



GSA Contract Holder

# SMD601

Very High Sensitivity Multi-Zone Metal Detector for Law Enforcement and Correctional Facilities



**NEW  
GENERATION**

- Most Sensitive WTMD, fully compliant with the NIJ-0601.02 Standard
- Very Accurate Pinpointing of individual and multiple metal targets
- Exceptional Immunity to Environmental Interference
- Unmatched Reliability



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*Threat Detection through Electromagnetics*

# SMD601

Very High Sensitivity Multi-Zone Metal Detector



## Introduction

The most recent standards relating to walk-through Metal Detectors for correctional facilities security, such as the NIJ0601.02 issued by the U. S. Department of Justice, require the detection of metal threats, even those of minimum dimensions, made of magnetic and non-magnetic metals.

The above-mentioned regulation requires these Metal Detectors to offer characteristics of high detection uniformity, performance independent of the transit speed and extremely high immunity to electrical and mechanical interference.

For each of these characteristics, the NIJ0601.02 Standard describes precise verification procedures and assessment criteria, thereby providing a powerful means of selection of the equipment, so as to guarantee the use of detectors which are

suitable to the difficult prison environment. The SMD601 Metal Detector conforms completely to the requirements of the NIJ0601.02 Standard for all foreseen security levels, and can therefore be applied in situations from the inspection of visitors to that of detainees in top-security areas, even in areas which are the most complex from the electrical and mechanical point of view.

The new 601 Series further extends the features of this device, which had already been adopted by authoritative bodies involved in prison security, by offering renewed capabilities of communication and connection in a computer network, an expanded choice of security levels, tools for guided installation and a wide range of options and accessories.

## Fully compliant with, and exceeding, the NIJ-0601.02 Standard



- The NIJ 0601.02 Standard introduced in 2003 by the U.S. Department of Justice replaces the NILECJ-STD-0601.00 Standard of 1974.
- The Standard establishes the requirements of Sensitivity, Discrimination and Immunity for Law Enforcement and Correctional Facilities.
- The Standard defines 3 levels of security:
  - 1 LO level - Large Object Size (Handguns)
  - 2 MO level - Medium Object Size (Knives)
  - 3 SO level - Small Object Size (small hard-to-find items)



LO LEVEL - LARGE OBJECT SIZE (HANDGUNS)



MO LEVEL - MEDIUM OBJECT SIZE (KNIVES)



SO LEVEL - SMALL OBJECT SIZE (SMALL HARD-TO-FIND ITEMS)

Par.	NIJ-0601.02 Requirement	SMD601 State of compliance
2.3	<b>DETECTION PERFORMANCE SPECIFICATIONS</b>	COMPLIANT
2.3.1	<b>DETECTION SENSITIVITY</b> The walk-through Metal Detector must provide an alarm indication for each test sample described (LO, MO, SO)	COMPLIANT
2.3.2	<b>SPEED</b> The walk-through Metal Detector must provide an alarm indication for each test sample described independent of the transit speed	COMPLIANT
2.3.4	<b>DISCRIMINATION</b> For each level of security the Metal Detector must discriminate the metal objects described	COMPLIANT
2.4.2	<b>INTERFERENCE</b> For each level of security the Metal Detector must be immune to electrical and mechanical interference:	COMPLIANT
2.4.2.1	Electromagnetic Interference	COMPLIANT
2.4.2.2	Metallic Interference Stationary Objects, Moving Objects, Moving Metal Door etc.	COMPLIANT

# The Reference Standard in Detection Capability

## SMD601 detects even the smallest metal items anywhere on or in the body

The SMD601 is a very high sensitive Walk-Through Metal Detector designed to satisfy the strictest security requirements. **An absolute must when the detection of extremely small metal masses is required** on the body or even if hidden in body cavities.

