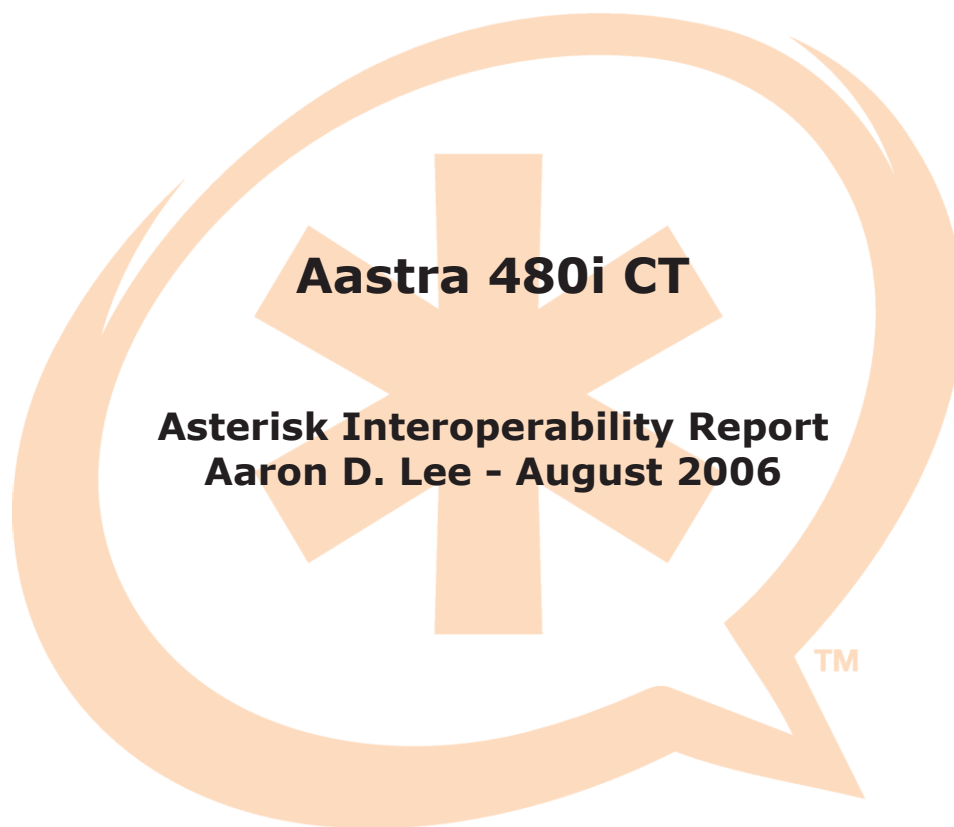


# Aastra 480i CT

**Form:** Asterisk Interoperability Report

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## Aastra 480i CT

### Asterisk Interoperability Report

Asterisk Interoperability Reports describe the certification testing performed by Digium on the specified product and Asterisk Business Edition. Each Supported feature of the device under test is described as well as how the device was configured to work with Asterisk during testing.

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# Aastra 480i CT

Form: Asterisk Interoperability Report

## SIP Device Summary

<b>Make:</b>	Aastra480i CT
<b>Firmware:</b>	1.4.0.1048
<b>Tested With:</b>	Asterisk B.E. B.1.1

## Product Description

The Aastra 480i CT is a versatile SIP phone featuring a large screen with 6 softkeys that may be configured to act as shortcuts to menu actions, launcher for custom xml applications as well as speed dial extensions with optional SIP presence. The Aastra 480iCT also supports up to 4 cordless handsets.

## Features Tested and Confirmed Working

- **Call Hold and Retrieve**
- **Call Waiting**
- **Call Transfer and Divert**
- **Other Party Identification (Caller ID)**
- **Conferencing**
- **Call History**
- **Do not Disturb**
- **Message Waiting Identification (Voicemail Alerts)**
- **Call Forwarding**
- **SIP Presence / Busy Lamp Field (Requires Asterisk B.E. Version B.1)**

## Asterisk Configuration

For the basic configuration of a SIP device within Asterisk requires the configuration of three configuration files: sip.conf for setting up the SIP device channel (including registration information, channel name, etc.), extensions.conf (for configuring SIP device extension), and voicemail.conf (for configuration of voice-mailbox). The following code snippets were used to configure the Aastra 480i CT for interoperability testing.

