



Sciencetech TechBooks are compact and user friendly learning platforms to provide a modern, portable, comprehensive and practical way to learn Technology. Each TechBook is provided with detailed Multimedia learning material which covers basic theory, step by step procedure to conduct the experiment and other useful information.

Sciencetech 2132A Understanding Dual SIM Mobile Phone TechBook is a unique, self contained, easy to operate, training platform that demonstrates the complete arrangement of a 2G Dual SIM GSM handset to understand the working of the mobile phone.

Sciencetech 2132A Understanding Dual SIM Mobile Phone TechBook is the perfect product for today's global technical professional. One of the main features of the TechBook is its real time signals. This realistic classroom training TechBook introduces the user to the fundamental of 2G Dual SIM GSM mobile equipment and clears the concept of underlying GSM technology in simple way. The Keypad of mobile handset, SIM sockets and User Interface section of the mobile phone i.e. Vibrator, Buzzer, Microphone, Speaker, Hands free port and display LEDs have been exposed onboard with switched faults creation facility and 58 test points for signal observation and detailed study. Also its attractive features and self explanatory multicolored chart containing useful technical information will help user in creating a full understanding of dual SIM mobile phone system.

Features

- ▶ Real time mobile operation
- ▶ Operates on dual band frequency network (GSM 900/ DCS 1800)
- ▶ Colour TFT display
- ▶ Full understanding of Dual SIM mobile phone working
- ▶ Provides study of all sections in Dual SIM mobile phone
- ▶ Tx/ Rx frequency measurement and band verification
- ▶ 2G technology GMSK signal
- ▶ Detail study of User Interface Control signals
- ▶ Detail study of Dual SIM operation
- ▶ Battery identification and charging study
- ▶ Switched faults
- ▶ Online Product Tutorial

Scope of Learning

- Study and observe Transmitted/Received RF signals
- Study and observe Tx IQ/ Rx IQ signals
- Study and observe signal constellation of GMSK signal (Rx I/Q)
- Study and observe signal constellation of GMSK signal (Tx I/Q)
- Study and measure Battery voltages the Battery charging phenomena
- Analyze the 'Partially ON' mode of phone while charging
- Study of switch faults in Battery section
- Study and measurement voltages of Power management unit
- Study and observe signals of LCD display section
- Study of switch faults in LCD display section
- Study of the Row/ Column configuration of key matrix
- Study of switch faults in Keypad section
- Study of SIM card detection with and without inserting SIM card
- Study of switch faults in SIM interface section
- Study and analyze the Buzzer section
- Study and analyze the vibrator section
- Study and analyze the LED control section
- Study and analyze MIC & Speaker section
- Study and analyze the Hands Free section (MIC/Speaker)
- Study of switch faults in User Interface Section
- Study and analyze Microprocessor Control unit
- Analyze that a mobile is powered On at the alarm set time
- Analyze the active mode of a mobile phone
- Analyze the acting dead mode of a mobile phone
- Analyze the sleep mode of a mobile phone

Understanding Dual SIM Mobile Phone

Technical Specifications

Cellular system : EGSM/GSM 900; DCS1800 (2G-Dual Band)

Rx Frequency band : EGSM 900 – 925 to 935 MHz
GSM 900 – 935 to 960 MHz
DCS 1800 – 1805 to 1880 MHz

Tx Frequency band : EGSM 900 – 880 to 890 MHz
GSM 900 – 890 to 915 MHz
DCS 1800 – 1710 to 1785 MHz

Output Power : +5... +33dBm/3.2mW... 2 W

Channel spacing : 200 KHz

Display : TFT, 256K colours, 128X168 Pixels, 2.0"

SIM support : Smart Dual SIM, Dual stand by (both GSM)

Battery type : Li-Ion 1000mAh

CPU : 208 MHz

Sound : Speaker and Earphone Jack (3.5mm)

On board sections : Keypad, Dual SIM, Charging Circuit, User interface: Buzzer, Vibrator, Mic, Speaker, Hands free port and display LEDs

Test points : 58 nos.

Switched fault : 35 nos

Features that can be set : Screen saver, Ring tones, Logos, SMS etc.

