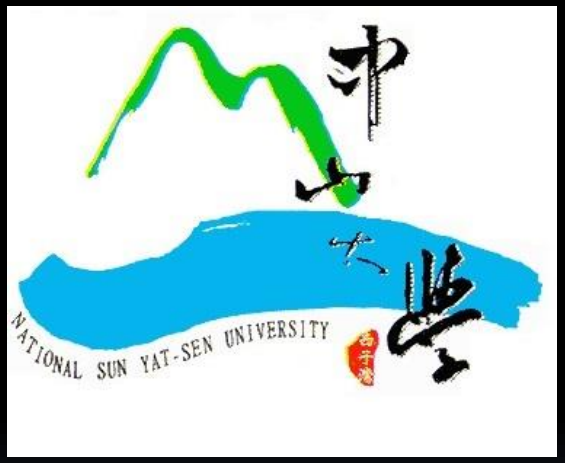
EXPLORING THE PHYSICS OF RF-ID



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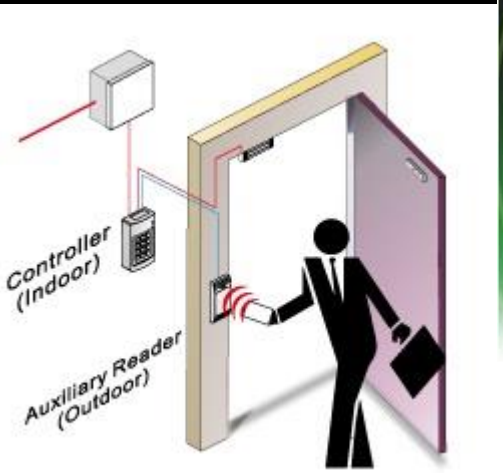
Outlines

- Introduction: RF-ID Applications
- The Physics of RF-ID Reader
- The Signals Obtained by the Reader
- The Physics of RF-ID Tag
- Conclusion