A full-height light bar displays the location of the detected metal masses in transit. This results in **rapid identification of threats and a reduction or elimination of the need for manual searches.**



- Very accurate pinpointing of individual and multiple metal targets



- Quick, accurate analysis of all parts of the body of people in transit, from the shoe level to the crossbar
- Built-in programs to screen visitors and staff for weapons and contraband

## Advanced Alarm Indication



- Entrance and Exit Multi-Zones Display Bars with each one Programmable as Entry Pacing and/or Localization Lights

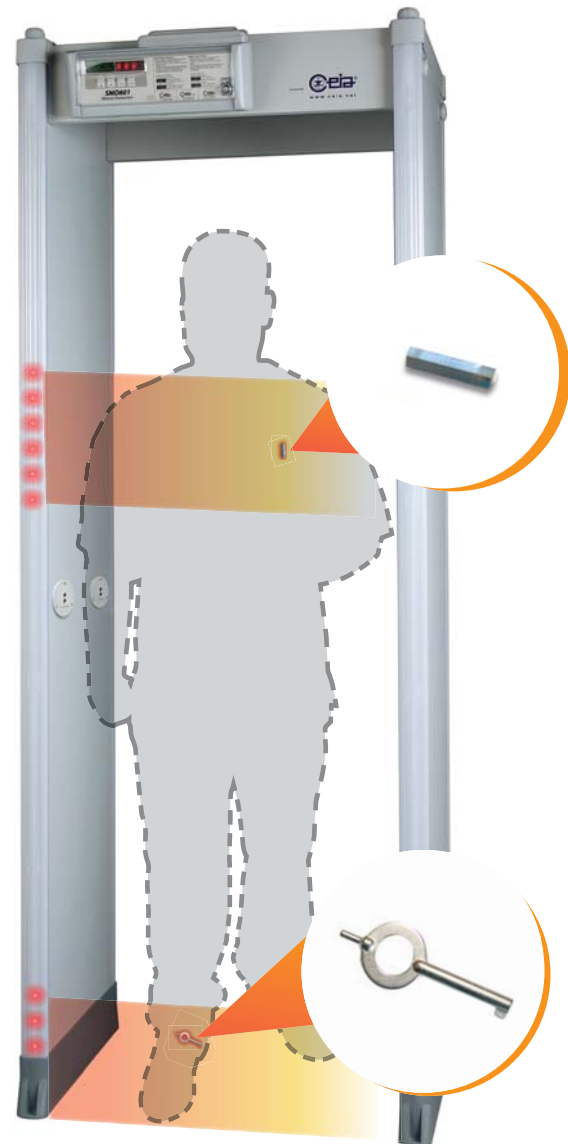


- Flexible Acoustic Alarm Signaling System:
  - ✓ 10 Continuous and Pulsed Tones
  - ✓ 34 Special Sounds
- 10 Acoustic Intensity Levels programmable from 0 up to 90 dBA at 1 m



- High Precision Transit Counter:
  - ✓ In-Bound Transits
  - ✓ Out-Bound Transits
  - ✓ Alarm Rate

An accurate and comprehensive alarm system allows the best use of Metal Detector. Optical indicators are fully programmable, both gate sides can indicate either separately or simultaneously vertical transit zones of detected threats and also be configured as traffic lights to regulate the access of the people being screened.



# SMD601

Very High Sensitivity Multi-Zone Metal Detector



## Comprehensive Security Features



- Over 40 built-in Security Programs
  - ✓ Up to 22 pre-programmed Security Programs
  - ✓ Up to 20 user programmable Security Programs



- Chip Card system for fast, simple and secure parameter changes (i.e. alarm volume and tone, counter reading, etc...) and Security Level Selection

A feature of CEIA's Metal Detectors is a chip-card system that allows the Head of Security to set the Security Level quickly, reliably and discreetly, without any programming operation on the detector itself.



