



## ONO SOKKI-OVERSEAS COMPANY PROFILE

Ono Sokki has been manufacturing digital instruments since the word "digital" was not popular at all. "Do what others do not do" is the words describing Ono Sokki spirit very well. The measurement technology has been contributing technological evolution of modern industries, and now it is also a key element to realize comfortable environment for human being. Ono Sokki is one step ahead providing tools and solutions to create better quality of both industry and human life.



# PROGRESSIVE

As a company specializing in measurement, control and information-handling technologies, Ono Sokki plays an active role in the global development of both basic and leading-edge industries, such as the automobile, shipbuilding, aeronautical, machinery and electronics industries. Ono Sokki also offers technologies and products that serve as key solutions for various needs relating to environmental issues and energy conservation. We at Ono Sokki are dedicated to meeting the needs of users from not just these, but a variety of industry sectors, by developing total system solutions which make use of our sensing, metering, data-processing and precision-machining technologies. This strategy of continually adding value to our products is what keeps Ono Sokki progressive and one step ahead of the competition.

## Head Office



Acoustic Laboratory



Automotive Testing Laboratory

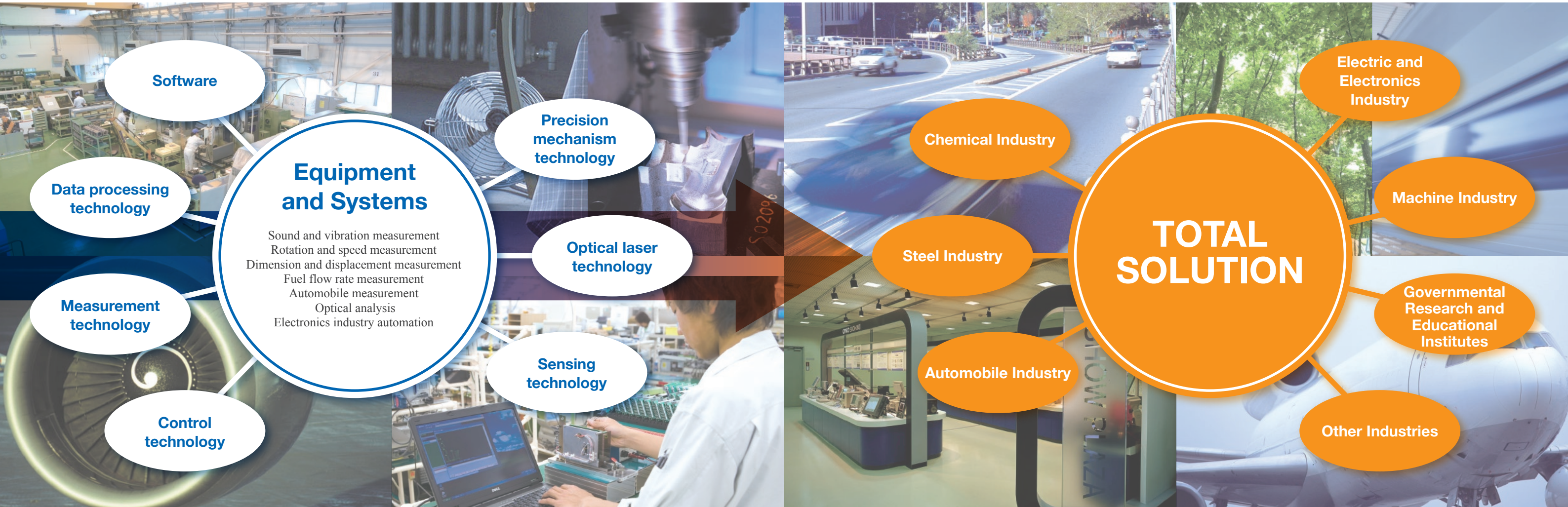


Yokohama Technical Center



Automotive Testing Laboratory Utsunomiya I & II

## Utsunomiya Technical & Product Center





# LEADING PRODUCTS OF

# ONOSOKKI

## DIGITAL HANDHELD TACHOMETER (HT series)

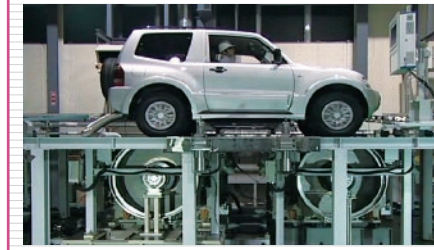
Both contact and non-contact types are available. Each type is small size and light weight. Very handy for speed measurements.



## Automotive Related

## CHASSIS DYNAMOMETER FOR CARS

Simulating actual road load conditions of the vehicle under test, the chassis dynamometer system measures various parameters on driving performance, exhaust gas emission, etc. indoors.



