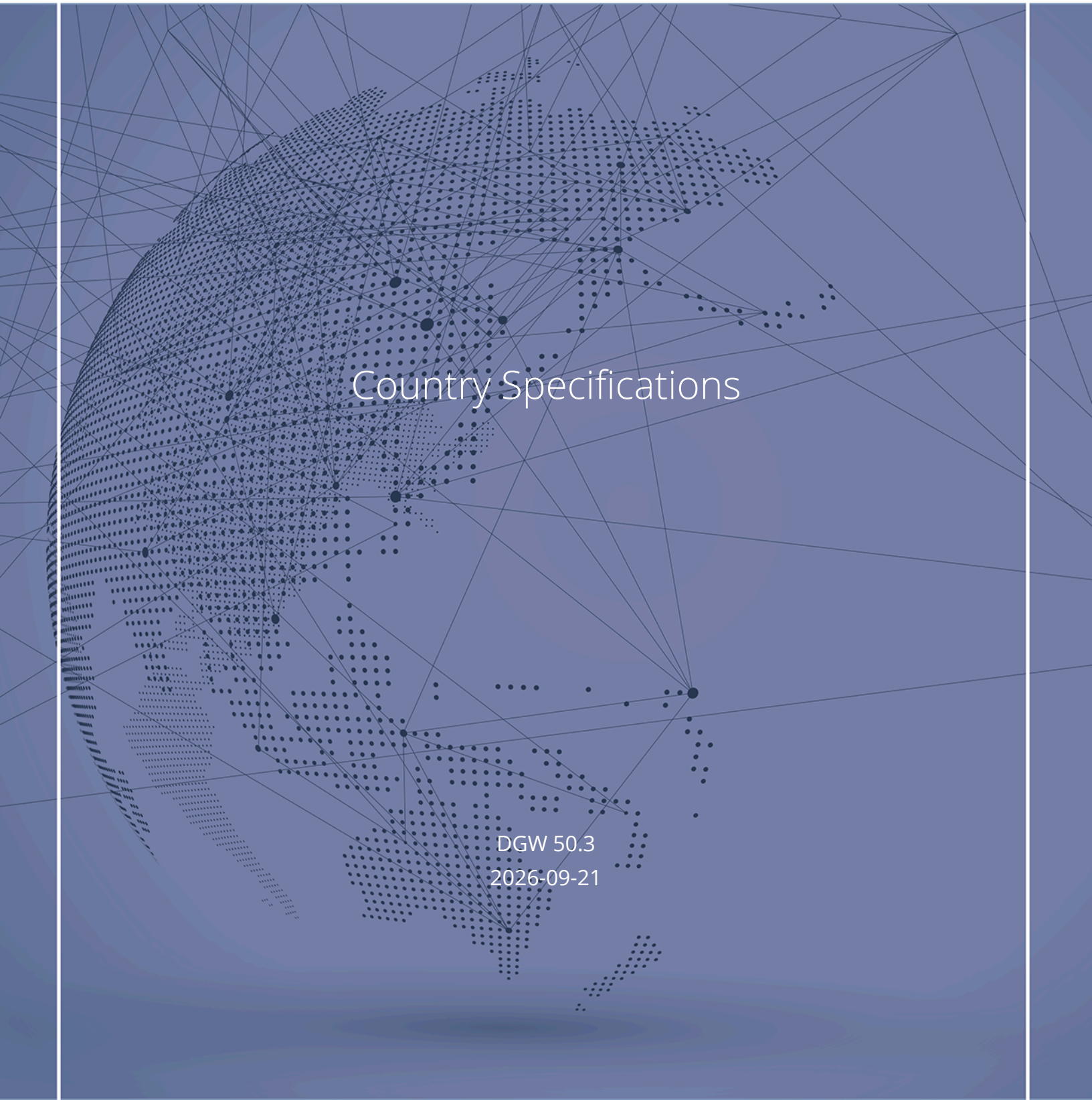
media5 corporation



Country Specifications

DGW 50.3

2026-09-21

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FXS and FXO Interfaces

Argentina1

Table 1: Argentina1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-10 dBm
Stutter Dial Tone	425 Hz	(**1.0** - 0.25)x3	-10 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-10 dBm
Confirmation Tone	425 Hz	**Continuous**	-10 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-10 dBm
Busy Tone	425 Hz	**0.3** - 0.2	-10 dBm
Reorder Tone	425 Hz	**0.75** - 0.25 - **0.25** - 0.25	-10 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-10 dBm -10 dBm -10 dBm
Receiver Off Hook (ROH) Tone	425 Hz	**0.25** - 0.25	-10 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.3** - 0.4	-10 dBm
Preemption Tone			
Hold Tone	425 Hz	**0.4** - 0.2 - **0.4** - 4.0	-10 dBm
Call Waiting Tone	425 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-10 dBm

Table 2: Argentina1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	900 Ω	
TBRL Impedance	800 Ω // 50 nF	
Gain (input)	+0 dBr	
Gain (output)	-7 dBr	
Caller ID	Modulation:	Telebras DTMF
	Transmission when on hook and ringing:	No alerting
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 3: Argentina1 FXO properties

Input Impedance	600 Ω
Gain (input)	+6 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 4: Argentina1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Australia1

Table 5: Australia1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz 400 Hz 450 Hz	**Continuous** **Continuous** **Continuous**	-18 dBm -24 dBm -24 dBm
Stutter Dial Tone	425 Hz 400 Hz 450 Hz	**Continuous** **Continuous** **Continuous**	-18 dBm -24 dBm -24 dBm
Message Waiting Indicator Tone	425 Hz 400 Hz 450 Hz	(**0.1** - 0.04)x72, **Continuous** (**0.1** - 0.04)x72, **Continuous** (**0.1** - 0.04)x72, **Continuous**	-18 dBm -24 dBm -24 dBm
Confirmation Tone			
Ringback Tone	425 Hz 400 Hz 450 Hz	**0.4** - 0.2 - **0.4** - 2.0 **0.4** - 0.2 - **0.4** - 2.0 **0.4** - 0.2 - **0.4** - 2.0	-18 dBm -24 dBm -24 dBm
Busy Tone	425 Hz	**0.38** - 0.38	-18 dBm
Reorder Tone	425 Hz	**2.5** - 0.5	-18 dBm
Special Information Tone	425 Hz	**2.5** - 0.5	-18 dBm
Receiver Off Hook (ROH) Tone	2350 Hz	**Continuous**	-5 dBm
Intercept Tone			
Network Congestion Tone	425 Hz 425 Hz	**0.38** - 0.38 - 0.38 - 0.38 0.38 - 0.38 - **0.38** - 0.38	-13 dBm -23 dBm
Preemption Tone			
Hold Tone			

