



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.

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

- [User Interface \(UI\) Security Parameter, page 5-3](#)
- [Parameters for Configuration Method and Encryption, page 5-4](#)
- [Network Configuration Parameters, page 5-8](#)
- [MGCP Configuration Parameters, page 5-12](#)
- [Audio Configuration Parameters, page 5-19](#)
- [Operational Parameters, page 5-21](#)
- [Tone Configuration Parameters, page 5-29](#)
- [Diagnostic Parameters, page 5-40](#)
- [CFGID—Version Parameter for Cisco ATA Configuration File, page 5-43](#)

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 separated by commas
 - Boolean (1 or 0)
 - Bitmap value—unsigned hexadecimal integer (for specifying bits in a 32-bit integer)



Note Bits are numbered from right to left, starting with bit 0.



Note A tool called bitaid.exe is bundled with your Cisco ATA software. You can use this tool to help you configure values of Cisco ATA bitmap parameters. The tool prompts you for the necessary information.

- 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 other countries as configuration examples for certain parameters. For detailed recommendations of tone-parameter values by country, see [Appendix D, “Recommended Cisco ATA Tone Parameter Values by Country.”](#)

Configuration Text File Template

This is a listing of the `mgcp_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 Unique and Common Cisco ATA Configuration Files”](#) section on page 3-9.

The `mgcp_example.txt` file contains all the Cisco ATA default values. A configuration file must begin with `#txt` so that the formatting tool, `cfgfmt.exe`, treats the file as a text file. The sections that follow this listing describe all the parameters in this file.

```
#txt
UIPassword:0
UseTftp:1
TftpURL:0
CfgInterval:3600
EncryptKey: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
DNS1IP:0.0.0.0
DNS2IP:0.0.0.0
VLANSetting:0x0000002b
CA0orCM0:0
CA1orCM1:0
CA0UID:0
CA1UID:0
EPID0orSID0:.
EPID1orSID1:.
PrfCodec:1
LBRCodec:3
MGCPPort:2427
MediaPort:16384
RetxIntvl:500
RetxLim:10
MGCPVer:MGCP1.0
Domain:.
CodecName:PCMU,PCMA,G723,G729
```

```
AudioMode:0x00350035
NumTxFrames:2
CallerIdMethod:0x00019e60
Polarity:0
FXSInputLevel:-1
FXSOutputLevel:-4
ConnectMode:0x00000400
SigTimer:0x00000064
OpFlags:0x00000002
TOS:0x000068B8
DialTone:2,31538,30831,1380,1740,1,0,0,1000
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
AlertTone:1,30467,0,5970,0,0,480,480,1920
RingCadence:2,4,25
NPrintf:0
TraceFlags:0x00000000
SyslogIP:0.0.0.0.514
SyslogCtrl:0x00000000
```

User Interface (UI) Security 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 0.

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 3-23).



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

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 5-5](#)
- [CfgInterval, page 5-5](#)
- [EncryptKey, page 5-6](#)
- [EncryptKeyEx, page 5-7](#)

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 5-5](#)
- [EncryptKey, page 5-6](#)
- [OpFlags, page 5-27](#)—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 on the TFTP server from which the Cisco ATA will download its configuration file.

For example, if the TFTP server IP address is 192.168.2.170 or www.cisco.com, and the path prefix for the configuration file on the TFTP server is /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
- [CfgInterval](#), page 5-5

CfgInterval

Description

Use this parameter to specify the number of seconds between each configuration update. The Cisco ATA will also upgrade its signaling image if it detects that the TFTP server contains an upgraded image.

When using TFTP for configuration, the Cisco ATA contacts TFTP each time the interval expires to get its configuration file.

You can set CfgInterval to a random value to achieve random contact intervals from the Cisco ATA to the TFTP server.

Value Type

Decimal

Range

60 to 4294967295

Default

3600

Voice Configuration Menu Access Code

80002

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), automatically encrypts the binary file when the EncryptKey parameter has a value other than 0. The cfgfmt tool uses the rc4 encryption algorithm.

If this parameter value is set to 0, the Cisco ATA configuration file on the TFTP server is not encrypted.

**Note**

Cisco recommends using the stronger Cisco ATA encryption method, which requires the use of the EncryptKeyEx parameter. For more information, see the [“EncryptKeyEx” section on page 5-7](#).

For examples on how to upgrade from the EncryptKey parameter to the stronger encryption method that uses the EncryptKeyEx parameter, see the [“Examples of Upgrading to Stronger Encryption Key” section on page 3-15](#).

Value Type

Hexadecimal string

Range

Maximum number of characters: 8

Default

0

Voice Configuration Menu Access Code

320

Related Parameters

- [UseTFTP, page 5-4](#)
- [TftpURL, page 5-5](#)
- [EncryptKeyEx, page 5-7](#)

EncryptKeyEx

Description

This parameter specifies an encryption key that is stronger than the key specified with the EncryptKey parameter. This stronger key is used to encrypt the Cisco ATA configuration file on the TFTP server.



Note

Cisco recommends using the EncryptKeyEx parameter instead of the EncryptKey parameter for the strongest possible encryption of the Cisco ATA configuration file.

When the EncryptKeyEx parameter is set to a non-zero value, the Cisco ATA uses this value as the encryption key and ignores any value that has been set for the EncryptKey parameter. The cfgfmt tool, which is used to create a Cisco ATA binary configuration file (see the [“Using Encryption With the cfgfmt Tool” section on page 3-12](#)), automatically encrypts the binary file using the stronger rc4 encryption algorithm.

When EncryptKeyEx is used for encryption, the Cisco ATA searches for the configuration file with the format ata<macaddress>.x. on the TFTP server.

