



520

Low noise multi-function Frequency Response Analyser



## Features – 520

- 10uHz to 2 MHz
- Wide frequency range
- High phase accuracy 0.05%
- 10 points/sec single frequency impedance
- Small and compact size – < 3kg
- Electrochemical Impedance spectroscopy (EIS) with optional Potentiostat

### Interface to any Potentiostat

Interface connections allow the 520 to interface to any Potentiostat with analogue I/O functionality

### Improved data integrity

The 520 has a high phase accuracy and a low noise footprint that can be used to achieve research based on a higher degree of data integrity.

### Expandable to 50 channels

Modular and compact the 520 is designed to operate in parallel for multi channel synchronous operations.

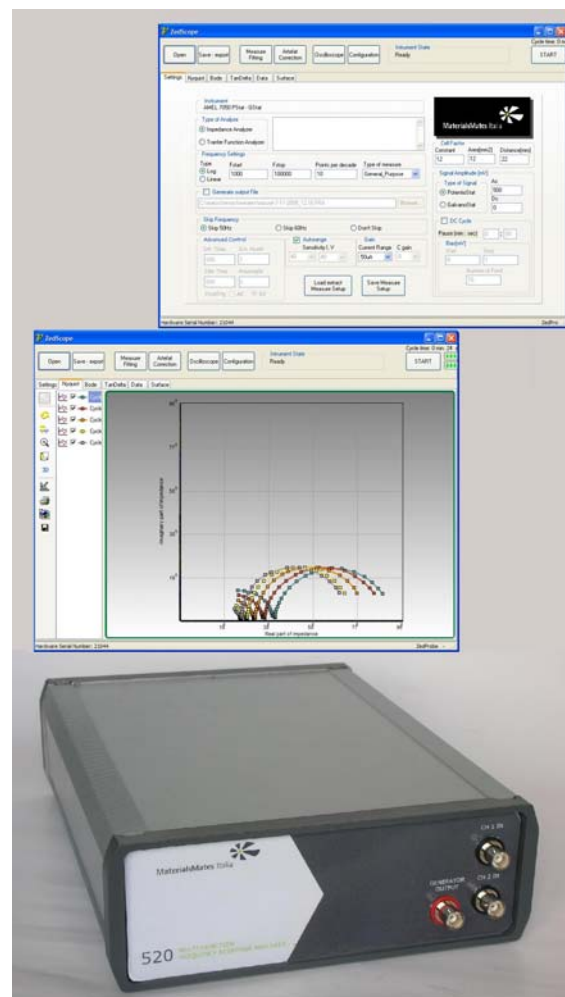
### Adaptable software included

ZedScope software included with the 520, intuitively simple, with standard and custom algorithms including the common Electrochemical Impedance Spectroscopy (EIS) techniques and a user-friendly graphical interface

The MaterialsM 520 is a low noise, multi-function Frequency Response Analyser (FRA). Used with a Potentiostat the 520 becomes a high performance impedance analyser designed for materials and energy research applications both in academia and industry.

Combining the 520 with a Potentiostat such as the MaterialsM 510, 515 or the Dielectric 530, creates the high performance research instrument, you would expect for electrochemical impedance spectroscopy (EIS). Included is the ability to operate in high noise environments and provide accurate and integral data for science and industry.

The 520 uses our inclusive electrochemistry application software - **ZedScope**. ZedScope is included with the 520, intuitively simple, with standard and custom algorithms including the common Electrochemical Impedance Spectroscopy (EIS) techniques and a user-friendly graphical interface.



Test instrumentation for materials and energy science

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<b>System</b>	
Operating Mode	Frequency Response Analyser (Impedance with potentiostat)
Measuring configuration	2-channel analyser with internal generator
Input/Output BNC	Outer contact grounded
<b>Generation</b>	
Frequency Range	10 $\mu$ Hz $\div$ 2 MHz
Accuracy	+/- 0.05% of the desired frequency
Resolution	16-bit conversion
<b>Output</b>	
Output Voltage	0V to 10V peak
Output impedance	50 ohm +/- 1%
Output resolution	50 $\mu$ V to 5 mV level-dependent
Output bias	+/- 5 V
<b>Input channels</b>	
Number	2 single ended
Connectors	Dual grounded BNC
Voltage range	+/-100 $\mu$ V to +/-80 V DC+pk AC
Input range	Fully automatic auto-range from 200 mV to 80V
Input impedance	1 Mohm // 30 pF
<b>Analyser (with ZedScope )</b>	
Amplitude accuracy	0.1 %
Phase accuracy	+/- 0.05 Deg. +/- 0.001 Deg. /Khz
Operating modes	Standard/fast/low noise/low freq. optimized
Basic Accuracy in impedance	0.1%
<b>Dimensions &amp; Sizes</b>	
Communication Port	USB 2 miniature connections
Power supply	USB-powered
Power consumption	300 mA max (1.5 W)
Dimensions	280 x 212 x 78 mm (L x W x H); Kg 1

**About us**

MaterialsM and Amel Chemistry are amongst the worlds leading electrochemistry instrumentation and test environment manufacturers operating in the scientific and industrial fields of materials and energy research. Our sales representation network covers Europe, Asia and the Americas, with an infrastructure of service and support for both instrumentation and electrochemical systems.

**Accessory information**

510DC/AC	20V, 1A	General purpose potentiostat (DC / AC option with EIS interface ability)
515DC/AC	5V, 5A	Intermediate power potentiostat (DC / AC option with EIS interface ability)
7050/7060	45/30V,1.5/48A	High voltage / High Power potentiostat
530	250V/10mA	Dielectric Potentiostat
Multi	Pot/ph/Cond.	Multi-functional electrochemistry instrument
Gas factory	MF / SF	Management unit and Safety flush unit
Sample Holders	HT/RT/FC	High temperature conductivity, Room temperature and Fuel Cell options
Ovens	1KB/1KH	Horizontal and Vertical sample furnaces up to 1200°C

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