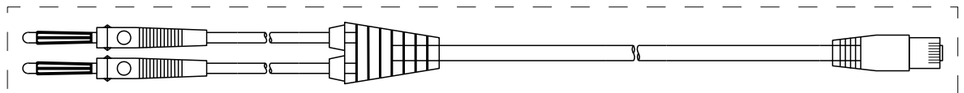


BRI U / POTS



XDSL adaptor
(Art.-No. 000048)

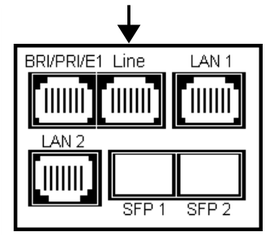
xDSL/POTS/BRI U 2 wire cable
(Art.-No. 020015)



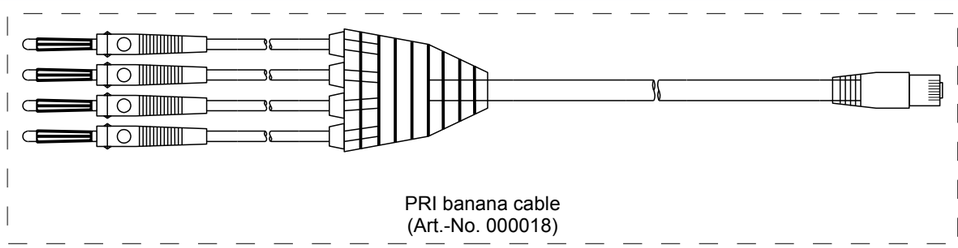
xDSL/POTS/BRI U 2 wire cable
(Art.-No. 020015)

RJ11	Ban.	RJ45
3	rd	4
4	blk	5

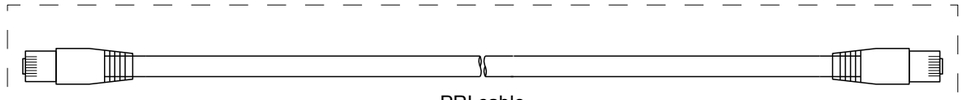
Ban.	RJ45
rd	4
blk	5



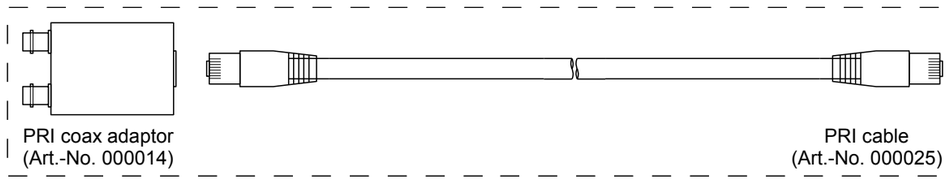
PRI



PRI banana cable
(Art.-No. 000018)



PRI cable
(Art.-No. 000025)



PRI coax adaptor
(Art.-No. 000014)

PRI cable
(Art.-No. 000025)



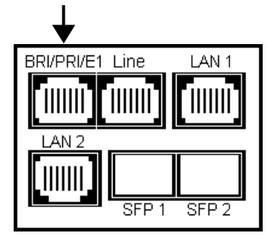
PRI ISEP cable
(Art.-No. 000098)

Ban.	RJ45
rd 1	8
rd 2	1
blk 1	7
blk 2	2

RJ45	RJ45
1/2	1/8
4/5	2/7

BNC	RJ45	RJ45
TX Out	1/2	1/8
RX In	4/5	2/7

ISEP	RJ45
1/2	1/8
4/5	2/7



Test leads and pin assignments
Copper tests

Cross reference:

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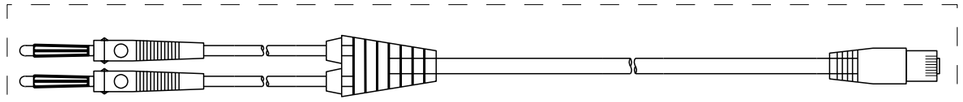
ISDN tests	page
BERT	32
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Copper tests	page
Copper Box	38-39
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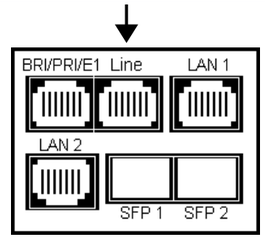
Others	page
Legend Protocol-overview	3
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Test leads	42-45

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



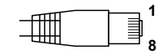
xDSL/POTS/BRI U 2 wire cable
(Art.-No. 020015)

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

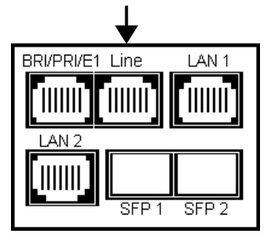


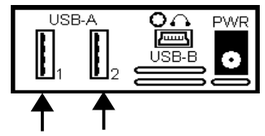
Copper tests: Line scope



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

Cross reference:

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