

# Interop T440/T640 2.0 Equada VoIP-Trunk

Equada VoIP-Trunk (T440/640 SW-version [2.0.0](#))

Feature	
Outgoing Calls	Yes
Incoming Calls	Yes
CLIP incoming	Yes
CLIP outgoing	Yes
Call Forwarding	Yes
Call Transfer	Yes
Call Waiting	Yes
DTMF	Yes
Anonymous Call	Yes
A-number forwarding	Yes
Fax	see chart below



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## Gigaset T440/T640 PRO settings.

For entering a new SIP trunk into the PBX, you need some steps:

1. Adding a new Gateway group
2. Adding a new SIP gateway
3. Defining the inbound routes (assignment of number to extension)
4. Defining the outbound routes

Let's assume our SIP trunk contains the following numbers:

**0891234567[0-9]**

And we choose following internal numberblock:

**67[0-9]**

And we have no line-prefix.

## Gateway Group

In the Gigaset PBX go to "Administration" - "Routes" - "Gateway groups" enter a name for the new group and click on: **Create new group**

In the Gateway group you have to define the Outbound Caller ID, the Inbound DIDs (how the number is forwarded to the Inbound routes) and the Inbound caller ID (number presentation of external caller). in addition you can permit here inbound calls in general for this gateway group.

## Equada Web-Portal



### Important

In order that the incoming caller-ID from external callers are presented correctly, you have to change the default setting in the Equada Web-portal.

Go to Einstellungen --> VoIP Trunk --> Format der Rufnummer  
(menu on the right side)

Select "Zielnummer: Ohne Präfix" and "Anrufernummer: National"

The screenshot shows the Equada Web-Portal interface. At the top, the user is logged in as Martin Hermann with account number 15690. The main navigation bar includes links for HOME, ANRUF, KONTO, EINSTELLUNGEN, DIENSTE, and HILFE. The current page is titled 'Rufnummernformate bei eingehender Telefonie' for 'Trunk 7884'. It features two dropdown menus: 'Zielnummer:' set to 'Ohne Präfix (zB. 49030) - Standard' and 'Anrufernummer:' set to 'National (zB. 030)'. A green 'Speichern' button is located below these settings. On the right side, there is a sidebar with 'VoIP-Trunk konfigurieren' options: Übersicht, Weiterleitungen, Passwort ändern, Fax2Mail, Format der Rufnummer, and Erweiterte Einstellungen. Below this is a 'Quicklinks' section with links to Meine Rechnungen, SMS Versenden, and Fax Versenden.

HOME

MENU

ADMINISTRATION

PROFILE

Users & extensions

System

Provisioning

Routes

Gateway groups

SIP gateways

TDM Gateways

Inbound routes

Outbound routes

Call forwarding

System status

Edit gateway group

Title

Equada trunk

Permit inbound calls

ON

Outbound caller ID

Search/replace pattern for outbound caller ID (1)

s/

\*d(d)(d)

/

49901234567S1

/

Asserted Identity

Search/replace pattern for asserted identity (1)

s/

/

/

Inbound DiDs

Search/replace pattern to cut prefixes (2)

s/

^(?:0049|+49490)?8997123

/

S1

/

Inbound caller ID

Search/replace pattern for inbound caller ID (3)

s/

^(\*)

/

S1

/

Gateways

SIP - equada trunk

Outgoing caller IDs

(1) Search/Replace pattern (PCRE) for outbound caller ID signalling. Examples:  
Extension only: s/\*(\*)/S1/  
National format: s/\*(\*)/00123456S1/  
International format: s/\*(\*)/00490123456S1/ or s/\*(\*)+4930123456S1/  
Same number for all users: s/\*(\*)/004930123456S1/  
In most cases you should use the national or international format.  
(2) If necessary, specify here a PCRE-pattern which removes prefixes from inbound numbers, so that only the internal extension remains. Examples:  
s/\*026313370//  
s/\*(((0049|0)2631))3370//  
s/\*(?:0049|0)2631)73370(\*)/S1/  
(3) Search/Replace pattern (PCRE) for inbound caller IDs, to fix up eventually wrong signalled caller IDs. Example: s/\*/0/ or s/\*(\*)/0S1/ to prefix the caller ID with a 0. Empty for no automatic change.  
Experimental: This option can also be used to add or remove a leading 0 to/from call log entries by using s/\*/0/ or s/\*(\*)/0S1/, or s/\*0/ or s/\*0(\*)/S1/.