CHIP CARD FOR AUTOMATIC SELECTION OF SECURITY LEVELS AND PARAMETER SETTING

## Communication Capabilities

TYPE OF OPERATION	Ethernet	Wi-Fi	USB	Infrared	Bluetooth	RS-232
Maintenance	○	○	○		●	●
Remote Control	○	○		●	●	●
Remote Data collection	○	○				

● STANDARD ○ OPTION

## Exceptional Immunity and Reliability



- **Exceptional Immunity to Environmental Interference**  
CEIA SMD601 Enhanced Metal Detectors offer such high immunity that they can be installed even in environments with high levels of electrical interference, impossible for conventional Metal Detectors.

Installation is also completely automatic thanks to an innovative, automatic verification and adjustment system that measures the electromagnetic interferences originating outside the device and determines the optimum setting for the specific environment.



- **Continuous self diagnostics assures monitored performance reliability**



- **No periodic re-calibration and preventive maintenance required**

# Model Configuration

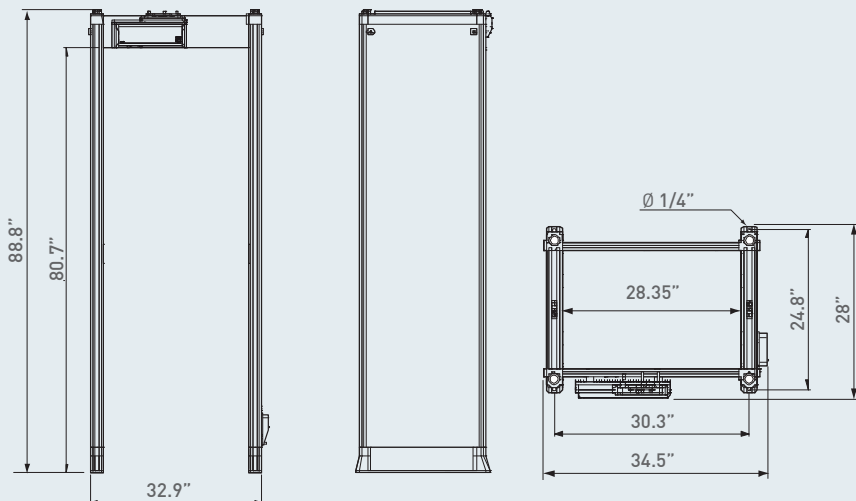
Features	SMD601/PZ
Fully compliant with and exceeding the NIJ-0601.02 Standard	●
2 display bars programmable as zone indicators and/or pacing lights	●
Dual Side 20 localization zones	●
Powered by safe low voltage DC	●
Chip Card Reader	●
One Touch Automatic Self Installation (OTS)	●
Bluetooth, infrared and RS-232 communication	●
Password and hardware key access protection	●
Anti-tamper on/off switch	●
High precision transit counter	●
Programmable Random Alarm capability	●
Weather resistant protection	○
Anti-vandalism, anti-tampering protection	○
IP65 protection (includes weather resistant and anti-vandalism options)	○
Embedded battery charger and under-voltage protection	○
Integrated web-server & logger (includes Ethernet and USB interface)	○
Long life crossbar battery back-up	○
Integrated video camera (lobby applications)	○

● STANDARD ○ OPTION



VIEW OF THE SMD601 WITH ANTI-VANDALISM AND ANTI-TAMPERING PROTECTION OPTION

# Dimensions



## SMD601

Very High Sensitivity Multi-Zone Metal Detector



## Options and Upgrade Kits

### WEATHER RESISTANT PROTECTION

Kit for upgrading the standard version to outdoor applications according to IEC 60950-22; this kit includes shelters, crossbars and protection covers for power supply.

Part # 55630



### ANTI-VANDALISM, ANTI-TAMPERING PROTECTION

This option includes stainless steel control unit, protection covers for power supply and antenna connection compartments. Equipped with screws requiring tools for removal.

Part # 55629



### IP65 PROTECTION

This option includes the Weather Resistant and Anti-vandalism kits.