sip.conf	voicemail.conf
<pre>[480iCT] type=friend context=sip-phones username=aas480iCT secret=blah host=dynamic mailbox=4801@default defaultip=192.168.0.78 dtmfmode=rfc2833</pre>	<pre>4801 =&gt; 5555,480iCT,&lt;email&gt;</pre>
extensions.conf	
Using old=style n+101 extensions:	
<pre>[sip-phones] ... exten =&gt; 4801,1,Dial(SIP/480iCT,15) exten =&gt; 4801,2,VoiceMail(u4801) exten =&gt; 4801,3,Hangup exten =&gt; 4801,102,VoiceMail(b4801) exten =&gt; 4801,103,Hangup ...</pre>	
Using stdexten macro:	
<pre>[sip-phones] ... exten =&gt; 4801,1,Macro(stdexten,4801,SIP/480iCT) ...</pre>	
Hints for SIP presence:	
<pre>[buddypress] ... exten =&gt; 4801,hint,SIP/480iCT exten =&gt; 4801,1,Macro(line,\${480iCT})</pre>	

## SIP Device Configuration

### Configuration overview:

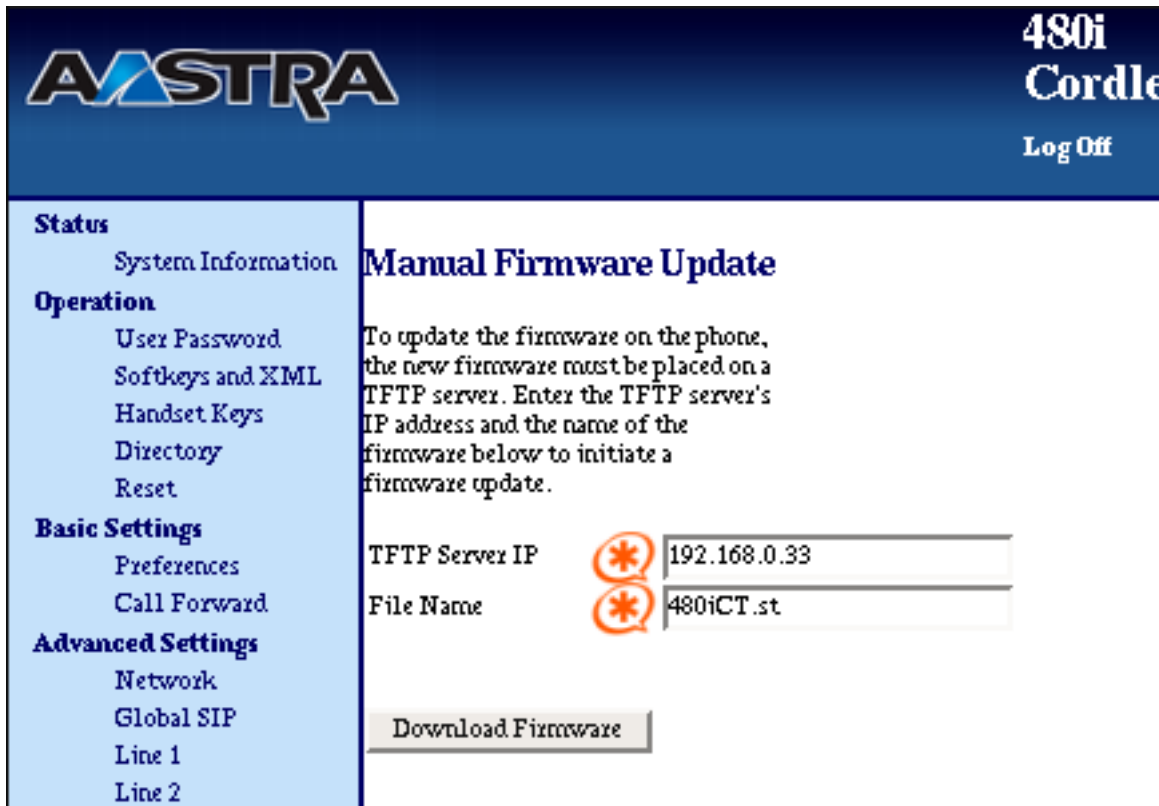
The 480i CT can be configured in any of these ways:

1. Navigating the web configuration interface
2. Editing phone configuration files on the TFTP server
3. Configuring the phone through the phone's internal menu system

### Web Configuration

The most vital configurations to the phone can be made easily through the phone's web interface. The 6 sections that must be configured are: Firmware, Global SIP, Network Settings, Configuration Server, SoftKeys and XML, and the individual Line configuration pages.