If the value of the EncryptKeyEx parameter is 0, then the Cisco ATA uses the value of the EncryptKey parameter for encryption.



Note

The cfgfmt tool (version 2.3) program generate an ata<macaddress>.x file in addition to an ata<macaddress> file if the EncryptKeyEx parameter is specified. You should place both such configuration files on the TFTP server.

For examples on how to upgrade from the EncryptKey parameter to the stronger encryption method that uses the EncryptKeyEx parameter, see the [“Examples of Upgrading to Stronger Encryption Key” section on page 3-15](#).

Value Type

Hexadecimal string of the form:

Rc4PasswdInHex/macInHex_12

- rc4KeyInHex_n is a hexadecimal string of one to 64 characters.
- /macInHex_12 is the optional extension consisting of a forward slash (/) followed by the six-byte MAC address of the Cisco ATA to which the configuration file will be downloaded.

Range

Maximum number of characters: 64

Default

0

Voice Configuration Menu Access Code

Not applicable for this parameter.

Related Parameters

- [UseTFTP, page 5-4](#)
- [TftpURL, page 5-5](#)
- [EncryptKey, page 5-6](#)

Network Configuration Parameters

This section includes 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 5-8](#)
- [StaticIp, page 5-9](#)
- [StaticRoute, page 5-9](#)
- [StaticNetMask, page 5-10](#)
- [DNS1IP, page 5-10](#)
- [TOS, page 5-29](#)
- [VLAN Setting, page 5-11](#)

DHCP

Description

This parameter can be used to automatically set the IP address of the Cisco ATA, 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 5-9](#)
- [StaticRoute, page 5-9](#)
- [StaticNetMask, page 5-10](#)
- [OpFlags, page 5-27](#) (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 5-8](#)
- [StaticRoute, page 5-9](#)
- [StaticNetMask, page 5-10](#)

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 5-8](#)
- [StaticIp, page 5-9](#)
- [StaticNetMask, page 5-10](#)

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 5-8](#)
- [StaticIp, page 5-9](#)
- [StaticRoute, page 5-9](#)

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

DNS2IP

Description

This parameter is for setting the secondary domain name server (DNS) IP address, 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

VLAN Setting

Description

This parameter is for software versions 2.14.ms, 2.15.ms, and later.

Bitmap definitions are as follows for the VLAN Setting parameter:

- Bits 0-2—Specify VLAN Class of Service (CoS) bit value (802.1P priority) for signaling IP packets.
- Bits 3-5—Specify VLAN CoS bit value (802.1P priority) for voice IP 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 5-27](#)

MGCP Configuration Parameters

This section describes the following parameters, which include Call Agent parameters:

- [CA0orCM0](#), page 5-12
- [CA1orCM1](#), page 5-13
- [CA0UID](#), page 5-13
- [CA1UID](#), page 5-14
- [EPID0orSID0 and EPID1orSID1](#), page 5-14
- [PrfCodec](#), page 5-15
- [LBRCodec](#), page 5-15
- [MGCPPort](#), page 5-16
- [MediaPort](#), page 5-17
- [RetxIntvl](#), page 5-17
- [RetxLim](#), page 5-17
- [MGCPVer](#), page 5-18
- [Domain](#), page 5-18

CA0orCM0

Description

Specify the primary Call Agent in this parameter. This parameter must be an IP address or URL and may include a port parameter. The default port number is 2727.

If you specify a 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

CA1orCM1

Description

Specify the alternate Call Agent in this parameter. This parameter must be an IP address or URL and may include a port parameter. The default port number is 2727.

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

**Note**

If no alternate Call Agent exists, this parameter value must be 0.

Examples

Examples of CA1orCM1 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

6

CA0UID

Description

Specify the ID of the primary Call Agent in this parameter.

Value Type

Alphanumeric string

Range

Maximum 31 characters

CA1UID

Description

Specify the ID of the secondary Call Agent in this parameter.

Value Type

Alphanumeric string

Range

Maximum 31 characters

EPID0orSID0 and EPID1orSID1

Description

EPID x (for MGCP only) specifies the alphanumeric Endpoint Identifier assigned to line x of the Cisco ATA, where $x=0$ or 1 . The complete Endpoint Identifier sent to the Call Agent has the format <EPID x >@<ip_addr>. (SID x does not apply to MGCP.) To enable the usage of square brackets around the IP address of the endpoint, enable Bit 20 of the ConnectMode parameter. (See the “[ConnectMode](#)” section on page 5-24.)



Note Setting the EPID0orSID0 or EPID1orSID1 parameter to 0 does not disable the respective line.

Value Types

Alphanumeric string for each parameter

Default

.—The dot is the default and means that the value of aaln/1 is used as the MGCP endpoint ID for EPID1 and aaln/2 is used as the MGCP endpoint name for EPID2.

Range

Maximum 51 characters for each parameter

Voice Configuration Menu Access Codes

46 and 47 for EPID0orSID0 and EPID1orSID1, respectively

PrfCodec

Description

This parameter specifies the default preferred codec. The preferred codec is used only when the Call Agent does not provide a list of preferred codecs in the Local Connection Options 'a' parameter and when the remote party does not include a codec preference in its SDP.

The following values are valid:

0=G.723.1 (only if LBRCodec=0)

1=G.711A-law

2=G.711u-law

3=G.729a (only if LBRCodec=3)

Value Type

Integer

Range

0 to 3

Default

1

Voice Configuration Menu Access Code

36

LBRCodec

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 LBRCodec=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 LBRCodec=3, check the setting of bit 21 in the ConnectMode parameter (see the [“ConnectMode” section on page 5-24](#)) to determine if G.729 is enabled for the **Phone 1** or **Phone 2** FXS port.

