

Ar.Drone 2 AT Commands

1 General

1.1 Synopsis

AT***<TYPE>**=**<SEQ>**[,**<OPT1>**[,**<OPT2>**[,...]]]\r

1.2 Argument

SEQ starts at 1 and should be incremented at each new command.

2 LED

2.1 Synopsis

AT*LED=**<SEQ>**,**<ID>**,**<FREQ>**,**<TIMEOUT>**\r

2.2 Arguments

- **ID**: animation number $\in [0; 20]$.
- **FREQ**: frequency in Hz converted in *IEEE 754 Float* $\in [0; 1]$.
- **TIMEOUT**: animation time in seconds.

2.3 Example

AT*LED=1,5,1061997773,4\r

2.4 IEEE 754 Float

2.4.1 C/C++

```
float var = 0,8;
int var754 = *(int*)&var;
```

2.4.2 Python

```
import struct
var = 0.8
tmp = struct.pack('>f', var)
var754 = struct.unpack('>l', tmp)[0]
```

2.4.3 Java

```
float var = 0.8;
int var754 = Float.FloatToRawIntBits(var);
```

3 FTRIM

3.1 Synopsis

AT*FTRIM=**<SEQ>**\r

3.2 Example

AT*FTRIM=2\r



4 REF

4.1 Synopsis

AT*REF=<SEQ>,<ID>\r

4.2 Arguments

- ID:
 - Landing: 290717696 ($2^{18}|2^{20}|2^{22}|2^{24}|2^{28}$)
 - Emergency motors cut: 290717952 ($LANDING|2^8$)
 - Take off: 290718208 ($LANDING|2^9$)

4.3 Example

AT*REF=3,290717952\r

5 PCMD

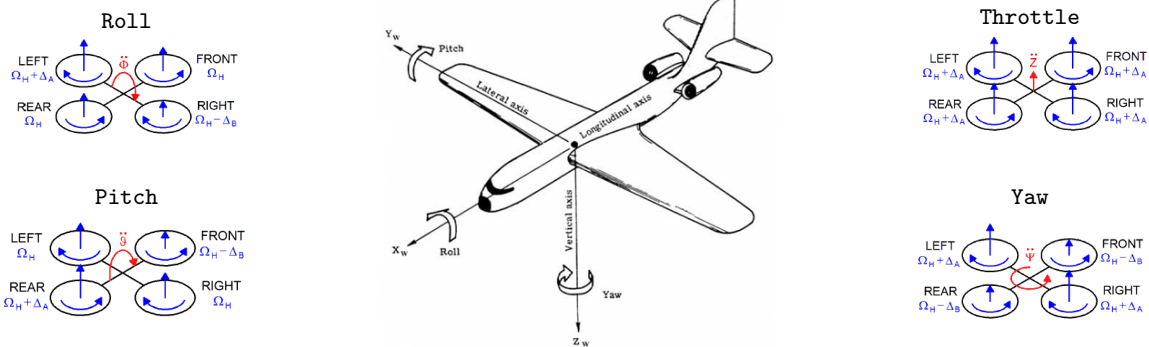
5.1 Synopsis

AT*PCMD=<SEQ>,<ID>,<LR>,<FB>,<GAZ>,<ANG>\r

AT*PCMD=<SEQ>,<ID>,<Roll>,<Pitch>,<Throttle>,<Yaw>\r

AT*PCMD=<SEQ>,<ID>,<Phi>,<Thêta>,<Dzêta>,<Psi>\r

5.2 Arguments



- ID:
 - Hover: 0
 - Move: 1
- parameters in *IEEE 754 Float* $\in [-1;1]$.

5.3 Example

AT*PCMD=4,0,0,0,0,0\r

AT*PCMD=5,1,0,1061997773,-1085485875,0\r

AT*PCMD=6,1,0,-1085485875,0,0\r

6 CALIB

6.1 Synopsis

AT*CALIB=<SEQ>,<ID>\r

6.2 Arguments

- **ID**: identifiant de l'appareil (défaut : 1)

6.3 Example

AT*CALIB=7,1\r

7 CONFIG

7.1 Synopsis

AT*CONFIG=<SEQ>,"<KEY>","<VAL>"\r

7.2 Arguments

- **KEY**: option name.
- **VAL**: option value.

7.3 Example

AT*CONFIG=8,"video:video_channel","0"\r

8 CONFIG_IDS

8.1 Synopsis

AT*CONFIG_IDS=<SEQ>,"<SESSION>","<PROFILE>","<APPLI>"\r

8.2 Arguments

- Before each AT*CONFIG.
- Parameters in *CRC 32*.
 - **SESSION**: session name.
 - **PROFILE**: user name.
 - **APPLI**: application name.

8.3 Example

AT*CONFIG_IDS=9,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=10,"control:altitude_max","5000"\r

8.4 CRC 32

8.4.1 Python

```
import zlib
var = "value"
tmp = zlib.crc32(var)
hextmp = tmp & 0xffffffff
crc32 = format(hextmp, '08x')
```

8.4.2 Java

```
import java.util.zip.Checksum;
import java.util.zip.CRC32;
String str = val;
byte bytes[] = str.getBytes();
Checksum checksum = new CRC32();
checksum.update(bytes,0,bytes.length);
long lngChecksum = checksum.getValue();
String ret = Long.toHexString(lngChecksum);
```

8.5 Session initiation

```
AT*CONFIG_IDS=1,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=2,"custom:session_id","-all"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=3,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=4,"custom:profile_id","-6bb4d6ff"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=5,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=6,"custom:application_id","-c96e70cf"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=7,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=8,"custom:session_id","7870b07f"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=9,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=10,"custom:application_id","c96e70cf"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=11,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=12,"custom:profile_id","6bb4d6ff"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=13,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=14,"custom:application_desc","app"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=15,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=16,"custom:profile_desc","pro"\r
```

Wait 0.2 seconds at least

```
AT*CONFIG_IDS=17,"7870b07f","6bb4d6ff","c96e70cf"\r
AT*CONFIG=18,"custom:session_desc","ses"\r
```

Wait 0.2 seconds at least