



Parameters and Defaults

This section provides information on the parameters and defaults that you can use to create your own Cisco ATA configuration file. This section also includes the voice configuration menu code for each parameter that has such a code.

Some parameters on the Web Configuration screen are not used for SCCP; only those used for SCCP are covered in this section.

Parameters are divided into categories based on their functionality. The following categories of parameters are covered in this section:

- [User Interface \(UI\) Parameter, page 5-3](#)
- [Parameters for Configuration Method and Encryption, page 5-4](#)
- [Network Parameters, page 5-6](#)
- [Account Information Parameters, page 5-8](#)
- [SCCP Mode Parameter, page 5-10](#)
- [Operating Parameters, page 5-10](#)
- [Optional Feature Parameters, page 5-19](#)

The following list contains general configuration information:

- Your configuration file must begin with **#txt**.
- The Cisco ATA uses the following parameter types:
 - Alphanumeric string
 - Array of short integers
 - Boolean (1 or 0)
 - Bitmap value—unsigned hexadecimal integer (for specifying bits in a 32-bit integer)
 - Extended IP address—IP address followed by port number (for example, 192.168.2.170.9001)
 - IP address (e.g. 192.168.2.170)
 - Integer (32-bit integer)
 - Numeric digit string



Note

The term *Cisco ATA* is used throughout this manual to refer to both the Cisco ATA 186 and the Cisco ATA 188, unless differences between the Cisco ATA 186 and Cisco ATA 188 are explicitly stated.

**Note**

This section contains recommended values for the United States and Sweden as configuration examples for certain parameters. For information about other countries, contact the Cisco equipment provider for a specific country.

Configuration Text File Template

This is a listing of the sk_example.txt text file, without its annotations, that comes bundled with the Cisco ATA software.

You can make a copy of this file and use it as a template for creating your own default configuration file or Cisco ATA-specific configuration file. For instructions on how to create these configuration files, see the [“Creating a Cisco ATA Default Configuration File”](#) section on page 3-10 and the [“Creating a Configuration File for a Specific Cisco ATA”](#) section on page 3-12.

The sk_example.txt file contains all the Cisco ATA default values. The sections that follow this listing describe all the parameters in this file.

```
#txt
UIPassword:0
UseTftp:1
TftpURL:0
cfgInterval:3600
EncryptKey:0
ToConfig:0
upgradecode:0,0x301,0x0400,0x0200,0.0.0.0,69,0,none
upgradelang:0,0x301,0x0400,0x0200,0.0.0.0,69,0,none
Dhcp:1
StaticIp:0
StaticRoute:0
StaticNetMask:0
CA0orCM0:0
CA1orCM1:0
CA0UID:0
CA1UID:0
EPID0orSID0:.
EPID1orSID1:.
PrfCodec:1
LBRCodec:3
AudioMode:0x00350035
NumTxFrames:2
CallerIdMethod:0x00019e60
ConnectMode:0x90000400
DNS1IP:0.0.0.0
DNS2IP:0.0.0.0
UDPTOS:0xA0
RingCadence:2,4,25
DialTone:2,31538,30831,1380,1740,1,0,0,0
BusyTone:2,30467,28959,1191,1513,0,4000,4000,0
ReorderTone:2,30467,28959,1191,1513,0,2000,2000,0
RingBackTone:2,30831,30467,1943,2111,0,16000,32000,0
CallWaitTone:1,30831,0,5493,0,0,2400,2400,4800
ConfirmTone:1,30467,0,5970,0,0,480,480,1920
MediaPort:16384
UseMGCP:0
MGCPPort:2427
RetxIntvl:500
RetxLim:7
MGCPVer:MGCP1.0
```

```
NPrintf:0
TraceFlags:0x00000000
SigTimer:0x00000064
CodecName:PCMU,PCMA,G723,G729
OpFlags:0x2
VLANSetting:0x0000002b
```

User Interface (UI) Parameter

This parameter type contains one parameter—UIPassword.

UIPassword

Description

This parameter controls access to web page or voice configuration menu interface. To set a password, enter a value other than zero.

To clear a password, change the value to 0.

You cannot recover a forgotten password unless you reset the entire configuration of the Cisco ATA (see the [“Resetting the Cisco ATA to Factory Default Values”](#) section on page 3-20). If you forget a password, you can contact your Cisco representative.