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Call Waiting Tone	425 Hz	**0.2** - 0.2 - **0.2** - *4.4* - **0.2** - 0.2 - **0.2** - 4.4	-23 dBm

Table 6: Australia1 FXS properties

Ring	AC: 53 VRMS, 25 Hz DC: -10 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 0.2 - **0.4** - 2.0	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	+0 dBr	
Gain (output)	-6 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 7: Australia1 FXO properties

Input Impedance	600 Ω
Gain (input)	+6 dBr
Gain (output)	+0 dBr
Delay before answering	2 s
Delay before dialing	4 s

Table 8: Australia1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Australia2

Table 9: Australia2 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz 400 Hz 450 Hz	**Continuous** **Continuous** **Continuous**	-18 dBm -24 dBm -24 dBm
Stutter Dial Tone	425 Hz 400 Hz 450 Hz	**Continuous** **Continuous** **Continuous**	-18 dBm -24 dBm -24 dBm
Message Waiting Indicator Tone	425 Hz 400 Hz 450 Hz	(**0.1** - 0.04)x72, **Continuous** (**0.1** - 0.04)x72, **Continuous** (**0.1** - 0.04)x72, **Continuous**	-18 dBm -24 dBm -24 dBm
Confirmation Tone			
Ringback Tone	425 Hz 400 Hz 450 Hz	**0.4** - 0.2 - **0.4** - 2.0 **0.4** - 0.2 - **0.4** - 2.0 **0.4** - 0.2 - **0.4** - 2.0	-18 dBm -24 dBm -24 dBm
Busy Tone	425 Hz	**0.38** - 0.38	-18 dBm
Reorder Tone	425 Hz	**2.5** - 0.5	-18 dBm
Special Information Tone	425 Hz	**2.5** - 0.5	-18 dBm
Receiver Off Hook (ROH) Tone	2350 Hz	**Continuous**	-5 dBm
Intercept Tone			
Network Congestion Tone	425 Hz 425 Hz	**0.38** - 0.38 - 0.38 - 0.38 0.38 - 0.38 - **0.38** - 0.38	-13 dBm -23 dBm
Preemption Tone			
Hold Tone			

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Call Waiting Tone	425 Hz	**0.2** - 0.2 - **0.2** - *4.4* - **0.2** - 0.2 - **0.2** - 4.4	-23 dBm

Table 10: Australia2 FXS properties

Ring	AC: 53 VRMS, 25 Hz DC: -10 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 0.2 - **0.4** - 2.0	
Input Impedance	220 Ω + 820 Ω // 120 nF	
TBRL Impedance	220 Ω + 820 Ω // 120 nF	
Gain (input)	-5 dBr	
Gain (output)	-10 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 11: Australia2 FXO properties

Input Impedance	220 Ω + 820 Ω // 115 nF
Gain (input)	+6 dBr
Gain (output)	+0 dBr
Delay before answering	2 s
Delay before dialing	4 s

Table 12: Australia2 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Australia3

Table 13: Australia3 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz 400 Hz 450 Hz	**Continuous** **Continuous** **Continuous**	-18 dBm -24 dBm -24 dBm
Stutter Dial Tone	425 Hz 400 Hz 450 Hz	**Continuous** **Continuous** **Continuous**	-18 dBm -24 dBm -24 dBm
Message Waiting Indicator Tone	425 Hz 400 Hz 450 Hz	(**0.1** - 0.04)x72, **Continuous** (**0.1** - 0.04)x72, **Continuous** (**0.1** - 0.04)x72, **Continuous**	-18 dBm -24 dBm -24 dBm
Confirmation Tone			
Ringback Tone	425 Hz 400 Hz 450 Hz	**0.4** - 0.2 - **0.4** - 2.0 **0.4** - 0.2 - **0.4** - 2.0 **0.4** - 0.2 - **0.4** - 2.0	-18 dBm -24 dBm -24 dBm
Busy Tone	425 Hz	**0.38** - 0.38	-18 dBm
Reorder Tone	425 Hz	**2.5** - 0.5	-18 dBm
Special Information Tone	425 Hz	**2.5** - 0.5	-18 dBm
Receiver Off Hook (ROH) Tone	2350 Hz	**Continuous**	-5 dBm
Intercept Tone			
Network Congestion Tone	425 Hz 425 Hz	**0.38** - 0.38 - 0.38 - 0.38 0.38 - 0.38 - **0.38** - 0.38	-13 dBm -23 dBm
Preemption Tone			
Hold Tone			

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Call Waiting Tone	425 Hz	**0.2** - 0.2 - **0.2** - *4.4* - **0.2** - 0.2 - **0.2** - 4.4	-23 dBm

Table 14: Australia3 FXS properties

Ring	AC: 53 VRMS, 25 Hz DC: -10 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 0.2 - **0.4** - 2.0	
Input Impedance	220 Ω + 820 Ω // 120 nF	
TBRL Impedance	220 Ω + 820 Ω // 120 nF	
Gain (input)	-5 dBr	
Gain (output)	-10 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 15: Australia3 FXO properties

Input Impedance	220 Ω + 820 Ω // 115 nF
Gain (input)	+6 dBr
Gain (output)	+1 dBr
Delay before answering	2 s
Delay before dialing	4 s

Table 16: Australia3 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Austria1

