



GEMINI™ Avoidance System

"Designed by Scientists for Scientists"

Active/passive avoidance testing for rats & mice

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SDI's GEMINI™ Avoidance System is designed for active and passive avoidance testing in both rats and mice. GEMINI is available in two configurations: Shock or Shock and Airstim. Conversion from rats to mice is possible in less than five minutes. GEMINI provides maximum flexibility in test paradigms by utilizing features such as non-heating LED house lights, laboratory standard cue lights, user selectable auditory stimuli, infrared photobeams and a quiet auto door.

GEMINI can be configured with up to 8 stations for testing large subject groups. Each station starts and runs independently making continuous testing quick and easy. Supported avoidance paradigms are, Passive Avoidance (Classic, Trials to Criterion, Continuous, Active Avoidance (Trials to Criterion, Continuous) and Learned Helplessness.

GEMINI takes full advantage of the Windows® operating system with data organization and management software that combines power and flexibility with ease of use. GEMINI utilizes a database to store all study results in a single file (table) format ready for export. This eliminates the need to cut and paste multiple files together in order to export study results to statistical packages.

Features & Benefits

- » Cues include non-heating LED house lights, laboratory standard cue lights, user selectable auditory stimuli and quiet auto door
- » Configure up to 8 stations for rapid testing of subjects
- » Independent station start makes continuous testing quick and easy
- » Easy-to-use, menu-based software assure reliable and accurate data
- » All study data is stored in a database, providing quick and easy export
- » Ability to run the system on a laptop or desktop computer

GEMINI™ System Components

The GEMINI Avoidance System includes the following:

- › Active and passive avoidance software
- › Test stations with 2 compartment enclosures and grid floor for rats (or mice), 16 photobeams, 2 "house" and 2 "cue" lights and 2 speakers for sound
- › Connection to computer sound card
- › SDI Animal Shocker with 8 unique outputs
- › Auto door (for passive avoidance testing)
- › USB Interface
- › All necessary cables and power supply

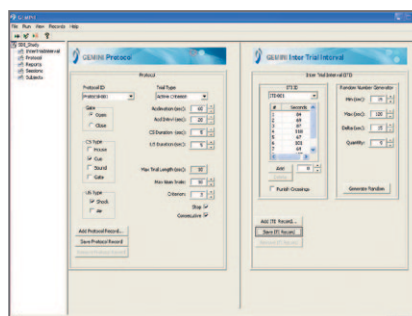
GEMINI™ Components & Accessories (optional)

You can add a variety of other SDI accessories and components to your GEMINI system including:

- › SDI Air Puff Stimulation Unit (AIRSTIM™)
- › Additional test stations
- › Mouse passive avoidance start box
- › Grid floors (for rats or mice)
- › Isolation Cabinet

GEMINI TEST STATIONS

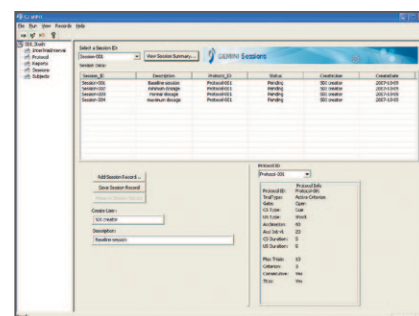
The GEMINI test station is a two-compartment enclosure with an interchangeable rat or mouse grid floor, 16 photobeams for precise location of the animal, two "house" and two "cue" lights, two speakers for sound, Auto Door and the SDI animal shocker - a solid state, feedback-controlled, constant current shocker with 8 unique outputs. SDI's GEMINI shocker is the only one of its kind to display the actual current being administered to the subject. Photobeams may be manually disabled to vary the required compartment entry distance.



GEMINI Protocol Display

GEMINI SOFTWARE

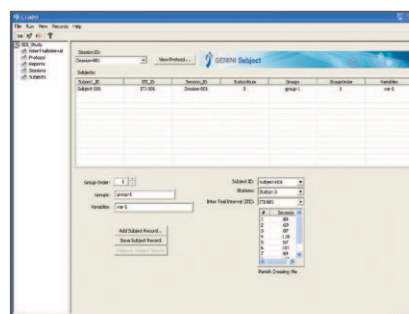
GEMINI's easy to use menu-based software offers both passive avoidance (Classic, Trials to Criterion, Continuous) and active avoidance (Trials to Criterion, Continuous) and Learned Helplessness, full test diagnostics, runtime data display and a fully formatted report. The GEMINI data is stored in a Microsoft® Access data base for easy transfer to other statistical programs.



GEMINI Sessions Display

USER-SELECTABLE TEST PARAMETERS

User-selectable passive avoidance testing parameters include subject identifiers, length of acclimation period, CS selection (house light, cue light, sound or any combination) and duration and US delay and duration. Delaying the US for a time after the Auto Door closes eliminates the association of the Auto Door and US by the animal providing a better learning experience. For active avoidance, you may select subject identifiers, number of trials, CS/US interval, inter-trial intervals (either fixed or randomly generated), length of acclimation period, maximum shock duration, stimuli to be used (house light, cue light, sound or any combination) and the option to punish inter-trial crossings. In either paradigm the user can select either white noise or a specific frequency of sound to be used for the sound CS.



GEMINI Subject Display

Power. Flexibility. Ease of Use

GEMINI System Specifications

Dimensions	Outside: 26" (W) x 13" (D) x 17 ¼" (H) Inside: 9 ½" (W) x 8" (D) x 8" (H) (each side)
Weight	35 lbs.
Material Composition	Acrylic and aluminum, stainless steel (Gate)
Maximum # Stations	8
# of Photobeams	16 infrared per enclosure
Photobeam Spacing	1"
Standard Cable Length	16 feet
Certifications	CE
Stimuli Options	Cue lights, house lights, sound, shock, gate
Color Options	Black
Stainless Steel Grids	28 for rats, 62 for mice

GEMINI COMPUTER REQUIREMENTS

Windows XP/Windows 7 compatible computer system with USB connection. Minimum disk and memory sizes specified to support Windows XP/Windows 7 are acceptable.

SDI CONFIGURED COMPUTERS

SDI offers high performance Cobalt™ Configured Computers that are pre-installed with the Windows® operating system and applicable SDI software. If required, SDI will pre-install PC Interface cards and all relevant drivers. Each computer is fully tested with your system prior to shipment. When your SDI system arrives, all you have to do is unpack it, attach the cables and begin testing.

SDI LEARNING TEST SYSTEMS

- › Barnes Maze
- › Water Maze
- › Freeze Monitor™
- › GEMINI™

FOR MORE INFORMATION

To learn more about SDI behavioral testing systems, please visit www.sandiegoinstruments.com. If you have any questions or would like to request a quote please call (858) 530-2600 or email us at sales@sandiegoinstruments.com.

To view the online GEMINI overview presentation, please visit: sandiegoinstruments.com/presentations.



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