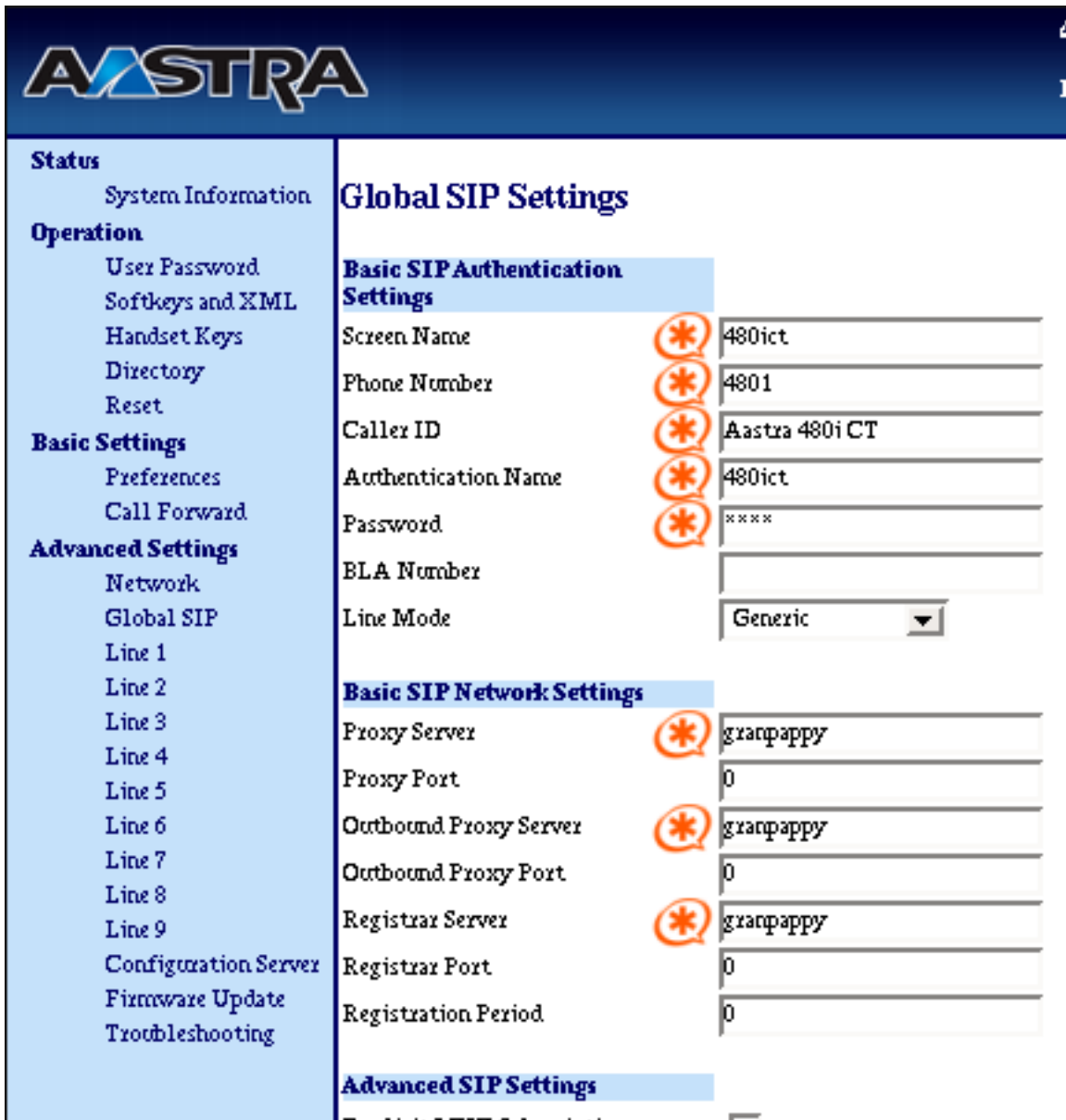
### Firmware



The screenshot shows the web interface for an Aastra 480i Cordless phone. The top header features the Aastra logo on the left and the text '480i Cordless' and 'Log Off' on the right. A left-hand navigation menu is visible, with categories: Status (System Information), Operation (User Password, Softkeys and XML, Handset Keys, Directory, Reset), Basic Settings (Preferences, Call Forward), and Advanced Settings (Network, Global SIP, Line 1, Line 2). The main content area is titled 'Manual Firmware Update' and contains the following text: 'To update the firmware on the phone, the new firmware must be placed on a TFTP server. Enter the TFTP server's IP address and the name of the firmware below to initiate a firmware update.' Below this text are two input fields: 'TFTP Server IP' with the value '192.168.0.33' and 'File Name' with the value '480iCT.st'. A 'Download Firmware' button is located at the bottom of the form.