## CHASSIS DYNAMOMETER FOR MOTORCYCLES

For a wide range of motorcycle tests on driving performance, durability and exhaust gas emission.



## Rotation and Torque Measurements

## DIGITAL TACHOMETER (TM series)

Compact and light weight. Conforms to DIN standard size (96 × 48 mm). Can be connected with various detectors, meeting requirements for various measurements.



## ADVANCED TACHOMETER (FT series)

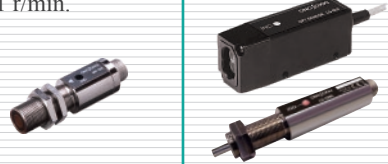
FFT computing type, small size and light weight. Measures rpm of a rotating shaft without any marker attached on, or even if the shaft itself is not come out.



## ROTATION DETECTOR (MP series) (LG series)

You can select from both detection gear-required type and built-in gear type sensors. The MP-981 can measure low rotation speed down to 1 r/min.

Compact and all-in-one type optical detector. The non-contact detection method eliminates any influence on objects under measurement.



## ELEVATOR SPEEDOMETER (EC-2100)

Designed for maintenance, adjustment and inspection of elevators. Wide measurement range up to 2,000 m/min, saving calculation time with 10 ms. Useful for a high speed elevator. The distance measurement function (option) can measure actual moving distance of an escalator after emergency stop.



## LASER DOPPLER SURFACE VELOCITY METER (LV-7000 series)

The LV-7000 series detects speed, uneven speed, distance, length of moving object or rotating object without contact. By connecting two sensors to one main unit, it enables to calculate difference in velocity/length between the two points in real time and output the results.



## VOLUMETRIC FLOW DETECTOR & DIGITAL FLOW METER (FP series/ DF-2200/FM-3100)

A complete series of volumetric flow meters, used for measuring and controlling fuel consumption of various types of engines. It is highly accurate and covers a wide range of flow rate.



## MASSFLOW MEASUREMENT SYSTEM (FP series/ FD-5110/ FM-3100)

By combining the Volumetric Flow Detectors and the Fuel Density Meter FD-5110 to measure flow rate and density, it enables the continuous mass flow measurement.



## ON-BOARD FUEL FLOW MEASUREMENT SYSTEM (FP-4135/ DF-2200)

The FP-4135 is a volumetric flow detector that is suitable for on-board measurement. Its operating temperature range is -30 to +100°C, thus it can be installed inside an engine room to measure the actual driving fuel efficiency. Achieves a wide range of measurement from small flow rate in an idling state to large flow rate in a high load state.



## TORQUE DETECTOR (TH series)

The TH series is easy to use high precision torque detector, having a high durability and long service life. Accurate measurement has been enabled by the new magnetic phase difference method, and AC power supply and switching of the rotation direction (CW/CCW) are no longer required. The high-speed rotation type can measure up to 25,000 r/min of a rotating body.



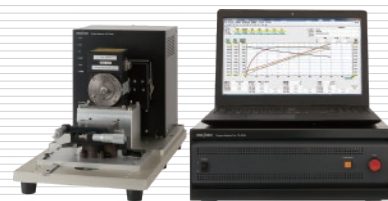
## TORQUE DETECTOR/METER

Assured high accuracy, stability and durability against overtorque. Various types of detectors cover entire range from microscopic to gigantic torque.



## TORQUE STATION PRO (TS-8700)

Measures motor torque property with high accuracy and high response. Wide variety of MT series detectors support various motors. Link function to secondary processing software (OC-1300 series / OS-2000 series : options) allows further analysis.



## ENGINE TACHOMETER

Wide selection of tachometers for gasoline engines, diesel engines and motors. Easy to use for checking engine speeds accurately in combination with engine rotation detectors.



## DIGITAL ENGINE TACHOMETER (CT-6700)

Used with a variety of sensors, it can measure rotation speed for virtually all types of engines. Its speed comparison function can be used to give the alarm of abnormal engine speeds.



## COMBUSTION ANALYSIS SYSTEM (DS-3000 series)

Basic functions such as monitoring, measurement/calculation and data storage are packaged in the basic software. You can perform a variety of analyses including transient combustion, knocking, and multiple injection by adding optional software.

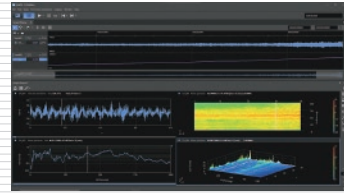




# Acoustic and Vibration Data Processing

## SOUND & VIBRATION ANALYSIS SYSTEM (OS-5000 series)

This software makes the operation of real-time measurement and detailed analysis smooth and easy. By combining it with the DS-5000, you can measure highly accurate sound and vibration data and perform detailed analysis on the site.