Note

When UIPassword contains letters, you cannot enter the password from the telephone keypad.

Value Type

Alphanumeric string

Range

Maximum nine characters

Default

0

Voice Configuration Menu Access Code

7387277

Related Parameter

[OpFlags, page 5-17](#) (bit 7)

Parameters for Configuration Method and Encryption

This section describes parameters for instructing the Cisco ATA how to locate its TFTP server and how to encrypt its configuration file. These parameters are:

- [UseTFTP](#), page 5-4
- [TftpURL](#), page 5-4
- [EncryptKey](#), page 5-5

UseTFTP

Settings

1—Use the TFTP server for Cisco ATA configuration.

0—Do not use the TFTP server for Cisco ATA configuration.

Value Type

Boolean

Range

0 or 1

Default

1

Voice Configuration Menu Access Code

305

Related Parameters

- [TftpURL](#), page 5-4
- [EncryptKey](#), page 5-5
- [OpFlags](#), page 5-17 (bits 0 and 3)

TftpURL

Description

Use this parameter to specify the IP address or URL of the TFTP server. This string is needed if the DHCP server does not provide the TFTP server IP address. When the TftpURL parameter is set to a non-zero value, this parameter has priority over the TFTP server IP address supplied by the DHCP server.

Optionally, you can include the path prefix to the TFTP file to download.

For example, if the TFTP server IP address is 192.168.2.170 or www.cisco.com, and the path to download the TFTP file is in /ata186, you can specify the URL as 192.168.2.170/ata186 or www.cisco.com/ata186.

**Note**

From the voice configuration menu, you can only enter the IP address; from the web configuration page, you can enter the actual URL.

Value Type

Alphanumeric string

Range

Maximum 31 characters

Default

0

Voice Configuration Menu Access Code

905

Related Parameters

- [UseTFTP, page 5-4](#)
- [Domain, page 5-16](#)

EncryptKey

Description

This parameter specifies the encryption key that is used to encrypt the Cisco ATA configuration file on the TFTP server.

The `cfgfmt` tool, which is used to create a Cisco ATA binary configuration file (see the [“Using the EncryptKey Parameter and `cfgfmt` Tool” section on page 3-14](#)), automatically encrypts the binary file, using the rc4 encryption algorithm, when the `EncryptKey` parameter has a value other than 0.

**Note**

If the Cisco ATA configuration file is not encrypted, the value must be set to 0.

Value Type

Alphanumeric string

Range

Maximum eight characters

Default

0

Voice Configuration Menu Access Code

320

Related Parameters

- [UseTFTP, page 5-4](#)
- [TftpURL, page 5-4](#)

Network Parameters

This section describes the parameters for enabling or disabling the use of a DHCP server to obtain IP address information, and parameters that you need to statically configure if you disable DHCP:

- [DHCP, page 5-6](#)
- [StaticIp, page 5-7](#)
- [StaticRoute, page 5-7](#)
- [StaticNetMask, page 5-8](#)

DHCP

Description

A DHCP server can be used to automatically set the Cisco ATA IP address, the network route IP address, the subnet mask, DNS, NTP, TFTP, and other parameters.

- 1—Enable DHCP
- 0—Disable DHCP

Value Type

Boolean

Range

0 or 1

Default

1

Voice Configuration Menu Access Code

20

Related Parameters

- [StaticIp, page 5-7](#)
- [StaticRoute, page 5-7](#)
- [StaticNetMask, page 5-8](#)
- [OpFlags, page 5-17](#) (bits 3 and 11)

StaticIp

Description

Configure the Cisco ATA IP address using this parameter if the DHCP parameter is set to 0.

Value Type

IP address

Default

0.0.0.0

Voice Configuration Menu Access Code

1

Related Parameters

- [DHCP, page 5-6](#)
- [StaticRoute, page 5-7](#)
- [StaticNetMask, page 5-8](#)

StaticRoute

Description

Configure the Cisco ATA statically assigned route in this parameter if the DHCP parameter is set to 0.

Value Type

IP address

Default

0.0.0.0

Voice Configuration Menu Access Code

2

Related Parameters

- [DHCP, page 5-6](#)
- [StaticIp, page 5-7](#)
- [StaticNetMask, page 5-8](#)

StaticNetMask

Description

Configure the statically assigned subnet mask using this parameter if the DHCP parameter is set to 0.