Table 17: Austria1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	450 Hz	**Continuous**	-20 dBm
Stutter Dial Tone	450 Hz	(**0.1** - 0.1)x3, **Continuous**	-20 dBm
Message Waiting Indicator Tone	450 Hz	(**0.1** - 0.1)x10, **Continuous**	-20 dBm
Confirmation Tone	450 Hz	(**0.1** - 0.1)x3, End	-20 dBm
Ringback Tone	450 Hz	**1.0** - 5.0	-20 dBm
Busy Tone	450 Hz	**0.3** - 0.3	-20 dBm
Reorder Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-20 dBm -20 dBm -20 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-20 dBm -20 dBm -20 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	450 Hz	**0.3** - 0.3	-20 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 18: Austria1 FXS properties

Ring	AC: 45 VRMS, 50 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 5.0	
Input Impedance	220 Ω + 820 Ω // 115 nF	
TBRL Impedance	600 Ω	
Gain (input)	-3 dBr	
Gain (output)	-10 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 19: Austria1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 20: Austria1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	450 Hz	**Continuous** for 8.0 s
Dial Tone	450 Hz	**Continuous** for 0.5 s

Brazil1

Table 21: Brazil1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-15 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-15 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-15 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-15 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-15 dBm
Busy Tone	425 Hz	**0.25** - 0.25	-10 dBm
Reorder Tone	425 Hz	**0.75** - 0.25 - **0.25** - 0.25	-10 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.03 - 0.33 - 0.03 - 0.33 - 1.0 0.33 - 0.03 - **0.33** - 0.03 - 0.33 - 1.0 0.33 - 0.03 - 0.33 - 0.03 - **0.33** - 1.0	-15 dBm -15 dBm -15 dBm
Receiver Off Hook (ROH) Tone	425 Hz	**0.25** - 0.25	-10 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.2** - 0.2	-10 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 22: Brazil1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	900 Ω	
TBRL Impedance	800 Ω // 50 nF	
Gain (input)	+0 dBr	
Gain (output)	-7 dBr	
Caller ID	Modulation:	Telebras DTMF
	Transmission when on hook and ringing:	No alerting
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 23: Brazil1 FXO properties

Input Impedance	600 Ω
Gain (input)	+6 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 24: Brazil1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

China1

Table 25: China1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	450 Hz	**Continuous**	-10 dBm
Stutter Dial Tone	450 Hz	**0.4** - 0.04	-10 dBm
Message Waiting Indicator Tone	450 Hz	**0.4** - 0.04	-10 dBm
Confirmation Tone	450 Hz	(**0.1** - 0.1)x3, End	-10 dBm
Ringback Tone	450 Hz	**1.0** - 4.0	-10 dBm
Busy Tone	450 Hz	**0.35** - 0.35	-10 dBm
Reorder Tone	450 Hz	**0.1** - 0.1 - **0.1** - 0.1 - **0.1** - 0.1 - **0.4** - 0.4	-10 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-10 dBm -10 dBm -10 dBm
Receiver Off Hook (ROH) Tone	950 Hz 950 Hz 950 Hz 950 Hz	**5.0** - 5.0 - 5.0 - 5.0 5.0 - **5.0** - 5.0 - 5.0 5.0 - 5.0 - **5.0** - 5.0 5.0 - 5.0 - 5.0 - **5.0**	-25 dBm -16 dBm -8 dBm -6 dBm
Intercept Tone	450 Hz	**0.2** - 0.2 - **0.2** - 0.6	-20 dBm
Network Congestion Tone	450 Hz	**0.7** - 0.7	-10 dBm
Preemption Tone	450 Hz	**0.2** - 0.2 - **0.2** - 0.6	-20 dBm
Hold Tone			
Call Waiting Tone	450 Hz	**0.4** - *4.0* - **0.4** - 4.0	-20 dBm

Table 26: China1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	+0 dBr	
Gain (output)	-9 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 27: China1 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 28: China1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	450 Hz	**0.35** - 0.35 for 8.0 s
Dial Tone	450 Hz	**Continuous** for 0.5 s

CzechRepublic1

Table 29: CzechRepublic1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**0.33** - 0.33 - **0.66** - 0.66	-12 dBm
Stutter Dial Tone	425 Hz	**0.17** - 0.17 - **0.17** - 0.17 - **0.17** - 0.17 - **0.66** - 0.66	-12 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10 - **0.33** - 0.33 - **0.66** - 0.66	-12 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-12 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-12 dBm
Busy Tone	425 Hz	**0.33** - 0.33	-12 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-12 dBm -12 dBm -12 dBm
Receiver Off Hook (ROH) Tone	425 Hz	**0.17** - 0.17	-12 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.17** - 0.17	-12 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	425 Hz	2.0 - **0.33** - *10.0* - **0.33** - 10.0	-11 dBm

Table 30: CzechRepublic1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	600 Ω	
TBRL Impedance	220 Ω + 820 Ω // 115 nF	
Gain (input)	+0 dBr	
Gain (output)	-7 dBr	
Caller ID	Modulation:	V23
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 31: CzechRepublic1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 32: CzechRepublic1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**0.17** - 0.17 for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.3 s

Denmark1

Table 33: Denmark1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-15 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-15 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-15 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-15 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-15 dBm
Busy Tone	425 Hz	**0.5** - 0.5	-10 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-15 dBm -15 dBm -15 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.2** - 0.2	-10 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 34: Denmark1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	300 Ω + 1000 Ω // 220 nF	
TBRL Impedance	400 Ω + 500 Ω // 330 nF	
Gain (input)	+0 dBr	
Gain (output)	-6 dBr	
Caller ID	Modulation:	TDK DTMF
	Transmission when on hook and ringing:	No alerting
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 35: Denmark1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	-6 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 36: Denmark1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

