AT command	Response	Comment
	OK	
AT+CLCK=”PS”,10,”1234”		Set full lock
	OK	

Ensemble S9: GSM Mobile Equipment, Control, and Status

Commands

AT+CPAS Phone Activity Status

Description: Returns the activity status <pas> of the phone. It can be used to interrogate the phone before requesting action from the phone. If the command is executed without the <mode> parameter, only <pas> values from 0 to 128 are returned. If the <mode> parameter is included in the execution command, <pas> values from 129 to 255 may also be returned.

Execution command: **AT+CPAS**[=<mode>]

Execution command response: +CPAS: <pas>

Test command: **AT+CPAS=?** Shows if the command is supported.

Test command response: +CPAS: (list of supported <pas>s)

Parameters:

<mode>:

<mode>	Description
1	Allows the CPAS to return Sony Ericsson-specific <pas> values **Default setting**

<pas>:

<pas>	Description
0	Ready (phone allows commands from phone/ terminal equipment)
3	Ringing (phone is ready for commands from phone/ terminal equipment, but the ringer is active)

<pas>	Description
4	Call in progress (phone is ready for commands from phone/terminal equipment, but a call is in progress)
129	MMI is in idle state. This is a sub-state to ‘ready’ (0) and has the following definition: • MMI in idle state, meaning that operator, clock, and date is shown on the display • No conversation or data call in progress • No sub-menus shown on the display • Only digits, ‘clear’, ‘*’, ‘NO’, and ‘#‘ allowed in this state
130	Mobile-oriented call in progress. Sub-state to ‘Call in progress’ (4)
131	Mobile-terminated call in progress. Sub-state to ‘Call in progress’ (4)

AT+CPIN PIN Control

Description: Sends the password to the phone, which is necessary to make the phone operational.

Execution command: **AT+CPIN=**<pin>[,<new_pin>]

Read command: **AT+CPIN?** Displays the current <code> setting.

Test command: **AT+CPIN=?** Shows if the command is supported.

Test command response: +CPIN: (list of supported <code>s)

Parameters:

<pin>: String: the range for the SIM PIN and the PH-SIM PIN is 4-8 digits.

The SIM PUK consists of 8 digits.

<new_pin>: String: the range for the SIM PIN and the PH-SIM PIN is 4-8 digits.

The SIM PUK consists of 8 digits.

<code>:

<code>	Description
READY	phone is not pending for any password
SIM PIN	phone is waiting for SIM PIN
SIM PUK	phone is waiting for SIM PUK
PH-SIM PIN	phone is waiting for PHone-to-SIM password to be given
SIM PIN2	phone is waiting for SIM2
SIM PUK2	phone is waiting for SIM PUK2
BLOCKED	The SIM card is blocked for the user

AT+CBC Battery Charge

Description: Execution and read command returns battery connection status <bcs> and battery level <bcl> of the phone.

Execution command: **AT+CBC**

Execution command response: +CBC: <bsc>,<bcl>

Read command: **AT+CBC?** Displays the current <bcs> and <bcl> values.

Test command: **AT+CBC=?** Shows if the command is supported.

Test command response: +CBC: (list of supported <bcs>s),(list of supported <bcl>s)

Parameters:

<bcs>:

<bcs>	Description
0	phone powered by the battery (no charger connected)
1	phone has a battery connected, but it is powered by the charger
2	phone does not have a battery connected

<bcl>:

<bcl>	Description
0	Battery exhausted
1-99	Battery charging level; the battery has 1-99 percent of capacity remaining
100	Battery fully charged

AT+CSQ Signal Quality

Description: The command returns received signal strength indication <rssi> and channel bit error rate <ber> from the phone.

Execution command: **AT+CSQ**

Execution command response: +CSQ: <rssi>,<ber>

Test command: **AT+CSQ=?** Shows if the command is supported.

Test command response: +CSQ: (list of supported <rssi>s),(list of supported<ber>s)

Parameters:

<rssi>:

<rssi>	Description
0	-113 dBm or less
1	-111 dBm

<rssi>	Description
2-30	-109 dBm to -53 dBm
31	-51 dBm or greater
99	Not known or not detectable

<ber>:

<ber>	Description
0-7	RXQUAL values
99	Not known or not detectable

AT+CKPD Keypad Control

Description: Emulates phone keypad by setting each keystroke as a character in a string <keys>.

