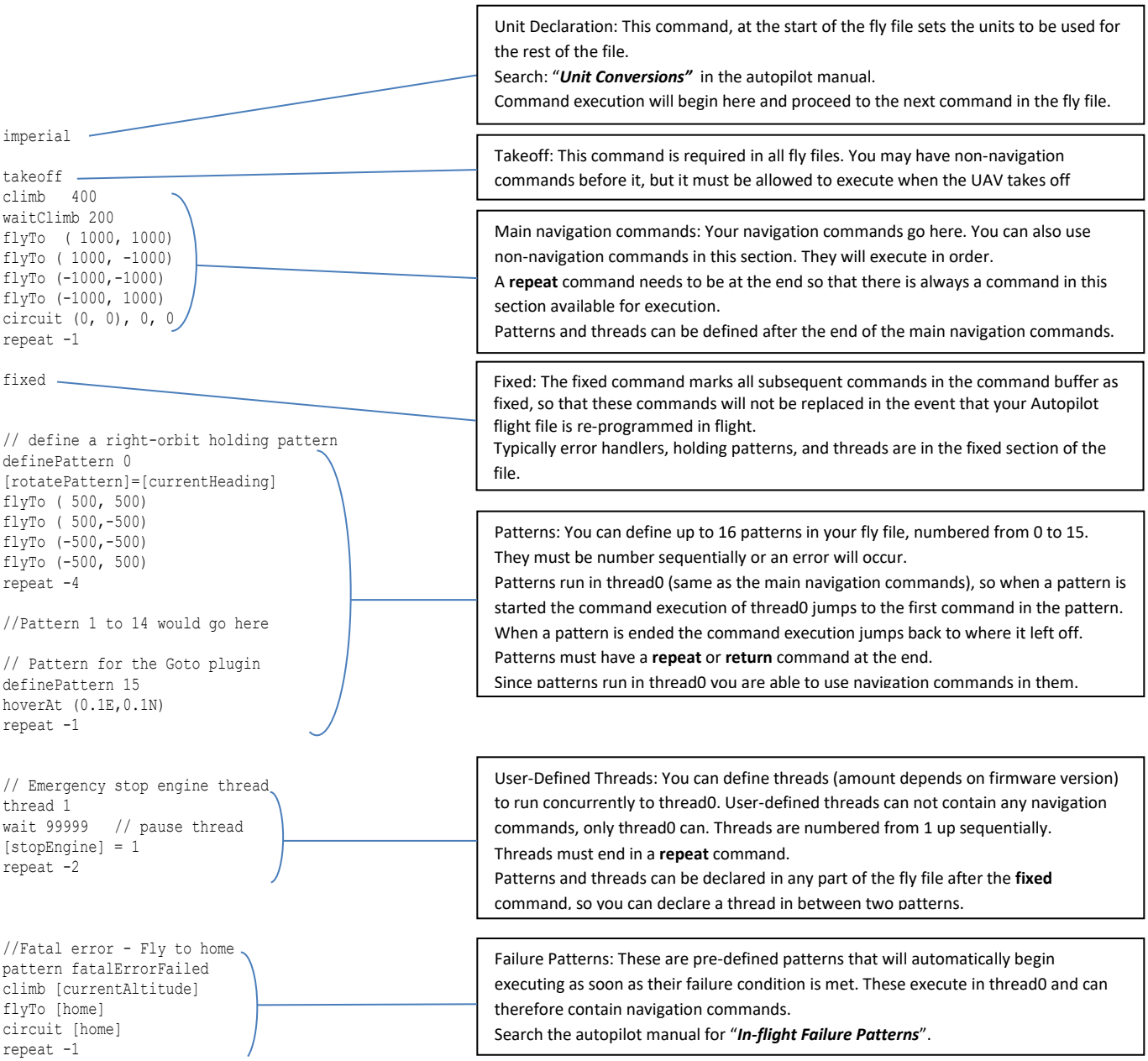
imperial
takeoff
climb 400
waitClimb 200
flyTo (1000, 1000)
flyTo (1000, -1000)
flyTo (-1000,-1000)
flyTo (-1000, 1000)
circuit (0, 0), 0, 0
repeat -1
fixed
// define a right-orbit holding pattern
definePattern 0
[rotatePattern]=[currentHeading]
flyTo (500, 500)
flyTo (500,-500)
flyTo (-500,-500)
flyTo (-500, 500)
repeat -4
//Pattern 1 to 14 would go here
// Pattern for the Goto plugin
definePattern 15
hoverAt (0.1E,0.1N)
repeat -1
// Emergency stop engine thread
thread 1
wait 99999 // pause thread
[stopEngine] = 1
repeat -2
//Fatal error - Fly to home
pattern fatalErrorFailed
climb [currentAltitude]
flyTo [home]
circuit [home]
repeat -1
Unit Declaration: This command, at the start of the fly file sets the units to be used for the rest of the file.
Search: "Unit Conversions" in the autopilot manual.
Command execution will begin here and proceed to the next command in the fly file.
Takeoff: This command is required in all fly files. You may have non-navigation commands before it, but it must be allowed to execute when the UAV takes off
Main navigation commands: Your navigation commands go here. You can also use non-navigation commands in this section. They will execute in order.
A repeat command needs to be at the end so that there is always a command in this section available for execution.
Patterns and threads can be defined after the end of the main navigation commands.
Fixed: The fixed command marks all subsequent commands in the command buffer as fixed, so that these commands will not be replaced in the event that your Autopilot flight file is re-programmed in flight.
Typically error handlers, holding patterns, and threads are in the fixed section of the file.
Patterns: You can define up to 16 patterns in your fly file, numbered from 0 to 15.
They must be number sequentially or an error will occur.
Patterns run in thread0 (same as the main navigation commands), so when a pattern is started the command execution of thread0 jumps to the first command in the pattern.
When a pattern is ended the command execution jumps back to where it left off.
Patterns must have a repeat or return command at the end.
Since patterns run in thread0 you are able to use navigation commands in them.
User-Defined Threads: You can define threads (amount depends on firmware version) to run concurrently to thread0. User-defined threads can not contain any navigation commands, only thread0 can. Threads are numbered from 1 up sequentially.
Threads must end in a repeat command.
Patterns and threads can be declared in any part of the fly file after the fixed command, so you can declare a thread in between two patterns.
Failure Patterns: These are pre-defined patterns that will automatically begin executing as soon as their failure condition is met. These execute in thread0 and can therefore contain navigation commands.
Search the autopilot manual for "In-flight Failure Patterns".