

MAGIC TH1 potsGo / MAGIC TH1 ipGo

Quick Guide

Version V1.701 (06 March 2023)

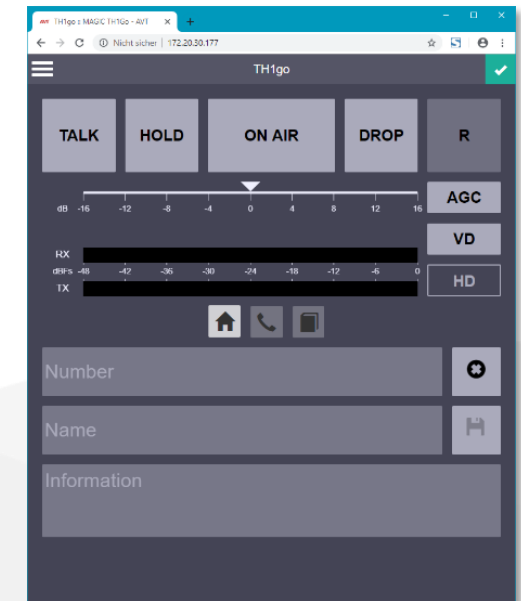
Content

- First Steps
- Operation
- Settings
- Administration
- Telephone Control Codes

MAGIC TH1Go

First Steps

- Connect your MAGIC TH1 system via the LAN interface to your IP network
- The easiest way to obtain a valid IP address is to activate DHCP in the system via the front panel
 - Press the softkey MENU and select LAN INTERFACE > DHCP and set the checkbox ENABLE
 - Press the DROP key and save the configuration
 - The assigned IP address is displayed when pressing the DROP key again
- Alternatively, you can set a static IP address, subnet mask, etc. manually under the LAN INTERFACE menu item
- Open now your web browser and enter the IP address of the MAGIC TH1 system
 - You can also use the system name TH1go instead of the IP address if DNS is available
- If everything is correct the main window appears



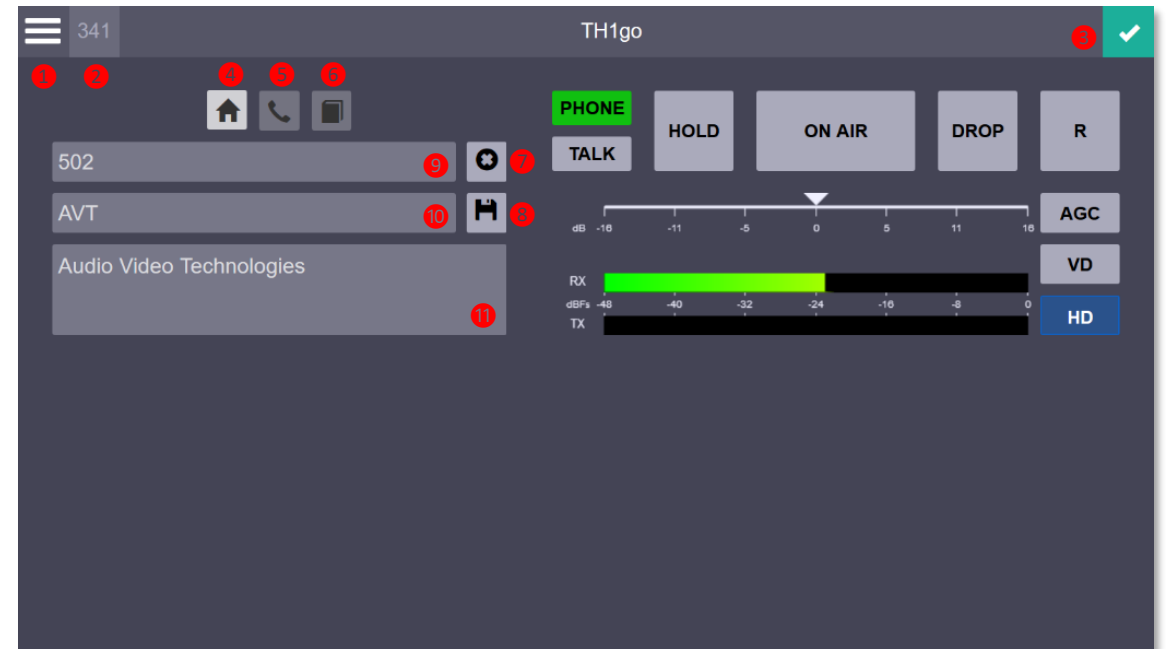
MAGIC TH1Go

Operation

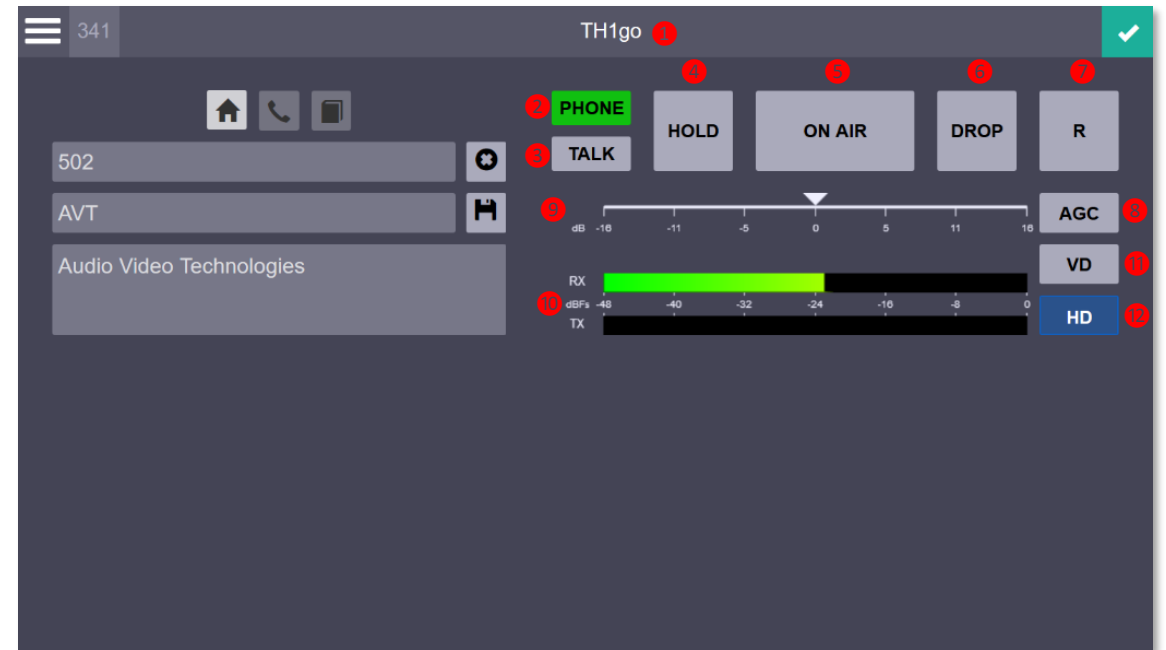
Opens
Configuration Menu

Connection
status of
MAGIC TH1

- ① Menu
- ② Own SIP number
- ③ Connection & system status
- ④ Caller information
- ⑤ Dial keypad
- ⑥ Telephone book
- ⑦ Delete caller information
- ⑧ Save caller information
- ⑨ Phone number of caller
- ⑩ Name of caller
- ⑪ Information of caller



- ① System Name
- ② PRETALK – Telephone in use
- ③ PRETALK – Audio XLR in use
- ④ HOLD
- ⑤ ON AIR
- ⑥ Disconnect line
- ⑦ Transfer call
- ⑧ AGC Automatic Gain Control on/off
- ⑨ Level adjustment
- ⑩ Level meter
- ⑪ VD Voice Disguise on/off
- ⑫ Audio in HD Voice (7-kHz) received



MAGIC TH1Go

Settings

- General
- Line Interface
- Audio
- Operation
- Signal Processing
- LAN Interface
- VLAN
- GPIO (TTL/Relay)

■ System Name

- The System Name is displayed in the main window which is helpful if you have more than one TH1 system in use
- The system can be also used instead of the IP address in a web browser (default: TH1go)

■ Authentication

- Administrators may restrict access to the systems via passwords. Setting or changing a password requires you to confirm the changes at the front display of the unit within 5 minutes.
- Administrator Password: Protects the configuration.
- User Password: Lets the user load presets via the optional PC software.
- Remote Password: Required to control or configure the unit from an external network. Controlling the unit from the network where the unit is located or from trusted networks is not protected by passwords. (Trusted networks are configured under LAN Interface.)

The screenshot shows the 'General' settings window for a TH1 system. The window has a title bar with 'General' and a close button. The 'System Name' field is set to 'TH1go'. The 'Authentication' section includes a blue box with 'Password requirements:' listing: Minimum 8 characters, At least one letter, one digit, one special character, and Allowed special characters: +, *, ., -, !, #, @. Below this are three password fields: 'Administrator Password' (masked with dots), 'User Password' (masked with dots), and 'Remote Password' (set to 'No Password'). Each password field has an eye icon and a trash icon. The 'Front Panel' section includes a 'Display Language' dropdown set to 'English', a 'Front Keypad Key Tone' checkbox that is checked, a 'Backlight' dropdown set to 'Auto-switch off', and a 'Display Contrast' slider set to 0. At the bottom right are 'Cancel', 'Apply', and 'OK' buttons.

