

AT Command Emulator – Command Variants & Help Report

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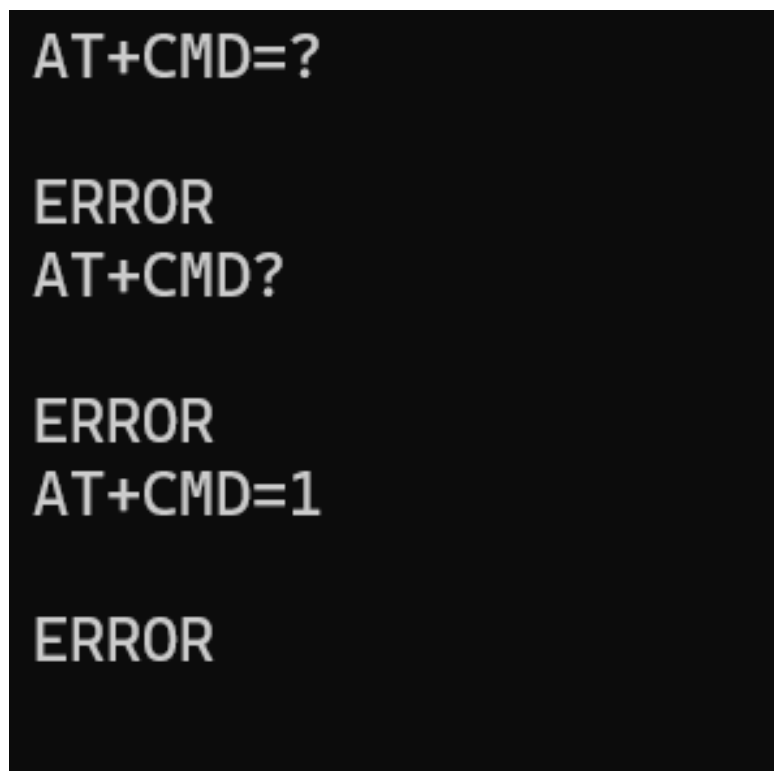
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1. Overview

This report explores AT command variants using the following formats:

- AT+CMD=? – Test Command
- AT+CMD? – Read Command
- AT+CMD=<value> – Write Command

Screenshot:



```
AT+CMD=?  
  
ERROR  
AT+CMD?  
  
ERROR  
AT+CMD=1  
  
ERROR
```

Five supported AT commands were tested and grouped by their syntax capabilities.

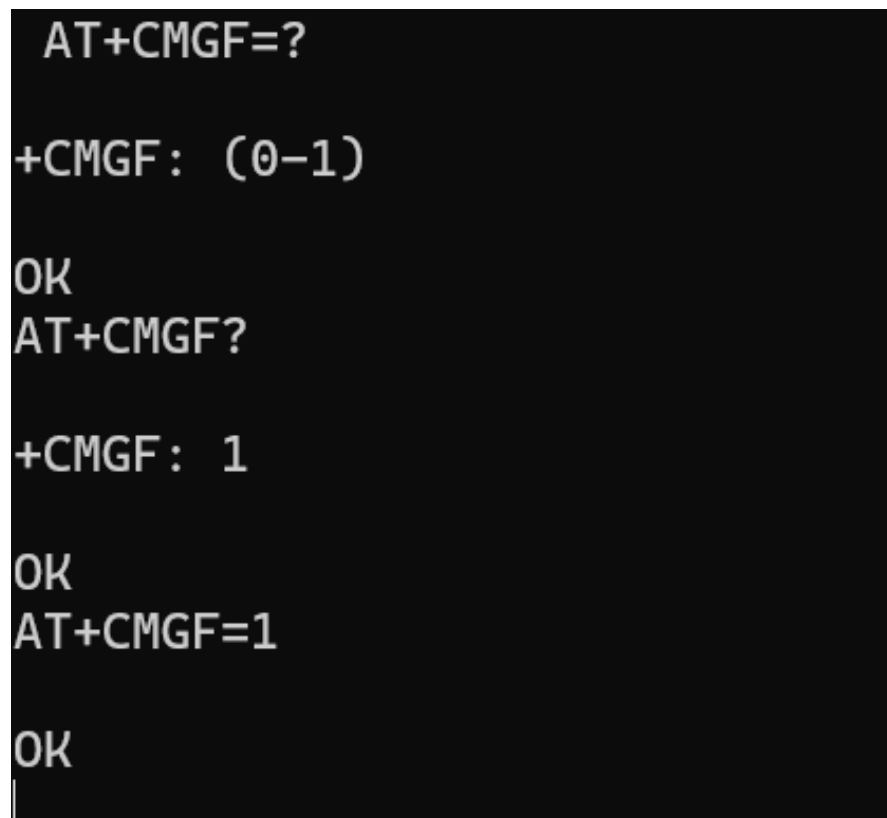
2. Command Grouping by Syntax Type

Group 1: All Variants Supported (Test, Read, Write)