If LBRCodec=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 LBRCodec=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

Voice Configuration Menu Access Code

300

MGCPPort

Description

This parameter specifies the listening port for Media Gateway Control (MGCP) messages on the Cisco ATA. The Cisco ATA also sends MGCP messages from this port. Using the same port for sending and receiving messages may facilitate passage through Network Address Translation (NAT).

Value Type

Integer

Range

1 to 65535

Default

2427

Voice Configuration Menu Access Code

201

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

RetxIntvl

Description

This parameter specifies the first retransmission interval of MGCP commands (in milliseconds). Subsequent retransmission periods double the previous interval (exponential backoff).

Value Type

Integer

Range

1 to 20000

Default

500

Voice Configuration Menu Access Code

203

RetxLim

Description

This parameter specifies the maximum number of times the Cisco ATA retransmits commands. When this value is exceeded, the Cisco ATA terminates its connection to the Call Agent and restarts.

Value Type

Integer

Range

1 to 4294967295

Default

10

Voice Configuration Menu Access Code

205

MGCPVer

Description

Enter the MGCP version string that the Cisco ATA should use when it powers on. The following values are valid:

- MGCP0.1
- MGCP1.0
- NCS1.0

**Note**

Spaces are not permitted in the MGCPVer parameter. The protocol string is case insensitive.

Value Type

Alphanumeric

Default

MGCP1.0

Voice Configuration Menu Access Code

206

Domain

Description

The Cisco ATA uses this parameter to determine how the domain-name portion of the endpoint identifier is constructed. The following values are valid:

- Dot (.) or blank—Uses DHCP-provided IP address if available; otherwise use static IP address.
- +—Uses combination of Host Name and Domain Name returned by the DHCP server. If no HostName is returned, uses the IP address with brackets.
- 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

Audio Configuration Parameters

:This section contains information about the following parameters:

- [CodecName](#), page 5-19
- [AudioMode](#), page 5-20
- [NumTxFrames](#), page 5-21

CodecName

Description

This parameter specifies the names of the encoder/decoders to use in the LocalConnectionOption parameter. You must list the names in the following order:

- G.711 μ -law
- G.711A-law
- G.723.1
- G.729

**Note**

All codec names must be separated by commas with no white space in between. If a name is empty, the default standard-based name is used.

Value Type

Alphanumeric string

Range

The following list shows the maximum number of characters allowed for the respective codec names:

- PCMU—six characters
- PCMA—six characters
- G.723—10 characters
- G.729—eight characters

If a codec name is longer than the maximum, the default standard-based name is used.

Default Names

- PCMU for G.711 μ -law
- PCMA for G.711A-law
- G723 for G.723.1
- G729 for G.729

Voice Configuration Menu Access Code

Not applicable

AudioMode

Description

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

Value Type

Bitmap

Default

0x00350035

Voice Configuration Menu Access Code

312

Table 5-1 AudioMode Parameter Bit Definitions

Bit Number	Definition
0 and 16	0/1—Disable/enable G.711 silence suppression. This is enabled by default.
1 and 17	0—Enable selected low-bit-rate codec in addition to G.711. This setting is the default. 1—Enable G.711 only.
2 and 18	0/1—Disable/enable fax CED tone detection. This is enabled by default.
3 and 19	Reserved.
4-5 and 20-21:DtmfMethod	0—Always in band. 1—By negotiation 2—Always out of band. 3—Disabled; no DTMF is sent. This is the default setting.
6-15 and 22-31	Reserved.

NumTxFrames

Description

Use this parameter to select the default RTP packet size in number of frames per packet. The Cisco ATA default frame sizes are as follows:

- G.711 and G.729—10 ms
- G.723.1—30 ms

For example, to receive 20 ms of G.729 packets, set the parameter to 2.

Value Type

Integer

Range

1-6

Default

2

Voice Configuration Menu Access Code

35

Operational Parameters

This section includes parameters that are used for configuring the connection mode of the Cisco ATA as well as for disabling or enabling various operational features:

- [CallerIdMethod](#), page 5-21
- [FXSInputLevel](#), page 5-23
- [FXSOutputLevel](#), page 5-23
- [ConnectMode](#), page 5-24
- [SigTimer](#), page 5-26
- [OpFlags](#), page 5-27
- [TOS](#), page 5-29

CallerIdMethod

Description

This 32-bit parameter specifies the signal format to use for both FXS lines for generating Caller ID format. The following values are allowed:

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

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

- Bit 3 to 8—Maximum number of digits in phone number part (valid values are 1 to 20)
- Bit 9 to 14—Maximum number of digits in name number part (valid values are 1 to 20)

- Bit 15—Use special character **O**.
- Bit 16—Use special character **P**.

**Note**

The Cisco ATA supports the Bellcore FSK method to turn on/off the visual message waiting indicator (VMWI) on a phone when the Cisco ATA receives MWI messages from a server. The Bellcore FSK VMWI is enabled automatically if the CallerIdMethod parameter is configured to use the Bellcore method.

