HOME CAGE ACTIVITY SYSTEM
V1.0

Home Cage Activity System
Version HCA1.0

Enter LogOn ID

Enter Password

Proceed
EXIT

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Coulbourn, Inc.
Allentown, PA
USA

Board Type: PCI

Board Number: 1

INSTALLATION GUIDE
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INTRODUCTION

The Infrared Motion Activity System is designed to monitor the activity movement of up to 64 subjects simultaneously. The infrared sensor detects movement by sensing the infrared heat field produced by the subject. Infrared heat sources can be easily reflected from many surfaces, so it is extremely important that two cages are not placed face-to-face in close proximity to each other, and that there is no movement in front of the cage while a session is in progress.

When used in a standard home cage rack system, it is important that the walls between cages are solid. Infrared cannot be detected through solid walls. If your cages are constructed of Plexiglas, it will be necessary to cut an opening on the front of the cage.

The system is typically used to monitor activity in the subject’s home environment and is capable of acquiring data continuously for up to 22 hours. The infrared sensors will detect activity in three axes (x, y, and z), unlike home cage photo beam sensor systems where only activity in a single axis is detected. A complete system requires an IBM-AT or compatible computer and the following components:

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HARDWARE INSTALLATION

Follow the instructions included with the PCI-3 card for installing the Measurement Computing PCI Card. Install the PCI Drivers BEFORE inserting the PCI card into the computer. Once the PCI card is installed be sure to run Instacal one time to complete the installation. Then connect the PCI cable that is included with the PCI-3 Kit to the H65-01 Home Cage IR System Controller.

To install an 8-Channel Home Cage Infrared Motion Sensor Interface (H65-08), be sure the power to the H65-01 Home Cage Infrared System Controller is off. Connect the cable of the H65-08 to the first connector of the H65-01. Subsequent H65-08 8-channel interfaces are connected to the remaining connectors on the H65-01.
INSTALLATION OF THE H65-01 INFRARED MOTION SENSORS

Loosen the mounting screw (6-32 BHMS) of the mounting bracket. With the sensor mounting slot in the down position and away from the cage, slide the double panels inside the upper lip of the cage from either side. Then slide the bracket to the center of the front of the cage and tighten the mounting screw.

Loosen the thumbscrew on the rear of the sensor and slide the sensor into the slot of the mounting bracket with the thumbscrew down and the lens facing the cage. The rear edge of the sensor is designed to fit directly over the mounting bracket. Once the sensor is in proper position in the mounting bracket, tighten the mounting screw on the rear. Connect the sensor(s) cable to the input(s) of the 8-Channel Home Cage Infrared Motion Sensor Interface (H65-08). The input to the H65-08 interface box will determine the position of the sensor or cage number.

It is not necessary to remove the mounting brackets when cleaning the cage and/or cage rack. However, the infrared sensors must be removed prior to cleaning.

SOFTWARE INSTALLATION

The software is loaded onto the system in two steps. Place the CD in the disk drive, then select “Start” and choose the Run option. Browse to the CD, select the “DISK1” folder, choose “Setup.bat” and then click the OK button. Then browse to the “DISK2” folder on the CD from the Run option, choose “Setup.exe” and click OK. Follow the onscreen instructions to complete the installation. The application will be stored as a subfolder of Program Files named HCA10. Start program execution by running HCA10 from the application folder (Start > All Programs > hca10 > hca10). The first screen displayed is the one shown on the cover page of this document.

ADMINISTRATOR/SUPERVISOR

The first logon must be by the person assigned as the program Administrator. The Administrator’s only function is to provide logon IDs for up to three Supervisors. Refer to the HCA-10 Home Cage Activity System Administrator & Supervisors Manual.