

7000 RS232 Command List

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1 Overview

1.1 Introduction

This document contains lists of the available RS232-based FIPP (Frye Instrument Packet Protocol) commands for the Fonix 7000. Descriptions of the commands can be found in *commands.txt*.

1.2 Legend

Availability of some major modes and commands will be limited depending on options installed on the Fonix 7000. These commands are noted with an (OPTION) designation below.

Commands marked with † are dynamic data get commands. The data returned by these commands are not guaranteed to be valid immediately following operating state change of the 7000. Settling delays may be necessary before reading dynamic data after making changes in the system.

Commands marked with ‡ are get curve commands. The composite and fast pure tone modes are dynamic, and as previously mentioned, the data may not be valid immediately after changing the state of the instrument.

For more in-depth discussion of dynamic data and other Fonix 7000-specific notes, see *7000notes.pdf*.

2 Common Commands

Common commands are available in all modes on the 7000 where RS232 is supported.

2.1 List of Common Commands

Command	Number
Set Label Information	6
Set Extended Label	66
Set Keyboard Scan Code	72
Set Poll Delay / Holdoff Time	73
Set Battery Information	79
Set Average Frequencies	82
Set Printer Label Storage	89
Set Printer Selection	92
 Do Battery	 14
Do Reset	38
Do Feed	64
Do Print	65
 Get Software Version	 28
Get Leveling Status	29
Get Command Status	33
Get Keyboard Scan Code	58
Get Instrument State	60
Get Poll Delay / Holdoff Time	74
Get Power State	80
Get Average Frequencies	81
Get Extended Label	86
Get Printer Selection	93
Get Software Information	95
Get Device ID Count	100
Get Long Device ID	101
Get Real Time Clock	103
Get Signal Information	109
Get Battery Information	179

2.2 Notes

Commands 28 and 33 are always supported on all instruments that follow the FIPP protocol. Command 38 is supported on all instruments that support the FIPP protocol, but its effects may differ between instruments.

Commands 80, 89, 100 and above 100 are not available on all instruments.

Be aware that commands may vary between instruments and software revisions. If supporting multiple instruments, refer to per-instrument documentation for implementation differences.

3 Major Modes of Operation

The Fonix 7000 supports the following major modes of operation via RS232:

Mode	Major
Opening	0
Coupler	1
ANSI87	(ANSI) 2
IEC 60118-7 1994	(IEC94) 3
JIS	(JIS) 4
Probe Insertion Gain	(PROBE) 6
Attack & Release (standard/fixed)	9
Coupler I/O	11
ANSI92	(ANSI) 12
Default Setup Menu	16
ANSI96	(ANSI) 18
Message Major State	21
Local Menu	22
Probe SPL	(PROBE) 23
Probe Audiogram	(PROBE) 25
Enhanced DSP	28
Probe Target	(PROBE) 29
Navigation	30
ANSI03	(ANSI) 33
Battery	35
Visible Speech	(PROBE) 36
IEC 60118-7 2005	(IEC05) 37

3.1 Opening Screen (0)

The following Opening Screen commands are available in major mode 0.

Command	Number
Set Probe Mode	(PROBE) !! 7
Set Instrument State	59
Set Option Parameters	70
Set Baud Rate	31747
Get Probe Mode	(PROBE) !! 35
Get Option Parameters	71