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

- Bit 2—Reserved.
- Bits 3-6—Start digit (valid values are **12** for “A,” **13** for “B,” **14** for “C,” and **15** for “D.”)
- Bits 7-10—End digit (valid values are **11** for “#,” **12** for “A,” **13** for “B,” **14** for “C,” and **15** for “D.”)
- Bits 11—Polarity reversal before and after Caller ID signal (value of 0/1 disables/enables polarity reversal)
- Bits 12-16—Maximum number of digits in phone number (valid values are 1 to 20; default is 15)
- Bits 17-19—These bits are for the Start digit for unknown or restricted telephone numbers (valid values are **4** for “A,” **5** for “B,” **6** for “C,” and **7** for “D.”).
- Bits 20-22—These bits are for the End digit for unknown or restricted telephone numbers (valid values are **3** for “#,” **4** for “A,” **5** for “B,” **6** for “C,” and **7** for “D.”).
- Bits 23-24—These bits are for the code that the Cisco ATA should send to the CID device if the telephone number is unknown (valid values are **0** for “00”, **1** for “0000000000”, and **2** for “2”). The value of 3 is reserved and should not be used.
- Bits 25-26—These bits are for the code that the Cisco ATA should send to the CID device if the telephone number is restricted (valid values are **0** for “10”, and **1** for “1”). The values of 2 and 3 are reserved and should not be used.
- Bit 27—Reserved.
- Bit 28—Set to 1 to disable call-waiting caller ID on the **Phone 1** port of the Cisco ATA.
- Bit 29—Set to 1 to disable call-waiting caller ID on the **Phone 2** port of the Cisco ATA.
- Bit 30—Set to 1 to disable the callee-ID feature on the **Phone 1** port of the Cisco ATA.
- Bit 31—Set to 1 to disable the callee-ID feature on the **Phone 2** port of the Cisco ATA.

If *method=2*, set the following bits:

- Bit 2—Set to 0 to have the Cisco ATA transmit data prior to ringing by using the Ring-Pulse Alerting Signal (RP-AS); set to 1 to have the Cisco ATA transmit data after the first ring.
- Bits 3-8—Maximum number of digits in a phone number (valid values are 1 to 20; default is 12).
- Bits 9-14—Maximum number of characters in a name (valid values are 1 to 20; default is 15).
- Bit 15—If this bit is enabled (it is enabled by default), send special character **O** (out of area) to CID device if telephone number is unknown.
- Bit 16—If this bit is enabled (it is enabled by default), send special character **P** (private) to CID device if telephone number is restricted.
- Bits 17-27 are reserved.

Examples

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

- Sweden = 0x0000ff61 or 0x006aff61
- Denmark = 0x0000fde1 or 0x033efde1
- USA = 0x00019e60

Value Type

Bitmap

Default

0x00019e60

Voice Configuration Menu Access Code

316

FXSInputLevel

Description

Use this parameter to specify the input level control (analog-to-digital path) of the Cisco ATA FXS ports.

Value Type

Integer

Range

-9 to 2 dB

Default

-1

Voice Configuration Menu Access Code

370

Related Parameter

[FXSOutputLevel](#), page 5-23

FXSOutputLevel

Description

Use this parameter to specify the output level control (digital-to-analog path) of the Cisco ATA FXS ports.

Value Type

Integer

Range

-9 to 2 dB

Default

-4

Voice Configuration Menu Access Code

371

Related Parameter[FXSInputLevel, page 5-23](#)

ConnectMode

Description

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

Value Type

Bitmap

Default

0x90000400

Voice Configuration Menu Access Code

311

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. Default: 0
3-6	Reserved.
7	0/1—Disable/enable fax pass-through redundancy. Default: 0
8-12	Specify the fax pass-through NSE payload type with these bits. 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.

Table 5-2 ConnectMode Parameter Bit Definitions (continued)

Bit Number	Definition
13	0—Use G.711 μ -law for fax pass-through codec. 1—Use G.711A-law for fax pass-through codec. Default: 0
14-15	0—Use fax pass-through. 1—Use codec negotiation in sending fax. 2,3—Reserved. Default: 0
16	0—Use non-NCS-compliant Session Description Protocol (SDP). 1—Use NCS-compliant SDP. Default: 0
17	0/1—Disable/enable automatic MGCP-version detection. Default: 0
18	0/1—Enable/disable persistent on-hook and off-hook events. Default: 0
19	0/1—Enable/disable persistent hook-flash events. Default: 0
20	0/1—Disable/enable using a pair of brackets to enclose the IP address of an endpoint identifier. For more information, see the “Endpoints and Connections” section on page 4-3. Default: 0
21	0—Enables G.729 codec on the Phone 1 port. 1—Enables G.729 codec on the Phone 2 port. Default: 0
22	0—Use loop mode for quarantine handling. 1—Use step mode for quarantine handling. Default: 0
23	0/1—Disable/enable conference connection mode. Default: 0
24	0/1—Enable/disable support for RSIP*@ipaddress syntax. For more information, see the “Cisco ATA Registration Process with MGCP” section on page 4-4. Default: 0
25-31	Reserved.

SigTimer

Description

This parameter controls various timeouts. [Table 5-3](#) contains bit definitions of this parameter.

Value Type

Bitmap

Default

0x00000064

Voice Configuration Menu Access Code

318

Table 5-3 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	PING period—Period in idle state before the Cisco ATA sends a NTFY command with observed event "O: X-NET/ping" to the call agent. Idle state is defined as the state when the Cisco ATA is not sending or receiving any MGCP request or response; the Cisco ATA does not process any response to the PING from the Call Agent. Range: 0 to 255 seconds Default: 0 (disables this feature)
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.

OpFlags

Description

Enables/disables various operational features.

See [Table 5-4](#) for bit definitions of this parameter.