Value Type

IP address

Default

255.255.255.0

Voice Configuration Menu Access Code

10

Related Parameters

- [DHCP, page 5-6](#)
- [StaticIp, page 5-7](#)
- [StaticRoute, page 5-7](#)

Account Information Parameters

This section describes the following identification parameters:

- [EPID0orSID0 and EPID1orSID1, page 5-8](#)
- [CA0orCM0 and CA1orCM1, page 5-9](#)

EPID0orSID0 and EPID1orSID1

SID x specifies whether to enable the **Phone 1** and/or **Phone 2** ports on the Cisco ATA to register with Cisco Call Manager. (EPID x is not for SCCP.) SID x can be one of the following values:

- 0—Disables port; port does not attempt to register with Cisco CallManager
- . or <mac_address>—Uses the default Skinny ID, which is the Cisco ATA MAC address (MAC) for the **Phone 1** port and MAC[1-5]+01 for the **Phone 2** port. The port attempts to register with Cisco CallManager.
- For example, if the MAC address of the Cisco ATA is 0001.2D01.073D, then SID0 is 0001.2D01.073D and SID1 is 012D.0107.3D01.
- Other values are reserved.

Value Types

Alphanumeric string for each parameter

Range

Maximum 51 characters for each parameter

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46 and 47 for EPID0orSID0 and EPID1orSID1, respectively

CA0orCM0 and CA1orCM1

Description

CMx specifies the IP address (with an optional port number) or the URL of the primary or secondary Cisco CallManager to which the Cisco ATA should register. Use the CM0 parameter for the primary Cisco CallManager and the CM1 parameter for the secondary Cisco CallManager parameter. (CAx is not for SCCP.)

**Note**

Use this parameter only if the default Cisco CallManager TFTP method is not desirable for configuring the Cisco CallManager IP address, in which case you must set the UseTftp parameter to 0.

If you specify a Cisco CallManager port, you must separate the port number from the host IP address with a colon (:).

Examples

Examples of CA0orCM0 values follow:

- 192.168.1.2:2727
- ca.cisco.com.

Value Type

Alphanumeric string

Range

Maximum 31 characters

Default

0

Voice Configuration Menu Access Code

5 and 6, respectively

Related Parameters

- [UseTFTP](#), page 5-4
- [Domain](#), page 5-16

SCCP Mode Parameter

This parameter (UseMGCP) is located in the yellow portion of the Cisco ATA web configuration page. The other parameters in this portion of the screen are not for SCCP.

UseMGCP

Description

Set this parameter to 0 if you are using the Cisco ATA as an SCCP client. (Set this parameter to 1 if you are using the Cisco ATA as an MGCP client.)

Value Type

Boolean

Range

0 or 1

Default

0

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Other Parameters

This remaining parameters in the yellow portion of the configuration screen are not used for SCCP:

- CA0UID
- CA1UID
- MGCPVer
- RetxIntv
- RetxLim
- MGCPPort
- CodecName

Operating Parameters

The parameters described in this section include parameters for configuring codecs, fax features and VLAN settings:

- [LBRCodec, page 5-11](#)
- [PrfCodec, page 5-12](#)
- [AudioMode, page 5-12](#)
- [ConnectMode, page 5-13](#)

- [CallerIdMethod](#), page 5-14
- [DNS1IP](#), page 5-15
- [DNS2IP](#), page 5-16
- [Domain](#), page 5-16
- [NumTxFrames](#), page 5-17
- [UDPTOS](#), page 5-17
- [OpFlags](#), page 5-17
- [VLANSetting](#), page 5-18

LBRCCodec

Description

This parameter is used for selecting the low-bit-rate codec. The following values are valid:

- 0—Select G.723.1 as the low-bit-rate codec (available only for connections 0 and 2).
- 3—Select G.729A as the low-bit-rate codec (available only for connection 0).

If LBRCCodec=0, then both Cisco ATA FXS ports can operate with the following codecs:

- Number of codecs=3
- Codec[0]=G.711 μ -law
- Codec[1]=G.711A-law
- Codec[2]=G.723.1

If LBRCCodec=3, check the setting of bit 21 in the ConnectMode parameter (see the [“ConnectMode” section on page 5-13](#)) to determine if G.729 is enabled for the **Phone 1** or **Phone 2** FXS port.