Part # 55631

### LONG LIFE CROSSBAR BATTERY BACK-UP

Crossbar battery back-up in stainless steel case.

Provides up to 3.5 hours of autonomous working time.

Part # 55681

3.5 HOURS TYPICAL (3 HOURS MINIMUM) CONTINUOUS OPERATION WITH SMD601



### EMBEDDED BATTERY CHARGER AND UNDER-VOLTAGE PROTECTION

Anti-tamper on/off switch, RS-232 interface, battery charger with 12 hours mains disconnection diagnostic alarm.

Part # APSM2Plus/P



### INTEGRATED WEB-SERVER & LOGGER, UNDER-VOLTAGE PROTECTION AND BATTERY CHARGER

Anti-tamper on/off switch, RS-232, USB, 10/100 baseT Ethernet interface, Wi-Fi, data logger, real-time clock, connectable to Net-ID centralized network management system, integrated web-server, transit statistical data analysis, battery charger with 12 hours mains disconnection diagnostic alarm.

Part # APSiM3Plus/P



### INTEGRATED VIDEO CAMERA

SMD601 series can be equipped with an embedded camera to record people in transit.

The kit includes the camera with mechanical support, the adapter crossbar and the connection cable. This option requires the installation of the integrated web-server & logger.

Part # 54253



# Accessories



VISUAL ALARM WITH ZONE INDICATION

## ▶ CHIP CARDS

Chip cards for simple and secure selection of Security Levels and parameter setting. List of chip-cards available on request.



## ▶ MBSU-2

Independent, compact size, long life power supply in weatherproof stainless steel case, with embedded fast charger:

- 5.5 hours typical (5 hours minimum) continuous operation with SMD601
- 5 hours typical charging time.

Part # MBSU-2



## ▶ IRC-1

Infrared Remote Controller for wireless remote programming of the control unit.

Part # 47180



## ▶ UPPER CONNECTION MODULE

This extension cable allows the connection of power supply and serial communication to personal computers or CEIA accessories, such as RCU-2.

Part # 46650

## ▶ RRU

Remote relay unit (RRU) to repeat the detection alarms of the gate through a relay contact. The RRU module can be used for integration of the Metal Detector in interlocked door systems.

Part # RRU

## ▶ WATERPROOF MAINS POWER SUPPLY

100W IP67 power supply for outdoor applications. It is provided with flanges for simple installation.

Part # 43564



## ▶ RCU2

Control unit for full remote access, including alarm signalling and programming of CEIA Walk Through Metal Detectors.

Part # RCU2



## ▶ MD-SCOPE

Powerful, PC based installation and service Software. Includes oscilloscope and terminal functionality.

Part # MD-SCOPE2



## ▶ METAL DETECTOR DIVESTING TABLE FOR MANAGEMENT OF PERSONAL METAL BELONGINGS

- Standard length: 24" (Part # 18074)
- Extended length: 47" (Part # 39491)



## ▶ TEST SAMPLES KIT

- Part # NIJ-0601.02-SK: complete test samples kit for NIJ-0601.02 compliance verification.
- Part # EMD-SK-NIJ-S0/M0: test samples kit for NIJ-0601.02 detection capability verification at medium and small objects level.