Power Consumption : 3.6VA (approximately)

Power Supply : 100 - 260V AC, 50/60 Hz

Fuse : 1 A

Product Tutorial : Online (Theory, procedure, reference, results etc)

Dimension (mm) : W 326 x D 252 113 x H 52

Weight : 2.5 Kg (approximately)

Operating Condition : 0-40°C, 85% RH

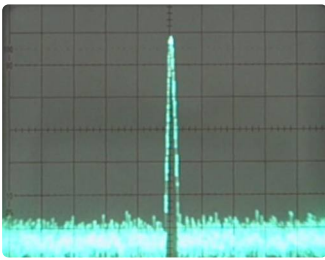
Included Accessories:

TechBook Power Supply for Sciencetech 2132A	1 no.
Patch cord 16"	2 nos.
Hands free kit	1 no.
Mains cord	1 no.
Battery (Li-Ion 1000mAh)	1 no.

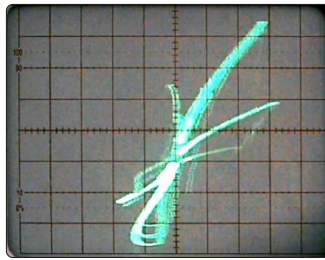
Optional Accessories:

Switchable Probe 60MHz for low signal location area	2 nos.
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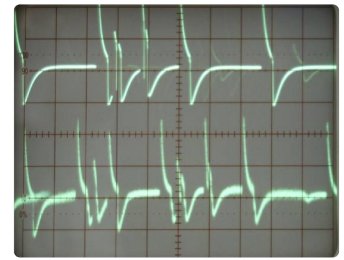
Tx/Rx RF signal



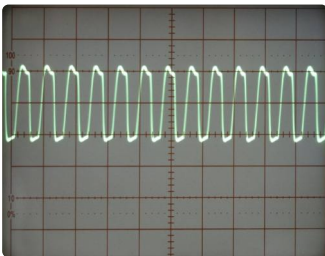
Tx I/Q Data in XY mode



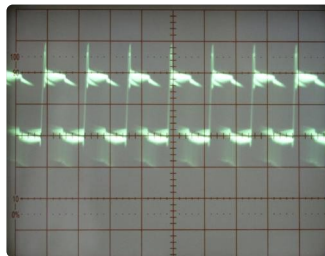
Tx I/Q Data



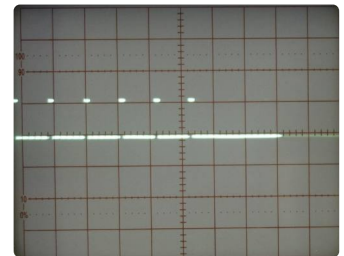
SIM Clock



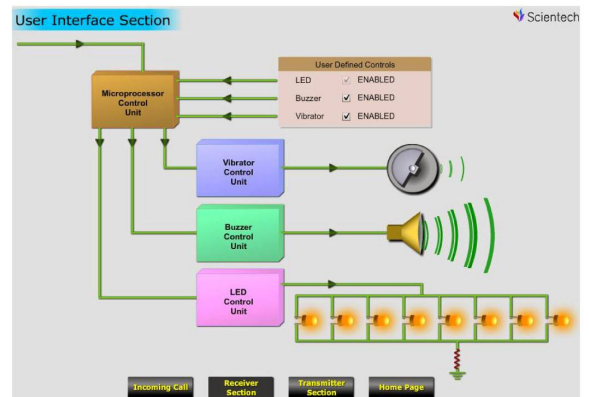
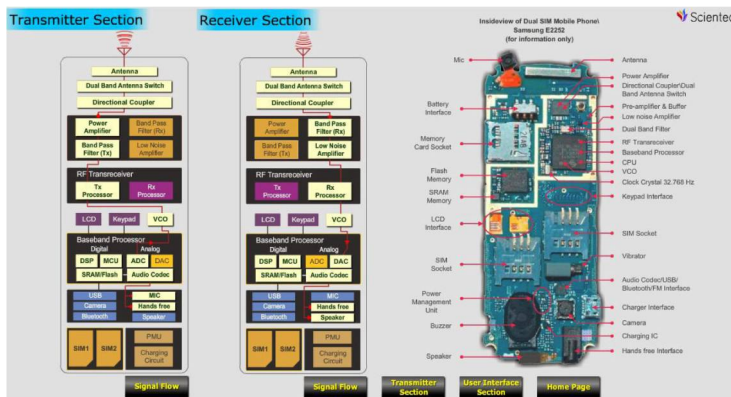
PWM Buzzer signal



GSM/DCS Enable signal



Mobile phone working presentation software



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