Execution command: **AT+CKPD=**<keys>[,<time>[,<pause>]]

Test command: **AT+CKPD=?** Shows if the command is supported.

Parameters:

<keys>:

<keys>	Description
“#”	Hash (number)
“*”	Star (*)
“0”-”9”	Number keys
“<“	Left arrow
“>”	Right arrow
“C”/”c”	Clear display (C/CLR)
“D”/”d”	Volume down.
“E”/”e”	Connection end (END)
“F”/”f”	Function (FCN) - option key
“S”/”s”	Connection start (SEND)
“U”/”u”	Volume up
“V”/”v”	Down arrow
“^”	Up arrow
“H”/”h”	Button pushed on the MC link handset

<time>: Time to strike each key.

<time>	Description
0-255	0-25.5 seconds

<pause>: Pause between keystrokes.

<pause>	Description
0-255	0-25.5 seconds

AT+CIND Indicator Control

Description: Displays the value of phone indicators.

Read command: **AT+CIND?**

Read command response: +CIND: <ind>,<ind>, ...

The command displays the current value for the different <descr> given below.

Test command: **AT+CIND=?** Shows if the command is supported.

Test command response: +CIND: (<descr>,(list of supported <ind>s),(<descr>,(list of supported <ind>s)), (<descr>,(list of supported <ind>s)), ...

Parameters:

<ind>: Integer; in the range given by <descr>. <ind> value ‘0’ means that the indicator is off, ‘1’ means the indicator is on, ‘2’ is more substantial than ‘1’, and so on.

<descr>:

<descr>	Description
“battchg”	Battery charge level (0-5)
“signal”	Signal quality (0-5)
“batterywarning”	Battery warning (0-1)
“chargerconnected”	Charger connected (0-1)
“service”	Service availability (0-1) (value = ’1’ means there is contact with the net)
“sounder”	Sounder activity (0-1) (Phone silent status, ‘1’ = phone silent)
“message”	Message received (0-1)
“call”	Call in progress (0-1)
“roam”	Roaming indicator (0-1) (Home net status, ‘0’ = Home Net)
“smsfull”	A short message memory storage in the MT has become full (‘0’), or memory locations are available (‘1’)

Example:

```
AT+CIND?
+CIND: 2,3,1,1,1,1,1,0,0,1
OK

AT+CIND=?
+CIND: (“battchg”,(0-1)),(“signal”,(0-5)),
(“batterywarning”,(0-1)),(“chargerconnected”,(0-1)),
(“service”,(0-1)),(“sounder”,(0-1)),(“message”,(0-1)),
(“call”,(0-1)),(“roam”,(0-1)),(“smsfull”,(0-1))
```

AT+CMER Mobile Equipment Event Reporting

Description: Enables or disables the unsolicited result codes **+CKEV** and **+CIEV** for key presses, display changes, and indicator state changes.

Set command: **AT+CMER=**[<mode>[,<keyp>[,<disp>[,<ind>[,<bfr>]]]]]

Read command: **AT+CMER?** Displays the current <mode>, <keyp>, <disp>, <ind>, and <bfr> settings.

Test command: **AT+CMER=?** Shows if the command is supported.

Test command response: +CMER: (list of supported <mode>s),(list of supported <keyp>s),(list of supported <disp>s),(list of supported <ind>s),(list of supported <bfr>s)

Parameters:

<mode>:

<mode>	Description
0	Buffer unsolicited result codes in the phone. If the phone result code buffer is full, codes can be buffered elsewhere, or the oldest result codes can be removed to make room for the new result codes **Default setting**
3	Forward the unsolicited result codes directly to the terminal equipment; phone - terminal equipment link-specific inband technique used to embed result codes and data when phone is in on-line data mode.

<keyp>:

<keyp>	Description
0	No keypad event reporting **Default setting**
2	Keypad event reporting using **+CKEV** Enables keypad event reporting of all key presses

<disp>:

<disp>	Description
0	No display event reporting **Default setting**

<ind>:

<ind>	Description
0	No indicator event reporting **Default setting**

<ind>	Description
1	Indicator event reporting using **+CIEV** Only those indicator that are not caused by **AT+CIND** shall be indicated by the phone to the terminal equipment

<bfr>:

<bfr>	Description
0	phone buffer of unsolicited result codes defined within this command is cleared when <mode>='0' or <mode>='3' is entered **Default setting**

AT+CVIB Vibrator Mode

Description: Enables and disables the vibrator alert function of the phone.

