



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](#)
- [Audio Configuration Parameters, page 5-16](#)
- [Operational Parameters, page 5-17](#)
- [Tone Configuration Parameters, page 5-26](#)
- [Diagnostic Parameters, page 5-37](#)
- [CFGID—Version Parameter for Cisco ATA Configuration File, page 5-40](#)
- [Parameters Not Used in SCCP that Appear on Web Page, page 5-40](#)

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 E, “Recommended Cisco ATA Tone Parameter Values by 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 3-9 and the “[Creating a Configuration File for a Specific Cisco ATA](#)” section on page 3-11.

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
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
MediaPort:16384
Domain:0
AudioMode:0x00350035
NumTxFrames:2
CallerIdMethod:0x00019e60
Polarity:0
FXSInputLevel:-1
FXSOutputLevel:-4
```

```

ConnectMode:0x90000400
SigTimer:0x00000064
OpFlags:0x2
TOS:0xA0
DialTone:2,31538,30831,1380,1740,1,0,0,1000
DialTone2:2,29780,30743,1252,1384,1,0,0,1000
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
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 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 3-24).



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 5-24 (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](#)
- [AltftpURL, 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 5-4](#)
- [EncryptKey, page 5-6](#)
- [OpFlags, page 5-24](#) (bits 0 and 3)

TftpURL

Description

Use this parameter to specify the IP address or URL of the TFTP server in a Cisco CallManager environment. 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 5-15](#)
- [AltftpURL, page 5-5](#)

AltftpURL

Description

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

Use the default if you have one of the following scenarios:

- You do not have an alternate TFTP server to configure.
- You have an alternate TFTP server but wish to configure this server by using the second value in DHCP option 150 and not by means of the AltTftpURL parameter.

Voice Configuration Menu Access Code

935

Related Parameters

- [UseTFTP](#), page 5-4
- [Domain](#), page 5-15
- [TftpURL](#), page 5-4

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 Encryption With the cfgfmt Tool”](#) section on page 3-13), 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 3-16.

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 5-4
- [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 3-13](#)), 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 3-16](#).

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 5-4](#)
- [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](#)
- [DNS2IP, page 5-11](#)
- [VLANSetting, page 5-11](#)
- [CA0orCM0 and CA1orCM1, page 5-12](#)
- [EPID0orSID0 and EPID1orSID1, page 5-13](#)
- [LBRCodec, page 5-13](#)
- [MediaPort, page 5-14](#)
- [Domain, page 5-15](#)

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 5-9
- [StaticRoute](#), page 5-9
- [StaticNetMask](#), page 5-10
- [OpFlags](#), page 5-24 (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

Related Parameter[DHCP, page 5-8](#)

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

Related Parameter[DHCP, page 5-8](#)

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 Class of Service (CoS) bit value (802.1 P priority) for signaling IP packets.
- Bits 3-5—Specify VLAN CoS bit value (802.1 P 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 5-24](#)

CA0orCM0 and CA1orCM1

Description

CM x 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. (CA x 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 5-15](#)

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 00012D01073D, then SID0 is 00012D01073D and SID1 is 012D01073D01.
- Other values are reserved.

Value Types

Alphanumeric string for each parameter

Range

Maximum 51 characters for each parameter

Voice Configuration Menu Access Codes

46 and 47 for EPID0orSID0 and EPID1orSID1, respectively

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). When G.729 is used, only one FXS port can use G.729.

When operating with a low-bit-rate codec, the Cisco ATA can support either two G.723.1 connections or one G.729 connection. The selection of G.723.1 or G.729 must be statically configured. When G.723.1 is the low-bit-rate codec, each FXS port is allocated with one G.723.1 connection. When G.729 is used, only one FXS port can use G.729.

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 5-21](#)) 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

Related Parameters

[ConnectMode](#), page 5-21 (bit 21)

[AudioMode](#), page 5-16 (bits 1 and 17)

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

- [TOS, page 5-25](#)
- [VLANSetting, page 5-11](#)

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 5-12](#)

Audio Configuration Parameters

This section contains information about the following parameters:

- [AudioMode](#), page 5-16
- [NumTxFrames](#), page 5-17

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 5-13
- [ConnectMode](#), page 5-21

Table 5-1 AudioMode Parameter Bit Definitions

Bit Number	Definition
0 and 16	Note These bits are obsolete for SCCP as of Cisco ATA Release 3.0. Silence suppression, formerly configurable with these bits, must be configured by means of the Cisco CallManager service parameters page.
1 and 17	0—Enable selected low-bit-rate codec in addition to G.711. 1—Enable G.711 only. Default: 0
2 and 18	0/1—Disable/enable fax CED tone detection. Default: 1
3-15 and 19-31	Reserved.

