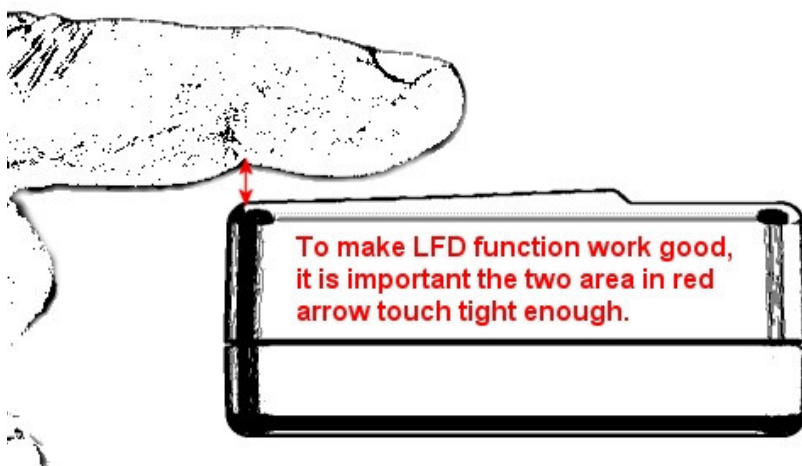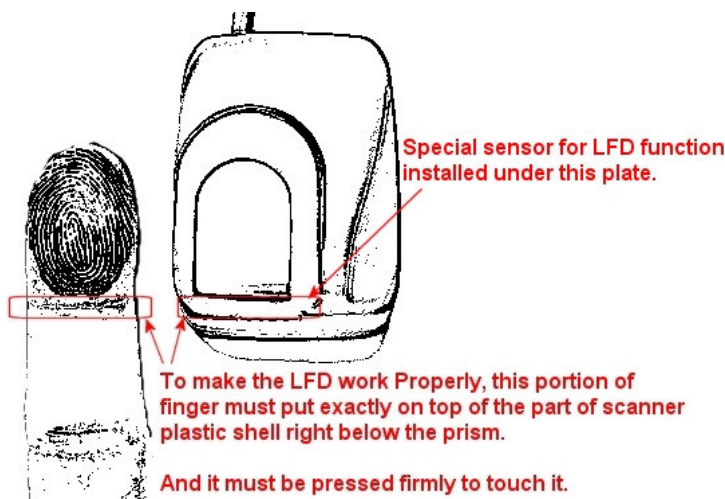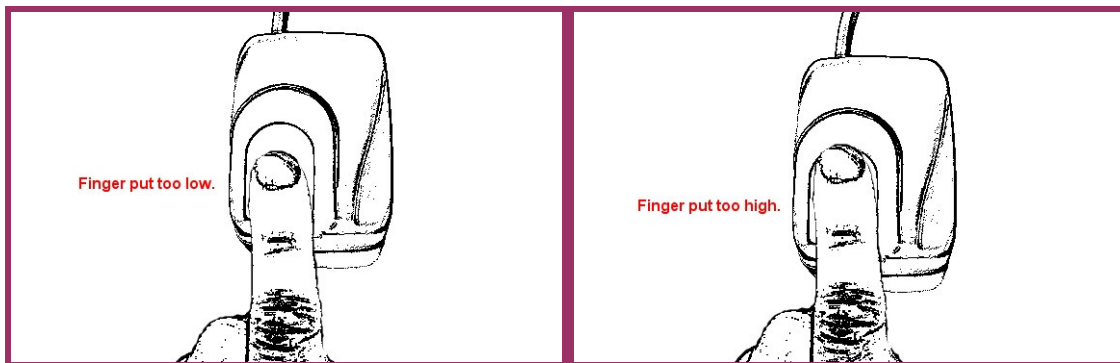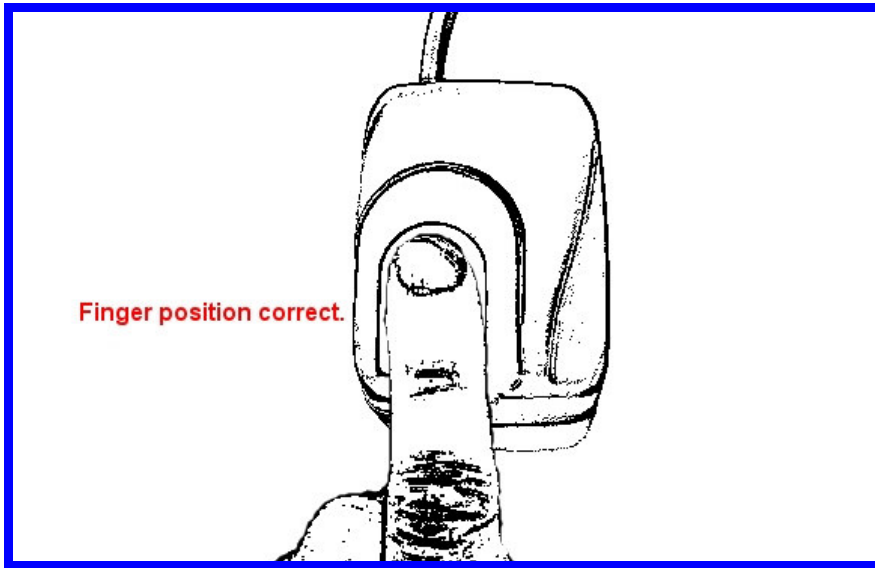# Fact sheet about Futronic's Live Finger Detection(LFD) technology

Live Finger Detection(LFD) is a patent pending technology developed by Futronic to stop the access to secured data and location by using fake fingers made from silicone, rubber, play-doh, etc.

Futronic uses active sensing technology to detect live human finger. In Futronic optical fingerprint scanner, a special signal is emitted to the finger to be authenticated. This signal goes beyond the human skin and then returns to sensor inside the scanner. The returned signal of a live human finger is unique compared to that from any other material. Futronic has developed an algorithm to differentiate the returned signal of live human finger from that of all other material. As a result, Futronic optical fingerprint scanner only captures the fingerprint of live fingers and rejects all other material that puts on it. Fake fingers made from silicone, rubber, play-doh, etc, cannot be used to get access through Futronic optical fingerprint scanner.

To make the LFD working properly, users need to put the finger on scanner more carefully and accurately. It is because the finger must touch a special location on the fingerprint scanner for the LFD signal and sensor to work on. The following pictures illustrate how to put finger on scanner for the LFD to work properly.

Special sensor for LFD function installed under this plate.

To make the LFD work Properly, this portion of finger must put exactly on top of the part of scanner plastic shell right below the prism.

And it must be pressed firmly to touch it.

To make LFD function work good, it is important the two area in red arrow touch tight enough.

Finger position correct.

Finger put too low.

Finger put too high.

If a finger is not put on scanner accurately according to the above pictures, it may be rejected because it cannot be detected by the scanner as a live human finger. When this happens, please take away finger and try to put finger again. After several trial, it is easy to get used to it.

Some users may feel that it is quite inconvenient to use LFD function. But it is worthwhile to sacrifice convenience a bit for enhanced security. Moreover, the FLD function can be de-activated in all Futronic products for applications that enhanced security against fake fingers is not necessary.