## Global SIP


Settings in this section are not strictly necessary since they can be set in the individual Line settings page for each "line" the phone registers to and uses; however, since in many cases the authentic user name and password, Caller ID information, etc. remain the same on all Lines, it is helpful to complete this configuration page.



Category	Field	Value	
Basic SIP Authentication Settings	Screen Name	480ict	
	Phone Number	4801	
	Caller ID	Aastra 480i CT	
	Authentication Name	480ict	
	Password	****	
	BLA Number		
	Line Mode	Generic	
	Basic SIP Network Settings	Proxy Server	gratpappy
		Proxy Port	0
		Outbound Proxy Server	gratpappy
Outbound Proxy Port		0	
Registrar Server		gratpappy	
Advanced SIP Settings	Registrar Port	0	
	Registration Period	0	

## Network Settings

The only configuration necessary to make in this section is enabling NTP and specifying the NTP server to connect to. Unless of course one needs to specify a static IP, DNS information, NAT, etc.

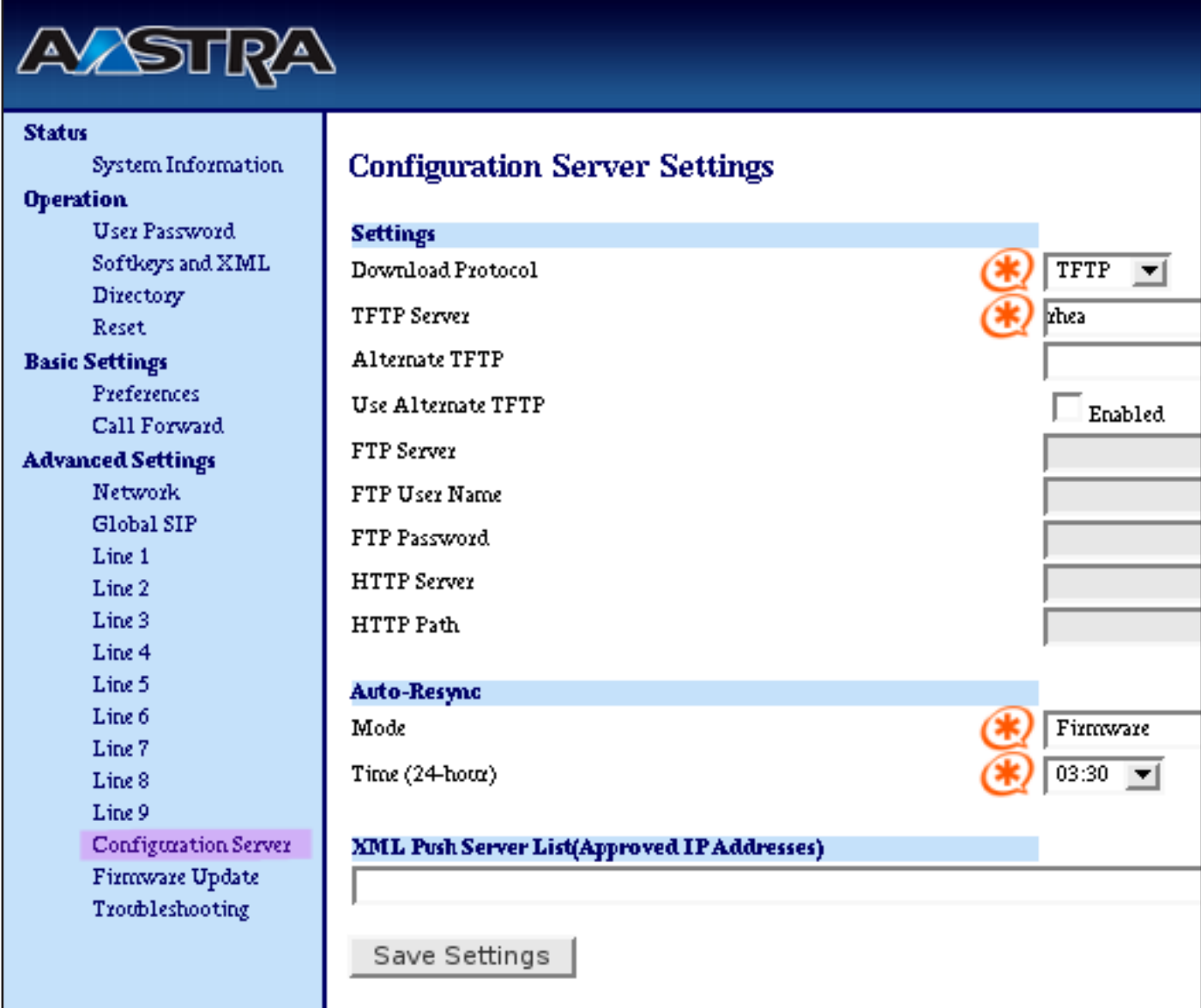

480i Co

[Log Off](#)

<p><b>Status</b></p> <ul style="list-style-type: none"> <li>System Information</li> </ul> <p><b>Operation</b></p> <ul style="list-style-type: none"> <li>User Password</li> <li>Softkeys and XML</li> <li>Handset Keys</li> <li>Directory</li> <li>Reset</li> </ul> <p><b>Basic Settings</b></p> <ul style="list-style-type: none"> <li>Preferences</li> <li>Call Forward</li> </ul> <p><b>Advanced Settings</b></p> <ul style="list-style-type: none"> <li>Network</li> <li>Global SIP</li> <li>Line 1</li> <li>Line 2</li> <li>Line 3</li> <li>Line 4</li> <li>Line 5</li> <li>Line 6</li> <li>Line 7</li> <li>Line 8</li> <li>Line 9</li> <li>Configuration Server</li> <li>Firmware Update</li> <li>Troubleshooting</li> </ul>	<h3 style="margin: 0;">Network Settings</h3> <p><b>Basic Network Settings</b></p> <p>DHCP <input