France1

Table 37: France1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	440 Hz	**Continuous**	-16.9 dBm
Stutter Dial Tone	440 Hz	(**0.1** - 0.1)x3, **Continuous**	-16.9 dBm
Message Waiting Indicator Tone	440 Hz	(**0.1** - 0.1)x10, **Continuous**	-16.9 dBm
Confirmation Tone	440 Hz	(**0.1** - 0.1)x3, End	-16.9 dBm
Ringback Tone	440 Hz	**1.5** - 3.5	-19.9 dBm
Busy Tone	440 Hz	**0.5** - 0.5	-19.9 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.3** - 0.03 - 0.3 - 0.03 - 0.3 - 1.0 0.3 - 0.03 - **0.3** - 0.03 - 0.3 - 1.0 0.3 - 0.03 - 0.3 - 0.03 - **0.3** - 1.0	-19.9 dBm -19.9 dBm -19.9 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	440 Hz	**0.25** - 0.25	-19.9 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 38: France1 FXS properties

Ring	AC: 45 VRMS, 50 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.5** - 3.5	
Input Impedance	215 Ω + 1000 Ω // 137 nF	
TBRL Impedance	600 Ω	
Gain (input)	+1.9 dBr	
Gain (output)	-8.9 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 39: France1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 40: France1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	440 Hz	**Continuous** for 8.0 s
Dial Tone	440 Hz	**Continuous** for 0.5 s

Germany1

Table 41: Germany1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-16 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-16 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-16 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-16 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-16 dBm
Busy Tone	425 Hz	**0.48** - 0.48	-16 dBm
Reorder Tone			
Special Information Tone	900 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-16 dBm -16 dBm -16 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.24** - 0.24	-16 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	**0.3**, End	-17 dBm

Table 42: Germany1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	220 Ω + 820 Ω // 115 nF	
TBRL Impedance	220 Ω + 820 Ω // 115 nF	
Gain (input)	-3 dBr	
Gain (output)	-10 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 43: Germany1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 44: Germany1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.15 s

Germany2

Table 45: Germany2 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-13 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-13 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-13 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-13 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-13 dBm
Busy Tone	425 Hz	**0.48** - 0.48	-13 dBm
Reorder Tone			
Special Information Tone	900 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-13 dBm -13 dBm -13 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-16 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.24** - 0.24	-13 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 46: Germany2 FXS properties

Ring	AC: 57 VRMS, 25 Hz DC: -5 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	220 Ω + 820 Ω // 115 nF	
TBRL Impedance	220 Ω + 820 Ω // 115 nF	
Gain (input)	+0 dBr	
Gain (output)	-7 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 47: Germany2 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 48: Germany2 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.15 s

Israel2

Table 49: Israel2 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	400 Hz	**Continuous**	-14 dBm
Stutter Dial Tone	400 Hz	(**0.1** - 0.1)x3, **Continuous**	-15 dBm
Message Waiting Indicator Tone	400 Hz	(**0.16** - 0.16)x10, **Continuous**	-14 dBm
Confirmation Tone	400 Hz	**0.17** - 0.34 - **0.14** - 0.14, End	-14 dBm
Ringback Tone	400 Hz	**1.0** - 3.0	-14 dBm
Busy Tone	400 Hz	**0.5** - 0.5	-14 dBm
Reorder Tone	1000 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-14 dBm -14 dBm -14 dBm
Special Information Tone	450 + 150 Hz	**0.5**, End	-14 dBm
Receiver Off Hook (ROH) Tone	1440 + 2060 + 2452 + 2600 Hz	**0.12** - 0.1	-14 dBm
Intercept Tone			
Network Congestion Tone	400 Hz	**0.25** - 0.25	-14 dBm
Preemption Tone			
Hold Tone	400 Hz	**0.05** - 2.0, End	-16 dBm
Call Waiting Tone	400 Hz	**0.5** - *10.0* - **0.5** - 10.0	-16 dBm

Table 50: Israel2 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 3.0	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	+0 dBr	
Gain (output)	-9 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 51: Israel2 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 52: Israel2 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	400 Hz	**Continuous** for 8.0 s
Dial Tone	400 Hz	**Continuous** for 0.5 s

Italy1

Table 53: Italy1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**0.2** - 0.2 - **0.6** - 1.0	-13 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3 - **0.2** - 0.2 - **0.6** - 1.0	-13 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10 - **0.2** - 0.2 - **0.6** - 1.0	-13 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-13 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-13 dBm
Busy Tone	425 Hz	**0.5** - 0.5	-13 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-20 dBm -20 dBm -20 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.2** - 0.2	-13 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 54: Italy1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	180 Ω + 630 Ω // 60 nF	
TBRL Impedance	750 Ω // 18 nF	
Gain (input)	+0 dBr	
Gain (output)	-7 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 55: Italy1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 56: Italy1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**0.2** - 0.2 - **0.6** - 1.0 for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.15 s

Japan2

Table 57: Japan2 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	400 Hz	**Continuous**	-19 dBm
Stutter Dial Tone	400 Hz	(**0.1** - 0.1)x3, **Continuous**	-13 dBm
Message Waiting Indicator Tone	400 Hz	(**0.1** - 0.1)x10, **Continuous**	-13 dBm
Confirmation Tone	400 Hz	(**0.1** - 0.1)x3, End	-13 dBm
Ringback Tone	400 Hz 420 Hz 380 Hz	**1.0** - 2.0 **1.0** - 2.0 **1.0** - 2.0	-16 dBm -22 dBm -22 dBm
Busy Tone	400 Hz	**0.5** - 0.5	-13 dBm
Reorder Tone			
Special Information Tone	400 Hz	**0.1** - 0.1	-13 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	400 Hz	**0.5** - 0.5	-13 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	400 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 58: Japan2 FXS properties

Ring	AC: 45 VRMS, 20 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 2.0	
Input Impedance	600 Ω + 1000 nF	
TBRL Impedance	600 Ω + 1000 nF	
Gain (input)	+0 dBr	
Gain (output)	-9 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 59: Japan2 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	2 s
Delay before dialing	3 s

Table 60: Japan2 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	400 Hz	**Continuous** for 8.0 s
Dial Tone	400 Hz	**Continuous** for 0.5 s