NumTxFrames

Description

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

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 5-17
- [Polarity](#), page 5-19
- [FXSInputLevel](#), page 5-20
- [FXSOutputLevel](#), page 5-20
- [ConnectMode](#), page 5-21
- [SigTimer](#), page 5-23
- [OpFlags](#), page 5-24
- [TOS](#), page 5-25

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 (default) =Bellcore (FSK), 1=DTMF, 2=ETSI, and 3 is 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). The default is 12.
- 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). The default is 15.
- Bit 15—Use the default value of 1 for this bit to send the special character **O** (out of area) to the CID device if the telephone number is unknown.
- Bit 16—Use the default value of 1 for this bit to send the special character **P** (private) to the CID device if the telephone number is restricted.



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—These bits are for the Start digit for known telephone numbers (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 for known telephone numbers (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 telephone number (valid values are 1 to 32; the 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

Polarity

Description

You can control line polarity of the Cisco ATA FXS ports when a call is connected or disconnected by configuring the Polarity bitmap parameter as follows:

- Bit 0: CALLER_CONNECT_POLARITY. Polarity to use when the Cisco ATA is the caller and the call is connected.
 - 0 =Use forward polarity (Default)
 - 1 =Use reverse polarity
- Bit 1: CALLER_DISCONNECT_POLARITY. Polarity to use when the Cisco ATA is the caller and the call is disconnected.
 - 0 =Use forward polarity (Default)
 - 1 =Use reverse polarity
- Bit 2: CALLEE_CONNECT_POLARITY. Polarity to use when the Cisco ATA is the callee and the call is connected.
 - 0 =Use forward polarity (Default)
 - 1 =Use reverse polarity
- Bit 3: CALLEE_DISCONNECT_POLARITY. Polarity to use when the Cisco ATA is the callee and the call is disconnected.
 - 0 =Use forward polarity (Default)
 - 1 =Use reverse polarity

**Note**

Bits 4-31 are reserved.

Value Type

Bitmap

Default

0x00000000

Voice Configuration Menu Access Code

304

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 5-20](#)

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 5-20](#)

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

Related Parameters

- [AudioMode](#), page 5-16
- [LBRCodec](#), page 5-13

Table 5-2 ConnectMode Parameter Bit Definitions


Bit Number	Definition
0	<p>0—Use the Cisco CallManager Cisco IP Telephony Locale Installer feature for the configuration of Cisco ATA tone parameters. For more information, see the “Using the Cisco IP Telephony Network Locale Option” section on page 4-5.</p> <p> Note The version of Cisco CallManager must be 3.3(3) or later and must contain Cisco IP Telephony Locale Installer.</p> <p>1—Use the Cisco ATA call-progress tone parameter configuration to override the Cisco CallManager tone configuration parameters. For more information, see the “Tone Configuration Parameters” section on page 5-26.</p> <p>Default: 0</p>
1	Reserved.
2	<p>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.</p> <p>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.</p> <p>Default: 0</p>
3-6	Reserved.
7	<p>0/1—Disable/enable fax pass-through redundancy.</p> <p>Default: 0</p>
8-12	<p>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.</p> <p>For example, if the offset is 4, the NSE payload type is 100.</p>

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
16-20	Reserved.
21	0—Enable G729 on the Phone 1 FXS port. 1—Enable G729 on the Phone 2 FXS port. Default: 0
22-24	Reserved.
25	0—Use the asterisk (*) as the first digit for your pre-call service access code. 1—Use the pound key (#) as the first digit for your pre-call service ccess code. Default: 0
26	0—Enable the Auto Resume softkey when the Cisco ATA is in the call-waiting state. 1—Disable the Auto Resume softkey when the Cisco ATA is in the call waiting state. Default: 0
27	0—Register the Cisco ATA as device type Cisco ATA 186 if you are running Cisco CallManager 3.2 or later. This setting is the default. 1—Register the Cisco ATA as device type Cisco 7960 if you are running Cisco CallManager versions 3.0 or 3.1 Default: 0
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.” Default: 0
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. Default: 0
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). Default: 1

SigTimer

Description

This parameter controls various timeout values for the Cisco ATA. [Table 5-3](#) contains bit definitions of this parameter.

Value Type

Bitmap

Default

0x00000064

Voice Configuration Menu Access Code

318

Related Parameter

[CallWaitTone, page 5-36](#)

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	Not used for SCCP.
16-21	Reserved—Should be set to 0.
22-25	Reorder delay—The amount of time before the Cisco ATA plays a fast-busy tone to its FXS port after the far-end party disconnects a call. Range: Values of 1 to 14 designate the number of seconds of the reorder delay; a value of 15 means that the Cisco ATA will not play a fast-busy tone. Default value: 0 (a four-second reorder delay)
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

Use this parameter to enable/disable various operational features.

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

Value Type

Bitmap

Default

0x2

Voice Configuration Menu Access Code

323

Related Parameters

- [TftpURL](#), page 5-4
- [DHCP](#), page 5-8
- [VLANSetting](#), page 5-11

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 servers do not respond if option 150 is requested. Default: 0
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 5-11). Default: 0
5	If Bit 5=1, the Cisco ATA disables 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

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

Bit Number	Definition
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. Default: 0
12	Reserved.
13	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. 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. For more information about statically configured DNS IP addresses, see the “DNS1IP” section on page 5-10 and the “DNS2IP” section on page 5-11. Default: 0
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

If you are running Cisco CallManager 3.3(3) with the Cisco IP Telephony Locale Installer, you should configure call-progress tones using the Network Locale option on the Cisco CallManager configuration page. For more information about using the Network Locale option, see the [“Using the Cisco IP Telephony Network Locale Option”](#) section on page 4-5.