If LBRCCodec=3, then the **Phone 1** FXS port can operate with the following codecs:

- Number of codecs=4
- Codec[0]=G.711 μ -law
- Codec[1]=G.711A-law
- Codec[2]=G.729 (only if Bit 21 of the ConnectMode parameter is set to 0)
- Codec[3]=G.729A

If LBRCCodec=3, then the **Phone 2** FXS port can operate with the following codecs:

- Number of codecs=3
- Codec[0]=G.711 μ -law
- Codec[1]=G.711A-law
- Codec[2]=G.729 (only if Bit 21 of the ConnectMode parameter is set to 1)

Value Type

Integer

Range

0 or 3

Default

3

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300

Related Parameters[ConnectMode](#), page 5-13 (bit 21)[AudioMode](#), page 5-12 (bits 1 and 17)

PrfCodec

Description

Not used for SCCP.

AudioMode

Description

This parameter is used for the audio operating mode. The lower 16 bits are for the **Phone 1** FXS port, and the upper 16 bits are for the **Phone 2** FXS port. [Table 5-1](#) provides definitions for each bit.

Value Type

Bitmap

Default

0x00350035

Voice Configuration Menu Access Code

312

Related Parameters

- [LBRCodec](#), page 5-11
- [ConnectMode](#), page 5-13

Table 5-1 AudioMode Parameter Bit Definitions

Bit Number	Definition
0	0/1—Disable/enable G.711 silence suppression for all codecs. Note When Bit 0 is set to 1, the Cisco ATA checks the silence suppression setting on the Cisco CallManager to determine if silence suppression should be applied to the call. When Bit 0 is set to 0, the Cisco ATA will not use silence suppression regardless of the silence suppression setting on the Cisco CallManager.
1	0—Enable selected low-bit-rate codec in addition to G.711. This setting is the default. 1—Enable G.711 only.
2	0/1—Disable/enable fax CED tone detection.
3-15	Reserved.

ConnectMode

Description

This parameter is a 32-bit bitmap to control the connection mode of the selected call signalling protocol. [Table 5-2](#) provides bit definitions for this parameter.

Value Type

Bitmap

Default

0x90000400

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311

Related Parameters

- [AudioMode](#), page 5-12
- [LBRCodec](#), page 5-11

Table 5-2 ConnectMode Parameter Bit Definitions

Bit Number	Definition
0-1	Reserved.
2	0—Use the dynamic payload type 126/127 as the RTP payload type (fax pass-through mode) for G.711 μ -law/G.711 A-law. 1—Use the standard payload type 0/8 as the RTP payload type (fax pass-through mode) for G.711 μ -law/G.711 A-law.
3-6	Reserved.
7	0/1—Disable/enable fax pass-through redundancy.

Table 5-2 ConnectMode Parameter Bit Definitions (continued)

Bit Number	Definition
8-12	Specifies the fax pass-through NSE payload type. The value is the offset to the NSE payload base number of 96. The valid range is 0-23; the default is 4. For example, if the offset is 4, the NSE payload type is 100.
13	0—Use G.711 μ -law for fax pass-through codec. 1—Use G.711A-law for fax pass-through codec.
14-15	0—Use fax pass-through. 1—Use codec negotiation in sending fax. 2,3—Reserved.
16-20	Reserved.
21	0—Enable G729 on the Phone 1 FXS port. 1—Enable G729 on the Phone 2 FXS port.
22-27	Reserved.
28-29	0—Select the Cisco ATA Style for mid-call services. Services are call hold/resume, call transfer and conference call. 1—Select the Bellcore Style for mid-call services. Services are call transfer and conference call. 2—Select the Cisco VG248 Style for mid-call services. Services are three-way calling, call transfer and conference call. For end-user procedures of each service that the Cisco ATA supports for each style, see Appendix A, “How to Use Pre-call and Mid-call Services.”
30	0/1—Disable/enable Cisco IOS Telephony Solution (ITS). Cisco ITS runs on an IOS router and is a subset of Cisco CallManager. If you have Cisco ITS, refer to the documentation for that product.
31	0 - Disable XML configuration file support (use if you are running Cisco CallManager version 3.0). 1 - Enable XML configuration file support (use if you are running Cisco CallManager version 3.1 or later).

CallerIdMethod

Description

This 32-bit parameter specifies the signal format to use for both FXS ports for generating Caller ID format. Possible values are:

- Bits 0-1 (method)—0=Bellcore (FSK), 1=DTMF, values 2 and 3 are reserved.