Mexico1

Table 61: Mexico1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-14 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-14 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-14 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-14 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-16 dBm
Busy Tone	425 Hz	**0.25** - 0.25	-18 dBm
Reorder Tone			
Special Information Tone	900 Hz 1400 Hz 1800 Hz	**1.0** - 1.0 - 1.0 - 1.0 1.0 - **1.0** - 1.0 - 1.0 1.0 - 1.0 - **1.0** - 1.0	-14 dBm -14 dBm -14 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.25** - 0.25	-18 dBm
Preemption Tone	425 Hz	**0.5** - 0.17 - **0.17** - 0.17	-18 dBm
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 62: Mexico1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	-3 dBr	
Gain (output)	-3 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 63: Mexico1 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 64: Mexico1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Netherlands1

Table 65: Netherlands1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-17 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-17 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-17 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-17 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-17 dBm
Busy Tone	425 Hz	**0.5** - 0.5	-17 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-17 dBm -17 dBm -17 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.25** - 0.25	-17 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 66: Netherlands1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	600 Ω	
TBRL Impedance	340 Ω + 422 Ω // 100 nF	
Gain (input)	+0 dBr	
Gain (output)	-7 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 67: Netherlands1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 68: Netherlands1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

NewZealand1

Table 69: NewZealand1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	400 Hz	**Continuous**	-17 dBm
Stutter Dial Tone	400 Hz	(**0.1** - 0.1)x3, **Continuous**	-17 dBm
Message Waiting Indicator Tone	400 Hz	(**0.1** - 0.1)x12, **Continuous**	-17 dBm
Confirmation Tone	400 Hz	(**0.1** - 0.1)x3, End	-17 dBm
Ringback Tone	400 + 450 Hz	**0.4** - 0.2 - **0.4** - 2.0	-19 dBm
Busy Tone	400 Hz	**0.5** - 0.5	-17 dBm
Reorder Tone	400 Hz	**0.07** - 0.1 - **0.07** - 0.1 - **0.07** - 0.1 - **0.07** - 0.4	-17 dBm
Special Information Tone	1400 Hz	**0.1** - 0.1	-17 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone	1400 Hz	**0.4** - 4.0	-17 dBm
Network Congestion Tone	400 Hz	**0.25** - 0.25	-17 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 70: NewZealand1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 0.2 - **0.4** - 2.0	
Input Impedance	370 Ω + 620 Ω // 310 nF	
TBRL Impedance	370 Ω + 620 Ω // 310 nF	
Gain (input)	-3 dBr	
Gain (output)	-9 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 71: NewZealand1 FXO properties

Input Impedance	370 Ω + 620 Ω // 310 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 72: NewZealand1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	400 Hz	**0.5** - 0.5 for 8.0 s
Dial Tone	400 Hz	**Continuous** for 0.5 s

NorthAmerica1

Table 73: NorthAmerica1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	350 + 440 Hz	**Continuous**	-17 dBm
Stutter Dial Tone	350 + 440 Hz	(**0.1** - 0.1)x3, **Continuous**	-17 dBm
Message Waiting Indicator Tone	350 + 440 Hz	(**0.1** - 0.1)x10, **Continuous**	-17 dBm
Confirmation Tone	350 + 440 Hz	(**0.1** - 0.1)x3, End	-17 dBm
Ringback Tone	440 + 480 Hz	**2.0** - 4.0	-19 dBm
Busy Tone	480 + 620 Hz	**0.5** - 0.5	-21 dBm
Reorder Tone	480 + 620 Hz	**0.3** - 0.2	-21 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-14 dBm -14 dBm -14 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone	440 + 620 Hz	**0.5** - 0.5	-14 dBm
Network Congestion Tone	480 + 620 Hz	**0.25** - 0.25	-21 dBm
Preemption Tone			

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 74: NorthAmerica1 FXS properties

Ring	AC: 45 VRMS, 20 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**2.0** - 4.0	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	-3 dBr	
Gain (output)	-3 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 300 ms Max: 1100 ms	

Table 75: NorthAmerica1 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0.7 s

Table 76: NorthAmerica1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	440 Hz	**Continuous** for 8.0 s
Dial Tone	440 Hz	**Continuous** for 0.5 s

Russia1

Table 77: Russia1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-10 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-10 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-10 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-10 dBm
Ringback Tone	425 Hz	**0.8** - 3.2	-10 dBm
Busy Tone	425 Hz	**0.4** - 0.4	-10 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-17 dBm -17 dBm -17 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.2** - 0.2	-10 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 78: Russia1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.8** - 3.2	
Input Impedance	600 Ω	
TBRL Impedance	350 Ω + 1000 Ω // 210 nF	
Gain (input)	+2 dBr	
Gain (output)	-2 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 79: Russia1 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 80: Russia1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Spain1

Table 81: Spain1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-10 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-10 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-10 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-10 dBm
Ringback Tone	425 Hz	**1.5** - 3.0	-13 dBm
Busy Tone	425 Hz	**0.2** - 0.2	-13 dBm
Reorder Tone	425 Hz	**0.2** - 0.2 - **0.2** - 0.6	-13 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-20 dBm -20 dBm -20 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.2** - 0.2 - **0.2** - 0.2 - **0.2** - 0.6	-13 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 82: Spain1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.5** - 3.0	
Input Impedance	220 Ω + 820 Ω // 120 nF	
TBRL Impedance	220 Ω + 820 Ω // 120 nF	
Gain (input)	+0 dBr	
Gain (output)	-7 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 83: Spain1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 84: Spain1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.15 s

Sweden1

Table 85: Sweden1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-12.5 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-12.5 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-12.5 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-12.5 dBm
Ringback Tone	425 Hz	**1.0** - 5.0	-12.5 dBm
Busy Tone	425 Hz	**0.25** - 0.25	-12.5 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-22 dBm -22 dBm -22 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.25** - 0.75	-12.5 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 86: Sweden1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 5.0	
Input Impedance	200 Ω + 1000 Ω // 100 nF	
TBRL Impedance	900 Ω // 30 nF	
Gain (input)	+0 dBr	
Gain (output)	-5 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 87: Sweden1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+2 dBr
Gain (output)	-3 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 88: Sweden1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Switzerland1

