



## Mexico Tone Plan

This chapter details the modifications to the Digital Tone Generator (DTG or DTG-2), Call Progress Analyzer (CPA) card, and SPC-CPA service circuits to support the supervision tones specific to the Mexico network.

The information in this supplement supersedes the information in the following manuals:

- *Cisco VCO/4K System Administrator's Guide*
- *Cisco VCO/4K Standard Programming Reference*
- *Cisco VCO/4K Extended Programming Reference*
- *Cisco VCO/4K Supervision and Call Progress Tone Detection*

## Tone Characteristics

Table 3-1 summarizes the characteristics of the most frequently used supervision tones in the Mexico network.

*Table 3-1 Mexico Digital Tone Generator Supervision Tones*

Tone	Frequency (Hz)	Amplitude (dBm)	Cadence	Detected by CPA?
Dial	425	-10	Continuous	Yes
Ring	425	-10	1 second on, 4 seconds off, REPEATED	Yes
Busy <sup>1</sup>	425	-10	0.25 seconds on, 0.25 seconds off, REPEATED	Yes—detected as Reorder
Reorder <sup>1</sup>	425	-10	0.25 seconds on, 0.25 seconds off, REPEATED	Yes

*Table 3-1 Mexico Digital Tone Generator Supervision Tones (continued)*

Tone	Frequency (Hz)	Amplitude (dBm)	Cadence	Detected by CPA?
Special Information Tone (SIT)	950 1400 1800	-10	0.33 seconds on, 0.03 seconds off, 0.33 seconds on, 0.03 seconds off, 0.33 seconds on, 1 second off, REPEATED	Yes
Intervention	425	-10	500 milliseconds on, 170 milliseconds off, 170 milliseconds on, 170 milliseconds off, REPEATED	Yes—detected as Busy
Waiting	425	-10	200 milliseconds on, 600 milliseconds off, 200 milliseconds on, 10 seconds off	No

1. The busy tone and the reorder tone share the same time slot, 4D2. Refer to Table 3-3 for further information.

## Tone Detection

CPA processing is modified to support the Mexico network requirements. Use the system administration answer supervision templates function to control tone detection for tones listed in Table 3-1. Supervision template processing is described in the *Cisco VCO/4K System Administrator's Guide*.



### Note

The supervision events listed in the Answer Supervision Template screen are based on standard North American network terminology. The terms “ringback” and “audible ringback” are synonymous with the term “ringing tone.” The terms “reorder” and “fast busy” are synonymous with the term “disconnect tone.”

## Answer Supervision Template Screen Terminology

The supervision events and tones listed in the Answer Supervision Template screen use standard North American network terminology. Table 3-2 shows the Answer Supervision Template screen terms to use with the Mexico country feature package.

*Table 3-2 Answer Supervision Template Screen Terminology for Mexico*

Answer Supervision Template Event and Tone Names	Mexico Tone Names
Dial Tone	Dial
Ringback	Ring
Busy	Intervention

**Table 3-2 Answer Supervision Template Screen Terminology for Mexico (continued)**

Answer Supervision Template Event and Tone Names	Mexico Tone Names
Reorder	Busy
SIT Tones	SIT
Ring Cess <sup>1</sup>	Not Applicable
Voice Det <sup>1</sup>	Not Applicable
Voice Cess <sup>1</sup>	Not Applicable
Wink <sup>1</sup>	Not Applicable
Answer <sup>1</sup>	Not Applicable
Time <sup>1</sup>	Not Applicable
Hook Flash <sup>1</sup>	Not Applicable
Pager Cue	Not Available
ISUP Tone	Not Available
ISUP Cess <sup>1</sup>	Not Applicable

1. Not a tone.

## Tone Generation

Tone generation is performed through DTG outpulse and static tone channels. The allocation of these tones is controlled via inpulse rules, Voice Path Control (\$66) commands, and MF Collection Control (\$68) commands.

Table 3-3 supersedes the tone generation table listed in the *Cisco VCO/4K Standard Programming Reference* and the *Cisco VCO/4K Extended Programming Reference*. It also supersedes the tone output level specifications found in the *Cisco VCO/4K Card Technical Descriptions*. For more information on generating tones, refer to the *Cisco VCO/4K System Administrator's Guide*.

The tones and their corresponding output levels, decimal values, hexadecimal values, and port addresses are shown in Table 3-3.