Set command: **AT+CVIB=**<mode>

Read command: **AT+CVIB?** Displays the current <mode> setting.

Test command: **AT+CVIB=?** Shows if the command is supported.

Test command response: +CVIB: (list of supported <mode>s)

Parameter:

<mode>:

<mode>	Description
0	Disable vibrator alert function
1	Enable vibrator alert function
16	Enable vibrator alert function when silent mode is selected

AT*ECAM Call Monitoring

Description: Activates or deactivates the call monitoring function in the phone. Also see the unsolicited result code ***ECAV**.

Set command: **AT*ECAM=**<onoff>

Set command response: *ECAM: <ccid>,<ccstatus>,<calltype>[,<processid>][,<exit_cause>]

[,<number>,<type>]

Read command: **AT*ECAM?** Displays the current <onoff> setting.

Test command: **AT*ECAM=?** Shows if the command is supported.

Test command response: *ECAM: (list of supported <onoff>s)

Parameters:

<onoff>:

<onoff>	Description
0	The call log function is disabled
1	The call log function is enabled

<ccid>:

<ccid>	Description
1-7	A number that uniquely identifies a call in the phone. The maximum number of call control processes is 7: 5 multiparty members, one call on hold and one waiting call

<ccstatus>:

<ccstatus>	Description
0	IDLE
1	CALLING
2	CONNECTING
3	ACTIVE
4	HOLD
5	WAITING
6	ALERTING
7	BUSY

<calltype>:

<calltype>	Description
1	VOICE
2	DATA
4	FAX
128	VOICE2

<processid>: Integer; reported when returning to IDLE state (<ccstatus>=0)

<processid>	Description
8=H´08	CC (Call Control)
68=H´44	MM (Mobile Management)
69=H´45	MS (Mobile Station)
122=H´7A	RR (Radio Resources)

<exit_cause>: Integer; reported when returning to IDLE state (<ccstatus>=’0’.

<number>: Integer string; Phone number. Format specified by <type>.

Only valid for <ccstatus>=1 (CALLING).

<type>: Type of address octet. Only valid for <ccstatus>=1 (CALLING).

<type>	Description
145	Default setting when a dialling string includes the international access code character '+'
129	Default setting when a dialling string does not include the international access code character '+'

AT*ELAN Language Set

Description: Sets the language in the phone. If the language has been set to "AUTO", the read command returns the current language set from the SIM card. Hence, the "AUTO" code is never returned by the read command.

Set command: **AT*ELAN=**<code>

Read command: **AT*ELAN?** Displays the current language setting.

Test command: **AT*ELAN=?** Shows if the command is supported.

Test command response: *ELAN: (list of supported <code>s)

Parameter:

<code>: Language codes defined in ISO 639. Consist of two characters, for example "sv", "en" etc.

<code>	Description
"AUTO"	Read the language code from the SIM card "AUTO" is never returned by the read command
...	Miscellaneous language codes

AT+CLAN Language Set

Description: Sets the language in the phone. If the language has been set to "AUTO", the read command returns the current language set from the SIM card. Hence, the "AUTO" code is never returned by the read command.

Set command: **AT+CLAN=**<code>

Read command: **AT+CLAN?** Displays the current language setting.

Test command: **AT+CLAN=?** Shows if the command is supported.

Test command response: +CLAN: (list of supported <code>s)

Parameter:

<code>: Language codes defined in ISO 639. Consist of two characters, for example "sv", "en" etc.

<code>	Description
"AUTO"	Read the language code from the SIM card "AUTO" is never returned by the read command
	Miscellaneous language codes

AT*EMAR Master Reset

Description: Requests the phone to reset user data.

Set command: **AT*EMAR=**<phone_lock_code>[,<option>]

Test command: **AT*EMAR=?** Shows if the command is supported.

Parameter:

<phone_lock_code>: String; security code (phone lock code) must be verified before performing the master reset. Also see **AT+CLCK**.

