Portable Ambient Vibration Monitoring System

SPC-52/VSE-15D6

TOKYO SOKUSHIN CO., LTD.

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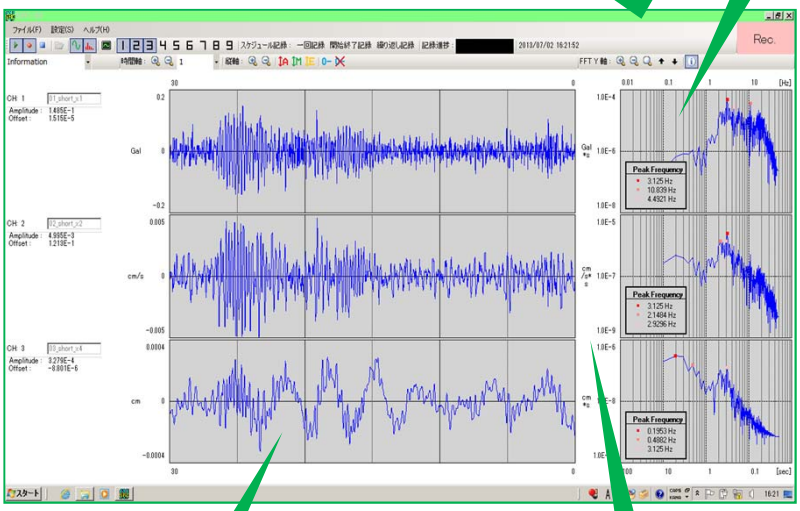
This system works well on moving obsevation with the field-portable vibration meter built-in Windows® PC. Measurement of high precision is available from the system configuration (max. 9 components) with the high resolustion servo velocity meter.

- **Building Vacillation / Health Monitoring**
- **Microtremor Monitoring / Vibration Test Monitoring**
- **Moving observation / Aftershock Monitoring**
- **Ambient Vibration / Environmental Pollution**



FFT sprctrum

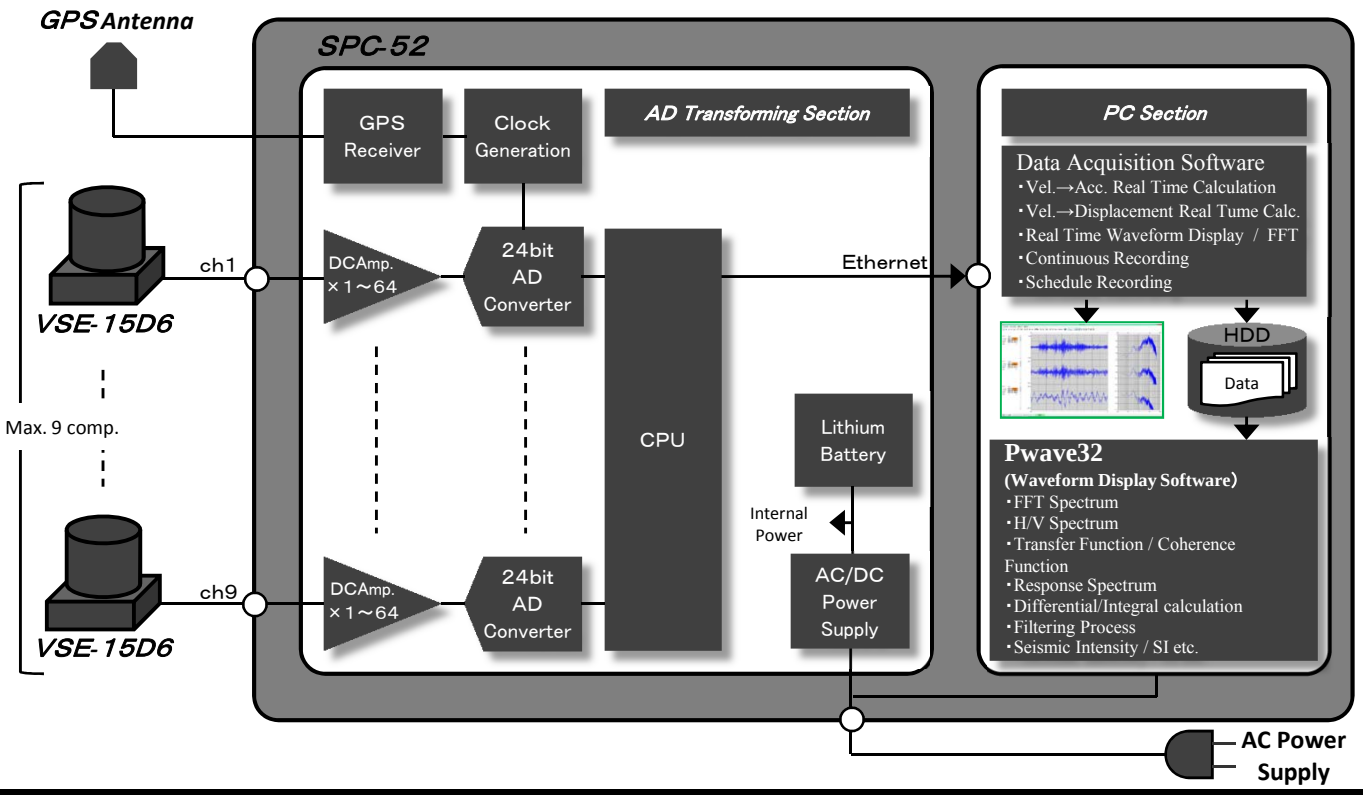
Equivalent of 24bit converter
Sampling : 1Hz - 1000Hz
Built-in amplifier : x1 - x64
GPS clock synchronization

