



Fully Digital - Ultrasound Output Verification - USB Reporting

Safety Compliance as per IRPA Guidelines

(International Radiation Protection Association) Geneva

Third Party BMS Integration - Software Monitoring & Reporting

Area coverage per system ranging from 3600 Sq. Ft. to 12,000 Sq. Ft.



**MASER**  
V2

## Product Suite

Advanced Rodent Control Management From MASER  
The Ultimate Solution For Your Downtime Problems



Torrent V2



Digital LP24 V2



VHFO V2



Torrent V2



VHFO V2



Miste



Digital LP24 V2



USB to RS-485 Converter  
Proprietary



Streame



## Benefits

- One Third Octave airborne ultrasound Band Frequencies emitted from the transducer can be recorded and documented in the form of a report there by ensuring human safety as per IRPA Guidelines (International Radiation Protection Association) Geneva.
- Document and Verify ultrasound output from the transducer whereby you can record individual frequency peaks along with corresponding sound pressure levels.
- Networkable on RS-485 with Maser CRMS V2 proprietary software that enables real time monitoring and reporting of system health in PDF format, upto a distance of 1.2 Kms.
- Networkable on RS-485 with support for Hardwired Third Party BMS Integration via Modbus & potential free NO-NC Contacts, upto a distance of 1.2 Kms.



# V2 Product Suite Features Matrix






Features	Torrent V2	Digital LP24 V2	VHFO V2
Visual Representation of Adherence to Safety Standards for continuous exposure to one third octave band airborne ultrasound frequencies as per IRPA Guidelines (International Radiation Protection Association) Geneva.	YES	YES	YES
Transducer Sound Output Verification and Analysis.	YES	YES	YES
PDF Reports showing Safety Compliance, Transducer Sound Output Verification and Controller Health Status for System Commissioning and Audit Purposes.	YES	YES	YES
USB Port for Real Time Reporting of Controller Health Status (Optional)	YES	YES	NO
Auto and Manual Modes of Operation	YES	YES	YES
Networkable on RS-485 with MASER CRMS V2 Software Compatibility	YES	YES	YES
Networkable on RS-485 with support for Hardwired Third Party BMS Integration via Modbus & potential free NO-NC Contacts.	YES	YES	YES
Audible Testing of Transducers	YES	YES	YES
Number of Wave Speed Options	8	4	3
Number of Wave Density Options	7	4	4
Number of Frequency Bands	5	4	4
Cable Connection Methodology between Controller and Transducers	Dedicated only	Dedicated or Looping	Dedicated or Looping
Password Protection on Controller	YES	YES	YES
Number of Transducers Supported	Upto 20 in a dedicated connection	Upto 20 in a Dedicated Connection & upto 24 in Looped Connection	Upto 20 in a Dedicated Connection & upto 24 in Looped Connection
Transformer Rating	25 V.A. <b>UL &amp; CE</b> Approved	25 V.A. <b>UL &amp; CE</b> Approved	25 V.A. <b>UL &amp; CE</b> Approved
Power Supply	230 V AC/50 HZ or 14 Volts AC	230 V AC/50 HZ or 14 Volts AC	230 V AC/50 HZ or 14 Volts AC
Dimensions (Width X Depth X Height)	260 mm X 355 mm X 80 mm	260 mm X 355 mm X 80 mm	200 mm x 300 mm x 85 mm
Weight	4.9 Kgs Approximately	4.9 Kgs Approximately	3.5 Kgs Approximately
Mounting	Wall / Table Mounting	Wall / Table Mounting	Wall / Table Mounting
Power Consumption	15 Watts Approximately	15 Watts Approximately	15 Watts Approximately
Area Coverage per Controller in Sq. Ft.	Upto 10000 Sq. Ft.	Upto 10000 Sq. Ft. Dedicated Connection upto 12000 Sq. Ft. Looped Connection	Upto 6000 Sq. Ft. Dedicated Connection upto 7200 Sq. Ft. Looped Connection
Area Coverage per Transducer in Sq. Ft. in AFC / BFC / BFF	500 Sq.Ft. / 500 Sq.Ft. / 500 Sq.Ft.	500 Sq.Ft. / 500 Sq.Ft. / 500 Sq.Ft.	150 Sq.Ft. / 300 Sq.Ft. / 150 Sq.Ft.
Transducer Sound Output (dB)	50 db to 110 db (Verifiable)	50 db to 110 db (Verifiable)	50 db to 110 db (Verifiable)
Transducer Power Output	900 mW	900 mW	800 mW

Note : AFC - Above False Ceiling • BFC - Below False Ceiling • BFF - Below False Flooring

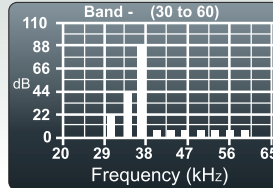
\* Customization of Transducers can be done as per Customer Request and Cost Feasibility.