**Table 3-3 Tone Levels, Values, and Port Addresses**

Tone	Output Level	Decimal Value	Hex Value	Port Addresses
Beep	—	0	00	None
Quiet (PCM idle pattern 01010100)	—	1	01	04C0
1 KHz	0 dBm	2	02	04C1
<b>Dial</b>	<b>-10 dBm</b>	<b>3</b>	<b>03</b>	<b>04C2</b>
380 Hz	-10 dBm	4	04	04C3
440 Hz	-13 dBm	5	05	04C4
480 Hz	-17 dBm	6	06	04C5
1400 Hz	-10 dBm	7	07	04C6

Table 3-3 Tone Levels, Values, and Port Addresses (continued)

Tone	Output Level	Decimal Value	Hex Value	Port Addresses
1000 Hz @max CODEC output	—	8	08	04C7
920 Hz	-13 dBm	9	09	04C8
404 Hz	0 dBm	10	0A	04C9
Reserved	—	11	0B	04CA
Reserved	—	12	0C	04CB
Steady RingBack	-10 dBm	13	0D	04CC
1800 Hz	-10 dBm	14	0E	04CD
Digital Test Pattern	—	15	0F	04CE
425 Hz	-10 dBm	16	10	04CF
<b>Ring</b>	<b>-10 dBm</b>	<b>17</b>	<b>11</b>	<b>04D0</b>
<b>Intervention</b>	<b>-10 dBm</b>	<b>18</b>	<b>12</b>	<b>04D1</b>
<b>Busy/Reorder</b>	<b>-10 dBm</b>	<b>19</b>	<b>13</b>	<b>04D2</b>
<b>SIT</b>	<b>-10 dBm</b>	<b>21</b>	<b>15</b>	<b>04D4</b>
Reserved	—	22 to 24	16 to 18	04D7
<b>Waiting</b>	<b>-10 dBm</b>	<b>25</b>	<b>19</b>	<b>04D8</b>
Reserved	—	26 to 32	1A to 20	04DF
DTMF digit 0 (steady)	-6/-8 dBm/freq	33	21	04E0
DTMF digit 1 (steady)	-6/-8 dBm/freq	34	22	04E1
DTMF digit 2 (steady)	-6/-8 dBm/freq	35	23	04E2
DTMF digit 3 (steady)	-6/-8 dBm/freq	36	24	04E3
DTMF digit 4 (steady)	-6/-8 dBm/freq	37	25	04E4
DTMF digit 5 (steady)	-6/-8 dBm/freq	38	26	04E5
DTMF digit 6 (steady)	-6/-8 dBm/freq	39	27	04E6
DTMF digit 7 (steady)	-6/-8 dBm/freq	40	28	04E7
DTMF digit 8 (steady)	-6/-8 dBm/freq	41	29	04E8
DTMF digit 9 (steady)	-6/-8 dBm/freq	42	2A	04E9
DTMF digit A (steady)	-6/-8 dBm/freq	43	2B	04EA
DTMF digit B (steady)	-6/-8 dBm/freq	44	2C	04EB
DTMF digit C (steady)	-6/-8 dBm/freq	45	2D	04EC
DTMF digit D (steady)	-6/-8 dBm/freq	46	2E	04ED
DTMF digit * (steady)	-6/-8 dBm/freq	47	2F	04EE
DTMF digit # (steady)	-6/-8 dBm/freq	48	30	04EF
MF digit 0 (steady)	-7 dBm/freq	49	31	04F0
MF digit 1 (steady)	-7 dBm/freq	50	32	04F1
MF digit 2 (steady)	-7 dBm/freq	51	33	04F2

*Table 3-3 Tone Levels, Values, and Port Addresses (continued)*

Tone	Output Level	Decimal Value	Hex Value	Port Addresses
MF digit 3 (steady)	-7 dBm/freq	52	34	04F3
MF digit 4 (steady)	-7 dBm/freq	53	35	04F4
MF digit 5 (steady)	-7 dBm/freq	54	36	04F5
MF digit 6 (steady)	-7 dBm/freq	55	37	04F6
MF digit 7 (steady)	-7 dBm/freq	56	38	04F7
MF digit 8 (steady)	-7 dBm/freq	57	39	04F8
MF digit 9 (steady)	-7 dBm/freq	58	3A	04F9
MF digit KP (steady)	-7 dBm/freq	59	3B	04FA
MF digit ST (steady)	-7 dBm/freq	60	3C	04FB
MF digit ST3P	-7 dBm/freq	61	3D	04FC
MF digit STP	-7 dBm/freq	62	3E	04FD
MF digit ST2P	-7 dBm/freq	63	3F	04FE