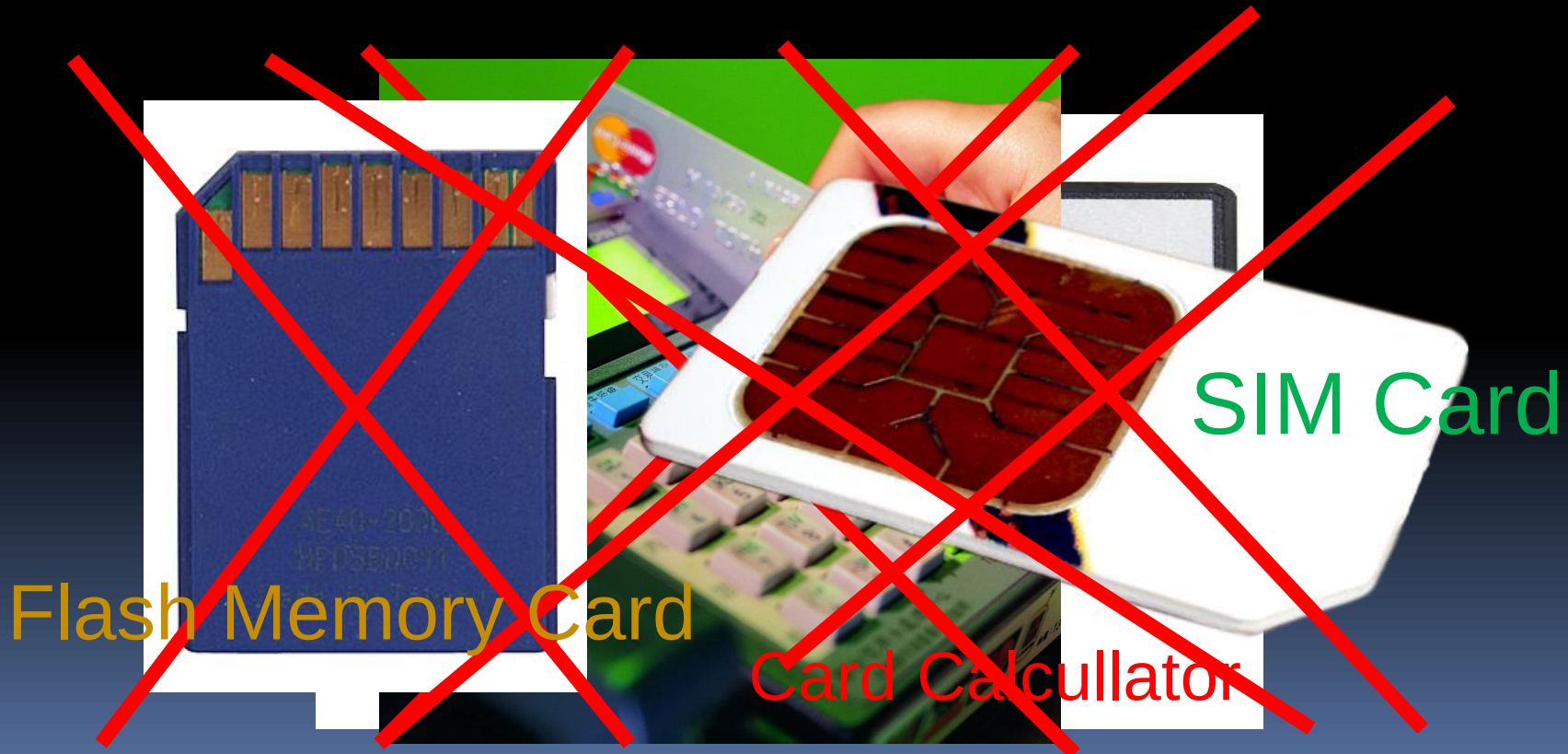
RF-ID Applications

- Access Management of Restricted Area
- Tracking Objects
- Toll Collection and Contactless Payment