Setting	Value
System Name	TH1go
Authentication	
Password requirements:	
• Minimum 8 characters.	
• At least one letter, one digit, one special character.	
• Allowed special characters: +, *, ., -, !, #, @.	
Administrator Password
User Password
Remote Password	No Password
Front Panel	
Display Language	English
Front Keypad Key Tone	<input checked="" type="checkbox"/>
Backlight	Auto-switch off
Display Contrast	0

- Display Language
 - Select English or German
- Front Keypad Key Tone
 - If Front Keypad Key Tone is selected a tone is generated after pressing a button on the key panel
- Backlight
 - One of the following modes can be selected:
 - Permanent On
 - Auto-switch off: on only during key entries
- Display Contrast
 - The display contrast can be adjusted in a range between -4 ... +4

The screenshot shows a 'General' settings window with a close button (X) in the top right corner. The settings are organized into sections: 'System Name' (TH1go), 'Authentication' (containing 'Password requirements' with a list of rules and allowed characters), 'Administrator Password', 'User Password', and 'Remote Password' (all with masked input fields and toggle/erase icons). The 'Front Panel' section includes 'Display Language' (English), 'Front Keypad Key Tone' (checked), 'Backlight' (Auto-switch off), and 'Display Contrast' (a slider set to 0). At the bottom are 'Cancel', 'Apply', and 'OK' buttons.

General

System Name: TH1go

Authentication

Password requirements:

- Minimum 8 characters.
- At least one letter, one digit, one special character.
- Allowed special characters: + * . - ! # @

Administrator Password: [masked] [toggle] [erase]

User Password: [masked] [toggle] [erase]

Remote Password: No Password [toggle] [erase]

Front Panel


Display Language: English

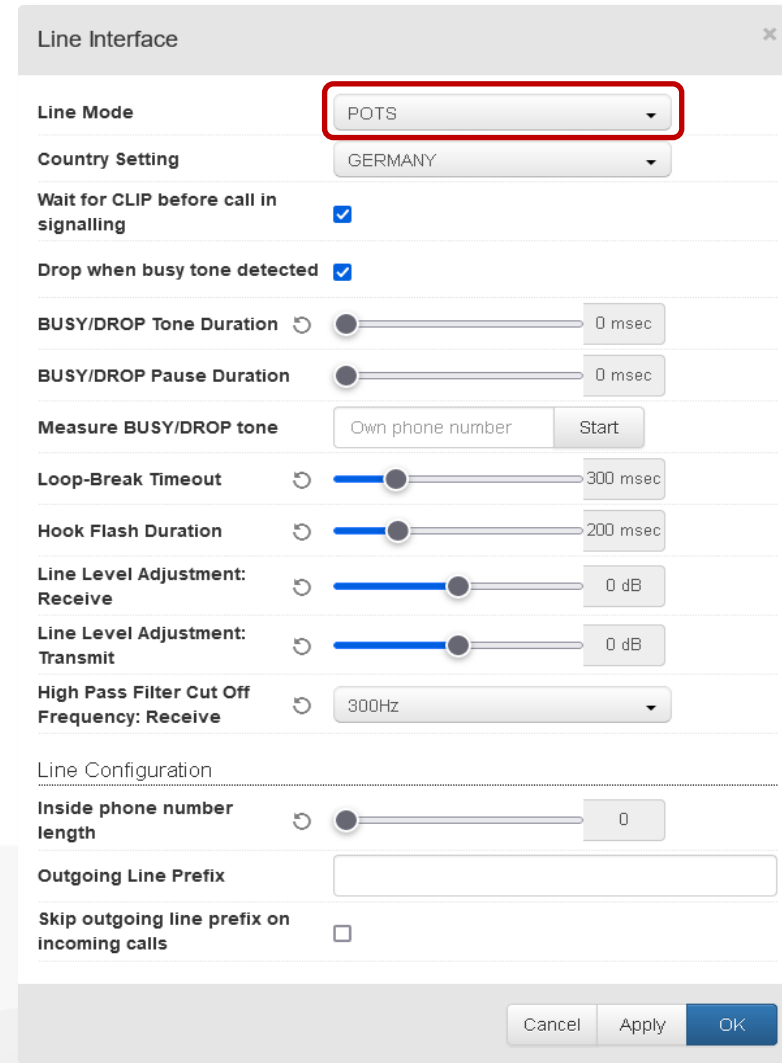
Front Keypad Key Tone: ☒

Backlight: Auto-switch off

Display Contrast: [slider] 0

Cancel Apply OK

- Under  → Line Interface the line interface settings can be configured
- Select under Line Mode which interface you want to use
(the availability depends on your system and enabled options)
 - POTS
 - VoIP



The image shows a 'Line Interface' configuration window. The 'Line Mode' dropdown is highlighted with a red box and set to 'POTS'. The 'Country Setting' is 'GERMANY'. The 'Wait for CLIP before call in signalling' checkbox is checked. The 'Drop when busy tone detected' checkbox is also checked. Below these are sliders for 'BUSY/DROP Tone Duration' and 'BUSY/DROP Pause Duration', both set to 0 msec. There is a 'Measure BUSY/DROP tone' section with a text input 'Own phone number' and a 'Start' button. Further down are sliders for 'Loop-Break Timeout' (300 msec), 'Hook Flash Duration' (200 msec), 'Line Level Adjustment: Receive' (0 dB), and 'Line Level Adjustment: Transmit' (0 dB). A 'High Pass Filter Cut Off Frequency: Receive' dropdown is set to '300Hz'. The 'Line Configuration' section includes a slider for 'Inside phone number length' (0), an empty text field for 'Outgoing Line Prefix', and an unchecked checkbox for 'Skip outgoing line prefix on incoming calls'. At the bottom are 'Cancel', 'Apply', and 'OK' buttons.

Setting	Value
Line Mode	POTS
Country Setting	GERMANY
Wait for CLIP before call in signalling	<input checked="" type="checkbox"/>
Drop when busy tone detected	<input checked="" type="checkbox"/>
BUSY/DROP Tone Duration	0 msec
BUSY/DROP Pause Duration	0 msec
Measure BUSY/DROP tone	Own phone number (Start button)
Loop-Break Timeout	300 msec
Hook Flash Duration	200 msec
Line Level Adjustment: Receive	0 dB
Line Level Adjustment: Transmit	0 dB
High Pass Filter Cut Off Frequency: Receive	300Hz
Line Configuration: Inside phone number length	0
Outgoing Line Prefix	
Skip outgoing line prefix on incoming calls	<input type="checkbox"/>

■ Your Country

- If you use landlines: Country of your location
- If you use a PBX: Try first your country or alternatively the country of origin of the PBX
 - Note that this setting is essential for correct operation of the built-in digital echo canceller. When you hear echoes, the cause is usually a maladaptation of the impedance, which is determined by the country setting.

■ Wait for CLIP before call in signalling

- If selected, an incoming call is not displayed until the caller's phone number has been recognized (CLIP function). If no phone number is signaled, the call is displayed after a short time.

■ Drop when busy tone detected

- Automatic drop after detection of the busy tone
 - This function requires to Start the function **Measure BUSY/DROP tone**

Line Interface

Line Mode: POTS

Country Setting: GERMANY

Wait for CLIP before call in signalling: ☒

Drop when busy tone detected: ☒

BUSY/DROP Tone Duration: 0 msec

BUSY/DROP Pause Duration: 0 msec

Measure BUSY/DROP tone: Own phone number Start

Loop-Break Timeout: 300 msec

Hook Flash Duration: 200 msec

Line Level Adjustment: Receive: 0 dB

Line Level Adjustment: Transmit: 0 dB

High Pass Filter Cut Off Frequency: Receive: 300Hz

Line Configuration

Inside phone number length: 0

Outgoing Line Prefix:

Skip outgoing line prefix on incoming calls: ☐

Cancel Apply OK

POTS
mode
selected

- The values for BUSY/DROP Tone Duration and BUSY/DROP Pause Duration can be set manually, but we strongly recommend using the built-in measurement function.
- Measure BUSY/DROP tone
 - Enter your own phone number and press Start
 - The values for BUSY/DROP Tone Duration and BUSY/DROP Pause Duration are automatically adjusted
 - With that settings the system recognises when a caller drops the line or if the line is busy
- Loop-Break Timeout
 - The loop current can be interrupted for that time period without interrupting the connection
- Hook Flash Duration
 - The length of the pulse which is necessary for call forwarding. It is also an interruption of the loop current

Line Interface

Line Mode: POTS

Country Setting: GERMANY

Wait for CLIP before call in signalling: ☒

Drop when busy tone detected: ☒

BUSY/DROP Tone Duration: 0 msec

BUSY/DROP Pause Duration: 0 msec

Measure BUSY/DROP tone: Own phone number Start

Loop-Break Timeout: 300 msec

Hook Flash Duration: 200 msec

Line Level Adjustment: Receive: 0 dB

Line Level Adjustment: Transmit: 0 dB

High Pass Filter Cut Off Frequency: Receive: 300Hz

Line Configuration

Inside phone number length: 0

Outgoing Line Prefix:

Skip outgoing line prefix on incoming calls: ☐

Cancel Apply OK

- Line Level Adjustment: Receive
 - Receive Line Level can be adjusted from -9 to +9 dB
 - Change this setting only if the caller level is always too low
- Line Level Adjustment: Transmit
 - Transmit Line level can be adjusted from -9 to +9 dB
 - Change this setting only if the callers can always hear you poorly.
- High Pass Filter Cut OFF Frequency: Receive
 - High pass filter for the reduction of disturbances
 - If you hear a humming noise on the line, set a higher cut-off frequency (e.g., 100 Hz)

The screenshot shows the 'Line Interface' configuration window. A red rectangular box highlights the following settings:

- Line Level Adjustment: Receive (slider at 0 dB)
- Line Level Adjustment: Transmit (slider at 0 dB)
- High Pass Filter Cut Off Frequency: Receive (dropdown menu set to 300Hz)

Other visible settings include:

- Line Mode: POTS
- Country Setting: GERMANY
- Wait for CLIP before call in signalling: ☒
- Drop when busy tone detected: ☒
- BUSY/DROP Tone Duration: 0 msec
- BUSY/DROP Pause Duration: 0 msec
- Measure BUSY/DROP tone: Own phone number, Start button
- Loop-Break Timeout: 300 msec
- Hook Flash Duration: 200 msec
- Line Configuration section:
 - Inside phone number length: 0
 - Outgoing Line Prefix: (empty field)
 - Skip outgoing line prefix on incoming calls: ☐

Buttons at the bottom: Cancel, Apply, OK.

- Inside Phone number length
 - The outgoing line prefix is dialled automatically if you dial a number that is longer than the number length specified here
 - If you work with landlines, please select 0
- Outgoing Line Prefix
 - If the system is connected to a PBX, you can enter the Outgoing Line Prefix, e.g., 0, which is automatically added by the unit when you dial an external number
- Skip outgoing line prefix on incoming calls
 - If the phone number is displayed in the software with outgoing line prefix, the outgoing line prefix is deleted, and the displayed telephone number can be saved directly to the phone book

Line Interface

Line Mode: POTS

Country Setting: GERMANY

Wait for CLIP before call in signalling: ☒

Drop when busy tone detected: ☒

BUSY/DROP Tone Duration: 0 msec

BUSY/DROP Pause Duration: 0 msec

Measure BUSY/DROP tone: Own phone number Start

Loop-Break Timeout: 300 msec

Hook Flash Duration: 200 msec

Line Level Adjustment: Receive: 0 dB

Line Level Adjustment: Transmit: 0 dB

High Pass Filter Cut Off Frequency: Receive: 300Hz

Line Configuration

Inside phone number length: 0

Outgoing Line Prefix:

Skip outgoing line prefix on incoming calls: ☐

Cancel Apply OK

■ SIP Server

- Enter the name or IP address of the SIP Server and optionally a Backup Server.
 - A name requires a valid DNS entry under LAN settings

■ SIP Transmission Protocol

- Select UDP or TCP/IP according to the requirements of the VoIP provider

■ User Name

- Enter your User Name (typically the phone number) provided by the VoIP provider

■ User Authentication

- Enter the User Authentication provided by the VoIP provider or leave it blank if it is not specified

■ Password

- Enter Password provided by the VoIP provider

■ DTMF Tx Type

- Select Inband (In Audio) or RTP (RFC2833)

The screenshot shows the 'Line Interface' configuration window. The 'Line Mode' is set to 'VoIP'. The 'SIP' section is highlighted with a red box and includes fields for 'SIP Server' (sip.provider.net), 'Backup Server' (backup-sip.provider.net), 'SIP Transmission Protocol' (UDP), 'User Name' (499115271110), 'User Authentication' (blank), 'Password' (masked with dots), and 'DTMF Tx Type' (Inband (In Audio)). Below the 'SIP' section are 'STUN' settings: 'Enable STUN' (checked), 'STUN Server' (blank), and 'NAT Keep Alive Message Time' (20 sec). The 'Quality of Service' section has 'QoS Voice' set to 'Expedited forwarding (Critical)' and 'QoS SIP' set to 'AF31 (Flash)'. The 'Line Configuration' section includes 'Enable E.164' (unchecked), 'Inside phone number length' (0), 'Outgoing Line Prefix' (blank), and 'Skip outgoing line prefix on incoming calls' (unchecked). At the bottom are 'Cancel', 'Apply', and 'OK' buttons.

VoIP
mode
selected

- Display Name
 - The display name is displayed on the caller's phone. However, it might be overwritten by the PBX or the provider.
- Audio UDP Port
 - Change only if necessary
- STUN
 - Enable STUN only if required by the VoIP provider. In this case a STUN Server must be configured
- STUN Server
 - Enter name or IP Address of the STUN Server
 - A name requires a valid DNS entry under LAN settings
- NAT Keep Alive Message Time
 - Time to open the STUN Server for communication

The screenshot shows the 'Line Interface' configuration window. The 'Line Mode' is set to 'VoIP'. Under the 'SIP' section, the 'SIP Server' is 'sip.provider.net', 'Backup Server' is 'backup-sip.provider.net', 'SIP Transmission Protocol' is 'UDP', 'User Name' is '499115271110', and 'User Authentication' is empty. The 'Password' field is masked with dots. 'DTMF Tx Type' is 'Inband (In Audio)'. The 'Display Name' is 'TH1Go' and 'Audio UDP Port' is '5004'. The 'STUN' section is highlighted with a red box, showing 'Enable STUN' checked, 'STUN Server' empty, and 'NAT Keep Alive Message Time' set to 20 seconds. Below this, 'Quality of Service' shows 'QoS Voice' as 'Expedited forwarding (Critical)' and 'QoS SIP' as 'AF31 (Flash)'. The 'Line Configuration' section has 'Enable E.164' unchecked, 'Inside phone number length' set to 0, 'Outgoing Line Prefix' empty, and 'Skip outgoing line prefix on incoming calls' unchecked. At the bottom are 'Cancel', 'Apply', and 'OK' buttons.

- QoS Voice and QoS SIP
 - If your network offers Quality of Service (QoS), please enter the matching values under QoS Voice and QoS SIP.
- If E.164 is not enabled
 - Inside Phone number length
 - The outgoing line prefix is dialed automatically if you dial a number that is longer than the number length specified here
 - If you work with landlines, please select 0
 - Outgoing Line Prefix
 - If the system is connected to a PBX, you can enter the Outgoing Line Prefix, e.g. 0, which is automatically added if you dial an external number
 - Skip outgoing line prefix on incoming calls
 - If the phone number is displayed in the software with outgoing line prefix, the outgoing line prefix is deleted and the displayed telephone number can be saved directly to the phone book

The screenshot shows the 'Line Interface' configuration window. The 'Line Mode' is set to 'VoIP'. Under the 'SIP' section, the 'SIP Server' is 'sip.provider.net', 'Backup Server' is 'backup-sip.provider.net', 'SIP Transmission Protocol' is 'UDP', 'User Name' is '499115271110', 'User Authentication' is empty, 'Password' is masked with dots, 'DTMF Tx Type' is 'Inband (In Audio)', 'Display Name' is 'TH1Go', and 'Audio UDP Port' is '5004'. Under the 'STUN' section, 'Enable STUN' is checked, 'STUN Server' is empty, and 'NAT Keep Alive Message Time' is set to 20 seconds. The 'Quality of Service' section is highlighted with a red box and contains 'QoS Voice' set to 'Expedited forwarding (Critical)' and 'QoS SIP' set to 'AF31 (Flash)'. The 'Line Configuration' section, also within the red box, includes 'Enable E.164' (unchecked), 'Inside phone number length' (slider set to 0), 'Outgoing Line Prefix' (empty field), and 'Skip outgoing line prefix on incoming calls' (unchecked). At the bottom are 'Cancel', 'Apply', and 'OK' buttons.

- Enable E.164 if E.164 number formatting is required by the provider.
 - Inside Phone number length
 - The outgoing line prefix is dialled automatically if you dial a number that is longer than the number length specified here
 - If you work with landlines, please select 0
- Country Code
 - Enter the local country code (e.g., 49 for Germany)
- Area Code
 - Enter the local area code if available

Line Interface

Line Mode: VoIP

SIP

SIP Server: sip.provider.net

Backup Server: backup-sip.provider.net

SIP Transmission Protocol: UDP

User Name: 499115271110

User Authentication:

Password:

DTMF Tx Type: Inband (In Audio)

Display Name: TH1Go

Audio UDP Port: 5004

STUN

Enable STUN: ☒

STUN Server:

NAT Keep Alive Message Time: 20 sec

Quality of Service

QoS Voice: Expedited forwarding (Critical)

QoS SIP: AF31 (Flash)

Line Configuration

Enable E.164: ☒

Inside phone number length: 0

Country Code: +

Area Code: 0

Cancel Apply OK

- Pretalk Interface

- Select here the desired Pretalk Interface:

- Not used
 - Telephone
 - Pretalk (XLR)
 - Telephone + Pretalk (XLR)

- Telephone with control

- When enabled, the TH1 sends the callees phone number and the line status of the TH1 to the display of the telephone. (Telephone must support FSK.)