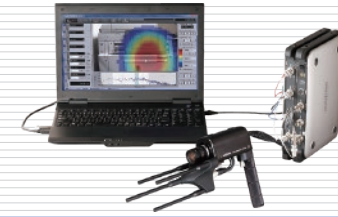
## SOUND & VIBRATION ANALYSIS SYSTEM (DS-5000 series)

The DS-5000 series supports wide range of measurement from a few to multiple channels over 100. Compact and battery-operated, easy to use in a limited place where a power supply is not available.



## SOUND SOURCE VISUALIZATION SYSTEM BY BEAMFORMING SOFTWARE

This system achieves real time sound source visualization with just 4 microphones. Searching the sound source position and recording the sound. You can perform more detailed analysis including offline analysis by using with the OS-2000 series software, as well as real-time monitoring by the BF-3200. Used with DS-3200 series as a measurement unit, and MI-5420A as sensor.



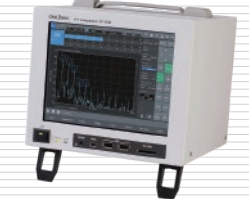
## PORTABLE 2-CH/4-CH FFT ANALYZER (CF-9200/9400)

All-in-one portable FFT analyzer. All FFT analysis operations can be performed easily with the hardware keys and the capacitance type touch panel, without requiring a PC for analysis. Equipped with CCLD & TEDS. Long continuous cordless operation up to 5 hours.



## FFT COMPARATOR (CF-4700)

FFT comparator which makes accurate Pass/Fail judgment and quality inspection by analyzing the frequency signal of sound/vibration on production lines. Pass/Fail judgment function allows precise inspection of various products. Measurement data and judgment result can be managed in a PC by means of copying those data in USB memory.



## SOUND CALIBRATOR FOR MICROPHONE

Model name	SC-3120	SC-2500	SC-2120A
Appearance			
Type	Piston-phone	Speaker	Speaker
Applying standard	IEC 60942: 2003 Class1/C	IEC 60942: 2017 Class1	IEC 60942: 2003 Class2
Applicable microphone	1/2-inch & 1/4-inch*		1/2-inch

\*Calibration of 1/4-inch microphone requires the SC-0313 adapter which is provided with the MI-3140 preamplifier (sold separately).

## SOUND LEVEL METER (Basic type)

- Simultaneous measurement of Lp, Leq, LE, LN, Lmax, Lmin and Lpeak.
- Wide linearity range: 100 dB
- Simple and easy data processing via RS-232C or USB.
- Comparator output function (option)



## SOUND LEVEL METER (High Performance type)

- Simultaneous measurement of Lp, Leq, LE, LN, Lmax, Lmin and Lpeak.
- Wide linearity range: 110 dB
- Possible to measure and record while listening via headphones.
- Performs more than just a sound level meter by adding options; analyzer, recorder, comparator.



## ULTRAMINIATURE MICROPHONE (MB-2200M10)

Ultra compact, super lightweight microphone. Sound pressure is able to be measured even in a limited space. TEDS-supported sensor that allows quick and easy measurement enables direct connection to Ono Sokki's FFT Analyzer or other CCLD supported analysis instruments.



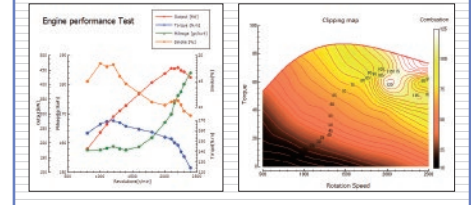
## TIME-SERIES DATA ANALYSIS SOFTWARE (OS-2000 series)

The OS-2000 series can read various data format quickly, and analyze the sound and vibration data offline. You can display multiple data in a screen simultaneously, and also play back the sound. It includes FFT analysis, sound quality evaluation, sound fluctuation analysis etc., which can clarify the features of the sound.



## MULTI-FUNCTIONED GRAPH CREATING SOFTWARE (OC-1300 series)

The OC-1300 series is graph creating software that anyone can easily make a beautiful graph report quickly and smoothly. Various kinds of graph are able to be created as desired such as multi-axis graph, 3D/4D graph, and color map.



## ACCELEROMETER (NP series)

Accelerometers are available in both charge output and built-in amplifier types. Used in combination with PS series amplifiers or other ONO SOKKI instruments, complex vibrations of objects can be measured with a high degree of accuracy. A sensitivity calibrator is optionally available.



