

## MODEL OX 5042

One of the few oscilloscopes on the market with isolated channels that fit into one hand



## SPECIFICATIONS

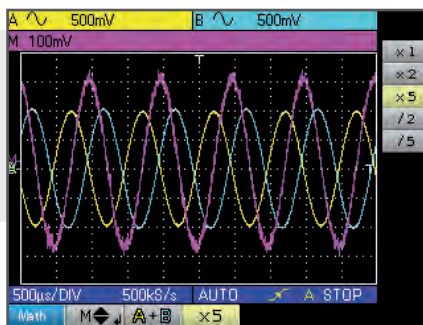
|                                      |   |
|--------------------------------------|---|
| <b>INTERFACE</b>                     |   |
| Display                              | 3.5" color TFT LCD screen; Resolution 320 x 240 – LED backlighting  |
| Commands                             | Direct adjustments on front panel & on-screen menus via browser (principal & secondary without "hidden menus")                                  |
| Display Mode                         | 2500 real acquisition points on screen  |
| Display of Curves on Screen          | 2 curves + 2 references + memory trace or mathematical calculation  |
| Integrated Interactive Help Function | 11 languages: French, English, German, Spanish, Italian, Swedish, Romanian, Russian, Finnish, Polish, Dutch                                     |
| <b>OSCILLOSCOPE MODE</b>             |   |
| <b>VERTICAL DEFLECTION</b>           |   |
| Bandwidth                            | 40MHz   |
| Bandwidth Limiter                    | 1.5MHz, 5kHz  |
| Number of Channels                   | 2 totally isolated channels   |
| Input Impedance                      | 1M $\Omega$ $\pm$ 0.5%, approx. 17pF  |
| Maximum Input Voltage                | 600V – Derating -20dB per decade from 100kHz  |
| Vertical Sensitivity                 | 5mV to 200V/div   |
| <b>HORIZONTAL DEFLECTION</b>         |   |
| Sweep Speed                          | 25ns/div to 200s/div – Roll Mode from 100ms to 200s/div   |
| Horizontal Zoom                      | Zoom factor: x1, x2, x5   |
| <b>TRIGGERING</b>                    |   |
| Mode                                 | Automatic, triggered, one-shot & triggered Roll   |
| Type                                 | Edge, pulse width (20ns – 20s)  |
| Coupling                             | AC or DC (depending on the coupling of the triggering channel) HF, LF or noise rejection  |
| Sensitive                            | $\leq$ 1.2 divisions p-p up to 40MHz  |
| <b>DIGITAL MEMORY</b>                |   |
| Maximum Sampling Rate                | 2GS/s in ETS mode – 50MS/s in one-shot mode on each channel   |
| Vertical Resolution                  | 9 bits  |
| Memory Depth                         | 2500 points per channel   |
| User Storage                         | 2MB for storing files: trace (.trc), text (.txt), configuration (.cfg), image files (.bmp)  |
| Glitch Mode                          | Duration $\geq$ 20ns – 1250 min/max pairs   |
| Display Modes                        | Envelope, Averaging (factors 2 to 64) and XY (vector)   |
| <b>Other Functions</b>               |   |
| Math Functions                       | Channel inversion, addition, subtraction, multiplication and division (adjustable scaling)  |
| Cursor Measurement                   | 2 cursors: V, T, dV, dt simultaneously – 4-digit display resolution   |
| Automatic Measurement                | 18 time or level measurements and phase measurement   |
| <b>MULTIMETER MODE</b>               |   |
| General Specifications               | 2 channels, 8000-count display + min/max bargraph – Graphic recording of 2700 measurements (5min to 1 month)                                    |
| Operating Modes                      | Absolute or relative display (absolute, deviation, ref, ref%) – Monitoring (instantaneous, min, max, Avg)                                       |
| AC, DC & AC+DC Voltages              | Ranges from 600mV to 600Vrms, 800mV to 800Vdc – accuracy for Vdc $\pm$ 1% reading +20D –50kHz bandwidth   |
| Resistance                           | Range from 80 $\Omega$ to 32M $\Omega$ – accuracy $\pm$ 2% reading + 10D –10ms quick continuity test  |
| Capacitance                          | Ranges from 5nF to 5mF – basic accuracy $\pm$ 2% reading + 10D  |
| Other Measurements                   | Frequency, rotation speed, 3.3V diode test, temperature measurement (with K-type thermocouple or infrared probe)                                |
| <b>POWER</b>                         |   |
| Measurements                         | Single-phase and balanced three-phase active power values (with or without neutral), simultaneous display of current                            |
| <b>HARMONIC ANALYZER MODE</b>        |   |
| Multi-Channel Analysis               | 2 channels, 31 orders, fundamental frequency from 40 to 450Hz   |
| Simultaneous Measurements            | Total VRMS, THD and selected order (% fundamental, phase, frequency, VRMS)  |
| <b>GENERAL</b>                       |   |
| Screenshots                          | Up to 100 files in standard ".bmp" format, viewable on the instrument   |
| PC Communication                     | Isolated optical USB interface "SX-Metro" PC application software (included)  |
| Power Supply                         | 6 LR6 or 6AA NiMH batteries – Battery life up to 8hrs 30min<br>Universal line adapter isolated from the channels – Quick charging in 2hrs 30min |
| Safety/EMC                           | Safety according to IEC61010-1 Ed3 – 600V CAT III, EMC according to EN61000-3 & EN61326-1   |