Cancel

Save

### Example of Equada VoIP trunk gateway group settings.

Outbound caller ID

As just the last digit of the trunk number block is changing, you can select just the last digit (in brackets) and put it into the variable \$1. As the provider wants the signalling number in the format (country-code)(city-code)(number), you have to enter this number into the next line (here: **0891234567\$1**, where the **\$1** represents the changing part).

For external calls, we will present e.g. **08912345678** to the provider, and he will take care about the correct representation to the called party.

### Asserted Identity

These fields are used specially for external forwardings. Some providers need special settings in order to present the correct number at the receiving party. For Equada VoIP Trunk, you can leave these fields empty.

## Inbound DIDs

For incoming calls, you can use the regular expression, generated by the setup assistant. In your case you would have to adjust the city-code and the pilot-number, according to your line-settings.

`^(?:((?:0049|\\+49|49|0)?89)?12345)?(\\.)*`

This expression cuts all possibly available country- and city-codes and the pilot-number from the incoming number and only the extension is remaining (here: **678**). This will be forwarded to the Inbound Routes.

Inbound caller ID

For incoming calls, we will the external number of the caller "as-is" to the phone (e.g. **089987 654321**). During the call-setup the additional **0** will be automatically removed.

## Gateways

This field will be empty when you create this Gateway group. It will show later the assigned SIP gateways.

## SIP gateway

In the Gigaset PBX go to "Administration" - "Routes" - "SIP gateways" enter a name for the new gateway and click on: **Create new gateway**

The SIP gateway contains all necessary data for the registration and dial command and how the number is delivered to/from the provider.

Just enter or choose the values according to your contract or VoIP trunk data you received from the provider.

The screenshot shows the 'Edit SIP gateway' configuration page in the Gigaset PBX interface. The page is titled 'Edit SIP gateway : equada trunk'. The left sidebar contains a navigation menu with options: HOME, MENU, ADMINISTRATION (selected), and PROFILE. Below this, there are links for Users & extensions, System, Provisioning, Routes, Gateway group, SIP gateways (selected), TDM Gateway, Inbound routes, Outbound routes, Call forwarding, and System status.

The main configuration area is divided into two columns. The left column contains a form with the following fields:

- Title: equada trunk
- Name: gw\_6\_equadatunk
- Registrar: 15690.pbx-trunk.net
- Proxy [1]:
- User [2]: 15690.pbx-trunk.net
- Password: (masked with dots)
- Allow outbound calls: ☒ ON
- Register: ☒ ON
- Language: de - German (de-DE)
- Dial command [3]: PJSIP/{prefix}{number}@{gateway}
- Transport name: default-udp
- Source of destination number: INVITE request line
- Group [4]: Equada trunk
- Port [5]: 5060
- NAT: Force port
- Redirect RTP stream: Do not reroute RTP stream (default)
- Check availability: ☒ ON
- Simultaneous calls: 0 (0 for unlimited (default))

The right column contains a list of notes and instructions:

- (1) Empty for no proxy.
- (2) For some SIP providers, it might be necessary to use the format user@domain. (domain is then used in the From header, which equals fromdomain in Asterisk.)
- (3) String for the Dial() command. T440/T640 PRO will automatically replace (number) by the called number; (number.1) without the first digit and (gateway) with the internal description (e.g. gw\_1\_amt).
- (4) In order to use gateways, they must be assigned to a gateway group.
- (5) When specifying the port (standard SIP port: 5060), it will be directly used. Without, a DNS lookup of the SRV record \_sip\_udp of the domain (or server) will be performed upon dialout. More Information Srv Resource Record, Srv Resource Record (en), CIDR, SIP-DNS-Srv-Records, SIP-DNS-Srv-Records (en), SIP-DNS-Srv-Records (en)
- (6) The priority of the codes is from left to right and top to bottom
- (7) Useful settings are e.g.  
0.0.0.0/0, to allow calls from all IP addresses,  
192.0.2.0/24 to allow calls originating from network 192.0.2.\*,  
192.168.0.0/16 to allow calls originating from network 192.168.\*.\*,  
192.168.1.1/32 to allow calls originating from IP address 192.168.1.1 etc.

