# SIMPLE TEST first release (Backup plan)

This is a simple first step to only program RF modules and log the result.

Start screen:

1. Program only
2. Test only
3. Automatic - Program and test

*Program only screen:*

Prompt the user to select file (last selection available)

1. Start programming.
   1. User press a button
   2. Software will send command to a J-LINK utility program that will handle the programming
   3. When done the device will reboot
2. When device has reboot it will send out Device ID
3. Test Software will receive and then log that device been programmed
4. Go back to 1) or exit

Normally in the *Automatic program and test*, the program would continue to perform test sequence after 3). But we will focus on this simple step as a start.

*Test only screen:*

TBD

*Automatic - Program and test:*

TBD

Resources needed:

* PC
* Test App Software – to be written by you
* J-LINK standalone Flasher ARM <https://www.segger.com/products/production/flasher/models/about-flasher-arm/>
* J-LINK Commander utility <https://wiki.segger.com/J-Link_Commander>
* RF interface (RF Sink) – connected with USB (being built by us)
* Test fixture (being built by us)

So, in this simple case the programming is done by sending command from test application to the J-LINK Commander utility.

When programming is done you must receive messages from the target. The messages are sent with MQTT. MQTT is simple protocol. I don't think you will have a problems with it.

Also, Eclipse Paho project has MQTT client libraries for many programming languages. Developers just can take ready-to-use MQTT client. In general, MQTT uses message-queue communication model, as other solutions (for example WebSphere MQ), but in much more simpler form. So, I don't think that can be any difficulties with MQTT. We will provide all information about it. Also in this simple first step you will not need to send commands and read results. We should only extract the Device ID (serial number) that we need to be able to log the programming result.

Initially we can provide sample text strings in accordance with the protocol so you can proceed before RF communication is up and running.

Next step:

Then we will test the complete product. We then will send some test commands to the target. We may also have to write a label with the device ID.

Next step:

After this we will do the complete test with I/O board, calibration. configuration etc…