Table 89: Switzerland1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	425 Hz	**Continuous**	-8 dBm
Stutter Dial Tone	425 Hz	(**0.1** - 0.1)x3, **Continuous**	-8 dBm
Message Waiting Indicator Tone	425 Hz	(**0.1** - 0.1)x10, **Continuous**	-8 dBm
Confirmation Tone	425 Hz	(**0.1** - 0.1)x3, End	-8 dBm
Ringback Tone	425 Hz	**1.0** - 4.0	-13 dBm
Busy Tone	425 Hz	**0.5** - 0.5	-13 dBm
Reorder Tone			
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-13 dBm -13 dBm -13 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	425 Hz	**0.2** - 0.2	-13 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 90: Switzerland1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**1.0** - 4.0	
Input Impedance	220 Ω + 820 Ω // 115 nF	
TBRL Impedance	220 Ω + 820 Ω // 115 nF	
Gain (input)	+0 dBr	
Gain (output)	-6.5 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 91: Switzerland1 FXO properties

Input Impedance	270 Ω + 750 Ω // 150 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 92: Switzerland1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	425 Hz	**Continuous** for 8.0 s
Dial Tone	425 Hz	**Continuous** for 0.5 s

Uae2

Table 93: Uae2 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	350 + 450 Hz	**Continuous**	-13 dBm
Stutter Dial Tone	350 + 450 Hz	(**0.4** - 0.04)x5, **Continuous**	-13 dBm
Message Waiting Indicator Tone	350 + 440 Hz	(**0.1** - 0.1)x10, **Continuous**	-13 dBm
Confirmation Tone	400 Hz	(**0.1** - 0.1)x3, End	-13 dBm
Ringback Tone	425 Hz	**0.4** - 0.2 - **0.4** - 2.0	-13 dBm
Busy Tone	400 Hz	**0.38** - 0.38	-13 dBm
Reorder Tone	400 Hz	**Continuous**	-13 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-13 dBm -13 dBm -13 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	400 Hz	**0.4** - 0.35 - **0.23** - 0.53	-13 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	425 Hz	(**0.2** - *12.0* - **0.2** - 12.0)x2, End	-13 dBm

Table 94: Uae2 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 0.2 - **0.4** - 2.0	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	-3 dBr	
Gain (output)	-3 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 95: Uae2 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 96: Uae2 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	440 Hz	**Continuous** for 8.0 s
Dial Tone	440 Hz	**Continuous** for 0.5 s

Uae3

Table 97: Uae3 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	350 + 440 Hz	**Continuous**	-13 dBm
Stutter Dial Tone	350 + 440 Hz	(**0.1** - 0.1)x3, **Continuous**	-22 dBm
Message Waiting Indicator Tone	350 + 440 Hz	(**0.1** - 0.1)x10, **Continuous**	-22 dBm
Confirmation Tone	350 + 440 Hz	(**0.1** - 0.1)x3, End	-22 dBm
Ringback Tone	400 + 450 Hz	**0.4** - 2.0 - **0.4** - 0.2	-22 dBm
Busy Tone	400 Hz	**0.38** - 0.38	-19 dBm
Reorder Tone	400 Hz	**Continuous**	-19 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-19 dBm -19 dBm -19 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	400 Hz	**0.4** - 0.35 - **0.23** - 0.53	-19 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 98: Uae3 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 2.0 - **0.4** - 0.2	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	-3 dBr	
Gain (output)	-3 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 99: Uae3 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 100: Uae3 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	440 Hz	**Continuous** for 8.0 s
Dial Tone	440 Hz	**Continuous** for 0.5 s

Uae4

Table 101: Uae4 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	350 + 440 Hz	**Continuous**	-13 dBm
Stutter Dial Tone	350 + 440 Hz	(**0.1** - 0.1)x3, **Continuous**	-22 dBm
Message Waiting Indicator Tone	350 + 440 Hz	(**0.1** - 0.1)x10, **Continuous**	-22 dBm
Confirmation Tone	350 + 440 Hz	(**0.1** - 0.1)x3, End	-22 dBm
Ringback Tone	400 + 450 Hz	**0.4** - 2.0 - **0.4** - 0.2	-22 dBm
Busy Tone	400 Hz	**0.38** - 0.38	-19 dBm
Reorder Tone	400 Hz	**Continuous**	-19 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-19 dBm -19 dBm -19 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	400 Hz	**0.4** - 0.35 - **0.23** - 0.53	-19 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 102: Uae4 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 2.5 - **0.4** - 0.2	
Input Impedance	600 Ω	
TBRL Impedance	600 Ω	
Gain (input)	-3 dBr	
Gain (output)	-3 dBr	
Caller ID	Modulation:	Bell 202
	Transmission when on hook and ringing:	First ring
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 103: Uae4 FXO properties

Input Impedance	600 Ω
Gain (input)	+0 dBr
Gain (output)	+0 dBr
Delay before answering	0 s
Delay before dialing	0 s

Table 104: Uae4 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	440 Hz	**Continuous** for 8.0 s
Dial Tone	440 Hz	**Continuous** for 0.5 s

Uk1

Table 105: Uk1 tone definitions

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration, italic = caller ID time period)	Power
Dial Tone	350 + 440 Hz	**Continuous**	-22 dBm
Stutter Dial Tone	350 + 440 Hz	(**0.1** - 0.1)x3, **Continuous**	-22 dBm
Message Waiting Indicator Tone	350 + 440 Hz	(**0.1** - 0.1)x10, **Continuous**	-22 dBm
Confirmation Tone	350 + 440 Hz	(**0.1** - 0.1)x3, End	-22 dBm
Ringback Tone	400 + 450 Hz	**0.4** - 0.2 - **0.4** - 2.0	-22 dBm
Busy Tone	400 Hz	**0.38** - 0.38	-19 dBm
Reorder Tone	400 Hz	**Continuous**	-19 dBm
Special Information Tone	950 Hz 1400 Hz 1800 Hz	**0.33** - 0.33 - 0.33 - 1.0 0.33 - **0.33** - 0.33 - 1.0 0.33 - 0.33 - **0.33** - 1.0	-19 dBm -19 dBm -19 dBm
Receiver Off Hook (ROH) Tone	1400 + 2060 + 2450 + 2600 Hz	**0.1** - 0.1	-19 dBm
Intercept Tone			
Network Congestion Tone	400 Hz	**0.4** - 0.35 - **0.23** - 0.53	-19 dBm
Preemption Tone			
Hold Tone			
Call Waiting Tone	440 Hz	2.0 - **0.3** - *10.0* - **0.3** - 10.0	-17 dBm