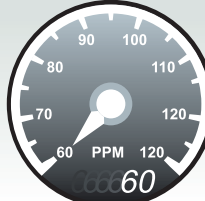
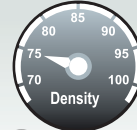

\*\* The Systems consist of Controller and Transducers only.

# CRMS Software V2 Dashboard

Band Time (mins)








### Network

- Me
  - MID-000 (TORRANT-V2)
  - MID-001 (DIGI LP24-V2)
  - MID-002 (VHFO-V2)
  - MID-003 (TORRANT-V2)

### Nodes


**TORRANT - V2**  
Type - Controller



Ok


Info
Transducers
PCB View

Machine ID	: MID-003
Root Network	: Me
<hr/>	
Wave Speed	: 60 PPM
Wave Density	: 75 Freqs.
Current Band	: 'B'-30 to 60KHz
<hr/>	
Current Mode	: 'Auto'
<hr/>	
Band A(mins)	: 4 Mins
Band B(mins)	: 6 Mins
Band C(mins)	: 10 Mins
Band D(mins)	: 10 Mins
Band E(mins)	: 2 Mins
<hr/>	
Total Transducers	: 20
Faulty Transducers	: 0




**Network**

All Selected PCB View



**Setup**

Service CRMS



**Connection**

Connect

Seamless integration with All new Maser CRMS V2 proprietary software that enables real time monitoring and reporting of system health.

## USB Reporting



PDF Reports showing Safety Compliance, Transducer Sound Output Verification and Controller Health Status for System Commissioning and Audit Purposes.

## Modbus Integration (Hardwired)

# Modbus<sup>®</sup>

Support for Third Party BMS Integration via Modbus.



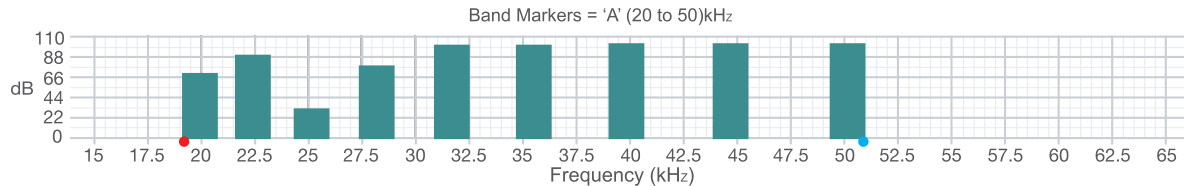
# Safety First

Visual Representation of Adherence to Safety Standards for continuous exposure to one third octave band airborne ultrasound frequencies as per IRPA Guidelines (International Radiation Protection Association) Geneva

USFR-V2



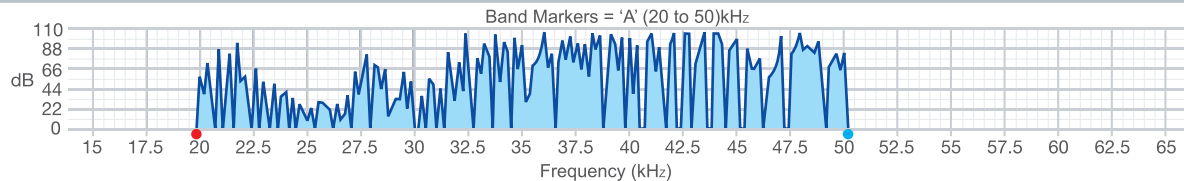
FFT (1/3rd Octave):



# Verifiable

Document and Verify ultrasound output from the transducer whereby you can record individual frequency peaks along with corresponding sound pressure levels.