- Hold Signal Source

- The HOLD signal can be generated from the following sources:
 - ON AIR in (XLR)
 - HOLD in (XLR)
 - Recorded Hold Signal (Upload a preproduced audio file via the LOAD FILE button below.)
Format of the file must be WAV/8-kHz/Mono/16 Bit

- Pause between repetition

- If Recorded Hold Signal is set as HOLD signal source, a Pause between repetitions can be defined

- HOLD Signal duration

- After loading the Recorded Hold Signal file via the Load file button, the HOLD signal duration will be displayed in seconds

The screenshot shows the 'Audio' configuration window. A red rectangular box highlights the following settings:

- Pretalk Interface:** Telephone (dropdown menu)
- Telephone with control:** ☒ (checkbox)
- Hold Signal Source:** Recorded Hold Signal (dropdown menu)
- Pause between repetition:** 3 sec (slider and text box)
- HOLD signal duration:** 3.00 s (text box) with a **Load file** button

Below the highlighted section, other settings are visible:

- Monitoring Out (XLR):** Caller + Presenter (dropdown menu)
- Level In:** 6 dBu (slider)
- Level Out:** 6 dBu (slider)
- Audio Headroom:** 9 dBu (slider)
- Pretalk Telephone Audio Level:** 0 dB (slider)

At the bottom right, there are three buttons: **Cancel**, **Apply**, and **OK**.

- **Monitoring Out (XLR)**

- The monitoring output is only available if no Pretalk (XLR) is configured for the Pretalk Interface
- You can choose between the following settings
 - Off
 - Caller
 - Caller + Presenter

- **Level In**

- Nominal Level of the analogue input
- Adjustable in a range from -3 to +9 dBu (default: +6 dBu)

- **Level Out**

- Nominal Level of the analogue output
- Adjustable in a range from -3 to +9 dBu (default: +6 dBu)

- **Audio Headroom**

- Headroom of the analogue audio interface
- Adjustable in a range from 0 to 15 dBr (default: +9 dBr)

- **Pretalk Telephone Audio Level**

- Audio Level to the optional connected POTS telephone
- Adjustable in a range from -12 to +12 dB

The screenshot shows the 'Audio' configuration window. It contains several settings: 'Pretalk Interface' set to 'Telephone', 'Telephone with control' checked, 'Hold Signal Source' set to 'Recorded Hold Signal', 'Pause between repetition' set to '3 sec', and 'HOLD signal duration' set to '3.00 s'. A red box highlights the 'Monitoring Out (XLR)' section, which includes 'Monitoring Out (XLR)' set to 'Caller + Presenter', 'Level In' set to '6 dBu', 'Level Out' set to '6 dBu', 'Audio Headroom' set to '9 dBu', and 'Pretalk Telephone Audio Level' set to '0 dB'. At the bottom are 'Cancel', 'Apply', and 'OK' buttons.

- Enable System Ringing Tone
 - If activated, the system internal buzzer signals incoming calls
- Front Call Control
 - Switching the line status (e.g., Pretalk, Hold, On Air etc.) via the front keypad can be configured in three different ways:
 - Standard
 - Standard function as labelled on the keys
 - Numerical Keypad
 - No connection → Standard function as labelled on the keys
 - Connection established:
 - 1 → PRETALK/PHONE
 - 2 → HOLD
 - 3 → ON AIR
 - 7 → Redirect Call (R)
 - DROP
 - Softkeys
 - The two softkeys allows a direct switching between ON AIR and DROP

Operation

Enable System Ringing Tone

☐

Front Call Control

Standard

Enable Voice Disguise

☒

Voice Disguise Pitch

Up

Voice Disguise Ratio

3

Answer Call on Audio Line

On Air

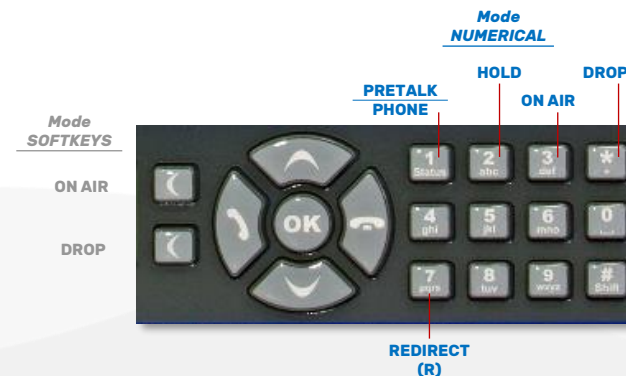
Auto Answer Delay

0 sec

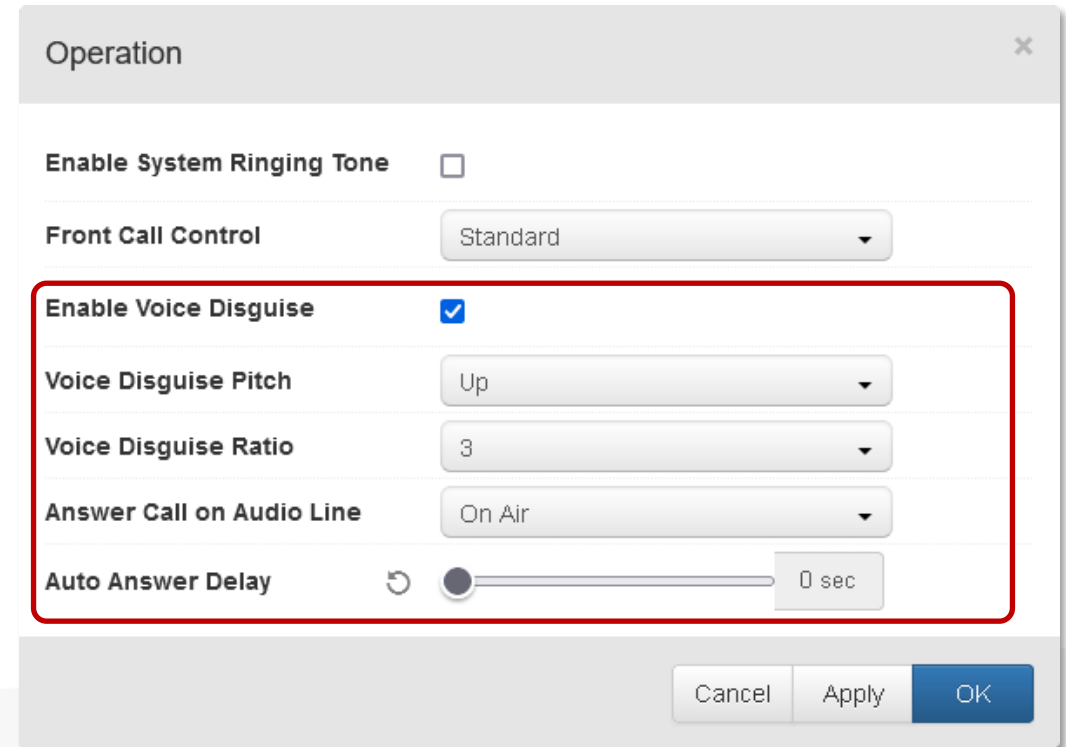
Cancel

Apply

OK



- **Enable Voice Disguise**
 - If activated, Voice Disguise is enabled
- **Voice Disguise Pitch**
 - As pitch can be selected
 - Up for a shift to higher frequencies
 - Down for a shift to lower frequencies
- **Voice Disguise Ratio**
 - The strength of the pitch shift can be adjusted in the range from 1 (low) ... 4 (high)
- **Auto Answer Call on Audio Line**
 - This activates automatic call answering for incoming calls. You can choose:
 - Not used to disable the function
 - Switch caller to HOLD
 - Switch caller to ON AIR
- **Auto Answer Delay**
 - This function can be used to delay automatic call answering in the time range of 0 ... 31 seconds. During this time, an incoming call is signaled as usual by ringing and/or flashing



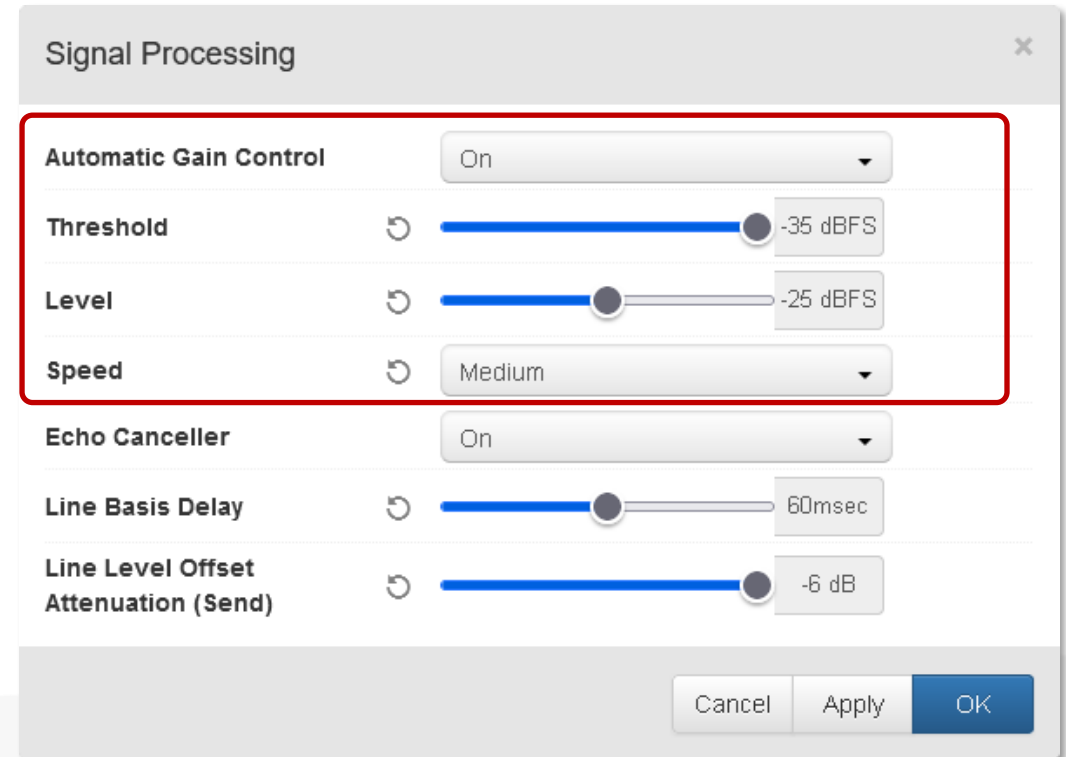
The screenshot shows a software window titled "Operation" with a close button (X) in the top right corner. The window contains several settings:

- Enable System Ringing Tone**: A checkbox that is currently unchecked.
- Front Call Control**: A dropdown menu set to "Standard".
- Enable Voice Disguise**: A checkbox that is checked, highlighted by a red rectangular box.
- Voice Disguise Pitch**: A dropdown menu set to "Up", also highlighted by the red box.
- Voice Disguise Ratio**: A dropdown menu set to "3", also highlighted by the red box.
- Answer Call on Audio Line**: A dropdown menu set to "On Air", also highlighted by the red box.
- Auto Answer Delay**: A slider control with a circular icon on the left and a numerical display showing "0 sec".

At the bottom right of the window are three buttons: "Cancel", "Apply", and "OK".

- Automatic Gain Control

- If the integrated Automatic Gain Control is switched On, the function can be configured via three parameters
 - Range: -45 -35 dBFS
 - Recommended: -40 dBFS
- The Threshold value determines the level when the AGC should start work
 - Range: -45 -35 dBFS
 - Recommended: -40 dBFS
- The Level parameter defines the target level
 - Range: -30 -20 dBFS
 - Recommended: -25 dBFS
- The Speed selection defines how fast the AGC should work. Values are:
 - Slow, Medium, Fast
 - Recommended: Medium or Slow



■ Echo Canceller

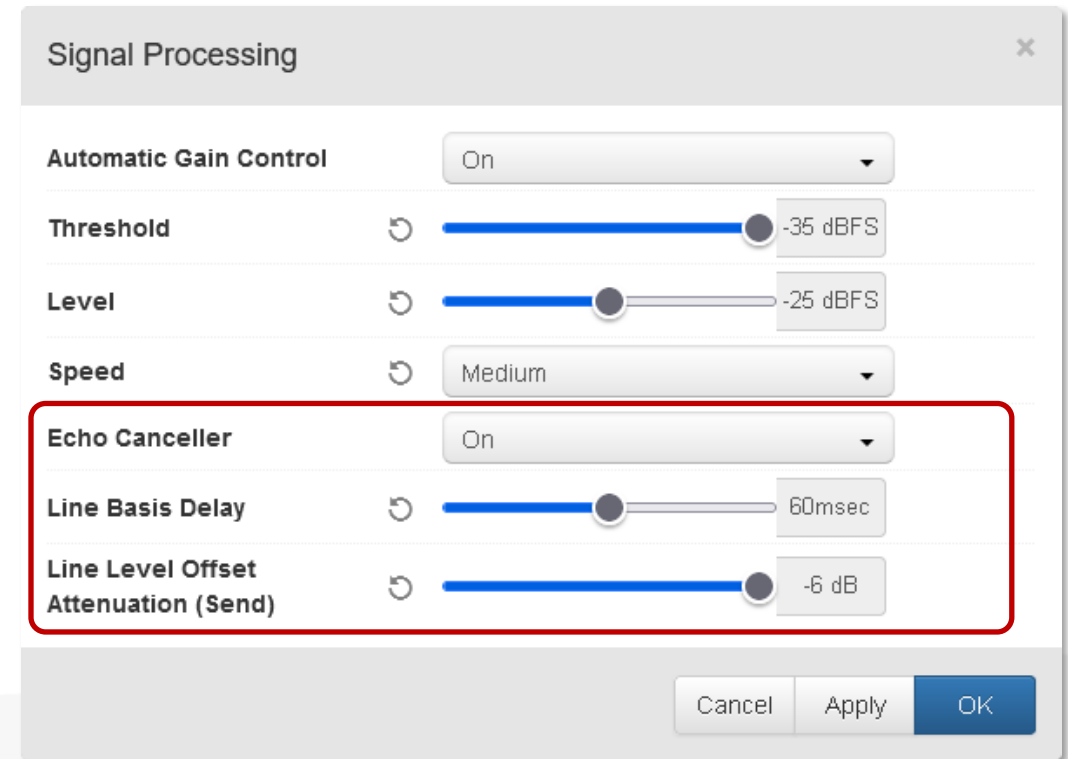
- The integrated Echo Canceller can be switched On or Off
 - Especially callers still using POTS lines can cause a strong echo. Therefore, we always recommend to activate the Echo Canceller.
 - The maximum echo tail time is approx. 120 msec. In this time window the echo canceller can reduce the echo.

■ Line Basis Delay

- If the system is connected to a PBX or callers are forwarded via an external platform, the Line Basis Delay of the (local) system can be set as the basis value so that a possible echo falls within the time window of 120 msec in any case.
 - Range: 0 ... 120 msec
 - Recommended: Landline = 0 msec, PBX > 40 msec

■ Line Level Offset Attenuation (Send)

- The send level can be reduced in a range from -6 dB ... -15 dB
 - If you have problems with echoes you should try to reduce this level slightly



- For easy setup you can use DHCP to obtain all IP parameters for the Primary IP Address automatically
 - The assigned IP address is visible by pressing the DROP key on the front panel of the system
- Alternatively you can assign all parameters manually
- Primary IP Address
 - Please enter IP Address, Subnet Mask, Default Gateway and DNS Server
 - Note that VoIP must use the Primary IP Address network
- Additionally you can enter a Secondary IP Address if you want to separate e.g. the VoIP and the control network
 - Please enter IP Address, Subnet Mask and Gateway
- LAN Alarm
 - Activate Enable Insufficient LAN Alarm to get an alarm if LAN interface is too slow.

The screenshot shows a 'LAN Interface' configuration window with the following sections:

- Primary IP Address**
 - DHCP: ☐
 - IP Address / Subnet Mask: 192.168.96.102 / 255.255.255.0
 - Default Gateway: 192.168.96.1
 - DNS Server: 192.168.96.1
- Secondary IP Address**
 - IP Address / Subnet Mask: [] / []
 - Gateway: []
- LAN Alarm**
 - Enable Insufficient LAN Alarm: ☒
- Access to Web Interface**
 - Allowed from: Primary: 192.168.96.102
- Trusted IP Networks**
 - IP Network / Subnet Mask: 192.168.1.1 / 255.255.255.0
 - IP Network / Subnet Mask: [] / []
 - IP Network / Subnet Mask: [] / []

Buttons at the bottom: Cancel, Apply, OK.

- Access to Web Interface

- We recommend to use different IP address ranges for VoIP and Control – if your router supports that – to be sure that nobody can easily login into your system via the VoIP network
 - Therefore the primary network must be used for VoIP. You should use the secondary network for control

- Trusted IP Networks

- By default the unit allows access to the web interface from the local network only.
- PCs located in trusted networks can access the unit as if they were in the local network.
- Accessing the unit from unknown networks requires the user to enter the remote password.