<option>:

<option>	Description
0	Reset all settings to factory default **Default setting**
1	Reset internal memory **Note:** The phone lock code will be reset to “0000”

AT*ERIN Ring Set

Description: Sets the sound for incoming voice, line L1 and L2, fax and data calls, and alarm.

A sound type is selected for each call type.

Set command: **AT*ERIN=**<sound_type>[,<call_type>]

Read command: **AT*ERIN?**

Read command response: *ERIN: <sound_type1>,<call_type1>**<CR><LF>**

*ERIN: <sound_type2>,<call_type2>**<CR><LF>**

...

*ERIN: <sound_type*n*>,<call_type*n*>

Test command: **AT*ERIN=?** Shows if the command is supported.

Test command response: *ERIN: (list of supported <sound_type>s),(list of supported <call_type>s)

Parameters:

<sound_type>:

<sound_type>	Description
1	Low ring signal
2	Medium ring signal
3	High ring signal
4	Mixed ring signal
11	Melody 1

<sound_type>	Description
12-20	Melody 2 - Melody 10 Reserved for preset melodies
31-34	Own melodies 1-4

<call_type>:

<call_type>	Description
1	Line 1 **Default setting**
2	Line 2
3	Fax
4	Data
5	Alarm

AT*ERIL Ring Level Set

Description: Sets the volume for the ring signal used for incoming voice, Line 1 and Line 2, fax, and data calls.

Set command: **AT*ERIL=**<volume>[,<call_type>[,<place>]]

Read command: **AT*ERIL?**

Read command response: *ERIL: <volume1>[,<call_type1>[,<place1>]]**<CR><LF>**

*ERIL: <volume2>[,<call_type2>[,<place2>]]**<CR><LF>**

...

*ERIL: <volume*n*>[,<call_type*n*>[,<place*n*>]]

Test command: **AT*ERIL=?** Shows if the command is supported.

Test command response: *ERIL: (list of supported <volume>s),(list of supported <call_type>s), (list of supported <place>s)

Parameters:

<volume>:

<volume>	Description
0	Off
1-6	Volume setting; no increasing ring
129-134	Volume setting; increasing ring

<call_type>:

<call_type>	Description
1	Line 1 **Default setting**
2	Line 2

<call_type>	Description
3	Fax
4	Data

<place>:

<place>	Description
0	Hand-held **Default setting**
1	Car mounted

AT*ERIP Ring Signal Playback

Description: Plays one of the sound types available as ring/message signal in the phone.

Set command: **AT*ERIP=**<volume>,<sound_type>

Test command: **AT*ERIP=?** Shows if the command is supported.

Test command response: *ERIP: (list of supported <volume>s),(list of supported <sound_type>s)

Parameters:

<volume>:

<volume>	Description
0	Off
2-*n*	Volume setting

<sound_type>:

<sound_type>	Description
1	Low ring signal
2	Medium ring signal
3	High ring signal
4	Mixed ring signal
11	Melody 1
12-20	Melody 2 - Melody 10 Reserved for preset melodies
31-34	Own melodies 1-4

AT*ESAM Answer Mode

Description: Sets the answer mode in the phone.

Set command: **AT*ESAM=**<mode>

Read command: **AT*ESAM?** Displays the current <mode> setting.

Test command: **AT*ESAM=?** Shows if the command is supported.

Test command response: *ESAM: (list of supported <mode>s)

Parameter:

<mode>:

<mode>	Description
0	Answer mode is neither set to ‘Any Key’, nor ‘Auto’
1	‘Any Key’ mode on
2	‘Auto’ mode on

AT*ESBL Backlight Mode

Description: Sets the backlight mode in the phone.

Set command: **AT*ESBL=**[<place>,]<mode>

Read command: **AT*ESBL?**

Read command response: *ESBL: <place0>,<mode0>**<CR><LF>**
*ESBL: <place1>,<mode1>

Test command: **AT*ESBL=?** Shows if the command is supported.

Test command response: *ESBL: (list of supported <place>s),(list of supported <mode>s)

Parameters:

<place>:

<place>	Description
0	Hand-held
1	Car mounted

<mode>:

<mode>	Description
0	OFF, Back light always switched off
1	ON, always on
2	AUTO, backlight is turned on when the phone reacts to a user event or when receiving a call The light is then turned off after a short while

AT*ESIL Silence Command

Description: Orders the phone to enter or leave silent mode.