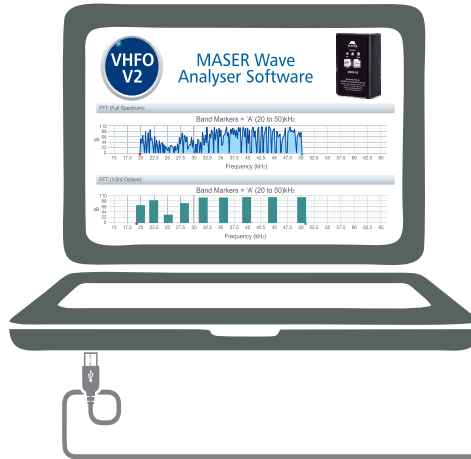
FFT (Full Spectrum):





# MASER USFR V2

Output Verification Kit  
Capture | Download | Analyse | Verify



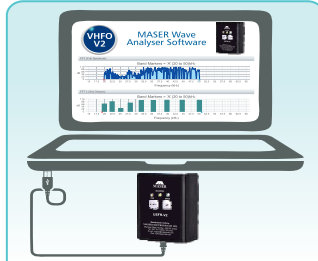
## THE OUTPUT VERIFICATION PROCESS

### Capture



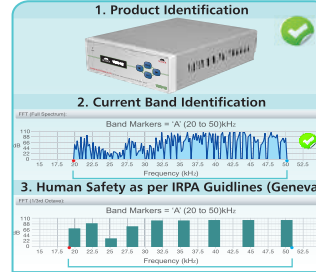
Capture Ultrasound Output Samples from Transducer

### Download



Download the Samples on Your Computer for Analysis by MASER WAVE ANALYSER SOFTWARE

### Analyse



Software Output Verification Analysis  
Product Identified : MASER VHFO V2  
Current Frequency Band : A  
(20kHz to 50kHz)

### Verify



Physical Verification on Site  
Product Installed : MASER VHFO V2  
Current Frequency Band : A  
(20kHz to 50kHz)

## AUTHENTICITY TEST FOR OUTPUT VERIFICATION KIT

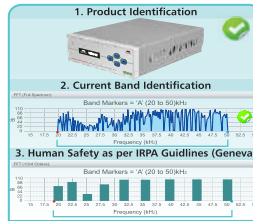
1. Identify the product, from which the output is being generated, by displaying the product name.
2. Identify the frequency band that was in operation at the time the output was recorded. As the frequency band is continuously changing you can verify the analysis of the software as it should be in sync with the band that was active on the controller at the time of recording the output.



Capture Ultrasound Output Samples from Transducer



Download the Samples on Your Computer for Analysis by MASER WAVE ANALYSER SOFTWARE



Software Output Verification Analysis  
Product Identified : MASER VHFO V2  
Current Frequency Band : A  
(20kHz to 50kHz)



Physical Verification on Site  
Product Installed : MASER VHFO V2  
Current Frequency Band : A  
(20kHz to 50kHz)



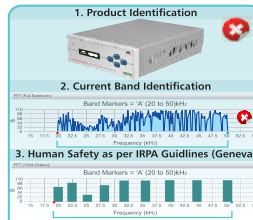
TEST PASS



Capture Ultrasound Output Samples from Transducer



Download the Samples on Your Computer for Analysis by MASER WAVE ANALYSER SOFTWARE



Software Output Verification Analysis  
Product Identified : TORRANT V2  
Current Frequency Band : A  
(20kHz to 50kHz)



Physical Verification on Site  
Product Installed : TORRANT V2  
Current Frequency Band : C  
(26kHz to 57kHz)