checked="" type="checkbox"/> Enabled</p> <p>IP Address <input type="text" value="192.168.0.117"/></p> <p>Subnet Mask <input type="text" value="255.255.255.0"/></p> <p>Gateway <input type="text" value="192.168.0.1"/></p> <p>Primary DNS <input type="text" value="192.168.0.1"/></p> <p>Secondary DNS <input type="text" value="0.0.0.0"/></p> <p><b>Advanced Network Settings</b></p> <p>NAT IP <input type="text" value="0.0.0.0"/></p> <p>NAT Port <input type="text" value="0"/></p> <p>Nortel NAT Traversal Enabled <input type="text" value="No"/></p> <p>Nortel NAT Timer (seconds) <input type="text" value="60"/></p> <p>NTP Time Servers <input checked="" type="checkbox"/> Enabled</p> <p>Time Server 1 <input type="text" value="time"/></p> <p>Time Server 2 <input type="text" value="pool.ntp.org"/></p> <p>Time Server 3 <input type="text" value="0.0.0.0"/></p> <p><b>Type of Service, DSCP</b></p> <p>SIP <input type="text" value="24"/></p>
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## Configuration Settings

This page allows one to configure the TFTP (or FTP) server.



**AASTRA**

**Status**  
System Information


**Operation**  
User Password  
Softkeys and XML  
Directory  
Reset


**Basic Settings**  
Preferences  
Call Forward

**Advanced Settings**  
Network  
Global SIP  
Line 1  
Line 2  
Line 3  
Line 4  
Line 5  
Line 6  
Line 7  
Line 8  
Line 9  
**Configuration Server**  
Firmware Update  
Troubleshooting

### Configuration Server Settings

**Settings**

Download Protocol  TFTP

TFTP Server  zhe

Alternate TFTP

Use Alternate TFTP  Enabled

FTP Server


FTP User Name


FTP Password

HTTP Server

HTTP Path

**Auto-Resync**

Mode  Firmware

Time (24-hour)  03:30


**XML Push Server List(Approved IP Addresses)**

Save Settings



## Line Settings

These pages (Line 1 – Line 9) are used to configure registration and network settings for individual Lines.