Measurment range : 1cm/s(0.1-70Hz)

Value H/V switching module

Making choice of each channel
"Acc.","Vel.","Displacement"

Real Time Display(Any of 9 channels)



Specifications

SPC-52

AD Transforming Section

Shape			Plastic Trunk case
Input CH			9 Channnels (VSE-15D6 X 9 components)
Input Range			±10V(Equivalent of ±10cm/sec), Single-ended input
Built-in Amplifier			x1, x2, x4, x8, x16, x32, x64
AD Converter	Format		Equivalent to ΔΣ 24bit (32bit form)
	Resolution (typ)		128dB (100Hz sampling, measured by X1 amplifier)
	Sampling Frequency		100, 200, 250, 400, 500, 800, 1000Hz
Filtering	Cutoff Frequency (-3dB)		Sampling Frequency X 0.413
	Characteristic		Selection of Minimum Phase Response / Linear Phase Response
Internal Clock	Clock		year, month, day, time, minute, second (automatic calendar)
	Calibration		GPS Synchro System (Less than ±100μ sec.)
Interface	Ethernet		10BASE-T/100BASE-T (Sharing communication with on-board PC)
Power Supply Section	Power Supply		AC100V to 240V (±15%)
	Consumption Current		Approx. 20VA(VSE-15D6 X 3 components connection) to Approx. 23VA(9 components), Providing AC100V , Recharging, Not incl. on-board PC
	Built-in Battery	Type	Lithium-ion Battery
		Operating Time	Approx. 7 hours (VSE-15D6 X 3 components connection) to Approx. 5 hours (9 components connection)
Operating Temperature Limit			-10℃ to +40℃, without on-board PC
Dimension			424mm(W) X 332mm(D) X 111mm(H), without projection
Weight			Approx. 5.3kg, without on-board PC

PC Section

On-board PC	Size	12.1 panoramic screen notebook PC, windows® 8 Pro 64bit
Acquisition Software	Number of channenls	Maximum 9 channels (Choose Acc./Vel./Disp. of each channel)
	Input Range	Maximum ±10cm/s
	Acceleration Computing Range	Maximum ±1256Gal (Provisional value)
	Displacement Computing Range	Maximum 31.8cm (Provisional value)
	Real Time Waveform Display	Waveform and FFT of Maximum 9 channels
	Recording Format	Tokyo Sokushin original Pwave format(int. type, singled integer type 32bit)
	Recording Mode	Scheduled recording, Manual recording
	Maximum Recording Time	24 hours (@100Hz sampling)

VSE-15D6 (It is possible to download the simple body catalog of VSE-15D6 from our website.)