LAN Interface

Primary IP Address

DHCP

☐

IP Address / Subnet Mask

192.168.96.102

255.255.255.0

Default Gateway

192.168.96.1

DNS Server

192.168.96.1

Secondary IP Address

IP Address / Subnet Mask

Gateway

LAN Alarm

Enable Insufficient LAN Alarm

☒

Access to Web Interface

Allowed from

Primary: 192.168.96.102

Trusted IP Networks

IP Network / Subnet Mask

192.168.1.1

255.255.255.0

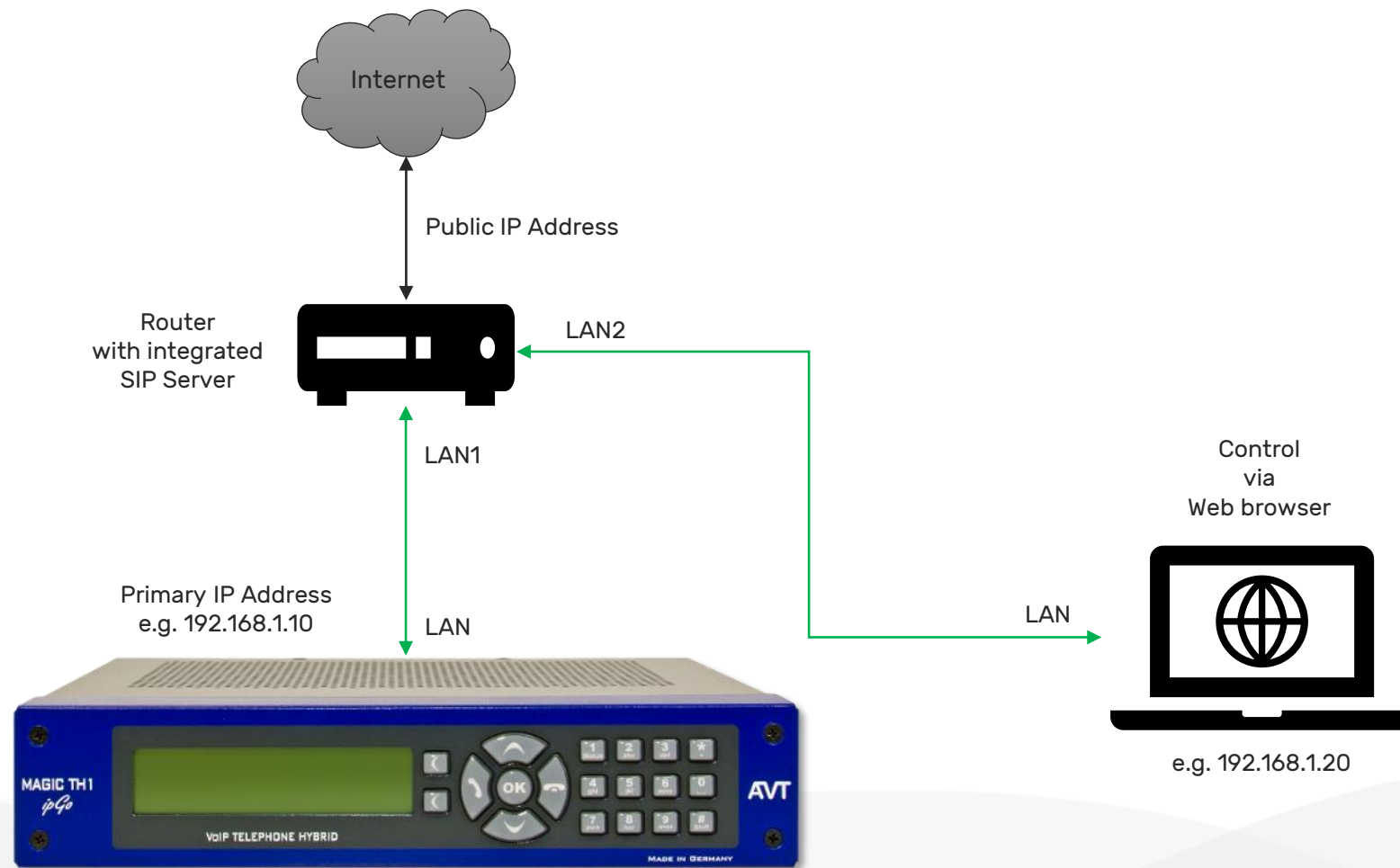
IP Network / Subnet Mask

IP Network / Subnet Mask

Cancel

Apply

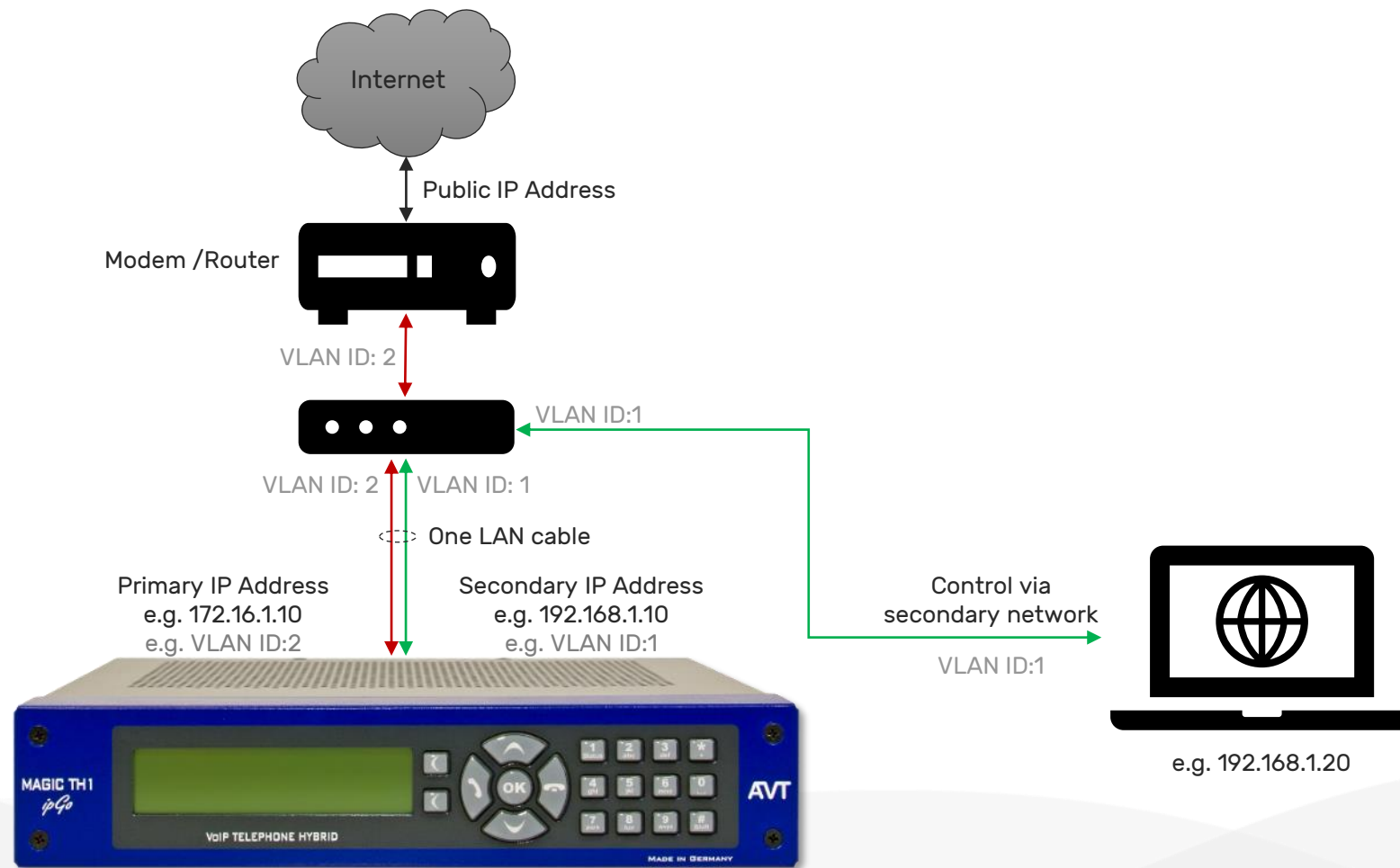
OK



- As already mentioned, we recommend to separate the VoIP network from the Control network for VoIP applications in general
- An additional possibility is to use VLANs if your switch/router supports that
- The configuration is done under VLAN
- Before you Enable VLAN, please make sure that your administrator has configured the Switch Port correspondingly
 - Activate the 802.1Q Tagging for Web and VoIP services
 - Please select the desired Priority (Standard for VoIP = 6 Voice)
 - Under VID you need to enter the VLAN IDs which has been allocated in the switch/router
- If you did something wrong in the configuration and you have no longer access to your system you can switch-off the VLAN support via the front panel of the system

The screenshot shows a 'VLAN' configuration window with a close button (X) in the top right corner. The window is divided into two main sections: 'Web Control' and 'VoIP'. Both sections have a 'TPID' dropdown menu set to '802.1 QTag', a 'Priority' dropdown menu, and a 'VID (12-Bit)' text input field. In the 'Web Control' section, the 'Priority' is set to '0 (Default, Best Effort)' and the 'VID' is '2'. In the 'VoIP' section, the 'Priority' is set to '6 (Voice)' and the 'VID' is '3'. At the bottom right, there are three buttons: 'Cancel', 'Apply', and 'OK'.