Table 106: Uk1 FXS properties

Ring	AC: 45 VRMS, 25 Hz DC: -15 Vdc	
Ring Cadence (bold = tone duration, non-bold = silence duration)	**0.4** - 0.2 - **0.4** - 2.0	
Input Impedance	300 Ω + 1000 Ω // 220 nF	
TBRL Impedance	370 Ω + 620 Ω // 310 nF	
Gain (input)	-3 dBr	
Gain (output)	-9 dBr	
Caller ID	Modulation:	V23
	Transmission when on hook and ringing:	Line reversal DT AS
	Transmission when on hook and not ringing:	OSI
	Transmission when off hook:	SAS CAS
Flash Hook Detection Range	Min: 170 ms Max: 900 ms	

Table 107: Uk1 FXO properties

Input Impedance	320 Ω + 1050 Ω // 230 nF
Gain (input)	+6 dBr
Gain (output)	-1 dBr
Delay before answering	0 s
Delay before dialing	4 s

Table 108: Uk1 FXO tone detections

Tone	Frequency	Cadence (bold = tone duration, non-bold = silence duration)
Far End Disconnect Tone	440 Hz	**Continuous** for 8.0 s
Dial Tone	440 Hz	**Continuous** for 0.5 s

R2 Interface

Signalling Variants

The R2 telephony interface has different values depending on the **CountrySelection** parameter.

Parameter	Default Value						
	Brazil	Mexico	Argentina	Saudi Arabia	Venezuela	Philippine	ITU-T
Bits BCD	1	1	1	1	1	1	1
ANI Length	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)
DNIS Length	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)	0 (Variable)
ANI Request	Enable	Disable	Enable	Enable	Enable	Enable	Enable
Send ANI request after nth DNIS Digits	0 (Variable)	0 (Variable)	0 (Variable)	1	0 (Variable)	0 (Variable)	0 (Variable)
Collect Call Blocked Enabled	Enable	Disable	Disable	Disable	Disable	Disable	Disable
ANI Category	Nat Subscriber NoPrio	Nat Subscriber NoPrio	Nat Subscriber NoPrio	Nat Subscriber NoPrio	Nat Subscriber NoPrio	Nat Subscriber NoPrio	Nat Subscriber NoPrio
Line Free Category	No Charge	No Charge	Charge	Charge	Charge	Charge	Charge
ANI Restricted	Enable	Disable	Disable	Disable	Disable	Disable	Disable
Incoming Decline Method	Release	Release	Release	Release	Release	Release	Release

Timers Variants

The R2 telephony interface has different values depending on the **CountrySelection** parameter.

Parameter	Default Value (ms)						
	Brazil	Mexico	Argentina	Saudi Arabia	Venezuela	Philippine	ITU-T
Seizure Ack Timeout	2000	2000	2000	2000	2000	2000	2000
Fault Seizure Ack Timeout	60000	60000	60000	60000	60000	60000	60000
Double Seizure Timeout	100	100	100	100	100	100	100
Double Answer Timeout	1000	1000	1000	1000	1000	1000	1000
Answer Timeout	0	0	0	0	0	0	0
ReAnswerTimeout	1000	1000	1000	1000	1000	1000	1000
Release Guard Timeout	100	100	100	100	100	100	100
InterCall Guard Timeout	100	100	100	100	100	100	100
Congestion Tone Guard Timeout	1000	1000	1000	1000	1000	1000	1000
Unblocking Timeout	100	100	100	100	100	100	100
Address Complete Timeout	8000	8000	8000	8000	8000	8000	8000
Wait Answer Timeout	60000	60000	60000	60000	60000	60000	60000
Digit Complete Timeout	4000	4000	4000	4000	4000	4000	4000
Wait GroupB Response Complete Timeout	3000	3000	3000	3000	3000	3000	3000
Wait Immediate Response Complete Timeout	1000	1000	1000	1000	1000	1000	1000
Play Tone Guard Timeout	70	70	70	70	70	70	70

Parameter	Default Value (ms)						
	Brazil	Mexico	Argentina	Saudi Arabia	Venezuela	Philippine	ITU-T
Accept Call Timeout	2000	2000	2000	2000	2000	2000	2000
Clear Forward Guard Timeout	1500	1500	1500	1500	1500	1500	1500
Clear Backward Guard Timeout	1500	1500	1500	1500	1500	1500	1500
Fault On Answered Guard Timeout	250	250	250	250	250	250	250
Fault On Clear Backward Guard Timeout	250	250	250	250	250	250	250
Fault On Seize Ack Guard Timeout	250	250	250	250	250	250	250
Fault On Seize Guard Timeout	250	250	250	250	250	250	250
Decline Guard Timeout	1500	1500	1500	1500	1500	1500	1500

Digit Timers Variants

The R2 telephony interface has different values depending on the **CountrySelection** parameter.

Parameter	Default Value (ms)						
	Brazil	Mexico	Argentina	Saudi Arabia	Venezuela	Philippines	ITU-T
MFC Pulse Inter Digit Timeout	100	100	100	100	100	100	100
MFC Pulse Min On Timeout	150	150	150	150	150	150	150
MFC Max Sequence Timeout	10000	20000	20000	20000	20000	20000	20000
MFC Max On Timeout	5000	10000	10000	10000	10000	10000	10000
MFC Max Off Timeout	5000	10000	10000	10000	10000	10000	10000

Link Timers Variants

The R2 telephony interface has different values depending on the **CountrySelection** parameter.

