

NEW PLEX KNOCK MONITOR V3[®]

TURNING TUNING INTO SCIENCE. NEVER MISS KNOCK AGAIN.



Description

The New PLEX Knock Monitor V3 is a fully re-envisioned and vastly improved professional knock detection tool that doubles as a full spectrum CAN BUS datalogger for dyno tuners. The new powerful multi-core processor and dedicated hi-fidelity DSP enable cutting edge knock detection with gain per cylinder, knock signal windowing and engine position signal decoding supporting many OEM trigger patterns. The PKM V3 is housed in a new, much more ergonomic aluminum enclosure that features a high-brightness 2.8" colour TFT IPS display and membrane keypad and comes with an improved M8 industrial wiring and connector system, a 100Mbit Ethernet port and USB datalogging. It is also compatible with the PLEX Device Manager V2 and the PLEX PDA-WIN Data Analysis Software.

Applications

- Knock Detection
- Vibration Analysis
- Generic Datalogging
- Dyno Datalogging
- Engine Tuning

Key Features

- ▶ 2.8" High-brightness IPS TFT display
- ▶ Basic on-device configuration
- ▶ Powerful multi-core processor and new dedicated audio DSP
- ▶ Multi-channel CAN BUS datalogging
- ▶ Real-time data streaming via Ethernet
- ▶ Unlimited USB datalogging
- ▶ Next-level knock detection with gain/cylinder
- ▶ Engine position signal decoding
- ▶ Hi-fi audio recording and playback function

Technical Specifications

Inputs	
Knock/vibration sensor inputs	2
Analog inputs 0-5V	2 (shared)
Digital inputs 0-5V	2 (shared)
Engine Position/Trigger VR/Hall Inputs	2
Outputs	
Analog outputs 0-5V	2 (shared)
LEDs	4 RGB (configurable)
Communications	
Can Bus Ports	1
Ethernet Streaming/Logging	100Mbit
USB	2 (for config. & logging)
Internal Sensors	
Real Time Clock	with battery backup
Device/Sensor voltage monitor	+12V supp./+5V sensor supply
Device Temperature monitor	Yes
Ambient light sensor	-
Data Channels	
Max Data Channels	Basic 45 / HD 256
Max Flag Channels	Basic 45 / HD 256

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Technical Specifications - Continued

Data-logging continued	
Memory	USB Flash Dr. or PC logging
Log Rate Max	44kHz knock/vibration, 100Hz other data
Calculations	
Knock Metrics	intensity, count, event, threshold (per cylinder)
Knock Frequency Analysis	real-time
Math Channels	Basic 4 / HD 8
Screen	
Type	RGB TFT IPS
Size	2.8" / 240 x 320 pixels
Brightness	900cd
Refresh rate	50Hz
User Interface	
# of Pages	24
Custom page design	yes
Colour themes	yes
Electrical Data	
Supply Voltage Range	9-30V DC
Current Consumption	max. 2A at 12V
Operating Conditions	
Temperature Range	-20 to +60 degC
Physical	
Connectors	M8 power/CAN M8 knock signals M8 trigger/in-out/5V-sgnd
Dimensions mm	width: 132, height: 76, depth 26
Weight	250g
Material	CNC machined aluminum
Sealing / Ingress Protection	IP5x

PC Software

PLEX Device Manager V2	configuration	free
PLEX PDA-WIN	data analysis	free
PLEX PDA-WIN-PRO	data analysis	paid

Improvements vs previous version (V2)

- Fully re-designed, more ergonomic hardware
- Fully re-designed electronics & new powerful processor
- New and improved connectors and wiring system
- New TFT IPS 2.8" bright colour display
- Significantly improved knock detection accuracy (hi-fi)
- Significantly enhanced knock detection options
- Real-time knock frequency analysis - FFT
- Multi-channel CAN BUS datalogging
- Crank trigger pattern signal decoding
- Knock signal windowing vs engine position
- Per cylinder gain and threshold settings
- Audio recording and playback function

Knock Data & Metrics

- | | |
|----------------------|-------------------------|
| ■ Raw noise | ■ Knock event frequency |
| ■ Raw noise filtered | ■ Knock threshold |
| ■ Knock intensity | ■ Knock count |

Product Versions

- PLEX-KM-V3-Basic (upgradable)
with/without knock sensor set
- PLEX-KM-V3-HD
with or without knock sensor set

Version Comparison

	BASIC	HD
Knock Sensor Inputs	2	2
CAN Bus Port	•	•
Detection per Cylinder	•	•
Knock Threshold	2D	3D
USB Datalogging	•	•
Ethernet	-	•
# of Data Channels	64	256
Engine Position Inputs	for RPM only	•
Gain per Cylinder	-	•
Gain per Sensor	-	•
Knock Windowing	-	•
Real-time FFT	-	•

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