Section	TPID	Priority	VID (12-Bit)
Web Control	802.1 QTag	0 (Default, Best Effort)	2
VoIP	802.1 QTag	6 (Voice)	3



- MAGIC TH1 Go provides the following GPIO contacts
 - 4 x programmable TTL in-/outputs
 - 2 x relay outputs
- TTL pins can be configured as Input or Output
 - Various functions are offered
 - Inputs
 - An input is high active by default. Set an input to GND (Pin 5) to trigger a switching operation
 - Outputs max. current 10 mA
 - max. voltage 3.3V
- Relay contacts
 - Various output functions are offered
 - max. current 200 mA
 - max. voltage 48V
- Please notice the maximum permissible currents and voltages

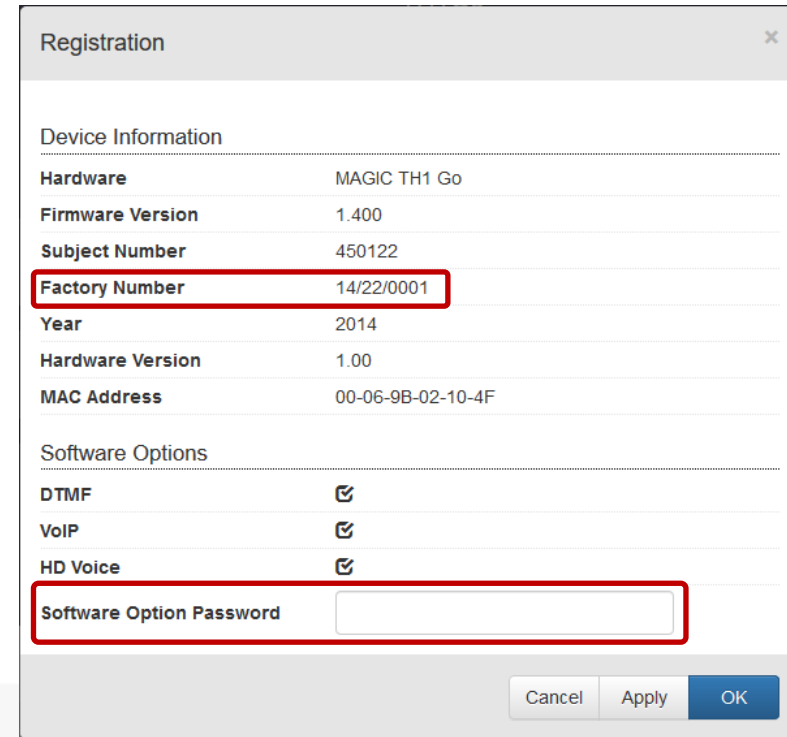
Input Functions	Output Functions
- Call Out / Accept Call In / Drop Call Out (Level Triggered) Accept Call In Drop Set Audio Line Set Audio Line / Accept Call In Lock Audio Line (Level Triggered) Suppress Ring Tone (Level Triggered)	Fixed Low Fixed High Connection Status Audio Line ON AIR PRETALK Ringing / Connected State Ringing / ON AIR Any System Alarm Pending

MAGIC TH1Go

Administration

- Registration
- Firmware Download
- System Panel
- Set Factory Settings
- Restart Device
- About

- Via Menu → Registration you will find the available Software Options for the system
 - The marked Options are already enabled in your system
- You will need the Factory Number of the device if you want to purchase additional software options later
- You will receive a licence with password, which you must enter under Software Option Password to activate the ordered software option



The image shows a 'Registration' dialog box with a close button (X) in the top right corner. It is divided into two main sections: 'Device Information' and 'Software Options'.

Device Information

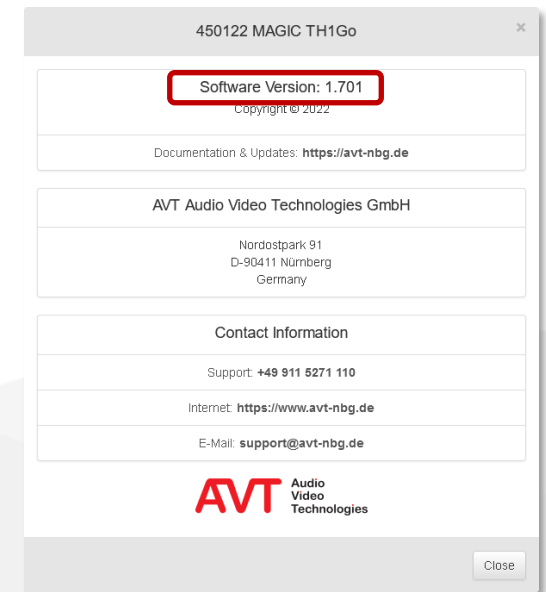
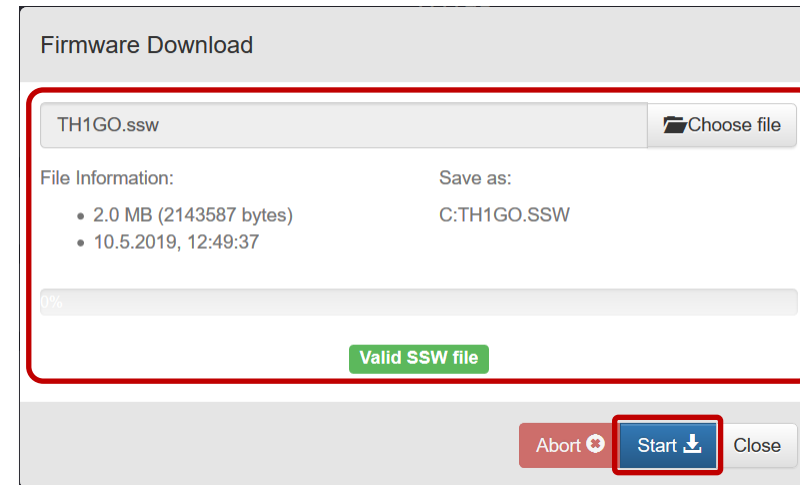
Hardware	MAGIC TH1 Go
Firmware Version	1.400
Subject Number	450122
Factory Number	14/22/0001
Year	2014
Hardware Version	1.00
MAC Address	00-06-9B-02-10-4F



Software Options

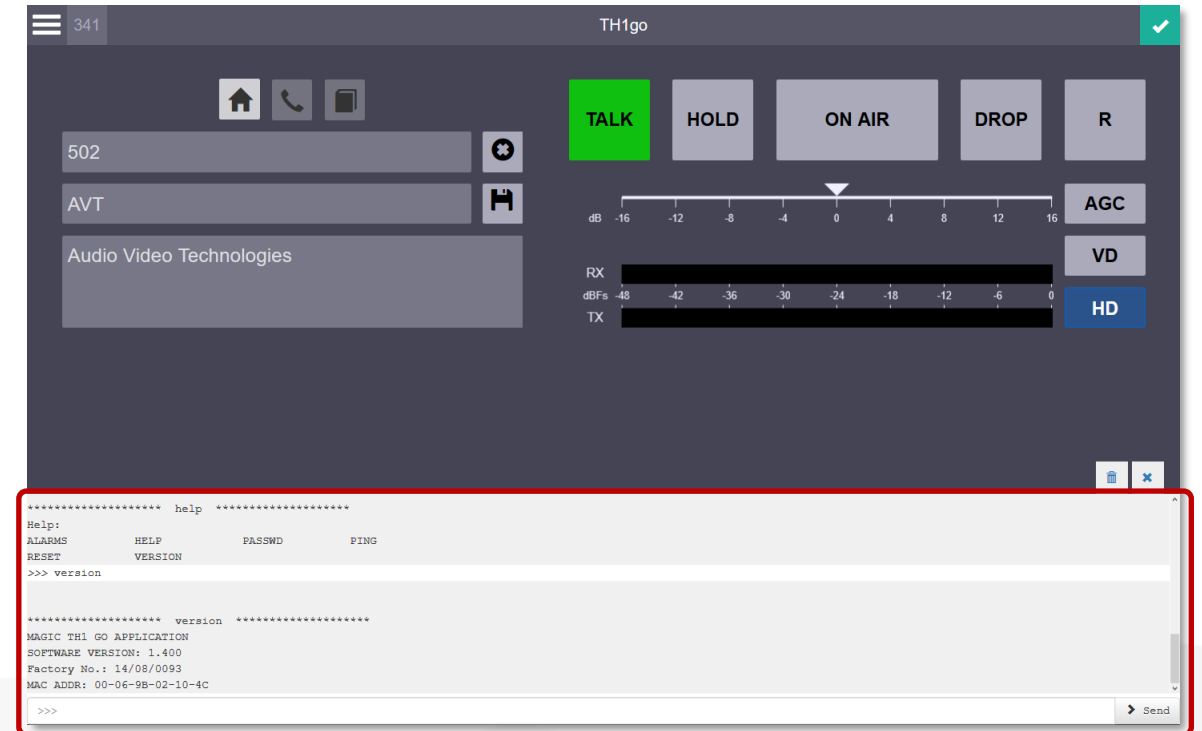
DTMF	<input checked="" type="checkbox"/>
VoIP	<input checked="" type="checkbox"/>
HD Voice	<input checked="" type="checkbox"/>
Software Option Password	<input type="text"/>

At the bottom right, there are three buttons: 'Cancel', 'Apply', and 'OK'.