EMD-SK-NIJ-S0/M0 TEST SAMPLES KIT

NIJ-0601.02-SK TEST SAMPLES KIT

# SMD601

## Very High Sensitivity Multi-Zone Metal Detector



## Specifications

<b>KEY FEATURES</b>	Very High Sensitivity	
	Fully compliant with and exceeding the NIJ-0601.02 Standard	
	20 High Precision localization zones	
	High precision bidirectional counter with automatic rescreening compensation	
	Chip Card capability for fast, simple, and secure programming	
	Random alarm capability programmable from 0% to 100%	
	Exceptional Immunity to external interferences	
	Can be combined with the Network based CEIA Profiling System for further sensitivity enhancement by compensating non-removable personal metal items	
	Powered by safe low voltage DC	
	Standard Interfaces: RS-232, Bluetooth, Infrared	
Other available interfaces: Ethernet, USB		
<b>QUALITY</b>	Continuous self diagnostic system	
	Proven reliability	
	No periodic re-calibration and preventive maintenance required	
	No scheduled maintenance	
Fully digital design		
<b>WALK-THROUGH GATE STRUCTURE</b>	State-of-the-art, robust and washable panels	
	Protected against aging, weather and wear	
<b>CENTRAL CONTROL UNIT</b>	Ergonomic and robust design	
	High visibility alphanumeric display and programming keyboard	
	Made of advanced plastics or stainless steel and anti-vandalism construction (option)	
Access to the front panel protected by hardware key and two levels of passwords		
<b>ALARM SIGNALLING</b>	<b>VISUAL SIGNALS</b>	Multi-zone display bar for "height on person" localization
		2 light bars with selectable entry/exit and pacing indication
	<b>AUDIO SIGNALS</b>	Green and red metering signals proportional to the mass of the detected target
10 selectable continuous and pulsed tone plus 34 special tones		
10 selectable sound intensities ranging from 0 to 90 dbA at 1m		
<b>TYPE OF SIGNALLING</b>	<b>VISUAL</b>	Fixed or proportional to the mass in transit - visible from 6m under lighting of 4000lux
	<b>VISUAL ZONE INDICATION</b>	20 distinct zones
<b>PROGRAMMING</b>	Over 40 built in security programs	
	Remote via RS-232, Infrared Remote Control Unit, Bluetooth™ or Ethernet 10/100 base T interface	
	<b>SECURITY LEVEL</b>	International Standard (IS) command
	Chip card	
	Local by Control Unit alphanumeric display and keyboard	
Programming and chip-card access protected by user and super-user passwords		
<b>OPERATIONAL FEATURES</b>	Quick reset time as short as 0.2 seconds for high throughput rate	
	Very high detection speed (up to 50 ft/sec.)	
	Built-in operational and technical functional verification	
	One-touch key reading of inbound, outbound and Security Level Data	
<b>INSTALLATION DATA</b>	Automatic synchronisation between two or more metal detectors with distance as close as 12" (30 cm) without the use of external cables	
	Built-in floor sensitivity adjustment function	
	Automatic Installation function (OTS)	

## Environmental Data

- **POWER SUPPLY** : 100...240V- -10/+15%, 47...63Hz, 70 VA max
- **OPERATING TEMPERATURE** : -4°F to 158°F [-20°C to +70°C]
- **STORAGE TEMPERATURE** : -31°F to 158 °F [-35°C to +70°C]
- **RELATIVE HUMIDITY** : 0 to 95% (without condensation)

## Certification and Compliance

- Complies with and exceeds the applicable Standards for Law Enforcement and Correctional Facilities
- Fully compliant with, and exceeding, the NIJ-0601.02 Standard
- Compliant with the applicable electromagnetic Standards on Human Exposure and Pacemaker Safety
- Compliant with applicable International Standards for electrical safety and EMC
- Harmless to magnetic media (floppy disks, tapes, etc.)

## Comprehensive support

CEIA USA PROVIDES FULL OPERATIONAL AND TECHNICAL TRAINING SUPPORT BY CERTIFIED PERSONNEL EITHER AT CEIA USA FACILITY OR AT CUSTOMER PREMISES



- phone technical support
- in-house and on-site repair/ services
- standard and custom training



CEIA USA Ltd - 9155 Dutton Drive, Twinsburg, OH 44087

Phone: (330) 405 3190 - Fax (330) 405 3196 - e-mail: security@ceia-usa.com

[www.ceia-usa.com](http://www.ceia-usa.com)

Call Toll-Free 888-532-CEIA

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