3.2 Coupler (1)

Command	Number
Set Source Amplitude Value	0

Set Harmonic Distortion Status	1
Set Frequency Value	2
Set OES Status	!! 3
Set Noise Reduction Value	4
Set Smoothing Status	5
Set Probe Mode	(PROBE) !! 7
Set Weighting Status	8
Set Curve Frame Data	9
Set Source Method Selection	11
Set Gain Status	12
Set Auto Mode	48
Set Active Status	54
Set Instrument State	59
Set Spectrum	68
Set Option Parameters	70
Set Ear	75
Set Operating Mode	77
Set Measurement Delay Times	84
Set CIC Status	!! 88
Set Impulse Rejection Value	108
Set Selected Curve	112
Set Curve Status	114
Set Static Tone	121
Set Aid Type	123
Set Bias Tone Selection	125
Set Filter Selection	136
Set Leveling State	147
Set Coupler Type	172
 Do Start/Stop (press start)	 16
Do Leveling (press level)	17
 Get Source Amplitude Value	 21
Get Harmonic Distortion Status	22
Get Frequency Value	23
Get OES Status	!! 24
Get Curve Frame Data	† 25
Get Noise Reduction Value	26
Get Smoothing Status	27
Get Weighting Status	30
Get Measurement Data	† 31
Get Harmonic Distortion Data	† 32
Get Probe Mode	(PROBE) !! 35
Get Gain Status	36
Get Source Method Selection	37
Get Last Measured Curve Data	‡ 42
Get Auto Mode	49

Get Reference Microphone Status	53
Get Active Status	55
Get Instrument State	60
Get Option Parameters	71
Get Ear	76
Get Operating Mode	78
Get Measurement Delay Times	83
Get CIC Status	!! 87
Get Impulse Rejection Value	107
Get Raw Sample Data	110
Get Selected Curve	113
Get Curve Status	115
Get Static Tone	122
Get Aid Type	124
Get Bias Tone Selection	126
Get Filter Selection	137
Get Coupler Type	173

3.3 Default Setup Menu (16)

Setup Menu Minor State 0

Command	Number
Set Harmonic Distortion Status	1
Set Frequency Value	2
Set Noise Reduction Value	4
Set Gain Status	12
Set Auto Mode	48
Set Instrument State	59
Set Option Parameters	70
Set Operating Mode	77
Set Measurement Delay Times	84
Set Static Tone	121
Set Aid Type	123
Set Filter Selection	136
Set User Number	150
Set Coupler Type	172
Set Curve Group	182
Set AGC	184
Do Save	177
Get Harmonic Distortion Status	22
Get Frequency Value	23
Get Noise Reduction Value	26
Get Gain Status	36

Get Auto Mode	49
Get Option Parameters	71
Get Operating Mode	78
Get Measurement Delay Times	83
Get Static Tone	122
Get Aid Type	124
Get Filter Selection	137
Get User Number	151
Get Coupler Type	173
Get Curve Group	183
Get AGC	185

Setup Menu minor state 1 is used when popup menus are active.

3.4 Navigation (30)

Command	Number
Set Instrument State	59
Set Option Parameters	70
Set Aid Type	123
Get Option Parameters	71
Get Aid Type	124

There are currently three navigation screens on the 7000 which share major state 30, but have unique minor states.

Navigation Screen	State
Real-Ear Navigation	(30:0)
ANSI S3.22 Navigation	(30:1)
Advanced Coupler Tests	(30:2)

3.5 Probe Insertion Gain & SPL (6 & 23)

Command	Number
Set Source Amplitude Value	0
Set Frequency Value	2
Set Noise Reduction Value	4
Set Smoothing Status	5
Set Probe Mode	(PROBE) !! 7
Set Weighting Status	8
Set Curve Frame Data	9
Set Gain Status	12
Set Output Limiting Value	50
Set Reference Microphone Status	52
Set Active Status	54
Set Instrument State	59