Set command: **AT*ESIL=**<mode>

Read command: **AT*ESIL?** Displays the current <mode> setting.

Test command: **AT*ESIL=?** Shows if the command is supported.

Test command response: *ESIL: (list of supported <mode>s)

Parameter:

<mode>:

<mode>	Description
0	Silent mode off Default setting
1	Silent mode on

AT*ESKL Key-Lock Mode

Description: Sets the key-lock mode in the phone.

Set command: **AT*ESKL=**<mode>

Read command: **AT*ESKL?** Displays the current <mode> setting.

Test command: **AT*ESKL=?** Shows if the command is supported.

Test command response: *ESKL: (list of supported <mode>s)

Parameter:

<mode>:

<mode>	Description
0	MANUAL; the user has to manually lock the keyboard Default setting
1	AUTOMATIC; the phone will, after a time delay, automatically lock the keyboard

AT*ESKS Key Sound

Description: Sets the key sound in the phone.

Set command: **AT*ESKS=**<mode>

Read command: **AT*ESKS?** Displays the current <mode> setting.

Test command: **AT*ESKS=?** Shows if the command is supported.

Test command response: *ESKS: (list of supported <mode>s)

Parameter:

<mode>:

<mode>	Description
0	SILENT; no sound when a key is pressed Default setting
1	CLICK; short click when a key is pressed
2	TONE, a continuous tone when a key is pressed

AT*ESMA Message Alert Sound

Description: Sets the message alert sound of the phone.

Set command: **AT*ESMA=**<mode>[,<mess_type>]

Read command: **AT*ESMA?**

Read command response: *ESMA: list of supported <mess_type>s with corresponding <mode>*ESMA: <mode>

Test command: **AT*ESMA=?** Shows if the command is supported.

Test command response: *ESMA: (list of supported <mess_type>s),(list of supported <mode>s)

Parameters:

<mode>:

<mode>	Description
0	SILENT; no sound when a message arrives **Default setting**
1	CLICK; short click when a message arrives
2	TONE, a continuous tone when a message arrives

<mess_type>:

<mess_type>	Description
3	SMS **Default setting**

AT*ESMM Minute Minder

Description: Sets the minute minder setting in the phone.

Set command: **AT*ESMM=**<mode>

Read command: **AT*ESMM?** Displays the current <mode> setting.

Test command: **AT*ESMM=?** Shows if the command is supported.

Test command response: *ESMM: (list of supported <mode>s)

Parameter:

<mode>:

<mode>	Description
0	OFF; minute minder off Default setting
1	ON; minute minder on

AT*ESOM Own Melody

Description: Sets the user-defined melodies in the phone.

Set command: **AT*ESOM=**[<melody_index>],<melody_string>[,<melody_format>]

Read command: **AT*ESOM?** Displays the current parameter settings.

Read command response: *ESOM: <melody_index>,<melody_string1><melody_format>**<CR><LF>**

*ESOM: <melody_index>,<melody_string2><melody_format>**<CR><LF>**

...

*ESOM: <melody_index>,<melody_string*n*><melody_format>

Test command: **AT*ESOM=?** Shows if the command is supported.

Test command response: *ESOM: (list of supported <melody_index>s),(list of supported <pause>s),

(list of supported <prefix>s),(list of supported <note>s),<mlength>,<mnotes>,

(list of supported <melody_format>s).

Parameters:

<melody_index>:

<melody_index>	Description
1	Melody 1 Default setting
2	Melody 2
3	Melody 3
4	Melody 4
5	Melody 5
6	Melody 6
7	Melody 7
8	Melody 8

<melody_format>:

<melody_format>	Description
0	<melody_string> is formed by the characters specified by <pause>, <prefix>,<note>, and <length_modifier> below **Default setting**
1	<melody_string> is formed by hexcoding the melody in the format used when saving it to the phone memory See <hex_note> and <hex_length> below

<pause>:

<pause>	Description
“p”	Short pause

<pause>	Description
“P”	Long pause

<prefix>:

<prefix>	Description
“#”	Half tone higher
“(b)”	Half tone lower
“+”	One octave higher
“++”	Two octaves higher

<note>:

<note>	Description
“c”, “d”,” e”, “f”, “g”, “a”, “h”	Short notes See <length_modifier> below
“C”, “D”, “E”, “F”, “G”, “A”, “H”	Long notes See <length_modifier> below

<length_modifier>: The note length may be modified by using “.”