If *method=0*, set the following bits:

- Bit 3 to 8—Use these bits for setting the maximum number of digits in the phone number portion (valid values are 1 to 20).
- Bit 9 to 14—Use these bits for setting the maximum number of digits in the name number portion (valid values are 1 to 20).
- Bit 15—Use special character **O**.
- Bit 16—Use special character **P**.

If *method=1*, set the following bits:

- Bits 3-6—These bits are for the Start digit (valid values are **12** for “A,” **13** for “B,” **14** for “C,” and **15** for “D.”).
- Bits 7-10—These bits are for the End digit (valid values are **11** for “#,” **12** for “A,” **13** for “B,” **14** for “C,” and **15** for “D.”).
- Bits 11—This bit is for setting polarity reversal before and after the Caller ID signal (value of 0/1 disables/enables polarity reversal).
- Bits 12-16—These bits are for the maximum number of digits in the phone number (valid values are 1 to 20).

Examples

The following examples are recommended values for the CallerID Method parameter:

- Sweden=0x0ff61
- Denmark=0x0fde1
- USA=0x19e60

Value Type

Bitmap

Default

0x00019e60

Voice Configuration Menu Access Code

316

DNS1IP

Description

This parameter is for setting the primary domain name server (DNS) IP address, if the DHCP server does not provide one. If DHCP provides DNS1IP (and if it is non-zero), this parameter overwrites the DHCP-supplied value. You *cannot* specify a port parameter. The Cisco ATA uses the default DNS port only.

Value Type

IP address

Default

0.0.0.0

Voice Configuration Menu Access Code

916

Related Parameter

[DHCP](#), page 5-6

DNS2IP

Description

This parameter is for setting the secondary domain name server (DNS) IP, if the DHCP server does not provide one. If DHCP provides DNS2IP (if it is non-zero), this parameter overwrites the DHCP-supplied value. You cannot specify a port parameter. The Cisco ATA uses the default DNS port only.

Value Type

IP address

Default

0.0.0.0

Voice Configuration Menu Access Code

917

Related Parameter

[DHCP, page 5-6](#)

Domain

Description

The Cisco ATA uses the value of this parameter for a DNS search if either the TftpUrl or CM0orCA0 parameters do not contain a fully qualified domain name. For example, if *cm1* is specified as the Cisco CallManager URL, and *cisco.com* is the value of the Domain parameter, then the Cisco ATA uses *cm1@cisco.com* for its DNS search.

The following values are valid:

- Dot (.) or blank—Uses DHCP-provided IP address if available; otherwise use static IP address.
- 0—Uses DHCP-provided domain name if available; otherwise use static IP address.
- *—Uses Cisco ATA MAC address.
- String—Uses specified string.

Value Type

Alphanumeric string

Range

Maximum 31 characters

Default

.

Voice Configuration Menu Access Code

931

Related Parameters

- [TftpURL](#), page 5-4
- [CA0orCM0 and CA1orCM1](#), page 5-9

NumTxFrames

Description

Not used for SCCP. For information about RTP packet size configuration, which is controlled by the Cisco CallManager, refer to your Cisco CallManager documentation.

UDPTOS

Description

Use this parameter to specify the default IP precedence (ToS bit) of UDP packets. Set the lower eight bits only, as follows:

- Bits 0-1: Unused
- Bit 2: Reliability bit—1=request high reliability
- Bit 3: Throughput bit—1=request high throughput
- Bit 4: Delay bit—1=request low delay
- Bits 5-7: Specify datagram precedence. Values range from 0 (normal precedence) to 7 (network control).

Value Type

Bitmap

Default

0xB8

Voice Configuration Menu Access Code

255

OpFlags

Description

Use this parameter to enable/disable various operational features.

See [Table 5-3](#) for bit definitions of this parameter.