At the bottom right of the form, there are 'Cancel' and 'Save' buttons.

Example of Equada VoIP trunk gateway settings 1/2.

Example of Equada VoIP trunk gateway settings 2/2.

**Registrar**

Use here the **SIP-Server / Registrar** (received by Equada, visible in the web-portal).

15690.pbx-trunk.net

**Proxy**

Can be left empty.

**User**

Enter here the **Username** (Benutzername), followed by '@15690.pbx-trunk.net'. You have to enter the realm behind the username in order to properly register the trunk at the provider.

For example

0891234567@15690.pbx-trunk.net

**Dial command**

The dial command is the command which is used in the asterisk software. The term **{number}** means, that the number (e.g. **089987654321**) is dialled as entered. If you use a line access code (in most cases '0' is used), you have to add ':1' after "number".

**Group**

Select here the previously created gateway group.

**Update remote party ID or P-Asserted-Identity (CLIP)**

These settings can be left on the default setting (no - Deactivated)

**From Domain**

Enter here the **Domain/Realm** delivered by Equada

15690.pbx-trunk.net

**T38 support**

In order to have a better fax-support for fax-machines, connected to the FXS ports activate this option.

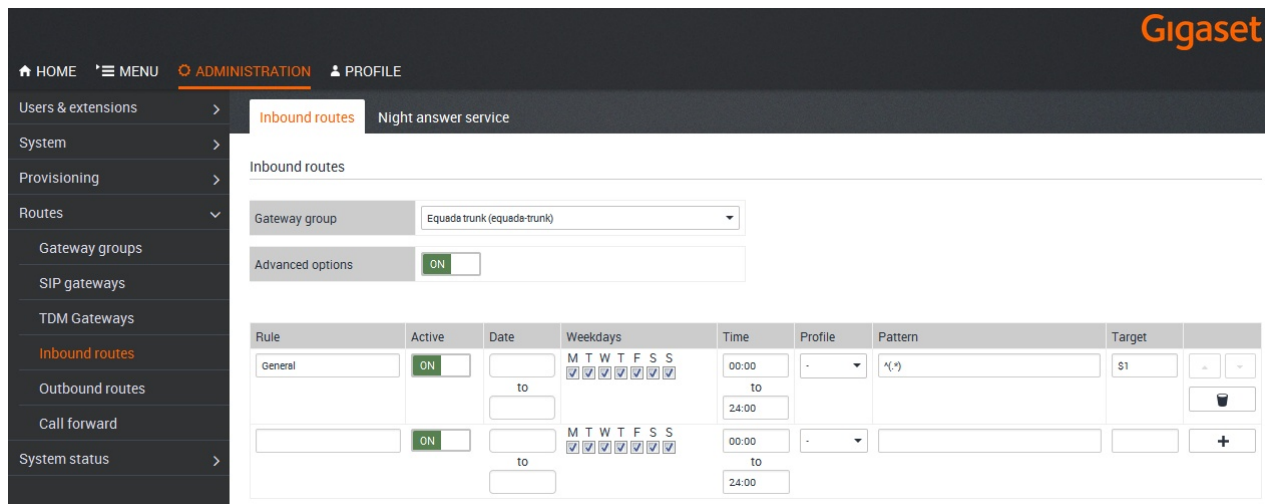
All tested scenarios were ok with this parameter activated.

Underneath the configuration parameter you will see a preview of the complete sip.conf file.

## Inbound routes

In the Gigaset PBX go to "Administration" - "Routes" - "Inbound routes" select the correct Gateway group and press **Show**.