Set Spectrum	68
Set Option Parameters	70
Set Ear Status	75
Set Operating Mode	77
Set Measurement Delay Times	84
Set Impulse Rejection Value	108
Set Selected Curve	112
Set Curve Status	114
Set Unaided Curve Selection	116
Set Static Tone	121
Set Aid Type	123
Set Bias Tone Selection	125
Set Fit Rule Selection	134
Set Filter Selection	136
Set Compression	138
Set Client Age	140
Set Transducer Location	142
Set Fit Type	152
Set Aid Channels	158
Set Aid Limiting	160
Do Start/Stop (press start)	16
Do Leveling (press level)	17
Get Source Amplitude Value	21
Get Frequency Value	23
Get Curve Frame Data	‡ 25
Get Noise Reduction Value	26
Get Smoothing Status	27
Get Weighting Status	30
Get Measurement Data (single tone)	† 31
Get Probe Mode	(PROBE) !! 35
Get Gain Status	36
Get Last Measured Curve Data	‡ 42
Get Output Limit Value	51
Get Reference Microphone Status	53
Get Active Status	55
Get Reference Microphone Input	57
Get Instrument State	60
Get Option Parameters	71
Get Ear Status	76
Get Operating Mode	78
Get Measurement Delay Times	83
Get Impulse Rejection Value	107
Get Raw Sample Data	110
Get Selected Curve	113
Get Curve Status	115

Get Unaided Curve Selection	117
Get Static Tone	122
Get Aid Type	124
Get Bias Tone Selection	126
Get Fit Rule Selection	135
Get Filter Selection	137
Get Compression	139
Get Client Age	141
Get Transducer Location	143
Get Fit Type	153
Get Aid Channels	159
Get Aid Limiting	161

3.6 Audiogram Screen (25)

Command	Number
Set Probe Mode	(PROBE) !! 7
Set Curve Frame Data	9
Set Active Status	54
Set Instrument State	59
Set Ear Status	75
Set Selected Curve	112
Set Curve Status	114
Set Fit Rule Selection	134
Set Compression	138
Set Client Age	140
Set Transducer Location	142
Set Fit Type	152
Set Aid Channels	158
Set Aid Limiting	160
Do Start/Stop (press start)	16
Get Curve Frame Data	‡ 25
Get Probe Mode	(PROBE) !! 35
Get Active Status	55
Get Instrument State	60
Get Ear Status	76
Get Selected Curve	113
Get Curve Status	115
Get Fit Rule Selection	135
Get Compression	139
Get Client Age	141
Get Transducer Location	143
Get Fit Type	153
Get Aid Channels	159

Get Aid Limiting	161
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3.7 Target Edit Screen (29)

Command	Number
Set Probe Mode	(PROBE) !! 7
Set Curve Frame Data	9
Set Instrument State	59
Set Ear Status	75
Set Selected Curve	112
Set Curve Status	114
Set Fit Rule Selection	134
Set Compression	138
Set Client Age	140
Set Transducer Location	142
Set Fit Type	152
Set Aid Channels	158
Set Aid Limiting	160
Get Curve Frame Data	‡ 25
Get Probe Mode	(PROBE) !! 35
Get Instrument State	60
Get Ear Status	76
Get Selected Curve	113
Get Curve Status	115
Get Fit Rule Selection	135
Get Compression	139
Get Client Age	141
Get Transducer Location	143
Get Fit Type	153
Get Aid Channels	159
Get Aid Limiting	161

3.8 IEC 60118-7 1994 Mode (3)

Command	Number
IEC94 Minor States #0&2 (IEC94 mode entry&complete)	
Set Noise Reduction Value	4
Set Active Status	54
Set Instrument State	59
Set Operating Parameters	70
Set Measurement Delay Times	84
Set Blob	99
Set Aid Type	123

Do Leveling	17
Get Noise Reduction Value	26
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83
Get Aid Type	124

IEC94 Minor State #1 (Set reference test gain)

Set Active Status	54
Set Instrument State	59
Get Measurement Data	† 31
Get Active Status	55
Get Blob	61

3.9 JIS Mode (4)

Command	Number
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JIS Minor States #0&2 (JIS mode entry&complete)

Set Noise Reduction Value	4
Set Reference Microphone Status	52
Set Active Status	54
Set Instrument State	59
Set Operating Parameters	70
Set Measurement Delay Times	84
Set Blob	99
Set Aid Type	123
Do Start/Stop (press start)	16
Do Leveling (press level)	17
Get Noise Reduction Value	26
Get Last Measured Curve Data	‡ 42
Get Reference Microphone Status	53
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83
Get Aid Type	124