Value Type

Bitmap

Default

0x2

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323

Related Parameters

- [TftpURL, page 5-4](#)
- [DHCP, page 5-6](#)
- [VLANSetting, page 5-18](#)

Table 5-3 OpFlags Parameter Operational Features to Turn On or Off

Bit Number	Definition
0	If Bit 0 = 0, the TFTP configuration filename supplied by the DHCP server overwrites the default filename for each Cisco ATA. If Bit 0 = 1, the default Cisco ATA filename is always used.
1	If Bit 1 = 0, the Cisco ATA probes the static network router during the power-up process. If Bit 1 = 1, static network router probing is disabled.
2	Reserved.
3	If Bit 3=1, the Cisco ATA does not request DHCP option 150 in the DHCP discovery message; some DHCP servers do not respond if option 150 is requested.
4	If Bit 4 = 1, the Cisco ATA use the VLAN ID specified in the VLANSetting parameter for VLAN IP encapsulation (see the “ VLANSetting ” section on page 5-18).
5	If Bit 5=1, the Cisco ATA disables VLAN IP encapsulation.
6	If Bit 6=1, the Cisco ATA does not perform CDP discovery.
7	If Bit 7=1, the Cisco ATA does not allow web-based configuration.
8-10	Reserved.
11	If Bit 11=0, the Cisco ATA requests the device hostname from the DHCP server. If Bit 11=1, the Cisco ATA uses the device hostname that is specified in DHCP option 12.
12-31	Reserved.

VLANSetting

Description

This parameter is used for specifying VLAN-related settings.

Bitmap definitions are as follows for the VLANSetting parameter:

- Bits 0-2—Specify VLAN CoS bit value (802.1 P priority) for TCP packets.
- Bits 3-5—Specify VLAN CoS bit value (802.1 P priority) for UDP packets.
- Bits 6-17—Reserved.
- Bits 18-29—User-specified 802.1Q VLAN ID.
- Bits 30-31—Reserved.

Value Type

Bitmap

Default

0x0000002b

Voice Configuration Menu Access Code

324

Related Parameter[OpFlags, page 5-17](#)

Optional Feature Parameters

This section includes the parameters used to configure various timeout values and call-progress tones:

- [SigTimer, page 5-19](#)
- [RingCadence, page 5-20](#)
- [Call-Progress Tone Parameters, page 5-21](#)
- [NPrintf, page 5-26](#)
- [TraceFlags, page 5-27](#)
- [MediaPort, page 5-27](#)

SigTimer

Description

This parameter controls various timeouts. [Table 5-4](#) contains bit definitions of this parameter.

Value Type

Bitmap

Default

0x00000064

Voice Configuration Menu Access Code

318

Related Parameter[CallWaitTone, page 5-25](#)

Table 5-4 SigTimer Parameter Bit Definitions

Bit Number	Definition
0-7	Call waiting period—The period between each burst of call-waiting tone. Range: 0 to 255 in 0.1 seconds Default: 100 (0x64=100 seconds)
8-15	Not used for SCCP.
16-25	Reserved—Should be set to 0.
26-27	Minimum hook flash time—The minimum on-hook time required for a hook flash event. Range: 0 to 3 Default: 0 (60 ms) Other possible values: 1=100 ms, 2=200 ms, 3=300 ms.
28-31	Maximum hook flash time—The maximum on-hook time allowed for a hook flash event. Range: 0 to 15 Default: 0 (1000 ms) Other possible values: 1=100 ms, 2=200 ms, 3=300 ms, 4=400 ms, 5=500 ms, 6=600 ms, 7=700 ms, 8=800 ms, 9=900 ms, 10=1000 ms, 11=1100 ms, 12=1200 ms, 13=1300 ms, 14=1400 ms, 15=1500 ms.

RingCadence

Description

Use this parameter to specify the internal and external ringer cadence pattern, expressed as a triplet of integers “a,b, and c”.

- a—Number of seconds to turn the ring ON.
- b—Number of seconds to turn the ring OFF.
- c—The ring frequency, fixed at 25.

Value Type

List of three integer values, separated by commas

Range

1-65535

Default

2, 4, 25

Recommended Values:

- United States —2,4,25
- Sweden — 1,5,25

Voice Configuration Menu Access Code

929

Call-Progress Tone Parameters

This section covers all the call-progress tones that the Cisco ATA supports, and contains the following topics:

- [List of Call-Progress Tone Parameters, page 5-21](#)
- [Tone Parameter Syntax, page 5-21](#)
- [How to Calculate Scaling Factors, page 5-22](#)
- [Recommended Values, page 5-22](#)
- [Specific Call-Progress Tone Parameter Information, page 5-23](#)

List of Call-Progress Tone Parameters

The following list contains the names of the call-progress tone parameters:

- DialTone
- BusyTone
- ReorderTone
- RingBackTone
- CallWaitTone
- ConfirmTone

Tone Parameter Syntax

Each tone is specified by nine integers, as follows:

ntone, freq0, freq1, level0, level1, steady, on-time, off-time, total-tone- time

- **ntone** is the number of frequency components (0, 1 or 2).
- **freq[0]** (Hz) is the transformed frequency of the first frequency component (-32768 to 32767).