Syntax	Description
“c”	Note length: 150 ms
“C”	Note length: 225 ms
“c.”	Note length: 300 ms
“C.”	Note length: 450 ms

<mlength>: Integer; indicates the maximum length of <melody_string>. If the length of <melody_string> exceeds <melngth>, only the first <mlength> characters are accepted.

<mnotes>: Integer; indicates the maximum number of notes in a melody.

<hex_note> String.

<hex_note>	Description	<prefix> and <note> equivalent
00	C_TONE_LOWER_OCTAVE	c
01	C_SHARP_TONE_LOWER_OCTAVE	#c
02	D_FLAT_TONE_LOWER_OCTAVE	(b)d
03	D_TONE_LOWER_OCTAVE	d
04	D_SHARP_TONE_LOWER_OCTAVE	#d
05	E_FLAT_TONE_LOWER_OCTAVE	(b)e
06	E_TONE_LOWER_OCTAVE	e
07	F_TONE_LOWER_OCTAVE	f
08	F_SHARP_TONE_LOWER_OCTAVE	#f
09	G_FLAT_TONE_LOWER_OCTAVE	(b)g

<hex_note>	Description	<prefix> and <note> equivalent
0a	E_TONE_LOWER_OCTAVE	g
0b	E_SHARP_TONE_LOWER_OCTAVE	#g
0c	A_FLAT_TONE_LOWER_OCTAVE	(b)a
0d	E_TONE_LOWER_OCTAVE	a
0e	E_SHARP_TONE_LOWER_OCTAVE	#a
0f	B_FLAT_TONE_LOWER_OCTAVE	(b)b
10	B_TONE_MIDDLE_OCTAVE	b
11	C_TONE_MIDDLE_OCTAVE	+c
12	C_SHARP_TONE_MIDDLE_OCTAVE	+#c
13	D_FLAT_TONE_MIDDLE_OCTAVE	+(b)d
14	D_TONE_MIDDLE_OCTAVE	+d
15	D_SHARP_TONE_MIDDLE_OCTAVE	+#d
16	E_FLAT_TONE_MIDDLE_OCTAVE	+(b)e
17	E_TONE_MIDDLE_OCTAVE	+e
18	F_TONE_MIDDLE_OCTAVE	+f
19	F_SHARP_TONE_MIDDLE_OCTAVE	+#f
1a	G_FLAT_TONE_MIDDLE_OCTAVE	+(b)g
1b	E_TONE_MIDDLE_OCTAVE	+g
1c	E_SHARP_TONE_MIDDLE_OCTAVE	+#g
1d	A_FLAT_TONE_MIDDLE_OCTAVE	+(b)a
1e	E_TONE_MIDDLE_OCTAVE	+a
1f	E_SHARP_TONE_MIDDLE_OCTAVE	+#a
20	B_FLAT_TONE_MIDDLE_OCTAVE	+(b)b
21	B_TONE_MIDDLE_OCTAVE	+b
22	C_TONE_UPPER_OCTAVE	++c
23	C_SHARP_TONE_UPPER_OCTAVE	++#c
24	D_FLAT_TONE_UPPER_OCTAVE	++(b)d
25	D_TONE_UPPER_OCTAVE	++d
26	D_SHARP_TONE_UPPER_OCTAVE	++#d
27	E_FLAT_TONE_UPPER_OCTAVE	++(b)e
28	E_TONE_UPPER_OCTAVE	++e
29	F_TONE_UPPER_OCTAVE	++f
2a	F_SHARP_TONE_UPPER_OCTAVE	++#f
2b	G_FLAT_TONE_UPPER_OCTAVE	++(b)g
2c	E_TONE_UPPER_OCTAVE	++g
2d	E_SHARP_TONE_UPPER_OCTAVE	++#g
2e	A_FLAT_TONE_UPPER_OCTAVE	++(b)a
2f	E_TONE_UPPER_OCTAVE	++a

<hex_note>	Description	<prefix> and <note> equivalent
30	E_SHARP_TONE_UPPER_OCTAVE	++#a
31	B_FLAT_TONE_UPPER_OCTAVE	++(b)b
32	E_TONE_UPPER_OCTAVE	++b
33	PAUSE_TONE	p
34	END_OF_OWN_MELODY_NOTE	
35	LAST_DISPLAY_NOTE	

<hex_length>: Modifies the tone length.