Command: AT+CMGF – Message Format

- AT+CMGF=? → Returns: +CMGF: (0,1)
- AT+CMGF? → Returns current format (e.g., +CMGF: 1)
- AT+CMGF=1 → Sets SMS to text mode

Screenshot:



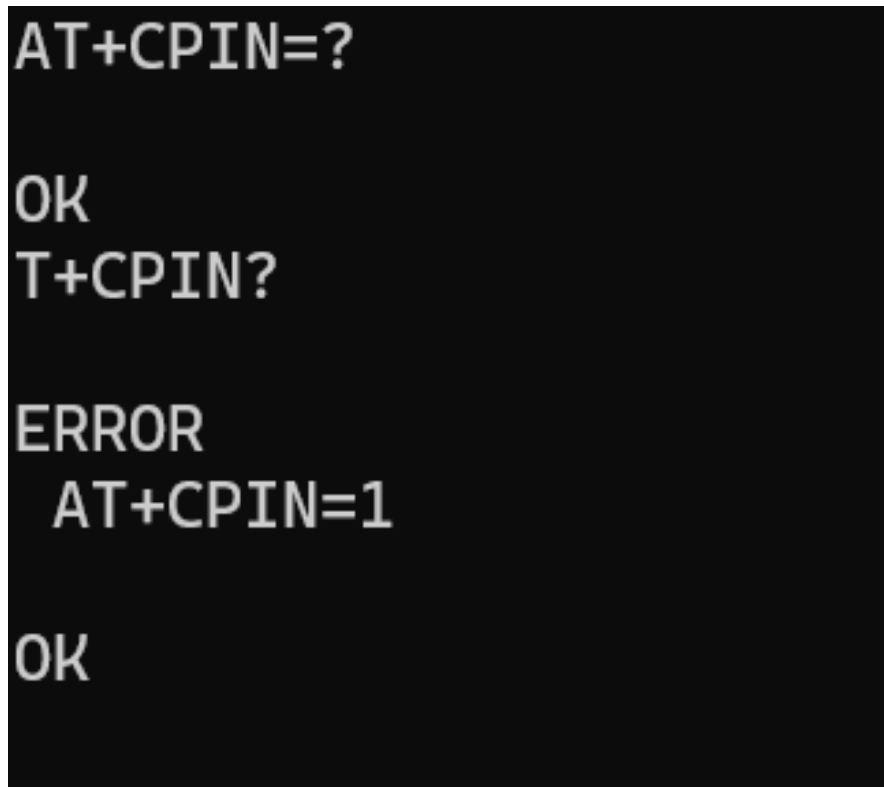
```
AT+CMGF=?
+CMGF: (0-1)
OK
AT+CMGF?
+CMGF: 1
OK
AT+CMGF=1
OK
```

Group 2: Read Only

Command: AT+CPIN – SIM Status

- AT+CPIN=? → Not supported (ERROR)
- AT+CPIN? → Returns SIM status: +CPIN: READY
- AT+CPIN=<val> → Not supported

Screenshot:

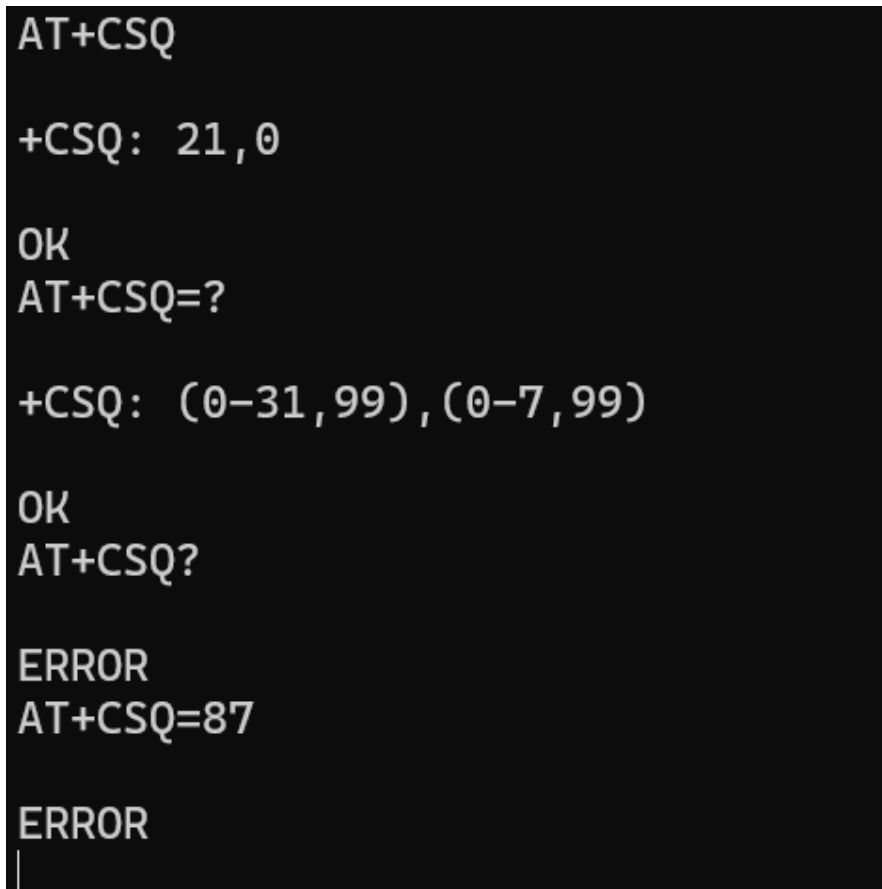
A screenshot of a terminal window with a black background and white text. It shows the following sequence of commands and responses:
1. Command: AT+CPIN=?
Response: OK
2. Command: T+CPIN?
Response: ERROR
3. Command: AT+CPIN=1
Response: OK

Group 3: Read Only (with network info)

Command: AT+COPS – Operator Selection

- AT+COPS=? → Not fully supported in emulator
- AT+COPS? → Returns current operator: e.g., +COPS: 0,0,"Airtel",7
- AT+COPS=<val> → not functional in emulator

Screenshot:



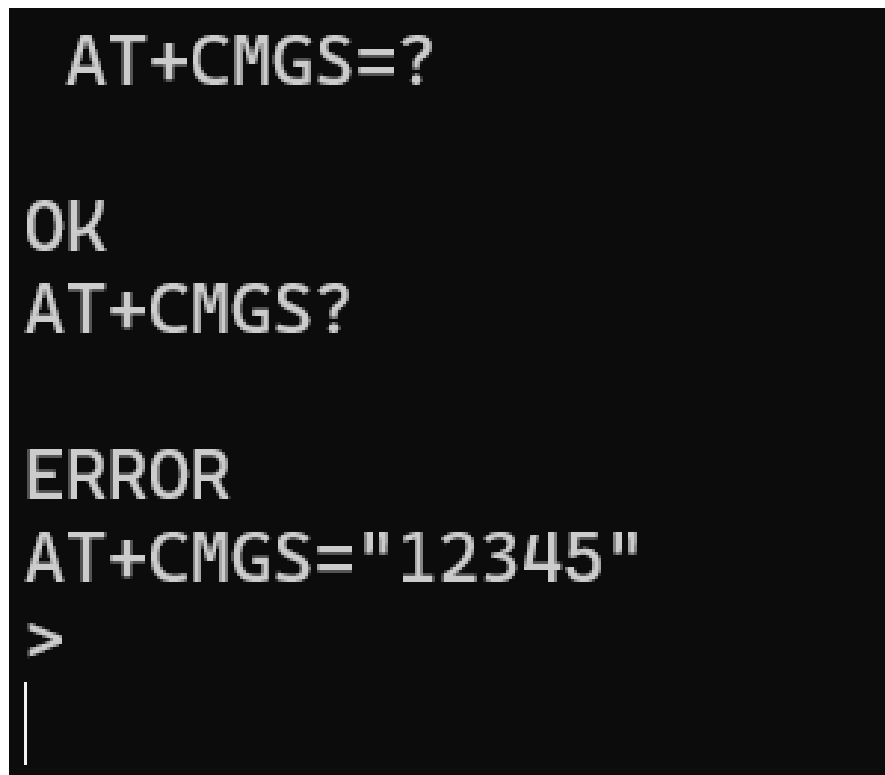
```
AT+CSQ
+CSC: 21,0
OK
AT+CSQ=?
+CSC: (0-31,99),(0-7,99)
OK
AT+CSQ?
ERROR
AT+CSQ=87
ERROR
|
```