JIS Minor State #1 (Set reference test gain)

Set Active Status	54
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Set Instrument State	59
Set Measurement Delay Times	84
Do Start/Stop (press start)	16
Get Noise Reduction Value	26
Get Measurement Data	† 31
Get Reference Microphone Status	53
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83

3.10 ANSI ANSI87(2)/ANSI96(18) Modes

Command	Number
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Minor States #0&4 (ANSI87/ANSI96 Entry and complete)

Set Noise Reduction Value	4
Set Reference Microphone Status	52
Set Active Status	54
Set Instrument State	59
Set Operating Parameters	70
Set Measurement Delay Times	84
Set Blob	99
Set Aid Type	123
Do Start/Stop (press start)	16
Do Leveling (press level)	17
Get Noise Reduction Value	26
Get Last Measured Curve Data	‡ 42
Get Reference Microphone Status	53
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83
Get Aid Type	124

Minor States #1,2,3 (Set reference test gain and telecoil)

Set Active Status	54
Set Instrument State	59
Set Measurement Delay Times	84
Do Start/Stop (press start)	16
Get Noise Reduction Value	26
Get Measurement Data	† 31
Get Reference Microphone Status	53

Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83

3.11 ANSI ANSI03(33) Mode

Command	Number
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Minor States #0&4 (ANSI03 Entry and complete)

Set Noise Reduction Value	4
Set Reference Microphone Status	52
Set Active Status	54
Set Instrument State	59
Set Operating Parameters	70
Set Measurement Delay Times	84
Set Blob	99
Set Aid Type	123
Do Start/Stop (press start)	16
Do Leveling (press level)	17
Get Noise Reduction Value	26
Get Last Measured Curve Data	‡ 42
Get Reference Microphone Status	53
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83
Get Aid Type	124

Minor States #1,2,3 (Set reference test gain, telecoil, and AGC)

Set Active Status	54
Set Instrument State	59
Set Measurement Delay Times	84
Do Start/Stop (press start)	16
Get Noise Reduction Value	26
Get Measurement Data	† 31
Get Reference Microphone Status	53
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83

3.12 ANSI92(12) Mode

Command	Number
Minor States #0&2 (ANSI91 Entry and complete)	
Set Noise Reduction Value	4
Set Reference Microphone Status	52
Set Active Status	54
Set Instrument State	59
Set Operating Parameters	70
Set Measurement Delay Times	84
Set Blob	99
Set Aid Type	123
Do Start/Stop (press start)	16
Do Leveling (press level)	17
Get Noise Reduction Value	26
Get Last Measured Curve Data	‡ 42
Get Reference Microphone Status	53
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83
Get Aid Type	124
Minor State #1 (Set reference test gain)	
Set Active Status	54
Set Instrument State	59
Set Measurement Delay Times	84
Do Start/Stop (press start)	16
Get Noise Reduction Value	26
Get Measurement Data	† 31
Get Reference Microphone Status	53
Get Active Status	55
Get Blob	61
Get Operating Parameters	71
Get Measurement Delay Times	83

3.13 Attack & Release (standard/fixed) (9)

Command	Number
Do Start/Stop	16
Set Attack and Release Frequency	40
Set Active Status	54
Set Attack and Release Parameters	97
Get Attack and Release Data	18
Get Attack and Release Frequency	41
Get Active Status	55
Get Attack and Release Parameters	98

3.14 Coupler I/O (11)

Command	Number
Do Start/Stop	16
Set Input/Output (I/O) Parameters	10
Set Active Status	54
Get Input/Output (I/O) Data	20
Get Input/Output (I/O) Parameters	34
Get Active Status	55

3.15 Battery (35)

Command	Number
Set Active Status	54
Set Ear Selection	75
Set Battery Type	79
Get Battery Data	19
Get Input/Output (mA/Ampl) Data	20
Get Curve Frame	25
Get Active Status	55
Get Ear Selection	76