## Functional Displays

### FEATURES

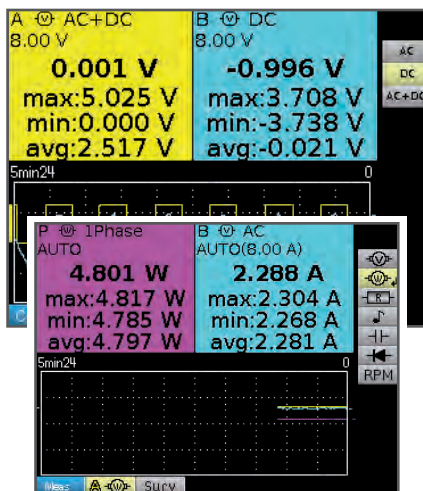
- Two isolated channels
- Three instruments in one
  - 40MHz oscilloscope
  - Double 8000-count TRMS multimeter / Power analyzer
  - Harmonic analyzer
- 3.5" color LCD screen LED backlighting technology
- Integrated interactive multilingual help function
- 2MB recording data
- Store graphic recordings of 2700 measurements (5 min to 1 month)
- Communication via isolated USB SCPI protocol

#### HIGH PERFORMANCE



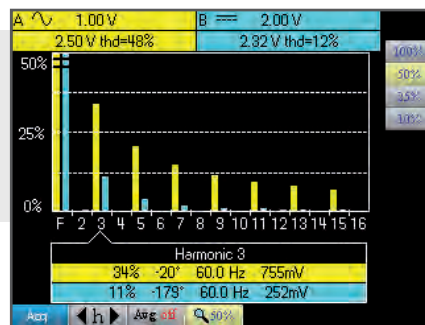
Automatically displays measurements for both isolated channels from your choice of 19 measurement types.

#### TWO INDEPENDENT 8000-COUNT TRMS DIGITAL MULTIMETERS



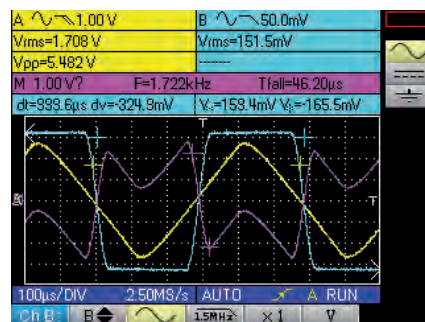
Instantly displays measurements in multimeter mode at the press of a button.

#### HARMONIC ANALYZER



Measures two channels of individual harmonic content up to the 31st harmonic.

#### STORAGE COMMUNICATION & PC SOFTWARE



View real-time measurements on your PC, configure the Handscope, export data to spreadsheet using the SX-Metro included software.



Shown: Model 2150.22 and 2150.23

## KITS INCLUDE

#### 2150.21

Meter, small classic tool bag, US Wall plug, USB Cable, Set of 2, 10 ft. Color-coded Leads (red/black), Set of 2, Color-coded Alligator Clips (red/black), Set of 2, color-coded Probes (red/black), BNC Adapter, 2 Probe 10:1 600V BNC male, 1.2V NiMH rechargeable batteries, quick start guide, and USB drive with software and user manual.

#### 2150.22

Meter, field case, US Wall plug, USB Cable, Set of 2, 10 ft. Color-coded Leads (red/black), Set of 2, Color-coded Alligator Clips (red/black), Set of 2, Color-coded Probes (red/black), BNC adapter, 1- Probe 10:1 600V BNC male, AC Current Probe Model MN251T, MiniFlex<sup>®</sup> Sensor 3000-24-1-1, 1.2V NiMH rechargeable batteries, quick start guide, and USB drive with software and user manual.

#### 2150.23

Meter, field case, US Wall plug, USB Cable, Set of 2, 10 ft. Color-coded Leads (red/black), Set of 2, Color-coded Alligator Clips (red/black), Set of 2, Color-coded Probes (red/black), BNC adapter, 1- Probe 10:1 600V BNC male, AC Current Probe Model MN379T, MiniFlex<sup>®</sup> Sensor 3000-24-1-1, 1.2V NiMH rechargeable batteries, quick start guide, and USB drive with software and user manual.

| CATALOG NO. | DESCRIPTION   |
|-------------|---|
| 2150.21     | Handscope Portable Oscilloscope Model OX 5042   |
| 2150.22     | Handscope Model OX 5042 w/MN251T & MF 3000-24-1-1 {BNC Output}                            |
| 2150.23     | Handscope Model OX 5042 w/MN379T & MF3000-24-1-1 (BNC output; Low AC current measurement) |