**480i Co**

Log Off

**Status**

System Information

**Operation**

User Password

Softkeys and XML

Handset Keys

Directory

Reset

**Basic Settings**

Preferences

Call Forward

**Advanced Settings**

Network

Global SIP

Line 1

Line 2

Line 3

Line 4

Line 5

Line 6

Line 7

Line 8

Line 9

Configuration Server

Firmware Update

Troubleshooting

### Configuration Line 1

**Basic SIP Authentication Settings**

Screen Name	*	Granpappy
Phone Number	*	480ict
Caller ID	*	Aastra 480iCT
Authentication Name	*	480ict
Password	*	****
BLA Number	*	4801
Line Mode		Generic ▼

**Basic SIP Network Settings**

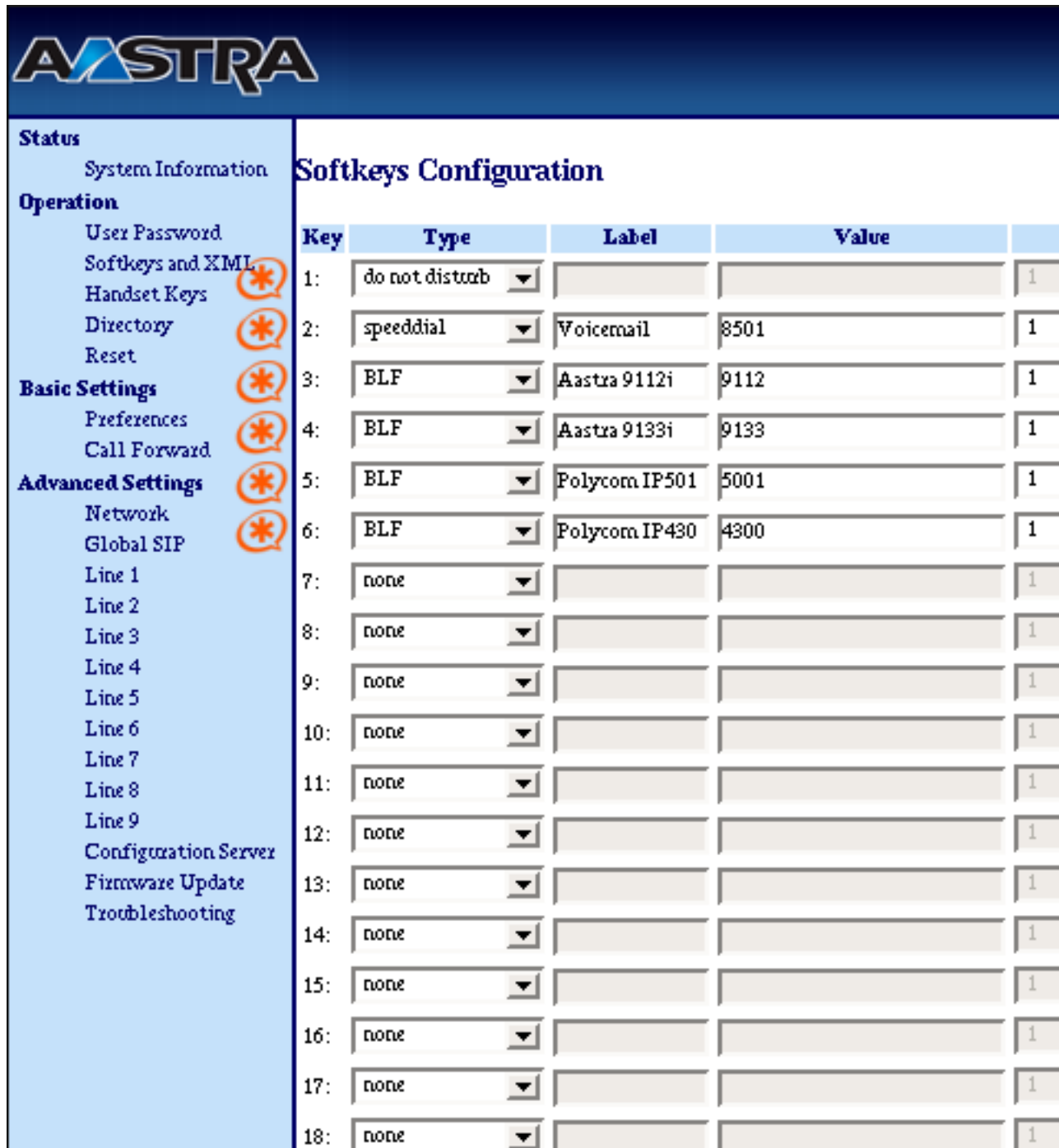
Proxy Server	*	granpappy
Proxy Port		0
Outbound Proxy Server	*	granpappy
Outbound Proxy Port		0
Registrar Server	*	granpappy
Registrar Port		0
Registration Period		0

**RTP Settings**

DTMF Method		RTP ▼
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## Softkeys and XML

This page is used for configuring the SoftKeys (used for holding extensions, lines, etc.) and for configuring the phone to utilize XML applications.