Value Type

Bitmap

Default

0x2

Voice Configuration Menu Access Code

323

Table 5-4 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. Default: 0
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. Default: 1
2	Reserved.
3	If Bit 3=1, the Cisco ATA does not request DHCP option 150 in the DHCP discovery message; some DHCP server do not respond if option 150 is requested. Default: 0
4	If Bit 4 = 1, the Cisco ATA uses the VLAN ID specified in the VLANSetting parameter for VLAN IP encapsulation (see the “ VLAN Setting ” section on page 5-11). Default: 0
5	If Bit 5=1, the Cisco ATA does not use VLAN IP encapsulation. Default: 0
6	If Bit 6=1, the Cisco ATA does not perform CDP discovery. Default: 0
7	If Bit 7=1, the Cisco ATA does not allow web-based configuration. Default: 0
8	If Bit 8=1, the Cisco ATA does not allow HTTP refresh access with the http://ip/refresh command. Default: 0
9	If Bit 9=1, the Cisco ATA does not allow HTTP reset access with the http://ip/reset command. Default: 0

Table 5-4 OpFlags Parameter Operational Features to Turn On or Off (continued)

Bit Number	Definition
10	Reserved.
11	<p>If Bit 11=0, the Cisco ATA requests the device hostname from the DHCP server.</p> <p>If Bit 11=1, the Cisco ATA uses the device hostname that is specified in DHCP option 12.</p> <p>Default: 0</p>
12	Reserved.
13	<p>If Bit 13=0 (default), use statically configured DNS IP addresses, if available, for name resolution. If statically configured DNS servers are not available, use DHCP-provided DNS IP addresses for name resolution.</p> <p>If Bit 13=1, use both statically configured DNS IP addresses and as many as two DHCP-provided DNS IP addresses. Therefore, the Cisco ATA can query as many as four DNS IP addresses in one DNS query.</p> <p>For more information about statically configured DNS IP addresses, see the “DNS1IP” section on page 5-10 section and the “DNS2IP” section on page 5-11 section.</p> <p>Default: 0</p>
14-31	Reserved.

TOS

Description

This parameter allows you to configure Type of Service (ToS) bits by specifying the precedence and delay of audio and signaling IP packets, as follows:

- Bits 0-7—These bits are for the ToS value for voice data packets.
 - Range: 0-255
 - Default: 184
- Bits 8-15—These bits are for the ToS value for signaling-data packets.
 - Range: 0-255
 - Default: 168
- Bits 16-31—Reserved.

Value Type

Bitmap

Default

0x000068B8

Voice Configuration Menu Access Code

255



Note

This parameter is called UDPTOS in previous Cisco ATA releases. If you are performing a Cisco ATA upgrade, the previous value of the UDPTOS parameter is carried forward to the TOS parameter.

Tone Configuration Parameters

The Cisco ATA supports the following tone parameters:

- DialTone
- BusyTone
- ReorderTone
- RingBackTone
- CallWaitTone
- AlertTone

The Cisco ATA supports two types of tone-parameter syntax—basic format and extended format. Basic format is used in most countries; use the extended format only if the country in which the Cisco ATA is used requires this format.

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

- [Tone Parameter Syntax—Basic Format, page 5-30](#)
- [Tone Parameter Syntax—Extended Formats, page 5-31](#)

- [Recommended Values, page 5-36](#)
- [Specific Tone Parameter Information, page 5-36](#)

This section also covers the following parameter, which is for configuring phone-ringing characteristics:

- [RingCadence, page 5-40](#)


Note

For detailed recommendations of tone-parameter values by country, see [Appendix D, “Recommended Cisco ATA Tone Parameter Values by Country.”](#)

Tone Parameter Syntax—Basic Format

Each tone is specified by nine integers, as follows:

parametername: NumOfFreqs, Tfreq1, Tfreq2, Tamp1, Tamp2, Steady, OnTime, OffTime, TotalToneTime

- *parametername* is the name of the tone.
- *NumOfFreqs* is the number of frequency components (0, 1 or 2).
- *Tfreq1* and *Tfreq2* are the transformed frequencies of the first and second frequencies, respectively. Their values are calculated with the following formula:

$$32767 * \cos(2 * \pi * F / 8000)$$

where *F* is the desired frequency in Hz. Set this value to **0** if the frequency does not exist.

The range of each value is -32768 to 32767.

For negative values, use the 16-bit 2's complement value. For example, enter **-1** as 65535 or as 0xffff.

- *Tamp1* and *Tamp2* are the transformed amplitudes of the first and second frequencies, respectively. Their values are calculated with the following formulas:

$$32767 * A * \sin(2 * \pi * F / 8000)$$

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

where *F* is the desired frequency in Hz, *k* is the desired volume in *dBm*, and *n* is the number of frequencies. The ^ symbol means *to the order of*.

- *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.
- *OnTime* controls the length of time the tone is played in milliseconds (ms).
Specify each value as a number of samples with a sampling rate of 8 kHz. The range of each value is 0 to 0xffff. For example, for a length of 0.3 seconds, set the value to 2400.
- *OffTime* controls the length of time between audible tones in milliseconds (ms).
Specify each value as a number of samples with a sampling rate of 8 kHz. The range of each value is 0 to 0xffff. For example, for a length of 0.3 seconds, set the value to 2400.
- *TotalToneTime* controls the length of time the tone is played. If this value is set to 0, the tone will play until another call event stops the tone. For *DialTone*, *DialTone2*, *BusyTone*, *ReorderTone*, and *RingBackTone*, the configurable value is the number of 10 ms (100 = 1 second) units.

For the remaining tones, the configurable value is the number of samples with a sampling rate of 8 kHz.

**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.

Tone Parameter Syntax—Extended Formats

Two types of extended format exist for the Cisco ATA tone parameters:

- [Extended Format A, page 5-31](#)—This format can be used for the following tone parameters:
 - DialTone
 - BusyTone
 - RingbackTone
 - CallWaitTone
 - AlertTone
- [Extended Format B, page 5-32](#)—This format can be used only for the ReorderTone parameter.