TEST FAIL

## Few of Our Valued Customers

- Air India
- Atos Origin
- Apple
- American Consulate
- ANZ Bank (Australia and New Zealand Banking Group Ltd.)
- ABM Infra (Projecture Infra LLP - Design & Build Contractor)
- Amazon
- Antillia - Mr. Mukesh Ambani Residence (Reliance)
- BPCL
- BARC
- Bharatiya Reserve Bank Note Mudran Ltd.
- BHEL
- BPL Mobile Communications Ltd.
- BGH Properties Pvt. Ltd.
- BSNL
- BMS (Bristol Myers Squibb)
- Bharti Airtel
- CIBIL
- CRL
- CMC
- Corporation Bank
- CFTRI
- Citibank
- CGMPL Citigroup Global Markets India Pvt. Ltd.
- CBRE
- Control S Data Centres
- Cognizant Technology Solutions
- CNBC
- CDAC
- Cap Gemini / Ernst & Young
- Capita Offshore Business Services Pvt. Ltd.
- CGR
- Cybele Paradise Pvt. Ltd.
- DOT
- Dena Bank
- Deutsche Bank
- Diebold Systems Pvt. Ltd.
- ExxonMobil Co. India Pvt. Ltd.
- E-funds International India Pvt. Ltd.
- e-Serve International Ltd.
- Exel India Pvt. Ltd.
- EXIM Bank
- ECGC - Export Credit Guarantee Corporation of India
- ECIL
- Effem India Pvt. Ltd.
- Federal Express Corporation
- Franklin Templeton
- Flipkart
- G4S Security
- Goldstar Jewellery Ltd.
- Group M Media India Pvt. Ltd.
- GTL
- Godrej & Boyce Mfg. Co. Ltd.
- Genpact India
- HDFC
- HSBC
- HPCL
- Honeywell Automation India Ltd.
- Hexaware
- Hindalco
- HCL Infosystems Ltd.
- ICICI Bank Ltd.
- ICICI Onesource Ltd.
- ICICI Lombard General Insurance Co. Ltd.
- IDBI Bank Ltd.
- Idea
- Intel
- IOCL
- IPCL
- Indian Navy
- Indian Air Force
- i2 Technologies (I) Pvt. Ltd.
- iGATE Global Solutions
- IBM India Ltd.
- Intuit India
- Infosys BPO Ltd.
- Ingram Micro India Ltd.
- JP Morgan
- Jawed Habib Hair & Beauty Ltd.
- Johnson Controls
- Jones Lang LaSalle Property Consultants (India) Pvt. Ltd.
- JSW Steel Ltd.
- JSW Steel Processing Centres Ltd.
- Kotak Bank
- Kotak Securities Ltd.
- Kotak Mahindra Finance Ltd.
- KPMG
- L&T
- LIC
- Lucent Technology
- Mastek Ltd.
- Mahindra & Mahindra Ltd.
- Madras Fertilizers Ltd.
- McKinsey & Company
- MTNL
- MSEB
- Mumbai Bank
- Mazagon Dock Ltd.
- Mind Tree Ltd.
- Mylan Laboratories Ltd.
- NDDB
- Netmagic Solutions Pvt. Ltd.
- NCR
- Northern Marine Management (I) Pvt. Ltd.
- NHPC
- Oil India Ltd.
- ONGC
- Procter & Gamble Home Products Ltd.
- Progeon Ltd. an Infosys Co.
- Polixel Security Systems Pvt. Ltd.
- Rank Investments and Credits India Ltd. (Barclays)
- Reliance Industries Ltd.
- Reliance Petroleum Ltd.
- Rota Design & Conversion Services Ltd.
- Royal Bank Of Scotland
- Reserve Bank Of India
- RSP Designs
- SBI Capital Markets Ltd.
- SEBI
- SHCIL
- SIDBI
- Sify Ltd.
- Shringar Cinemas Pvt. Ltd.
- Standard Chartered Scope International
- Siemens Ltd.
- Sterling and Wilson Ltd.
- Syntel International Pvt. Ltd.
- Schneider Electric
- SWE Engineering (India) Pvt. Ltd.
- TELCO
- Trans Market Group
- TCS
- TCL
- TTTSI
- Teleweb Services India Pvt. Ltd.
- Telecom Regulatory Authority of India
- Technimont ICB Ltd.
- TASS
- The Associated Building Co. Ltd.
- The National Small Industries Corp. Ltd.
- Times Global Broadcasting Co. Ltd.
- Technologies Ltd.
- Universal Cables Ltd.
- Universal Music India Ltd.
- UTI
- UTV News Ltd.
- USV Ltd.
- U S Technology Intl. Pvt. Ltd.
- Vodafone
- Voltas International Ltd.
- Videocon
- Venus Jewels
- VSNL
- Wadhwa Constructions
- WIPRO
- WNS Global Services Pvt. Ltd.
- Yahoo Web Services (I) Pvt. Ltd.
- YOU Broadband & Cable India Ltd.
- Yes Bank
- Zuari Agro Chemicals Ltd.
- ZOHO Corporation Pvt. Ltd.



AN UL REGISTERED ISO 9001:2015 FIRM

Designed, Developed & Manufactured in India by



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