IotaGFTapp Commands

The IotaGFTapp listens at the TCP port 127.0.0.1:33001 when running.

Any program can connect to that port and send command strings to setup up a recording session.

Here is an example Python script (setUTCeventTime.py) to fill the UTC event data/time entry box:

```
import socket, os
MSGLEN = 1000
def makeMsg(msg):
        paddedMsg = msg
        paddedMsg += (MSGLEN - len(msg)) * ' '
        return bytes(paddedMsg.encode("utf"))
def sendUTCeventStartTime():
        HOST = '127.0.0.1'
        PORT = 33001
        with socket.socket(socket.AF_INET, socket.SOCK_STREAM) as s:
                s.connect((HOST, PORT))
                msg = makeMsg('setUTCeventTime 2026-01-25 10:11:12')
                s.sendall(msg)
                s.close()
                print('Sent:', 'setUTCeventTime 2026-01-25 10:11:12')
sendUTCeventStartTime()
```

In this example, the UTC time is hard coded, and the script will need to be modified to accept a ‘real’ event time from some source. It would be nice if this type of script could be added to Occult Watcher (OW) in such a way that the user can ask OW to send an event time to IotaGFTapp.

makeMsg() is used to pad strings so that they contain a fixed number of characters (1000). This is done to avoid any possibility of a command being delivered in more than one part, which the TCP protocol allows – IotaGFTapp always waits for a complete 1000 character message.

Here are the command strings that IotaGFTapp will recognize and act on when sent to 127.0.0.1:33001:

1) setAutorunTrue
2) setAutorunFalse
3) setShutdownTrue
4) setShutdownFalse
5) setUTCeventTime yyyy-mm-dd hh:mm:ss
6) setUTCeventTime
7) recordingTime <duration in seconds>
8) armUTCstart
9) flashNow

Commands 1 and 2 set the desired checked-state of the auto-run FitsReader checkbox in the GUI.

Commands 3 and 4 set the state of the shutdown CPU at end-of-recording checkbox in the GUI.

Command 5 sets the text in the UTC event date/time entry box. Note: the format shown is strict and must be adhered to.

Command 6 must contain only the characters shown – no trailing spaces allowed. This clears the UTC event date/time entry box and sets up a special test where a recording will be made starting 10 seconds after the schedule is armed. This facilitates testing whether the camera is properly configured for the observation.

Command 7 sets the desired length of the recording between the flash goalposts. The 'event' will be centered in this part of the recording. The units are seconds.

Command 8 'arms' the recording schedule.

Command 9 will probably find no use as the IotaGFTapp is much better equipped to deal with flash duration and timing.