If the desired network locale does not exist, you can configure call-progress tones using the Cisco ATA parameters described in this section. For the Cisco ATA to use the Cisco ATA tone parameter values described in this section, you must set bit 0 the Cisco ATA ConnectMode parameter to the value **1**. For more information on the ConnectMode parameter, see the [“ConnectMode”](#) section on page 5-21. If you do not set this bit value to 1, the Cisco ATA will use the Cisco CallManager default tone settings for the United States.

The Cisco ATA supports the following tone parameters:

- DialTone
- DialTone2
- 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 5-27](#)
- [Tone Parameter Syntax—Extended Formats, page 5-28](#)
- [Recommended Values, page 5-33](#)
- [Specific Tone Parameter Information, page 5-33](#)

**Note**

For detailed recommendations of tone-parameter values by country, see [Appendix E, “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 5-28](#)—This format can be used for the following tone parameters:
 - DialTone
 - DialTone2
 - BusyTone
 - RingbackTone
 - CallWaitTone
 - AlertTone
- [Extended Format B, page 5-29](#)—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:

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

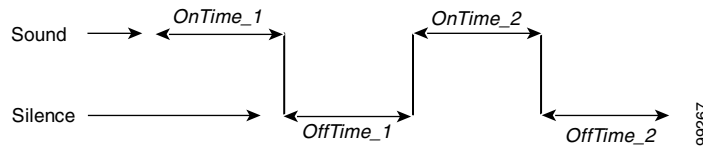
$$A \text{ (amplitude factor)} = 0.5 * 10^{((k+10-(n-1)*3)/20)}$$

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 plays when the called number is not available or the external circuit is busy. This tone 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.

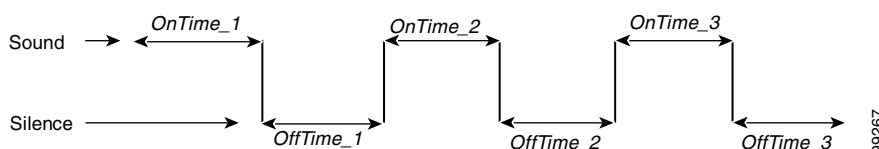
For example, for a length of 0.3 seconds, set a value to 2400.

- *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).

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
NumOfFreqs	3	Three frequencies in the tone
TFreq1	24917	First frequency is 900 Hz
TAmp11	3405	First frequency volume is –19 dBm
TFreq2	14876	Second frequency is 1400 Hz
TAmp2	4671	Second frequency volume is –19 dBm
TFreq3	5126	Third frequency is 1800 Hz
TAmp3	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)
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
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)
- DialTone2 = "2,29780,30743,1252,1384,1,0,0,1000" (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)
- AlertTone = "1,30467,0,5970,0,0,480,480,1920"

**Note**

For detailed recommendations of tone-parameter values by country, see [Appendix E, "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 5-33](#)
- [DialTone2, page 5-34](#)
- [BusyTone, page 5-34](#)
- [ReorderTone, page 5-35](#)
- [RingbackTone, page 5-35](#)
- [CallWaitTone, page 5-36](#)
- [AlertTone, page 5-36](#)

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 (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

DialTone2

Description

This is a secondary dial tone (for example, the dial tone that the Cisco ATA plays when you dial a number to obtain an outside line).

Default values (using the Basic format)

- NumOfFreqs—2
- Tfreq1—29780
- Tfreq2—30743
- Tamp1—1252
- Tamp2—1384
- Steady—1
- OnTime—0
- OffTime—0
- TotalToneTime—1000

Voice Configuration Menu Access Code

927

BusyTone

Description

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

Default values (using the Basic format)

- NumOfFreqs—2
- Tfreq1—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
- Tfreq1—30467
- Tfreq2—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
- Tfreq2—0
- Tamp1—5970
- Tamp2—0
- Steady—0

- OnTime—480
- OffTime—480
- TotalToneTime—1920

Voice Configuration Menu Access Code

925

Diagnostic Parameters

This section describes the following parameters that are used for diagnostic purposes:

- [NPrintf, page 5-37](#)
- [TraceFlags, page 5-38](#)
- [SyslogIP, page 5-38](#)
- [SyslogCtrl, page 5-39](#)

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 5-38](#)

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 5-37](#)

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 5-39](#)

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 5-38](#)**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
5-8	Reserved.
9	Cisco ATA event messages.
10	FAX messages.
11-15	Reserved.
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

Parameters Not Used in SCCP that Appear on Web Page

The following parameters appear on the Cisco ATA Web Configuration page but are not used with the SCCP protocol:

- CfgInterval
- CA0UID and CA1UID
- PrfCodec
- NumTxFrames
- RingCadence