Note Only positive values can be configured to the Cisco ATA 186. For negative values, use the 16-bit 2's-complement value. For example, enter -1 as 65535 or 0xffff.

- **freq[1]** is the transformed frequency of the second frequency component (-32768 to 32767).
- **level[0]** is the transformed amplitude of the first frequency component (-32768 to 32767).
- **level[1]** is the transformed amplitude of the second frequency component (-32768 to 32767).
- **steady** controls whether the tone is constant or intermittent. A value of 1 indicates a steady tone and causes the Cisco ATA to ignore the on-time and off-time parameters. A value of 0 indicates an on/off tone pattern and causes the Cisco ATA to use the on-time and off-time parameters.
- **on-time** controls the length of time the tone is heard in milliseconds (ms) expressed as an integer from 0 to 0xffff sample at 8000 samples/second.
- **off-time** controls the length of time between audible tones in milliseconds (ms) expressed as an integer from 0 to 0xffff sample at 8000 samples/second.

- **total-tone-time** controls the length of time the tone is audible (0 to 0xffff). If this value is set to 0, the tone will play until another call event stops the tone. For DialTone, BusyTone, ReorderTone, and RingBackTone, the configurable value is the number of 10 ms (100 = 1 second) units.

For the other tones, the value is the number of samples at 8000 samples/second, where the following information applies:

- Frequency ranges from 0 to 4000 (Hz)
- Transformed Frequency = $32767 \cdot \cos(2\pi \cdot \text{Frequency}/8000)$
- Amplitude ranges from 0 to 32767
- Transformed Amplitude = $A \cdot 32767 \cdot \sin(2\pi \cdot \text{Frequency}/8000)$

The scaling factor *A* determines the volume level of the tone. To calculate scaling factors, see the [“How to Calculate Scaling Factors”](#) section on page 5-22.

**Note**

All tones are persistent (until the Cisco ATA changes state) except for the call-waiting tone and the confirm tone. The call-waiting tone, however, repeats automatically once every 10 seconds while the call-waiting condition exists.

How to Calculate Scaling Factors

Use the following formula to calculate the scaling factor *A*:

$$A = 0.5 * 10^{((k+10-(n-1)*3)/20)}$$

In this formula, *k* is the desirable volume in dBm; *n* is the number of frequency components. The ^ means *to the order of*.

Example

If a one-frequency component of -20 dBm volume level is desirable, then:

$$A = 0.5 * 10^{((-20+10)/20)} = 0.16$$

Recommended Values

The following settings are recommended for the US:

- DialTone = "2,31538,30831,3100,3885,1,0,0,1000" (approximately -10 dBm)
- BusyTone = "2,30467,28959,1191,1513,0,4000,4000,0" (approximately -21 dBm)
- ReorderTone = "2,30467,28959,1191,1513,0,2000,2000,0" (approximately -21 dBm)
- RingBackTone = "2,30831,30467,1943,2111,0,16000,32000,0" (approximately -16 dBm)
- CallWaitTone = "1,30831,0,5493,0,0,2400,2400,4800" (approximately -10 dBm)
- ConfirmTone = "1,30467,0,5970,0,0,480,480,1920" (approximately -10 dBm)

The following settings are recommended for Sweden:

- DialTone = "1,30959,0,4253,0, 1, 0, 0,1500" (approximately -5 dBm)
- BusyTone = "1,30959,0,2392,0, 0, 2000, 2000,0" (approximately -10 dBm)
- ReorderTone = "1,30959,0,2392,0, 0, 2000, 6000,0" (approximately -10 dBm)
- RingBackTone = "1,30959,0,2392,0, 0, 8000, 40000,0" (approximately -10 dBm)

- CallWaitTone = "1,30959,0,2392,0, 0, 1600, 4000,11200" (approximately -10 dBm)
- ConfirmTone = "1,30959,0,2392,0, 0, 480, 480,1920" (approximately -10 dBm)

Specific Call-Progress Tone Parameter Information

Brief descriptions, and lists of default values and the voice configuration menu code for each Cisco ATA tone parameter, appear in the following sections:

- [DialTone](#), page 5-23
- [BusyTone](#), page 5-24
- [ReorderTone](#), page 5-24
- [RingbackTone](#), page 5-25
- [CallWaitTone](#), page 5-25
- [ConfirmTone](#), page 5-26

DialTone

Description

The Cisco ATA plays the dial tone when it is ready to accept the first digit of a remote address to make an outgoing call.