## VIBRATION COMPARATOR (VC-2200/3200)

Useful for maintenance and constant monitoring of production facilities with high accuracy, high function, and low cost in a single unit. Easy sensor setting by TEDS function. Features "visual and auditory" monitoring of sound and vibration by headphones and on-screen numerical displays and bar graphs.



## LASER DOPPLER VIBROMETER (LV series)

A non-contact laser vibrometer using a laser Doppler technique. You can detect the vibration of microscopic or high frequency objects with no load.



# Dimension and Displacement Measurements

## NON-CONTACT THICKNESS METER (VE/CL series)

For conductors and semiconductors. Used with VE series gap detector, the CL series measures thickness as well as gap between sensor and object. Optional resolution: down to 0.02µm



## DIGITAL GAUGE (High-resolution type)

Ball spline bearing and development of new optical system achieve both of high resolution and environment resistance (IP66G). Detected signal can be obtained as square wave to connect PLC directly. The exclusive counter provides various calculation functions.



## PORTABLE DATA RECORDER FOR ACOUSTICS & VIBRATION (DR-7100)

Simultaneous recording of sound and vibration is available with ease and high speed. It enables evaluation of sound and vibration according to changing rotation speed.



## HIGH-SPEED RESPONSE F/V CONVERTER (FV series)

A frequency-to-voltage (current) converter that converts frequency signal proportional to rotation speed, moving speed, etc. into voltage signal. Ideal for transient speed fluctuation analysis such as measurements of elevator speed fluctuation, electric motor startup characteristics, etc.



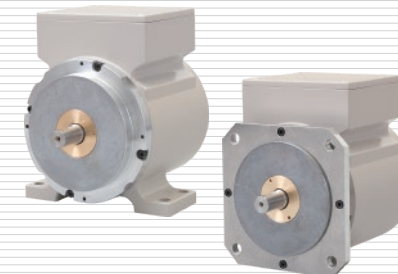
## MICROPHONE (MI series)

A series of microphones, including high sensitivity type and wide-band type for a variety of applications. The microphones exhibit good environmental stability with regard to temperature and humidity. A selection of preamplifiers meets various applications.



## ROTARY ENCODER (RP series)

The series has general purpose industrial type and compact type. There is a selection of pulse rates and maximum rotations.



## DIGITAL GAUGE (Sensor) (BS/GS series)

Measurement range: Max. 100 mm\*1  
Resolution: 0.1\*2 µm to 10 µm  
Various types of gauge sensors (including space-saving type) are available. Please use with the DG series gauge counter.



\*1 : Long stroke type  
\*2 : High resolution type

## DIGITAL GAUGE (Counter) (DG series)

Combined with the BS/GS series gauge sensor. DIN 72 standard models which are easily mounted on a variety of panels.



# History

- 1954: Ono Sokki Co., Ltd. was established in Yokohama.  
Manufactured the first tachometer in Japan for use with jet engines.
- 1955: Started manufacture of a wide variety of digital instrumentation.
- 1961: For the first time in Japan, Ono Sokki manufactured transistorized digital instrumentation.
- 1963: Developed digital torque measurement instruments which were widely acclaimed throughout Japan and the world.
- 1963: Completed and delivered computer on-line data management device for use in engine development.
- 1968: Introduction of IC technology into all products.
- 1973: Development of CF-type statistical analysis system using a built-in minicomputer.
- 1977: Development of ultra-rugged high-reliability linear gauge.
- 1979: Developed the first portable dual channel FFT analyzer with 64-K byte mass-storage memory, model CF-500 and put on mass-production line.
- 1986: Listed on the First Section of the Tokyo Stock Exchange.
- 1986: Ono Sokki Technology Inc. was established.
- 1990: New Technical Center was established in Yokohama.
- 1990: Acoustics Lab. was established in Technical Center.
- 1992: Ono Sokki Beijing Office was established.
- 1996: Conformance to ISO 9001 was certified.
- 1997: Conformance to ISO 14001 was certified.
- 2004: Automotive Testing Lab. was established in Technical Center.
- 2005: Automotive Testing Lab. Utsunomiya was established in Utsunomiya factory.
- 2006: Ono Sokki (Thailand) Co., Ltd. was established.
- 2009: New office building was established in Shin-Yokohama. Relocation of head quarter and Software Development Center to the new building in Shin-Yokohama.
- 2012: Ono Sokki India Private Ltd. was established.  
Ono Sokki Shanghai Technology Co., Ltd. was established.
- 2015: Automotive Testing Lab. Utsunomiya II was established in Utsunomiya Technical & Product Center.
- 2018: Ono Sokki Software Co., Ltd. was established.
- 2019: Upgraded bench test system for NV evaluation in Automotive Testing Lab, Utsunomiya Technical & Product Center.

## Overseas Subsidiaries and Offices

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