

NFC Trainer

KL-900E



NFC technology has been widely adopted nowadays for diversified applications. With the use of NFC, information can be shared quickly between devices without physical contact, making our life easier and more convenient.

● What is NFC ?

Near Field Communication (NFC) is a short-range wireless connectivity technology that detects and then enables in close proximity to communicate without internet connection. It allows easy and fast data exchange.

● Complete learning plan for NFC

(1) NFC Principles of Transmission.

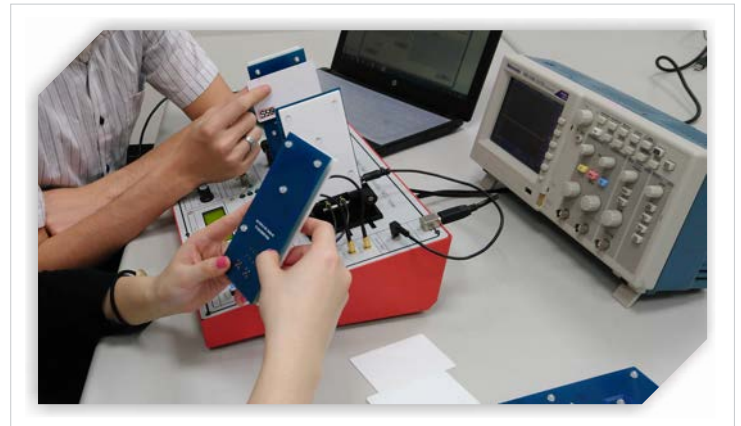
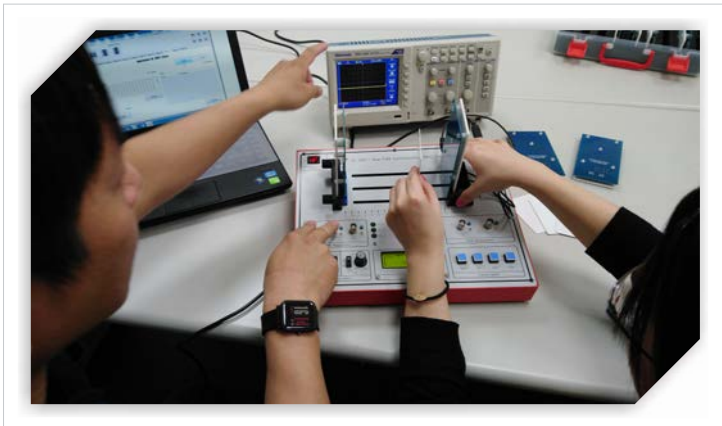
- » Coupled Transmission
- » LC Characteristics
- » Load modulation

(2) NFC and Contactless Smart Cards.

- » NFC ASK modulation
- » NFC Data Rate Experiment
- » NFC Read Card ID
- » NFC Read / Write Data Block

(3) NFC Appliance Integration.

- » NDEF
- » P2P



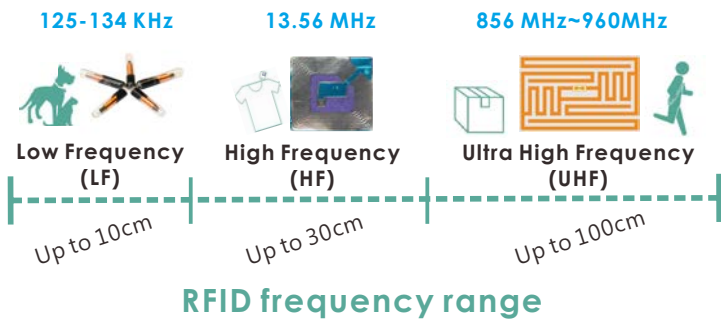
● Features

1. Multiple antenna modules increase the experimental variability.
2. The movable module holder allows flexible adjustment of distance between the listener module and the poller module.
3. The system allows users to read and/or write on the Mifare S50 card and the Ultralight.
4. Applications such as NDEF, NDEF vCard, and P2P data transmission.
5. Experiments cover from the NFC physical to the application layer.

● What's the difference between RFID and NFC

● Radio Frequency Identification

● Near-Field Communication



- Operate at the same frequency (13.56MHz) as HF RFID readers and tags
- May act as both a reader and tag
- Devices must be in close proximity due to the short read range limitations of its radio frequency

▶ Behavior

Active

- Self-contained power source
- Capable of identifying multiple tag locations

Passive

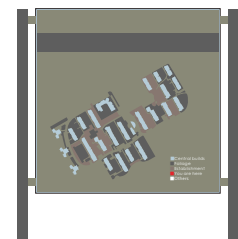
- Powered by the reader
- The max. read range is 25 meters



Card mode



Point-to-Point mode



Read/Write mode

▶ Application

- » Asset Management
- » Tracking
- » Authenticity Verification
- » Matching
- » Process Control
- » Access Control
- » Automated Payment
- » Supply Chain Management