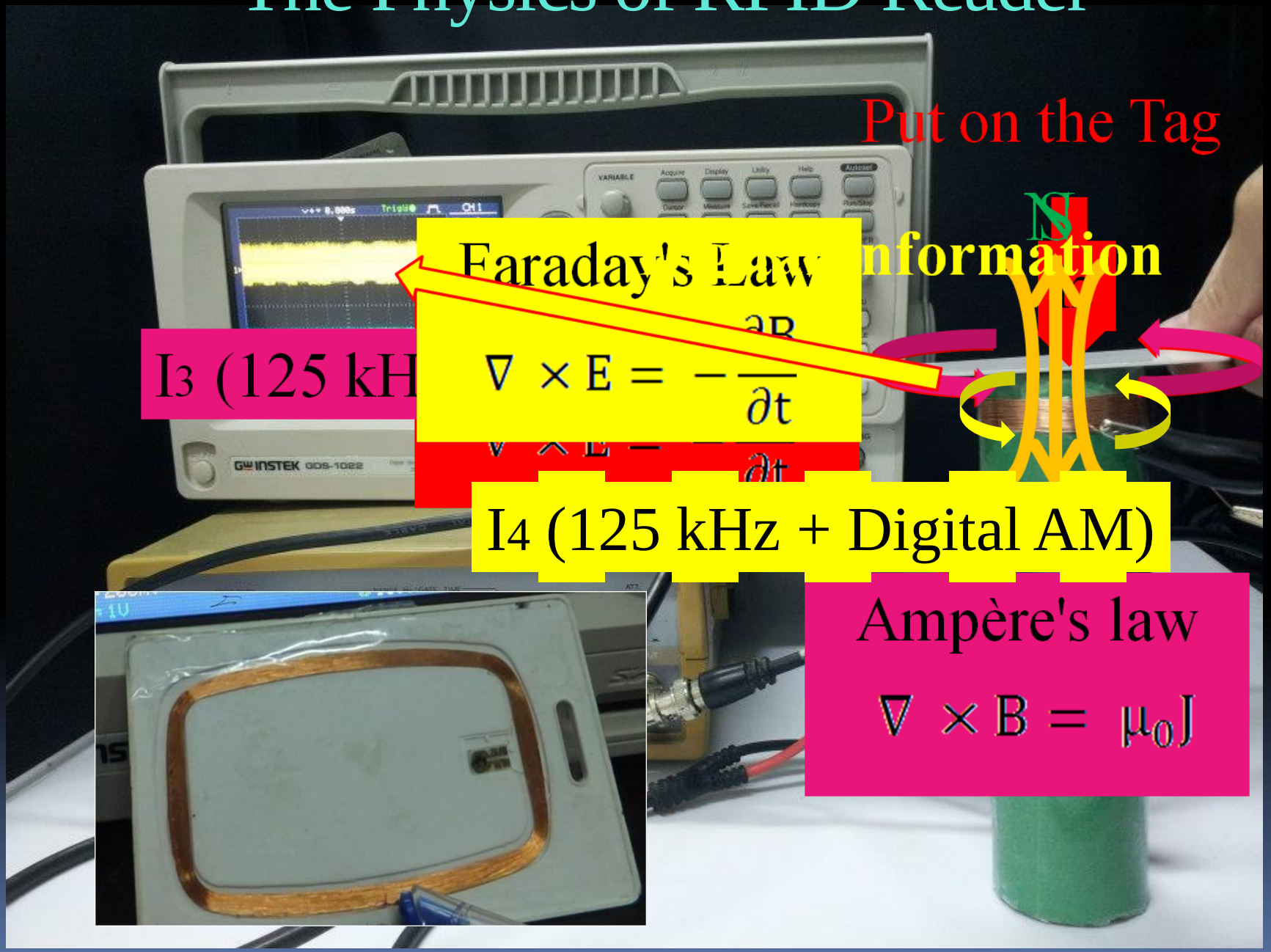


The Amazing RF-ID

- No Contact
- No Electrode
- No Battery



The Physics of RFID Reader



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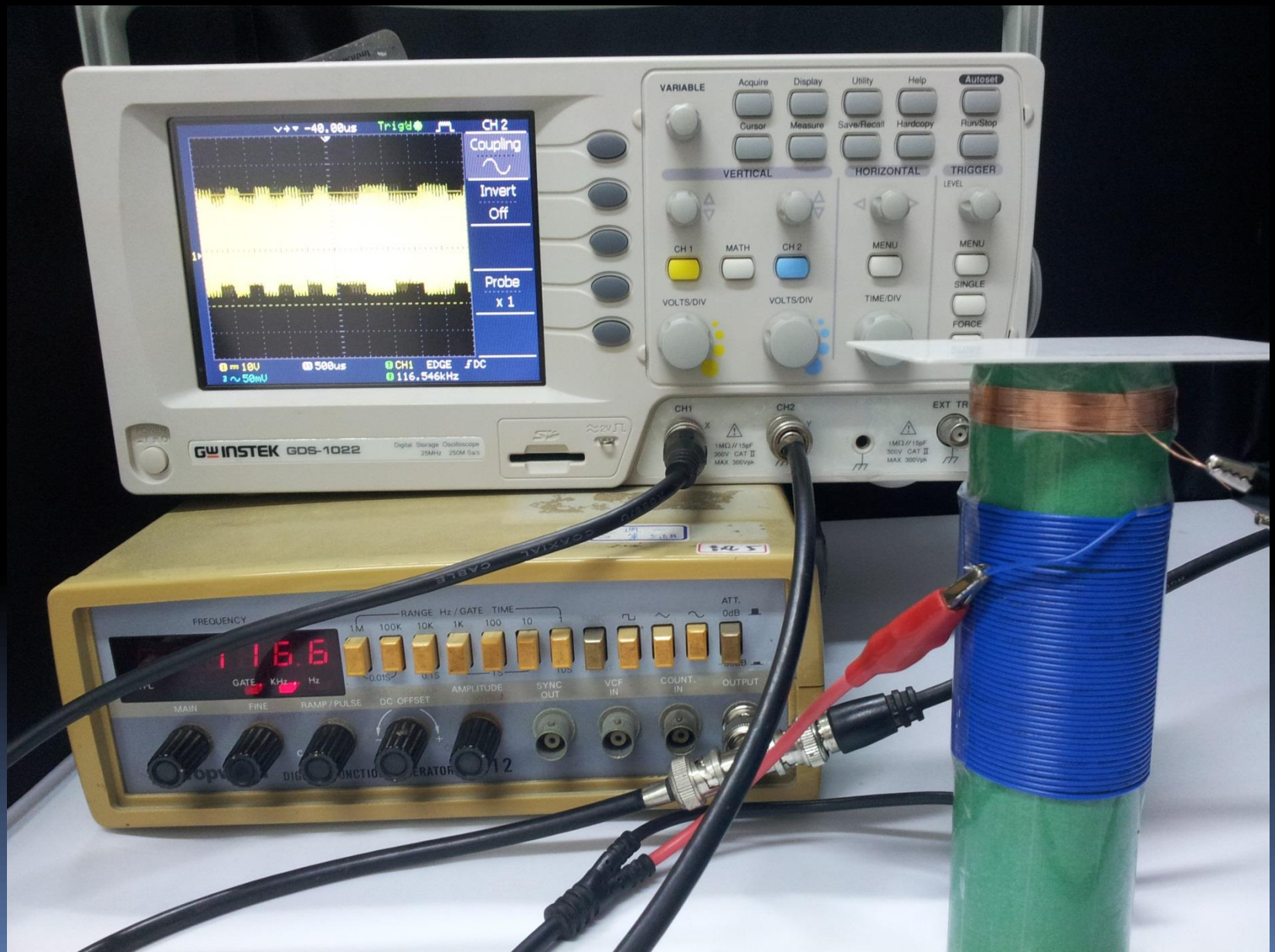