<hex_length>	Description
0	Note length: 150 ms
1	Note length: 225 ms
2	Note length: 300 ms
3	Note length: 450 ms

The note byte in <melody_string> is formed by <hex_note> (6 bits) and <hex_length> (2 bits).

Example: An A_TONE_UPPER_OCTAVE note with the duration 300 ms is formed “2” (10 in binary representation) and “2f” (101111 in binary representation), giving the <hex_note> byte “af” (10101111 in binary representation).

AT*ETXT Text Command

Description: Sets and activates the greeting text in the phone. The greeting is shown in the phone display when the phone is turned on. The command can also deactivate the greeting.

Note: The optional <text> parameter is only to be used when activating the custom greeting (<mode>=1). If the <mode> parameter is set to 1, but no text is provided, the greeting text previously stored in the phone shall be used.

Set command: **AT*ETXT=**<mode>[,<melody>[,<text>]]

Read command: **AT*ETXT?** Displays the current <mode> and <text> settings.

Test command: **AT*ETXT=?** Shows if the command is supported.

Test command response: *ETXT: (list of supported <mode>s),(list of supported <melody>s),<ltext>.

Parameters:

<mode>:

<mode>	Description
0	No greeting <text> shall not be sent

<mode>	Description
1	Custom text, given in <text>
2	Standard ('SONY ERICSSON') start-up message <text> shall not be sent **Default setting**
3	Pre-defined start-up show
4	Custom start-up show

<melody>:

<melody>	Description
0	Melody off **Default setting**
1	Melody on

<text>: Text to be displayed; may not contain **<CR>**.

<ltext>: Integer; maximum number of characters in <text>.

AT*EAPP Application Function

Description: Requests the MT to perform an application function specified by <app> and <subfunc>. The <subfunc> parameter specifies which function within the specified application to call.

Note: There is no guarantee that the application will execute. The command will return OK if the command, including sub-parameters, is supported. There is no correlation between the OK response and the time the application function is performed by the MT.

Set command: **AT*EAPP=**<app>[,<subfunc>[,<text1>[,<text2>]]]

Test command: **AT*EAPP=?** Shows if the command is supported.

Test command response:

*EAPP: <app>,(list of supported <subfunc>s)

*EAPP: <app>,(list of supported <subfunc>s)

...

Parameters:

<app>:

<app>	Description
0	Message application
1	Phonebook application
2	E-mail application
3	WAP application
4	Calendar application
7	Notes application

<app>	Description
8	Image browser application

<subfunc>: Application specific information, see tables below.

<subfunc>, **<app=0>**	Description
0	Send new message. Preentered message text can be provided in <text1> **Default setting**
1	Inbox
2	Unsent
3	Add new template. Preentered message text can be provided in <text1>
4	Sent items
5	Send new message to specific phonebook entry Pre-entered message text can be provided in <text1> The name of the phonebook entry to send message to shall be provided in <text2>
6	Send new message and include formatting characters and phonebook entry for e-mail **Note:** It is up to the MT to insert the formatting characters and the phonebook entry
7	Send new message and include formatting characters for WWW **Note:** It is up to the MT to insert the formatting characters and the phonebook entry

<subfunc>, **<app=1>**	Description
0	Add new number. Pre-entered number can be provided in <text1> **Default setting**
1	Find and Call. Pre-entered name can be provided in <text1> **Note:** If a name is provided, the search is started without user interaction
2	Find and Edit. Pre-entered name can be provided in <text1> **Note:** If a name is provided, the search is started without user interaction
3	Add new voice label

<subfunc>, **<app=1>**	Description
4	Add new group Pre-entered name can be provided in <text1>
5	Add new e-mail address Pre-entered address can be provided in <text1>