**AASTRA**

**Status**  
System Information

**Operation**  
User Password  
Softkeys and XML  
Handset Keys  
Directory  
Reset

**Basic Settings**  
Preferences  
Call Forward

**Advanced Settings**  
Network  
Global SIP  
Line 1  
Line 2  
Line 3  
Line 4  
Line 5  
Line 6  
Line 7  
Line 8  
Line 9  
Configuration Server  
Firmware Update  
Troubleshooting

**Softkeys Configuration**

Key	Type	Label	Value	
1:	do not disturb			1
2:	speeddial	Voicemail	8501	1
3:	BLF	Aastra 9112i	9112	1
4:	BLF	Aastra 9133i	9133	1
5:	BLF	Polycorn IP501	5001	1
6:	BLF	Polycorn IP430	4300	1
7:	none			1
8:	none			1
9:	none			1
10:	none			1
11:	none			1
12:	none			1
13:	none			1
14:	none			1
15:	none			1
16:	none			1
17:	none			1
18:	none			1

## Phone Configuration Settings

There are two configuration files one can edit in order to configure the Aastra 480i CT. First is the `aastra.cfg` file, which contains the settings for all aastra phones utilizing that TFTP server, the second is the `<mac>.cfg` (where `<mac>` is the phone's mac address) which contains phone specific settings. Below are samples of said configuration files.

### **`aastra.cfg`**

```
# Aastra Telecom Inc.
# Common settings for all Aastra IP Phones. Any parameter
# listed in this file can be
# overwritten by the same parameter in <mac>.cfg file.

#Time Server Settings
#time server disabled: 0
#time server1: pool.ntp.org

#Sip Settings
sip proxy ip: 0.0.0.0
sip proxy port: 5060
sip registrar ip: 0.0.0.0
sip registrar port: 5060
sip outbound proxy:
sip outbound proxy port:

sip registration period: 3600
sip registration retry timer: 30

sip use basic codecs: 1
sip line1 vmail:

#sip intercom type: 2
#sip intercom prefix code: *55

web interface enabled: 1

#Daily Resync of cfg and firmware files
#auto resync mode: 3
#auto resync time: 23:30

#Server-based directory download
#directory 1: mydirectory.csv
```

## **<mac-address>.cfg**

```
# Aastra Telecom Inc.
# This file contains specific settings for the phone with the
MAC
# address for which this file was named.  Settings which have
already
# appeared in aastra.cfg will be overridden by those in this
file.

#line info
#line 1
sip line1 auth name: aas480i CT
sip line1 password: blah
sip line1 mode: 0
sip line1 user name: aas480i CT
sip line1 display name: Aastra480i CT
sip line1 screen name: Aastra480i CT

# Softkey Settings
softkey1 type: speeddial
softkey1 label: Voicemail
softkey1 value: 8500
softkey1 line:
softkey1 states: idle

softkey2 type: dnd
softkey2 label: DND
softkey2 value:
softkey2 line:
softkey2 states: idle

softkey3 type: blf
softkey3 label: Snom 360
softkey3 value: 3600
softkey3 line: 1
```

## Test Reports

The following test reports give an overview of the tests performed, as well as their objectives and expected and actual results. Because the the 480i CT is identical to the 480i except for the external cordless handset functionality, all the following tests were performed on the cordless handset, unless otherwise specified.