In addition it is advised to activate the **advanced options** by clicking it to 'ON' and then pressing **Show**.



The screenshot shows the Gigaset PBX administration interface. The sidebar menu on the left includes options like "Users & extensions", "System", "Provisioning", "Routes", "Gateway groups", "SIP gateways", "TDM Gateways", "Inbound routes" (which is highlighted), "Outbound routes", "Call forward", and "System status". The main content area is titled "Inbound routes" and shows a configuration for the "Equade trunk (equade-trunk)" gateway group. There is a section for "Advanced options" with a toggle switch set to "ON". Below this is a table with columns: Rule, Active, Date, Weekdays, Time, Profile, Pattern, and Target. The table contains two rows. The first row is for a rule named "General", which is active (ON), has a date field, a weekdays field with checkboxes for M, T, W, T, F, S, S, a time field from 00:00 to 24:00, a profile dropdown, a pattern field containing "^()", and a target field containing "\$1". The second row is for an empty rule, also active (ON), with similar fields. There are also buttons for adding, deleting, and saving rules.

Example of Equada VoIP trunk Inbound routes.

### Rule

Enter here a name for the according rule.

### Date / Weekdays / Time

With these settings you can configure a time-controlled routing to different targets.

### Pattern / Target

In the pattern you define which part of the incoming number is used to forward the call to the according extension.

In our example we receive already the correct extension from the gateway group. Therefore no further number-manipulation is necessary.

When the PBX finds an according extension it will route the call to it.

But you can add here exceptions from this rule, for example for internal fax users or waiting queues, etc.

Please have in mind the order of these rules, as the system is using **First Match!!!**

## Outbound routes

In the Gigaset PBX go to "Administration" - "Routes" - "Outbound routes" activate the Advanced options by clicking it to 'ON' and then pressing **Show**.

Gigaset

HOME MENU ADMINISTRATION PROFILE

Users & extensions System Provisioning Routes

Gateway groups SIP gateways TDM Gateways Inbound routes

### Outbound Routes

Advanced options ON

Rule	Active	Weekdays	Time	Pattern	Group	Gateway gr...	Add prefix	
Equada trunk	<span style="background-color: #2e7d32; color: white; padding: 2px 5px;">ON</span>	M T W T F S S <div style="display: flex; justify-content: space-around; font-size: 10px;"> <span>☑</span><span>☑</span><span>☑</span><span>☑</span><span>☑</span><span>☑</span><span>☑</span> </div>	00:00 to 24:00	*0	[all]	Equada t		<div style="display: flex; align-items: center;"> <div style="border: 1px solid #ccc; padding: 2px 5px;">-</div> <div style="border: 1px solid #ccc; padding: 2px 5px;">-</div> </div> <div style="text-align: right; font-size: 12px;"> <span>⌵</span> </div>

Example of Equada VoIP trunk Outbound routes.  
Rule

Enter here a name for the according rule.

Date / Weekdays / Time

With these settings you can configure a time-controlled routing.

Pattern

In the pattern you define how the outside line is seized. In our example all dialled numbers starting with '0' will use the Gateway group Equada VoIP trunk.

Remark: For calling anonymous to external parties, use the CLIR-setting in the HOME screen of the user!

## Fax support

Following table shows you the current state (29.08.2016) of supported fax constellations. These results are without a guarantee. Due to different end-devices, configuration of PBX or other settings the fax transmission might fail. [More info about fax via VoIP networks can be found here.](#)

Receiving	Sending			
	Internal FXS	Internal T38-Fax	External T38-Fax	External machine-Fax
Internal FXS	---	---	OK**	OK**
Internal T38-Fax	---	---	OK**	OK**
External T38-Fax	OK*	OK**	---	---
External machine-Fax	OK**	OK**	---	---

Used devices or services:

Canon Fax-L100 (internal FXS), [www.minifax.de](http://www.minifax.de) (external SW-Fax), Triumph Adler DCC 2725 (external machine-Fax)

\* = T38 option in SIP gateway deactivated

\*\* = T38 option in SIP gateway activated