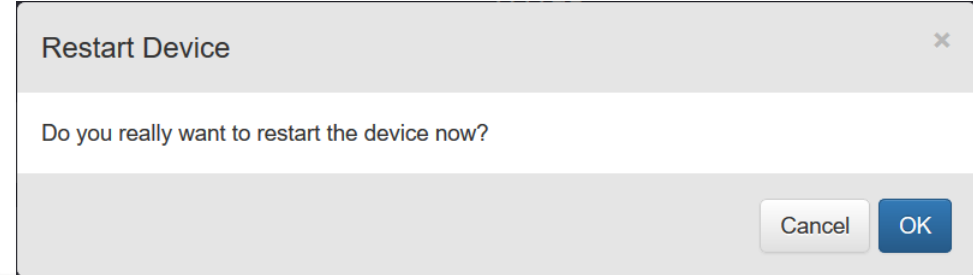
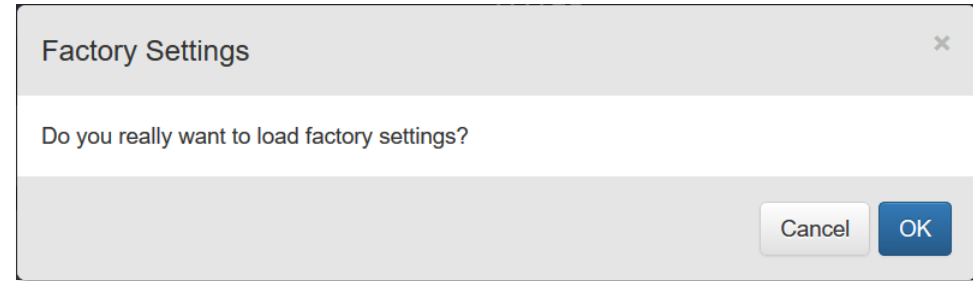
- New firmware can be downloaded from our [Website](#) under Downloads → Software
- The firmware file TH1GO.SSW must be downloaded to the MAGIC TH1Go via the Firmware Download menu
 - Press Choose File to select the downloaded firmware file
 - If the firmware file is valid, you see the size, the release date as well as the confirmation Valid SSW file
 - Press Start to update the system
 - Do not switch-off the system during a firmware update
- The new software version can be displayed via Menu → About



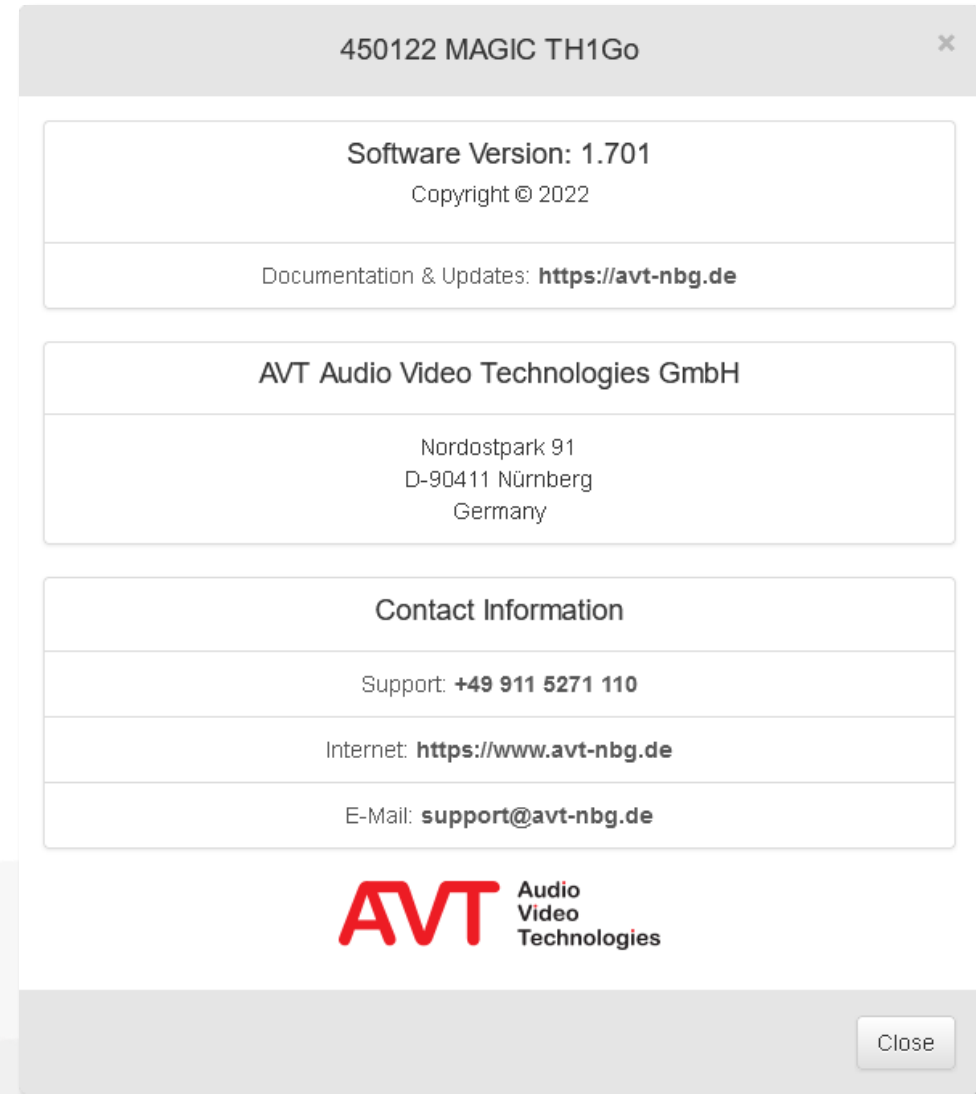
- Via Menu → System Panel a command window can be displayed, which offers special functions for e.g., extended troubleshooting
- The System Panel is displayed below the main window
 - Press  to clear the window
 - Press  to close the command window
- By entering the “help” all commands available for users are displayed
 - ALARMS
 - To check alarms and reset alarm counters
 - PING
 - To check connections to e.g., SIP or DNS server via the system ethernet interface
 - RESET
 - To restart the system
 - VERSION
 - To show firmware version, factory number, MAC address




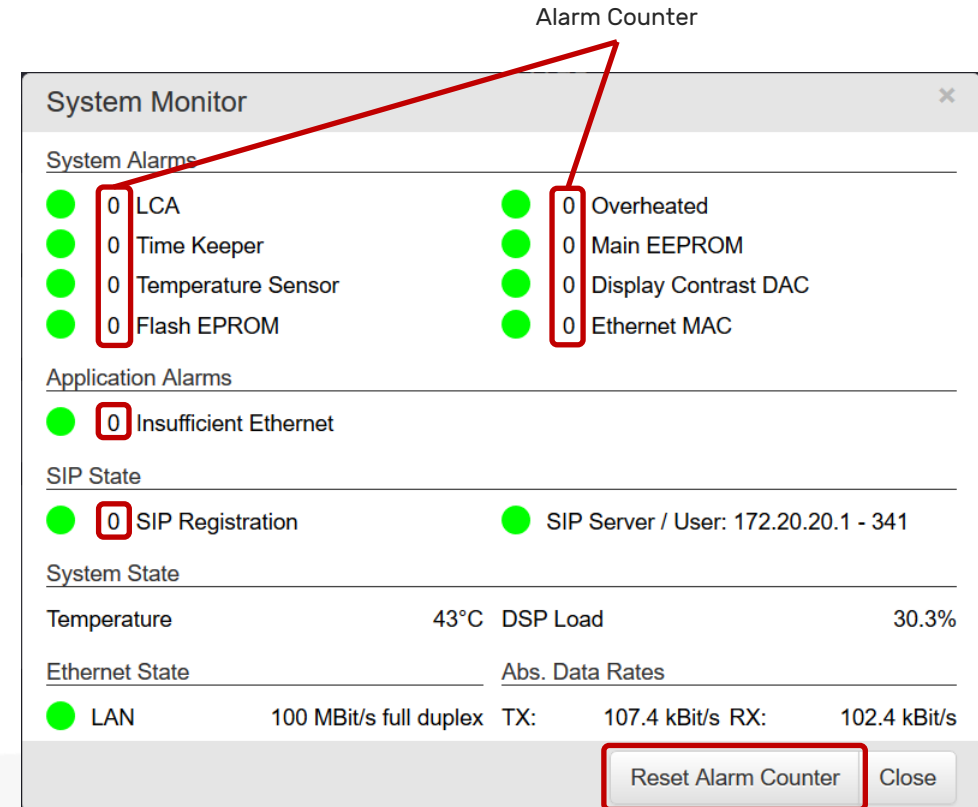
- Using Menu → Set Factory Settings, the system can be reset to the factory settings
 - For safety reasons, the action must be confirmed with OK
 - To be able to access the device via the web browser again, you must first reset the old IP address via the front keyboard (see [Basic Configuration](#))
- Via Menu → Restart Device a soft restart start is initiated
 - For safety reasons, the action must be confirmed with OK



- The About Panel displays the following information
 - Firmware version
 - AVT contact address
 - Support details
 - Phone number
 - Email address
 - Website



- The system monitor displays all possible System and Application Alarms
 - To open the System Monitor, double-click the  icon in the upper right corner of the PC software or select Menu → System Monitor
- Alarm indication
 - GREEN No alarm
 - RED Active alarm
 - BLUE Occurred alarm, but no longer active
- The alarm counter indicates the number of alarms that have occurred since the last time the Reset Alarm Counter button was pressed.
- The VoIP version displays additionally the SIP Registration and details of the SIP Server
- General information such as Temperature, DSP Load, Ethernet State and Data Rates are also displayed



MAGIC TH1Go

Tips & Tricks

- Telephone Control Codes

- The TH1 can be controlled via the connected telephone using DTMF tones.
- Press the following key combinations or store them as quick dials on the telephone:

#	CALL
*1	PRETALK
*2	ON AIR
*3	HOLD
*4	DROP
*5	AGC ON
*6	AGC OFF
*7	Voice Disguise ON
*8	Voice Disguise OFF
*9	LOCK



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Support



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