Measurement Frequency Range	0.1Hz to 70Hz
Direction of Measurement	Switchable Horizontal/Vertical
Measurement Range	±10cm/s (±0.1m/s)
Sensitivity	±10cm/s (output Low), ±1cm/s (output High), *Using output of Low based on SPC-52 System configuration.
Linearity	0.03% (@ Measurement range)
Resolution	Less than 2 X 10^{-6}Gal
Dynamic Range	More than 140dB
Lateral Sensitivity	Less than 0.03G/G
Operating Temperature Limit	-10℃ to 50℃
Dimension	55mm (W) X 69.5mm (D) X 72mm (H)
Weight	Approx. 350g

Accessories (Fitting in combined sale of SPC-52 and VSE-15D6 × 3 components)

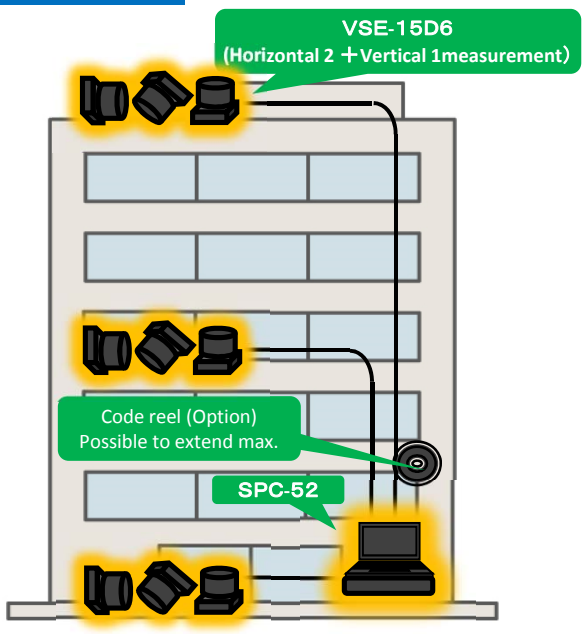
AC power cable (2.0m) X 1, GPS antenna for car use, SPC-52 setup disc X 1
Mounting base for 3 components Velocity meter (BS-3), Case for 3 components Velocity meter (CS-3A), Connecting cable for Velocity meter (2.0m)

Option

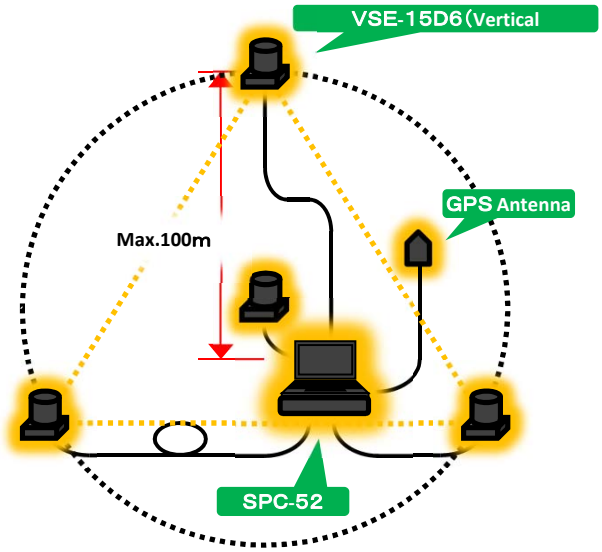
Extension cable for Velocity meter and Cable reel (each Max. 100m)

Example of observation

Vibration measurement for



Array Survey



*Possible to measure clock synchronized observation of plural SPC-52 by GPS synchronization.

Information in this document is subject to change witout notice.

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