Extended Format A

Each tone is specified by 11 integers, as follows:

parametername:NumOfFreqs,Tfreq1,Tamp1,Tfreq2,Tamp2,NumOfOnOffPairs,OnTime1,OffTime1,OnTime2,OffTime2,TotalToneTime

- *parametername* is the name of the tone.
- *NumOfFreqs* = 100 + the number of frequencies in the tone. (Therefore, *NumOfFreqs* = 101 for one frequency, and 102 for two frequencies.)
- *Tfreq1* and *Tfreq2* are the transformed frequencies of the first and second frequencies, respectively. Their values are calculated with the following formula:

$$32767 * \cos(2 * \pi * F / 8000)$$

where *F* is the desired frequency in Hz. Set this value to **0** if the frequency does not exist.

The range of each value is –32768 to 32767.

For negative values, use the 16-bit 2's complement value. For example, enter **-1** as 65535 or as 0xffff.

- *Tamp1* and *Tamp2* are the transformed amplitudes of the first and second frequencies, respectively. Their values are calculated with the following formula:

$$32767 * A * \sin(2 * \pi * F / 8000)$$

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

where *F* is the desired frequency in Hz, *k* is the desired volume in *dBm*, and *n* is the number of frequencies. The ^ symbol means *to the order of*.

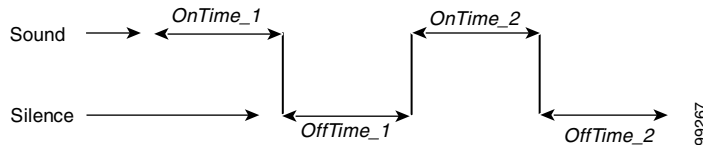
- *NumOfOnOffPairs* is the number of on-off pairs in the cadence of the tone. Valid values are 0, 1 and 2. Use 0 if the tone is steady.
- *OnTime1* and *OnTime2* values are the lengths of time the tone is played for the first and second on-off pairs of a cadence, respectively. (See [Figure 5-1](#) for a graphical representation.)

Specify each value as a number of samples with a sampling rate of 8 kHz. The range of each value is 0 to 0xffff. For example, for a length of 0.3 seconds, set the value to 2400.

- *OffTime1* and *OffTime2* values are the lengths of time that silence is played for the first and second on-off pairs of a cadence, respectively. (See Figure 5-1 for a graphical representation.)

Specify each value as a number of samples with a sampling rate of 8 kHz. The range of each value is 0 to 0xffff. For example, for a length of 0.3 seconds, set the value to 2400.

Figure 5-1 Cadence With Two On-Off Pairs



- *TotalToneTime* controls the length of time the tone is played. If this value is set to 0, the tone will play until another call event stops the tone. For *DialTone*, *DialTone2*, *BusyTone*, *ReorderTone*, and *RingBackTone*, the configurable value is the number of 10 ms (100 = 1 second) units.

For the remaining tones, the configurable value is the number of samples with a sampling rate of 8 kHz.



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.

Extended Format B

The *ReorderTone* parameter specifies the tone that the Cisco ATA plays when the called number is not available or the external circuit is busy. This tones can consist of:

- Up to three frequencies played simultaneously and a cadence of up to three on-off pairs. The first on-off pair can repeat multiple times before the second on-off pair plays.
For example, a 400 Hz frequency plays four times for 0.75 second followed by 0.1 second of silence after each play and then plays one time for 0.75 second followed by 0.4 second of silence. This pattern can be set to repeat until another call event stops the pattern.
- Up to three frequencies played sequentially with a cadence of up to three on-off pairs
For example, the frequencies 900 Hz, 1400 Hz, and 1800 Hz play sequentially for 0.33 seconds each with no silence after the first and second frequencies but one second of silence after the third frequency.

The syntax of the *ReorderTone* parameter is specified by 17 integers, as follows:

```
ReorderTone: Sequential, NumOfFreqs, TFreq1, Tamp1, TFreq2,
Tamp2, TFreq3, Tamp3, NumOfOnOffPairs, OnTime1, OffTime1,
OnTime2, OffTime2, OnTime3, OffTime3, NumOfRepeats, TotalToneTime
```

where:

- *Sequential* specifies whether multiple frequencies in a tone play simultaneously (100) or sequentially (101). Set to 100 for a tone with one frequency. If *Sequential* is 101, the number of frequencies (*NumOfFreqs*) has to be the same value as the number of on-off pairs in a cadence (*NumOfOnOffPairs*).

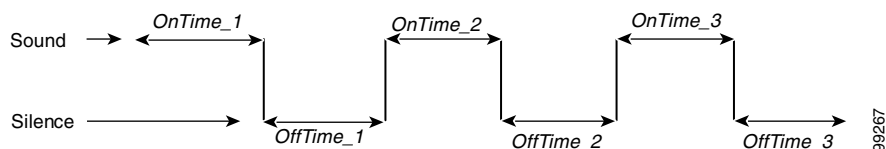
- *NumOfFreqs* is the number of frequencies in the tone (1, 2, or 3). The frequencies can play simultaneously or sequentially, depending on the *Sequential* setting.
- *TFreq1*, *TFreq2*, and *TFreq3* are the transformed frequencies of the first, second, and third frequencies, respectively. Calculate each value with the following formula:

$$32767 * \cos(2 * \pi * F/8000)$$
 where *F* is the desired frequency in Hz. Set this value to 0 if the frequency does not exist.
 The range of each value is -32768 to 32767.
 For negative values, use the 16-bit 2's complement value. For example, enter -1 as 65535 or as 0xffff.
- *Tamp1*, *Tamp2* and *Tamp3* are the transformed amplitudes of the first, second and third frequencies, respectively. Their values are calculated with the following formula:

$$32767 * A * \sin(2*\pi*F/8000)$$

$$A \text{ (amplitude factor)} = 0.5 * 10^{((k+10-(n-1)*3)/20)}$$
 where *F* is the desired frequency in Hz, *k* is the desired volume in dBm, and *n* is the number of frequencies (If *Sequential* is set to 101, *n* is equal to 1). The ^ symbol means *to the order of*.
- *NumOfOnOffPairs* is the number of on-off pairs in the cadences of the tone (0, 1, 2, or 3). For a steady tone, use 0.
 If this value is 0, the *OnTime1*, *OnTime2*, *OnTime3*, *OffTime1*, *OffTime2*, and *OffTime3* values must also be 0.
- *OnTime1*, *OnTime2*, and *OnTime3* are the lengths of time that the first, second, and third on-off pairs of a cadence play a sound, respectively. (See Figure 5-2 for a graphical representation.)
 Specify each value as a number of samples with the sampling rate of 8 kHz. The range of each value is 0 to 0xffff.
 For example, for a length of 0.3 seconds, set a value to 2400.
- *OffTime1*, *OffTime2*, and *OffTime3* are the lengths of silence after the sound of the first, second, and third on-off pairs of a cadence, respectively.
 Specify each value as a number of samples with the sampling rate of 8 kHz. The range of each value is 0 to 0xffff.
 For example, for a length of 0.3 seconds, set a value to 2400. (See Figure 5-2 for a graphical representation.)

Figure 5-2 Cadence with Three On-Off Pairs



- *NumOfRepeats* is the number of times that the first on-off pair of the cadence (specified by *OnTime1*, *OffTime1*) repeats before the second on-off pair (specified by *OnTime2*, *OffTime2*) plays.
 For example, if *NumOfRepeats* is 2, the first on-off pair will play three times (it will play once and then repeat two times), then the second on-off pair will play.

- *TotalToneTime* is the total length of time that the tone plays. If this value is 0, the tone will play until another call event stops the tone.

This value is in 10 ms units (100 ms = 1 second).

Two examples of Extended Format B, both using the Reorder tone, follow.

ReorderTone Parameter Example1

Assume that you want a reorder tone in which:

- The frequencies 900 Hz, 1400 Hz, and 1800 Hz play sequentially.
- Each frequency plays once for 0.33 seconds.
- There is no silence after the first and the second frequencies.
- There is 1 second of silence after the third frequency (before the first frequency starts again)
- The volume of each frequency is –19 dBm.
- The tone plays until another call event stops the tone.

For this reorder tone, make the following setting. See [Table 5-5](#) for a detailed explanation.

```
ReorderTone:101,3,24917,3405,14876,4671,5126,5178,3,2640,0,2640,0,
2640,8000,0,0
```

Table 5-5 Reorder Tone Parameter Example 1 Explanation

Component	Setting	Explanation
Sequential	101	Frequencies play sequentially
NumOffFreqs	3	Three frequencies in the tone
TFreq1	24917	First frequency is 900 Hz
TAmpl1	3405	First frequency volume is –19 dBm
TFreq2	14876	Second frequency is 1400 Hz
TAmpl2	4671	Second frequency volume is –19 dBm
TFreq3	5126	Third frequency is 1800 Hz
TAmpl3	5178	Third frequency volume is –19 dBm
NumOfOnOffPairs	3	Three on-off pairs in the cadence of the tone
OnTime1	2640	Sound in first on-off pair plays for 0.33 seconds
OffTime	0	No silence after the first sound (the second sound plays immediately)
OnTime2	2640	Sound in second on-off pair plays for 0.33 seconds
OffTime2	0	No silence after the second sound (the third sound plays immediately)
OnTime3	2640	Sound in third on-off pair plays for 0.33 seconds
OffTime3	8000	1 second of silence after the sound in the third on-off pair (before the pattern repeats, beginning with the first on-off pair)

Table 5-5 Reorder Tone Parameter Example 1 Explanation (continued)

Component	Setting	Explanation
NumOfRepeats	0	First on-off pair of the cadence plays once (does not repeat), then the second on-off pair plays
TotalToneTime	0	Tone plays continuously (set of three on-off pairs of the cadence repeat continuously) until another call event stops the tone

ReorderTone Parameter Example 2

Assume that you want a reorder tone in which:

- The only frequency is 400 Hz.
- The frequency plays six times, each time for 0.1 second followed by 0.9 second of silence.
- The frequency then plays once for 0.3 second followed by 0.7 second of silence.
- The volume of the frequency is -19 dBm.
- The tone plays until another call event stops the tone.