<b>Hold and Retrieve</b>	
<b>Test Objective:</b>	Verify that a call can be placed on hold, other calls can be made, and the original call can be retrieved.
<b>Procedure:</b>	Place a call to the 480i CT and place the calling party on hold by pressing the "F" button, and selecting Line 2. Then from the 480i CT call out to another party by dialing the desired extension and pressing the button located under "Line 2". Then the new call can be hung up and by pressing the key located under "Line 1" the previous call can be retrieved.
<b>Expected Results:</b>	The call will be placed on hold and can be retrieved whenever.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b>Call Waiting</b>	
<b>Test Objective:</b>	Verify that call waiting is functional, allowing a new call to be answered by placing existing conversing party on hold.
<b>Procedure:</b>	Place a call to the 480i CT and answer it, with another device call the 480i CT. Place the first calling party on hold the answer the new call. Hangup (or place on hold) and resume the conversation with the first calling party.
<b>Expected Results:</b>	The original caller will be on hold until new caller is disconnected or put on hold itself.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b><i>Transfer and Divert</i></b>	
<b>Test Objective:</b>	Verify transferring calls works using the transfer button on the SIP phone.
<b>Procedure:</b>	Place a call to the 480i CT during the conversation press "F" then select "PgDown" then "Xfer", dial the number of the party to which you will be transferring the call and press the button located under "Xfer" on the display, then the call should be successfully transferred.
<b>Expected Results:</b>	The call will be successfully transferred via the blind transfer method.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b><i>Other Party Identification</i></b>	
<b>Test Objective:</b>	Verify the phone displays the proper caller ID information.
<b>Procedure:</b>	Place a call to the 480i CT and verify caller ID information is displayed correctly.
<b>Expected Results:</b>	Caller ID information should be displayed upon receiving a call.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b><i>Conferencing</i></b>	
<b>Test Objective:</b>	Verify that conferences can be initiated using the Conf option within the phone itself.
<b>Procedure:</b>	Place a call to the first conference member then press "F" then "PgDown" and select "Conf" then dial the second member for the conference then press "Conf" once more to bridge all members.
<b>Expected Results:</b>	The conference should be initiated using the "Conf" button option.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b>Call History</b>	
<b>Test Objective:</b>	Verify that an accurate call history is recorded and displayed from within the phone.
<b>Procedure:</b>	Place a few answered as well as missed calls to the phone and then press the key located under the phone icon displayed on the screen. Scroll through the call list and verify.
<b>Expected Results:</b>	The call history should be recorded and displayed in the "Callers Lists" menu.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b>Do Not Disturb</b>	
<b>Test Objective:</b>	Verify if "Do not Disturb" mode is turned on calls to the 480i CT will be sent directly to voicemail.
<b>Procedure:</b>	After registration, press the "Do Not Disturb" button (which must be configured in the Softkey menu in the web administration page or in the phone configuration file) and from another device place a call to the 480i CT. *This must be done from the base-station.
<b>Expected Results:</b>	The call placed to the 480i CT will jump directly to voicemail.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b>Waiting Message Indication</b>	
<b>Test Objective:</b>	Verify Asterisk phone receives WMI from Asterisk and displays this information.
<b>Procedure:</b>	Call the 480i CT and leave a message on it's voicemail, verify that after a short while the phone receives the WMI. *Note: a speed dial Softkey set for the voicemail extension can be configured in the Softkey menu in the web administration page.
<b>Expected Results:</b>	After a voicemail is placed, Asterisk will send WMI to phone, and the information will be displayed on-screen.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b>Forwarding</b>	
<b>Test Objective:</b>	Verify if specified calls can be forwarded to a specified extension.
<b>Procedure:</b>	Press the "Options" button and select option number 8 by either pressing "8" or scrolling down and pressing "Show". Then configure a forwarding extension and set it to forward either All, Busy, NoAns, BusyNoAns, or Off. With it configured to all any call to the 480i CT will instantly be forwarded to the configured extension. *This must be done from the base-station.
<b>Expected Results:</b>	The calls to the 480i CT should be forwarded to whatever extension is specified, using the forwarding condition as specified.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>

<b>SIP Presence / Busy Lamp Field (BLF)</b>	
<b>Test Objective:</b>	Verify if BLF softkeys are configured (and if Asterisk is correctly configured) the BLF extensions will have their status (on-hook or off-hook) displayed on-screen.
<b>Procedure:</b>	Configure the softkeys menu in the web administration page so that there some BLF extensions specified. (This is done in the same way that "speedial" extensions are setup only "BLF" is specified rather than "speedial" *This must be done from the base-station.
<b>Expected Results:</b>	Small phone icons will appear next to the specified extensions. When any of these devices is busy, the phone icon will appear as if it is off-hook.
<b>Actual Results:</b>	As expected.
<b>Status:</b>	<b>Pass</b>