

Infrared proximity detector for the Marantz® DV4001P player

Technical Data

Features

- **Passive Infrared Motion triggering of DVD,CD-DA, VCD presentations**
- **Ultra low power consumption from the connected player**
- **Simple connection to Marantz® DV4001P player serial (RS232) port**
- **High efficiency, ultra low power, Infrared detection element with in-built fensel lens and 5metre range**
- **10second timer ensures reliable pedestrian detection**
- **Enclosure lugs provide simple secure fixing**

Description

The DVD-MSPRX interface connects to a Marantz® DV4001P player and controls the playback of the inserted media.

The DVD-MSPRX emulates a standard external serial control device by issuing a PLAY command whenever the motion of a passer-by is detected. Multiple PLAY commands are inhibited with an in-built timer that prevents the DVD-MSPRX from issuing another PLAY within a 10second time frame. The Infrared sensor has an in-built fensel lens which gives the DVD-MSPRX a range of up to 5metres in front of the device, preventing unnecessary media playback.

DVD-MSPRX detector

Firmware revision 1.00



Applications

The DVD-MSPRX is primarily for use within a kiosk environment where a DVD player system is used to provide POS and EPOS advertising.

DVD PERIPHERALS

Selection Guide

Description	Part Number
Standalone DVD Infrared proximity detector	DVD-MSPRX
Individually boxed product	Order Option #01 with the above referenced part number. The product shipped in a box, including this DVD-MSPRX data sheet.

Note: All products are subject to availability; normal despatch is 10 working days following order date.

Power requirements

The DVD-MSPRX range are powered from the serial port RXD line of the connected HD-DVD player. The maximum current draw is 6mA.

Proximity sensing element

The DVD-MSPRX is fitted with an Infrared sensing element. This element detects the change in Infrared radiation a passing human body exhibits, triggering the DVD-MSPRX internal circuitry to issue a PLAY command to the connected DVD player.

The sensing element has a useful range of approx. 5 metres mainly due to the in-built fensel lens.

DVD-MSPRX interface

The DVD-MSPRX interface connection is a standard DB9 female as specified within the DV4001P player specification. All I/O is RS232 and TTL compatible.

Player control protocol

The DVD-MSPRX communicates with the player using the Marantz player serial control protocol **.

Automatic power-up

The DVD-MSPRX features automatic power-up control for applications that are controlled by a mains time-switch or a staff member. Under normal operation the player, when mains power is applied, will enter standby mode until the power button is pressed. With the DVD-MSPRX connected the power button is automatically activated five (5) seconds after mains power application and the inserted DVD starts playing. This function allows all in-store/gallery/exhibition players to start without staff intervention.

DVD-MSPRX function

After the DV4001P player has been switched on, the DVD-MSPRX waits for 30 seconds before activating itself ready for detection.

As soon as a passer-by moves within range of the DVD-MSPRX the unit immediately sends a PLAY instruction to the player, it then disables itself for 10 seconds to prevent multiple PLAY instructions from being sent.

DVD-MSPRX interface

Function	DB9 Female
RXD	3
TXD	2
Ground	5
All other connection are N/C	

DVD Media Authoring Notes

When authoring DVD media for use with the DVD-MSPRX the following requirements should be adhered to:

- The inserted disc must be in the STOP condition for the DVD-MSPRX to start PLAY, therefore, NO auto-start command must be authored on the media.
- THE DISC MUST BE LAID OUT AS ONE TITLE CONTAINING THE VIDEO PROGRAM WITH NO RETURN TO BEGINNING (LOOP COMMAND) AT THE END.

Electrical Characteristics (T_A = 25°C Typical)

Parameter	Minimum	Maximum	Units	Notes
Supply Voltage (RXD)	-4.5	-5.5	V	
Supply Current	-	6	mA	
Proximity detector time-out	10	-	seconds	
Proximity detector warm-up time	30	-	seconds	
TXData high level	GND	0.8	V	
TXData low level	2.4	VCC	V	