Identification



Ticketing



Cashless Payments



Games



Physical Access



Travel

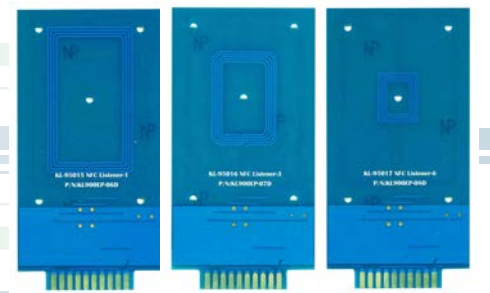
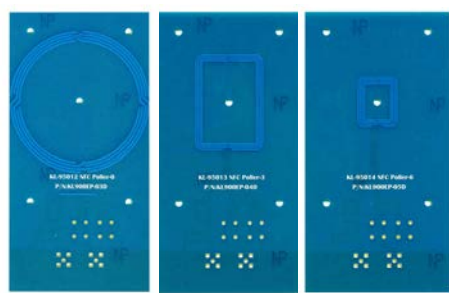
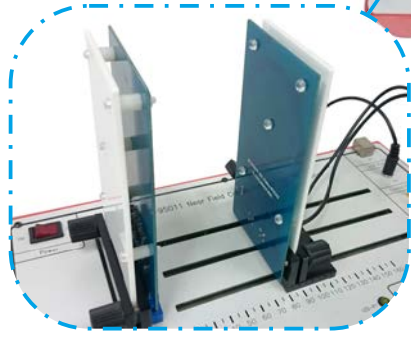
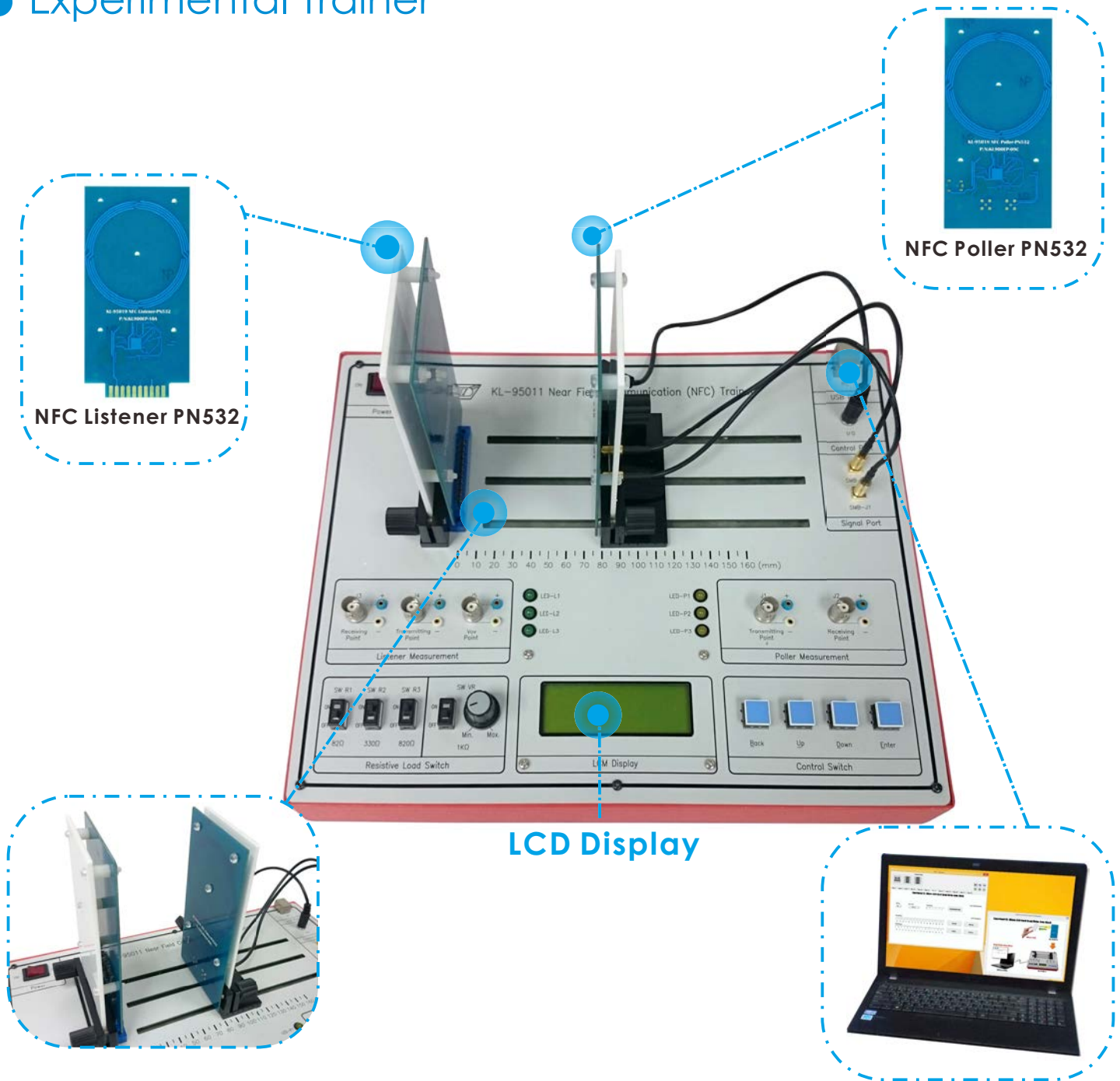


Secure PC Log-on



Contact Sharing

● Experimental Trainer



Mifare S50 Card x 2
Ultralight Card x 2

NFC Poller Modules

NFC Listener Modules