<subfunc>, **<app=2>**	Description
0	Send new message Pre-entered message text can be provided in <text1> **Default setting**
1	Inbox (read new mail). <text1>='Y' => check for new mail <text1>='N' => do not check for new mail
2	Outbox
3	Draft
4	Add attachment

<subfunc>, **<app=3>**	Description
0	Enter address Pre-entered URL can be provided in <text1> **Default setting**
1	Go to address Pre-entered URL **must be** provided in <text1> The connection is initiated without user interaction
2	Add new bookmark
3	Edit homepage
4	Go to homepage

<subfunc>, **<app=4>**	Description
0	Add new appointment **Default setting**
1	Add new ToDo
2	ToDo view
3	Today view
4	Week view
5	Month view

<subfunc>, **<app=7>**	Description
0	Create new note Pre-entered message text can be provided in <text1> **Default setting**
1	Display list of notes If only notes of a certain class should be shown, its name can be provided in <text1>
2	Display a certain note. The index of the note shall be provided in <text1>
3	Delete a certain note The index of the note shall be provided in <text1>

<subfunc>, **<app=8>**	Description
0	Display an image in fullscreen mode This is done by choosing a directory that contains only one picture The directory is specified in <text1>
1	Display thumbnail images The command shows thumbnail images of all pictures in the directory specified by <text1>
2	Delete one or several image(s) The image name is specified in <text1>
255	Close Image browser

Example:

```
AT*EAPP=?
*EAPP: 0,(0-7)
*EAPP: 1,(0-5)
*EAPP: 2,(0-4)
*EAPP: 3,(0-4)
*EAPP: 4,(0-5)
*EAPP: 7,(0-3)
*EAPP: 8,(0-2,255)
OK
```

AT*EKSE Keystroke Send

Description: Sends a keystroke identifier to the MT. The MT will make a context-sensitive interpretation of the keystroke, based on the state of the MMI.

Set command: **AT*EKSE=**<key>[,<time>]

Test command: **AT*EKSE=?** Shows if the command is supported.

Test command response: *EKSE: (list of supported <key>s),(list of supported <time>s)

Parameters:

<key>:

<key>	Description
0-65535	Keystroke identifier

<time>: Reports how long the key is pressed.

<time>	Description
0-255	0-25.5 seconds

AT*EIMR Input Method Change Report

Description: Set command enables unsolicited result code ***EIMV** which indicates that the input method has been changed.

Set command: **AT*EIMR=**<onoff>

Read command: **AT*EIMR?** Displays the current <onoff> setting.

Test command: **AT*EIMR=?** Shows if the command is supported.

Test command response: *EIMR: (list of supported <onoff>s)

Parameter:

<onoff>:

<onoff>	Description
0	Unsolicited result code *EIMV is disabled
1	Unsolicited result code *EIMV is enabled

AT*ECAP Camera Button Pressed

Description: Action command notifies the MS that a button on the camera has been pushed.

Action command: **AT*ECAP=**<button>,<time>,<state>

Test command: **AT*ECAP=?** Shows if the command is supported.

Test command response: *ECAP: (list of supported <button>s), (list of supported <state>s)

Parameters:

<button>:

<button>	Description
1	Button 1 is pressed

<time>:

<time>	Description
0-255	The length of the camera button key press, in units of 100 ms

<state>:

<state>	Description
0	Stand-by
1	Active
2	View picture

Unsolicited result codes

+CKEV Keypad Event

Description: Keypad event reporting is enabled by the **AT+CMER** command and indicates key press/release.

Unsolicited result code: **+CKEV:** <keys>,<press>

Parameters:

<keys>: See **AT+CKPD**.

<press>:

<press>	Description
0	Key released
1	Key pressed

+CIEV Indicator Event

Description: Indicates changes in indicator levels. Enabled with **AT+CMER**.

Unsolicited result code: **+CKEV:** <ind>,<value>

Parameters:

<ind>: Indicates the indicator order number (as specified for **AT+CIND**)

<ind>	Description
1	Battery charge level indicator
2	Signal quality indicator
3	Battery warning indicator
4	Charger connected indicator
5	Service availability indicator
6	Sounder activity indicator
7	Message received indicator
8	Call-in-progress indicator
9	Transmit activated by voice activity indicator
10	Roaming indicator
11	Short message memory storage indicator in the SMS