3.16 Visible Speech (36)

Command	Number
Do Start/Stop	16
Set Noise Reduction Value	4

Set Curve Frame	9
Set Active Status	54
Set Instrument State	59
Set Option Parameters	70
Set Ear Selection	75
Set Selected Curve	112
Set Fit Rule Selection	134
Set Compression	138
Set Client Age	140
Set Transducer Location	142
Set Fit Type	152
Set Aid Channels	158
Set Aid Limiting	160
Get Curve Frame	25
Get Noise Reduction Value	26
Get Probe Mode	(PROBE) !! 35
Get Gain Status	36
Get Last Measured Curve Data	‡ 42
Get Active Status	55
Get Option Parameters	71
Get Ear Selection	76
Get Raw Sample Data	110
Get Selected Curve	113
Get Fit Rule Selection	135
Get Compression	139
Get Client Age	141
Get Transducer Location	143
Get Fit Type	153
Get Aid Channels	159
Get Aid Limiting	161

3.17 IEC 60118-7 2005 Mode (37)

The following basic minor states are available in IEC 60118-7 2005:

Mode	Minor
Start of Test	0
FOG (telecoil)	1
RTG	2
RTG (telecoil)	3
AGC Switching (AGC switch) / End of telecoil (telecoil)	4
Test Complete	5

The following enhanced minor states are available in IEC 60118-7 2005:

Mode	Minor
OSPL90 sweep	100
FOG sweep	200
FOG (telecoil)	300
RTG	400
Response sweep	500
Distortion Test	600
Current Measurement (battery)	700
Input Noise (EQIN)	800
RTG (telecoil)	900
AGC Switching (AGC switch)	1000
first I/O (AGC)	1100
second I/O (AGC)	1110
third I/O (AGC)	1120
fourth I/O (AGC)	1130
fifth I/O (AGC)	1140
first attack/release (AGC)	1200
second attack/release (AGC)	1210
third attack/release (AGC)	1220
fourth attack/release (AGC)	1230
fifth attack/release (AGC)	1240
Test Complete	32000

Command	Number	Available in the following minors:
Get Active Status	55	all minors
Get Aid Type	124	all minors
Get Leveling Status	29	all minors
Get Measurement Delay Times	83	all minors
Get Noise Reduction Value	26	all minors
Get Operating Parameters	71	all minors
Set Active Status	54	all minors
Set Instrument State	59	all minors

Command	Number	Available in the following minors:
Do Leveling (press level)	17	0 (Start of Test)
Set Aid Type	123	0 (Start of Test)
Set Measurement Delay Times	84	0 (Start of Test)
Set Noise Reduction Value	4	0 (Start of Test)
Set Option Parameters	70	0 (Start of Test)

Command	Number	Available in the following minors:
Set Blob	99	0 (Start of Test), 5, 32000 (Test Complete)
Get Measurement Data	† 31	1, 300 (FOG (telecoil)), 2, 400 (RTG), 3, 900 (RTG (telecoil))

Get Input/Output (I/O) Data	20	5, 32000 (Test Complete) and 1100-1140 (I/O) if test number is specified; with no argument only valid in 1100-1140 (I/O)
Get Attack and Release Data	18	5, 32000 (Test Complete) and 1200-1240 (attack/release) if test number is specified; with no argument only valid in 1200-1240 (attack/release)
Get Attack and Release Frequency ..	41	5, 32000 (Test Complete) and 1200-1240 (attack/release) if test number is specified; with no argument only valid in 1200-1240 (attack/release)
Get Blob	61	all minors except 0 (Start of Test); short blob returned for all minors except 5 and 32000 (Test Complete)
Get Curve Frame	25	all minors if curve number is specified; curve 0 only valid in minors 100 (OSPL90), 200 (FOG sweep), 500 (Response Sweep)