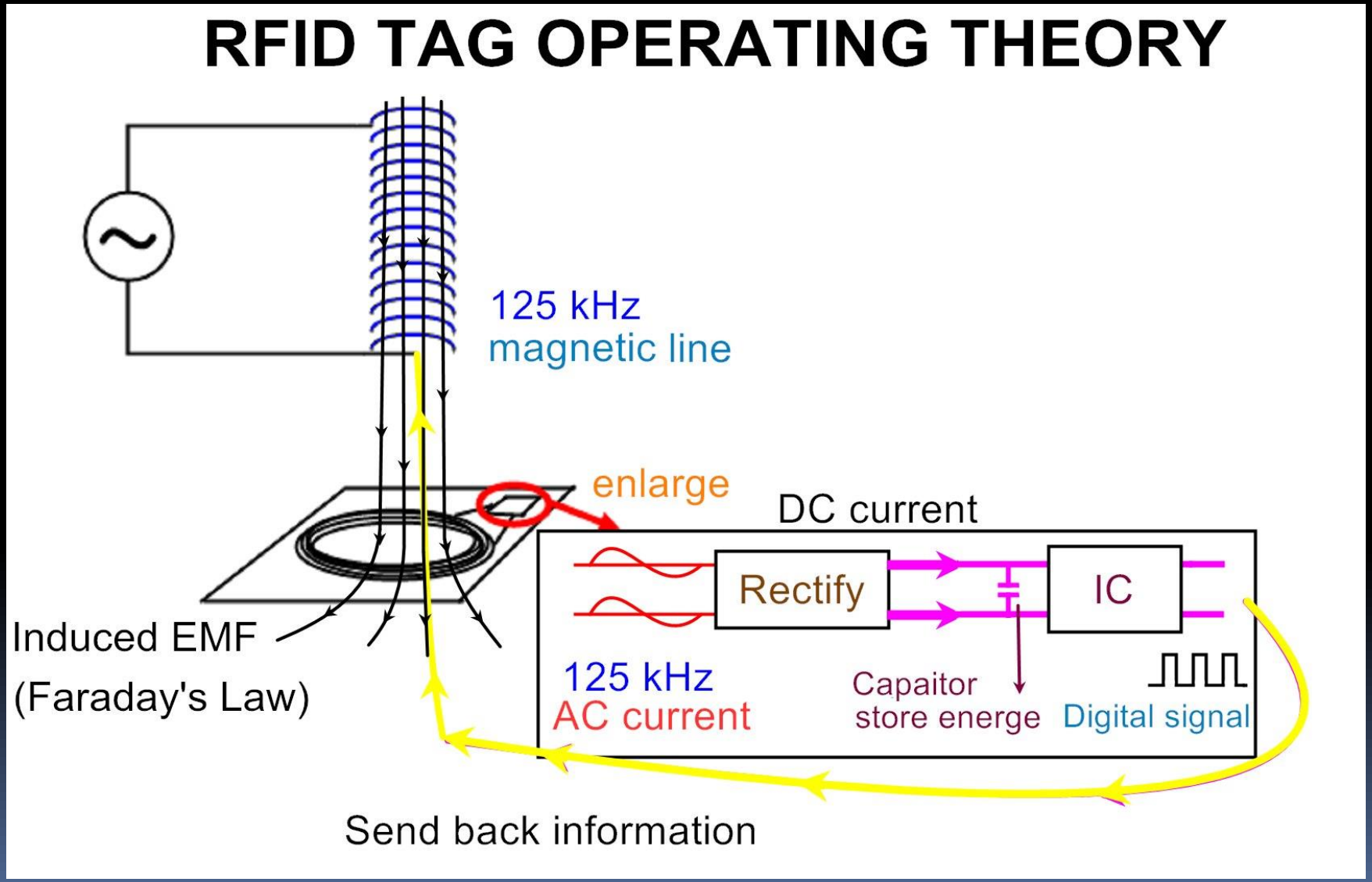
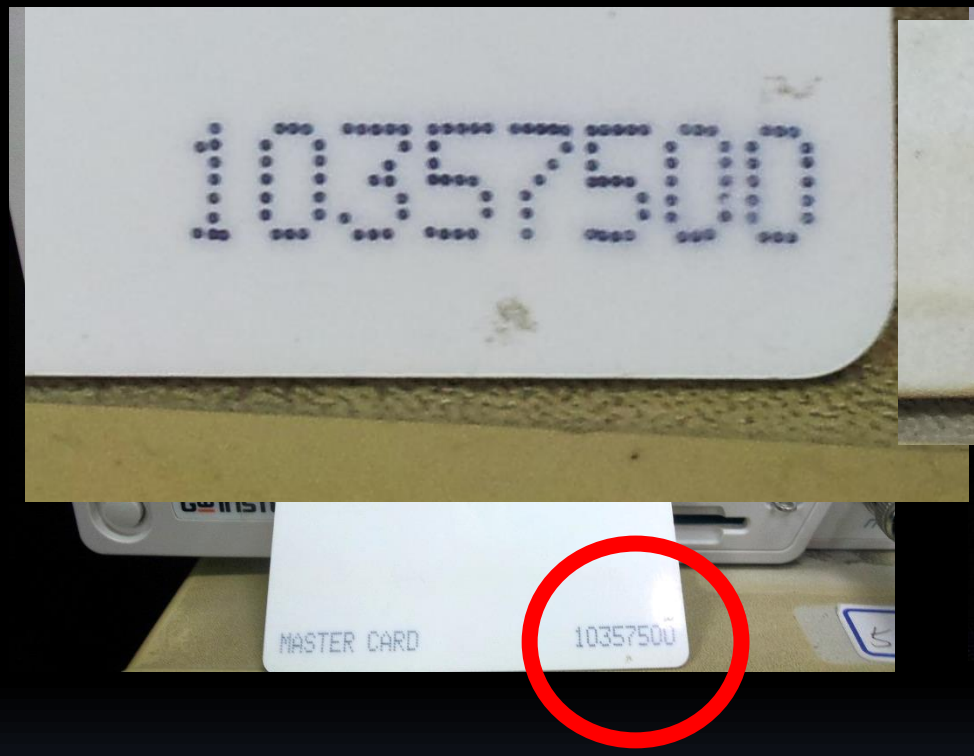


The Physics of RFID Tag

Block Diagram of the RF-ID System



The Signals Obtained by the Reader



- Each Tag Has a Set of Unique Serial Numbers
- Discrimating Tags by the Serial Numbers

Conclusion

- RF-ID reader is a 125 kHz AC generator + a coil
- RF-ID tag is a coil + a digital chip
- RF-ID is a technology governed by Faraday's Law and Ampère's Law

Thank You For Your Attention