For this reorder tone, make the following setting. See [Table 5-6](#) for a detailed explanation.

```
ReorderTone:100,1,31164,1620,0,0,0,0,2,800,7200,2400,5600, 0,0,5,0
```

Table 5-6 Reorder Tone Parameter Example 2 Explanation

Component	Setting	Explanation
Sequential	100	Required setting for a tone with one frequency
NumOfFreqs	1	One frequency in the tone
TFreq1	31164	First frequency is 400 Hz
TAmp1	1620	First frequency volume is -19 dBm
TFreq2	0	No second frequency
TAmp2	0	No second frequency
TFreq3	0	No third frequency
TAmp3	0	No third frequency
NumOfOnOffPairs	2	Two on-off pairs in the cadence of the tone
OnTime1	800	Sound in first on-off pair plays for 0.1 second
OffTime1	7200	Sound in first on-off pair is followed by 0.9 second of silence
OnTime2	2400	Sound in second on-off pair plays for 0.3 seconds
OffTime2	5600	Sound in second on-off pair is followed by 0.7 second of silence
OnTime3	0	No third on-off pair in the cadence
OffTime3	0	No third on-off pair in the cadence

Table 5-6 Reorder Tone Parameter Example 2 Explanation (continued)

Component	Setting	Explanation
NumOfRepeats	5	First on-off pair of the cadence plays six times (plays once and then repeats five times), then the second on-off pair plays
TotalToneTime	0	Tone plays continuously (set of two on-off pairs of the cadence repeat continuously) until another call event stops the tone

Recommended Values

The following settings are recommended for the US:

- DialTone = "2,31538,30831,1380,1740,1,0,0,1000" (approximately -17 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)
- AlertTone = "1,30467,0,5970,0,0,480,480,1920"



Note

For detailed recommendations of tone-parameter values by country, see [Appendix D, "Recommended Cisco ATA Tone Parameter Values by Country."](#)

Specific 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 5-36](#)
- [BusyTone, page 5-37](#)
- [ReorderTone, page 5-37](#)
- [RingbackTone, page 5-38](#)
- [CallWaitTone, page 5-38](#)
- [AlertTone, page 5-39](#)

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.

Default values (using the Basic format)

- NumOfFreqs—2

- Tfreq1—31538
- Tfreq2—30831
- Tamp1—1380
- Tamp2—1740
- Steady—1
- OnTime—0
- OffTime—0
- TotalToneTime—1000

Voice Configuration Menu Access Code

920

BusyTone

Description

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

Default values (using the Basic format)

- NumOfFreqs—2
- Treq1—30467
- Tfreq2—28959
- Tamp1—1191
- Tamp2—1513
- Steady—0
- OnTime—4000
- OffTime—4000
- TotalToneTime—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. This is a fast-busy tone.

Default values (using the Basic format)

- NumOfFreqs—2
- Treq1—30467
- Treq2—28959
- Tamp1—1191

- Tamp2—1513
- Steady—0
- OnTime—2000
- OffTime—2000
- TotalToneTime—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 (using the Basic format)

- NumOfFreqs—2
- Tfreq1—30831
- Tfreq2—30467
- Tamp1—1943
- Tamp2—2111
- Steady—0
- OnTime—16000
- OffTime—32000
- TotalToneTime—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 (using the Basic format)

- NumOfFreqs—1
- Tfreq1—30831
- Tfreq2—0
- Tamp1—5493
- Tamp2—0
- Steady—0
- OnTime—2400

- OffTime—2400
- TotalToneTime—4800

Voice Configuration Menu Access Code

924

AlertTone

Description

The Cisco ATA plays the alert tone as a confirmation tone that a special event, such as call forwarding, is in effect.

Default values (using the Basic format)

- NumOfFreqs—1
- Tfreq1—30467
- Treq2—0
- Tamp1—5970
- Tamp2—0
- Steady—0
- OnTime—480
- OffTime—480
- TotalToneTime—1920

Voice Configuration Menu Access Code

925

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

Diagnostic Parameters

This section describes the following parameters, which are used for diagnostic purposes

- [NPrintf, page 5-40](#)
- [TraceFlags, page 5-41](#)
- [SyslogIP, page 5-41](#)
- [SyslogCtrl, page 5-42](#)

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

TraceFlags

Description

This parameter is reserved in MGCP. The Cisco ATA will output all MGCP messages regardless of this parameter value.

Value Type

Bitmap

Default

0x00000000

Voice Configuration Menu Access Code

313

SyslogIP

Description

Use this parameter for diagnostic purposes; specify the IP address and port number to which the Cisco ATA should send its *syslog* output information.

The program *prserv.exe*, which is included in all Cisco ATA software upgrade packages, can be used to capture syslog information if you do not have a syslog server.

Syntax

<HOST_IPaddress>.<HOST_PORT>

Example

If you want to send syslog information to the host at IP address 192.168.2.170 and port number 514, do the following:

- Configure the value of this parameter as 192.168.2.170.514
- On your PC, run the command:

```
prserv 514
```

Value Type

Extended IP address

Default

0.0.0.0.514

Voice Configuration Menu Access Code

7975640

Related Parameter[SyslogCtrl, page 5-42](#)

SyslogCtrl

Description

Use this parameter to turn on specific syslog traces. All traces are sent to the syslog server specified in the SyslogIP parameter.

See [Table 5-7](#) for bit values and the corresponding types of messages to turn on for tracing.

Value Type

Bitmap

Default

0x00000000

Voice Configuration Menu Access Code

7975641

Related Parameter[SyslogIP, page 5-41](#)**Table 5-7 SyslogCtrl Parameter Definitions**

Bit Number	Type of Messages to Trace
0	ARP messages.
1	DHCP messages
2	TFTP messages
3	Cisco ATA configuration-update messages.
4	System reboot messages
5-7	Reserved.
8	SCCP messages
9	Cisco ATA event messages.
10	FAX messages.
11-15	Reserved.

Table 5-7 SyslogCtrl Parameter Definitions (continued)

Bit Number	Type of Messages to Trace
16	RTP statistics messages.
17-31	Reserved.

CFGID—Version Parameter for Cisco ATA Configuration File

Description

CFGID is a 32-bit unsigned-value parameter whose purpose is to allow the local administrator to track the version of the Cisco ATA configuration file. This parameter-value assignment is entirely the responsibility of the local administrator, and has no significance to the operation of the Cisco ATA.

Value Type

Bitmap

Default

0x00000000