Group 4: Test Only

Command: AT+CSQ – Signal Quality

- AT+CSQ=? → Supported. Returns range: +CSQ: (0-31,99),(0-7,99)
- AT+CSQ? → ERROR – Read not supported in emulator
- AT+CSQ=87 → ERROR – Write not supported

Screenshot:



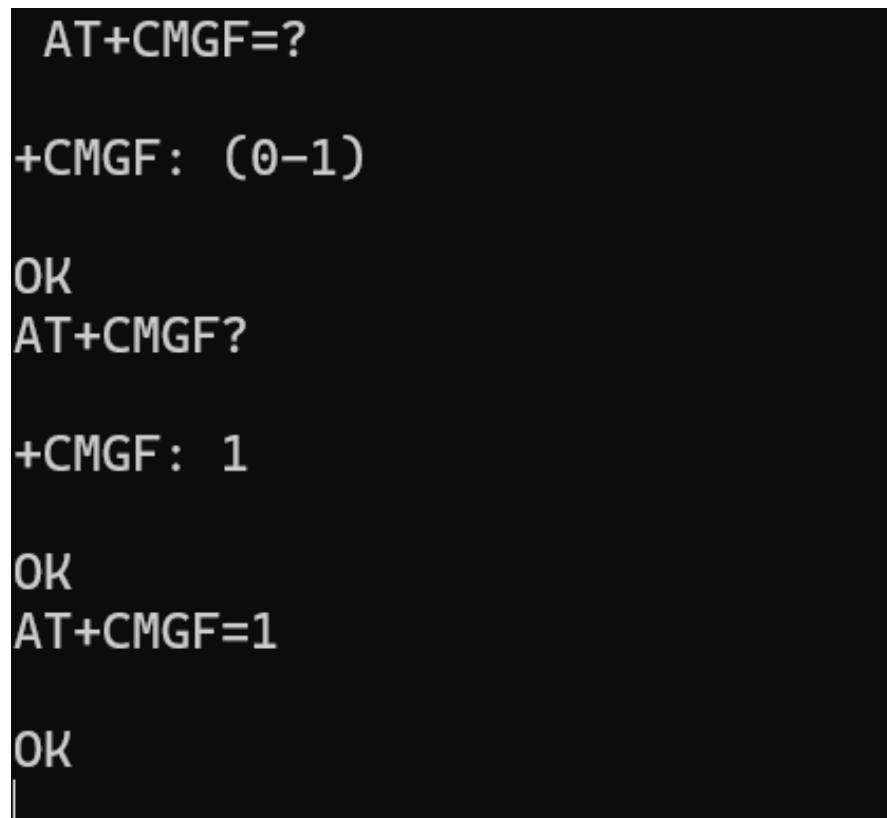
```
AT+CMGS=?  
  
OK  
AT+CMGS?  
  
ERROR  
AT+CMGS="12345"  
>  
|
```

Group 5: Write Only

Command: AT+CMGS – Send SMS (simulated)

- AT+CMGS=? → Not supported
- AT+CMGS? → Not supported
- AT+CMGS="<number>" → Starts SMS (may be partially functional)

Screenshot:



```
AT+CMGF=?  
  
+CMGF: (0-1)  
  
OK  
AT+CMGF?  
  
+CMGF: 1  
  
OK  
AT+CMGF=1  
  
OK
```

3. Conclusion

This exercise validated different syntax variants for AT commands in the emulator environment. While not all commands support every form (Test/Read/Write), these differences closely resemble behavior on real modules.

Summary:

- Some commands like **AT+CMGF** support all three formats.
- Others like **AT+CSQ** only allow testing, not reading or writing.
- Manual grouping is necessary as help listings are not auto-generated by the emulator.

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