Absolute Maximum Ratings

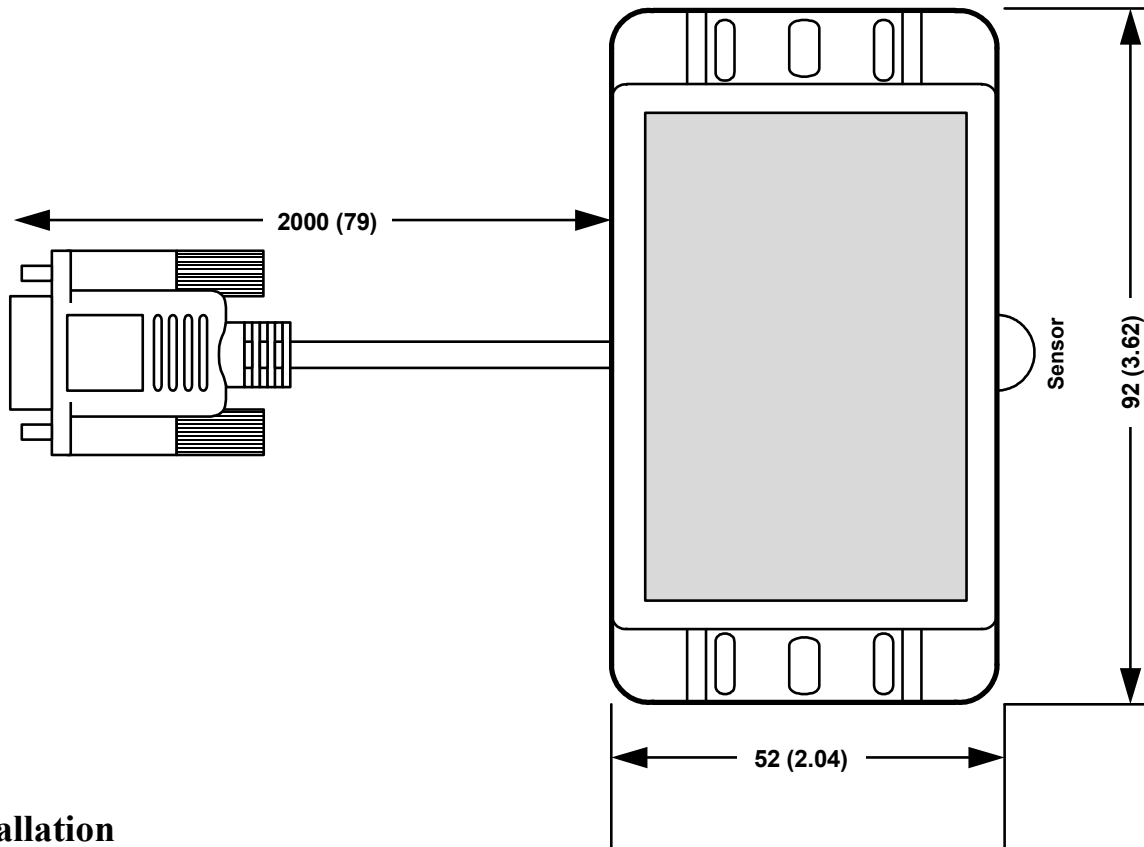
Parameter	Minimum	Maximum	Units
Supply Voltage (RXD)	+0.5	-6.0	V

Environmental

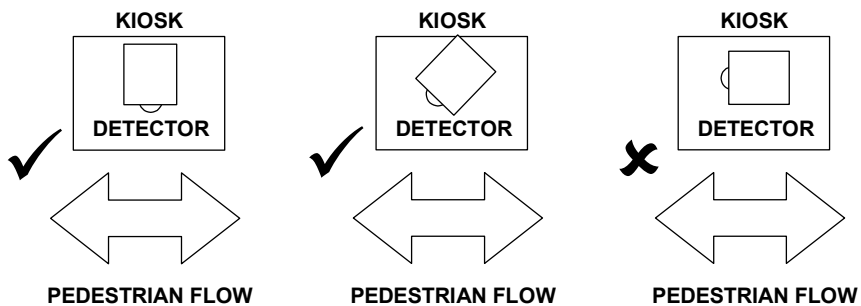
Parameter	Minimum	Maximum	Units
Operating Temperature	0	70	°C
Storage Temperature	-10	80	°C
Humidity	0	80	%
Dimensions	See below		
Weight	100g		
Immunity & emissions	EMC compliance to 2004/108/EC		

** See Marantz serial communications technical specification for more information.

Mechanical Specifications – Units millimetres (inches)



Installation



1. Sighting of the DVD-MSPRX is critical if a reliable installation is to be provided. The unit should be fixed 45 - 90 degrees to the direction of pedestrian flow so that reliable detection is made.
2. Insert the flying lead into the RS232 IO connection on the Marantz DV4001P player.
3. Switch ON the Marantz DV4001P player at the mains and wait five seconds for the player to power-up. (Note: the DVD may play at this point so press stop)
4. After 30 seconds, sensor stability time, the DVD-MSPRX will issue a PLAY instruction to the player whenever a pedestrian is detected. A 10 second disable period is awaited after each PLAY instruction to prevent multiple triggering.

Notes:

- The PIR sensor should be pointed away from fluctuations in infra-red level e.g. drafts, curtains, windows, heaters, fans etc.
- The detector has a range of approx. 5metres (16 feet) but placing the unit behind a piece of Perspex or glass to reduce detection sensitivity can reduce this range. This is recommended when used in a kiosk environment.
- The sensor lens should never be touched, as this may leave a grease deposit that could cause poor operation.



WEEE Consumer Notice

This product is subject to Directive 2002/96/EC of the European Parliament and the Council of the European Union on Waste of Electrical and Electronic Equipment (WEEE) and, in jurisdictions adopting that Directive, is marked as being put on the market after August 13, 2005, and should not be disposed of as unsorted municipal/public waste. Please utilise your local WEEE collection facilities in the disposition and otherwise observe all applicable requirements. For further information on the requirements regarding the disposition of this product in other languages please visit <http://www.designersystems.co.uk>



RoHS Compliance

This product complies with Directive 2002/95/EC of the European Parliament and the Council of the European Union on the Restriction of Hazardous Substances (RoHS) which prohibits the use of various heavy metals (lead, mercury, cadmium, and hexavalent chromium), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).


Declaration of Conformity

Apparatus name / model number DVD-MSPRX

Conformity via Generic Standard EN50081-1
Generic Standard EN50082-1

Conformity criteria For use only within commercial, residential and light industrial applications

We certify that the apparatus identified above conforms to the requirements of Council Directive 2004/108/EC & 2006/95/EC

Signed.  **Date** 16/7/07

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Description of apparatus DVD control device

Having made this declaration the CE mark is affixed to this product, its packaging, manual or warranty.

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