This parameter is for specifying the inside dial tone in SCCP. The outside dial tone in SCCP is fixed at 450Hz+540Hz@-6dBm. The inside dial tone is the tone that the telephone plays when a phone inside the PBX goes off-hook. The outside dial tone is the tone that the telephone plays when a phone inside the PBX is connected to the PSTN.

Default values for the nine-integer array

- ntone—2
- freq0—31538
- freq1—30831
- level0—1380
- level1—1740
- steady—1
- on-time—0
- off-time—0
- total time to play tone—1000

Voice Configuration Menu Access Code

920

BusyTone

Description

The Cisco ATA plays the busy tone when the callee is busy.

Default values for the nine-integer array

- ntone—2
- freq0—30467
- freq1—28959
- level0—1191
- level1—1513
- steady—0
- on-time—4000
- off-time—4000
- total time to play tone—0

Voice Configuration Menu Access Code

921

ReorderTone

Description

The Cisco ATA plays the reorder tone (also known as congestion tone) if the outgoing call failed for reasons other than busy.

Default values for the nine-integer array

- ntone—2
- freq0—30467
- freq1—28959
- level0—1191
- level1—1513
- steady—0
- on-time—2000
- off-time—2000
- total time to play tone—0

Voice Configuration Menu Access Code

922

RingbackTone

Description

The Cisco ATA plays the ring-back tone when the callee is being alerted by the called device.

Default values for the nine-integer array

- ntone—2
- freq0—30831
- freq1—30467
- level0—1943
- level1—2111
- steady—0
- on-time—16000
- off-time—32000
- total time to play tone—0

Voice Configuration Menu Access Code

923

CallWaitTone

Description

The Cisco ATA plays the call-waiting tone when an incoming call arrives while the user is connected to another party.

Default values for the nine-integer array

- ntone—1
- freq0—30831
- freq1—0
- level0—5493
- level1—0
- steady—0
- on-time—2400
- off-time—2400
- total time to play tone—4800

Voice Configuration Menu Access Code

924

ConfirmTone

Description

The Cisco ATA plays the confirm tone to prompt the user to enter a phone number when invoking a supplementary service, such as call-forwarding, or blind transfer.

Default values for the nine-integer array

- ntone—1
- freq0—30467
- freq1—0
- level0—5970
- level1—0
- steady—0
- on-time—480
- off-time—480
- total time to play tone—1920

Voice Configuration Menu Access Code

925

NPrintf

Description

Use this parameter to specify the IP address and port of a host to which all Cisco ATA debug messages are sent. The program *prserv.exe*, which comes bundled with the Cisco ATA software, is needed to capture the debug information.

Syntax

<HOST_IP>, <HOST_PORT>

Example

If the program *prserv.exe* is running on a host with IP address 192.168.2.170 and listening port 9001, set NPrintf to 192.168.2.170.9001. This causes the Cisco ATA to send all debug traces to that IP address.

Value Type

Extended IP address

Default

0

Voice Configuration Menu Access Code

81

Related Parameter

[TraceFlags](#), page 5-27

TraceFlags

Description

This parameter is for diagnostic use. Bit values are as follows:

- Bits 0 to 6—Reserved
- Bit 7—SCCP message log (set to **0** for a simplified log; set to **1** for a detailed log).
- Bits 8 to 31—Reserved

Value Type

Bitmap

Default

0x00000000

Voice Configuration Menu Access Code

313

Related Parameters

[NPrintf](#), page 5-26

MediaPort

Description

Use this parameter to specify the base port where the Cisco ATA transmits and receives RTP media. This parameter *must* be an even number. Each connection uses the next available even-numbered port for RTP.

Value Type

Integer

Range

1 to 65535

Default

16384

Voice Configuration Menu Access Code

202

Related Parameters

- [UDPTOS](#), page 5-17
- [VLANSetting](#), page 5-18