Parameter	Default Value (ms)						
	Brazil	Mexico	Argentina	Saudi Arabia	Venezuela	Philippines	ITU-T
Link Activation Timeout	1000	1000	1000	1000	1000	1000	1000
Link Activation Retry Timeout	3000	3000	3000	3000	3000	3000	3000

Tones Variants

The R2 telephony interface has different values depending on the **CountrySelection** parameter.

Parameter	Default Value						
	Brazil	Mexico	Argentina	Saudi Arabia	Venezuela	Philippines	ITU-T
R2 Tones Forward Groups							
End of DNIS Tone	I15	None	I15	I15	None	I15	I15
End of ANI Tone	I15	I15	I15	I15	I15	I15	I15
Restricted ANI Tone	I12	None	None	None	I12	None	None
R2 Tones Backward Groups							
Send Next DNIS Digit Tone	A1	A1	A1	A1	A1	A1	A1
Send Previous DNIS Digit Tone	A9	None	A9	A2	A2	A9	A9
Switch to Group II Tone	A3	A3	A3	A3	A3	A3	A3
Network Congestion Tone	A4	A4	A4	A4	A4	A4	A4
Send Calling Party Category Tone	A5	None	A5	A5	A5	A5	A5
Immediate Accept Tone	None	None	A6	A6	A6	A6	A6
Send DNIS Digit N-2 Tone	A7	None	A7	A7	A7	A7	A7
Send DNIS Digit N-3 Tone	A8	None	A8	A8	A8	A8	A8
Repeat all DNIS Tone	None	None	A10	None	A10	A10	A10
Send Next ANI Digit Tone	A5	A2	A5	A5	A9	A5	A5
Send Calling Party Category Tone Switch to Group C	None	A6	None	None	None	None	None
Send Special Information Tone	None	None	B2	B2	B2	B2	B2
User Busy Tone	B3	B2	B3	B3	B3	B3	B3
Network Congestion Tone	B4	B4	B4	B4	B4	B4	B4

Parameter	Default Value						
	Brazil	Mexico	Argentina	Saudi Arabia	Venezuela	Philippines	ITU-T
Unassigned Number Tone	B8	None	B7	B5	B5	B5	B5
Line Free with Charge Tone	B1	B1	B6	B1	B6	B6	B6
Line Free with Charge Tone (Supplementary)	B6	None	None	None	None	None	None
Line Free without Charge Tone	B7	B5	B7	B6	B7	B7	B7
Line Out of Order Tone	B8	None	B8	B8	B8	B8	B8
Changed Number Tone	B3	None	None	None	None	None	None
Send Next ANI Digit Tone	None	C1	None	None	None	None	None
Repeat All DNIS Tone switch to Group A	None	C2	None	None	None	None	None
Send Next DNIS Digit Tone switch to Group A	None	C5	None	None	None	None	None
Network Congestion Tone	None	C4	None	None	None	None	None
Send Previous DNIS Digit Tone switch to Group A	None	C6	None	None	None	None	None
Switch to Group II Tone	None	C3	None	None	None	None	None

Note: The various R2 Forward and Backward signals are defined in the ITU-T Q.441 standard.

Eam Interface

Signalling Variants

The E&M telephony interface has different values depending on the **SignalingType** parameter.

Parameter	Default Value			
	Wink Start	Immediate Start	Feature Group B (FGB)	Feature Group D (FGD)
Bits BCD	8	8	8	8
ANI Length	0	0	0	0
DNIS Length	0	0	0	0
Incoming Register Signaling	DTMF	DTMF	MfR 1	MfR 1
Outgoing Register Signaling	DTMF	DTMF	MfR 1	MfR 1
Incoming Dial Map	%dnis%t	%dnis%t	%kp%dnis%st	%kp%dnis%st
Outgoing Dial Map	%dnis%t	%dnis%t	%kp%dnis%st	%kp%dnis%st
Wait Wink	Enable	Disable	Enable	Enable
Wait Wink Ack	Disable	Disable	Disable	Enable
Send Wink	Enable	Disable	Enable	Enable
Send Wink Ack	Disable	Disable	Disable	Enable

Timers Variants

The E&M telephony interface has different values depending on the **SignalingType** parameter.

Parameter	Default Value (ms)			
	Wink Start	Immediate Start	Feature Group B (FGB)	Feature Group D (FGD)
Backward Wait Pre Wink Timeout	50	50	50	50
Backward Send Wink Timeout	200	200	200	200
Backward Wait First Digit Timeout	10000	10000	10000	10000
Backward Clear Backward Timeout	2000	2000	2000	2000
Backward Digit Complete Timeout	4000	4000	4000	4000
Forward Wait Wink Timeout	5000	5000	5000	5000
Forward Wait Max Wink on Timeout	5000	5000	5000	5000
Forward Wait Pre Dial Timeout	140	140	140	140
Forward Wait Answer Timeout	180000	180000	180000	180000
Forward Clear Forward Timeout	2000	2000	2000	2000
Release Guard Timeout	200	200	200	200

Digit Timers Variants

The E&M telephony interface has different values depending on the **SignalingType** parameter.

Parameter	Default Value (ms)			
	Wink Start	Immediate Start	Feature Group B (FGB)	Feature Group D (FGD)
KP On Timeout	100	100	100	100
KP Off Timeout	68	68	68	68

Link Timers Variants

The E&M telephony interface has different values depending on the **SignalingType** parameter.

Parameter	Default Value (ms)			
	Wink Start	Immediate Start	Feature Group B (FGB)	Feature Group D (FGD)
Link Activation Timeout	1000	1000	1000	1000
Link Activation Retry Timeout	3000	3000	3000	3000

Tones Variants

The E&M telephony interface has different values depending on the **SignalingType** parameter.

Parameter	Default Value			
	Wink Start	Immediate Start	Feature Group B (FGB)	Feature Group D (FGD)
KP Tone	MFC 10	MFC 10	MFC 10	MFC 10
ST Tone	MFC 13	MFC 13	MFC 13	MFC 13

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