NextPlay LTD.
Entertainment Technologies

Active Arena®

(Trivia Vote & Game System)

Manual

USA Version

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Safety and EMC

International & National Standards Conformance

When installed and operated according to the instructions in this manual, Active Arena® systems are designed to meet the applicable Safety and Electro Magnetic Compatibility standards for any country in which they are used.

Maximum operating voltages

Do not apply more than the indicated voltage on the system's voltage supplier or on the UPS supplied by NextPlay LTD.

Dangerous Environments
Do not operate in the presence of flammable gases, fumes or water.

Warning:
Removing the lids of either the system's enclosure or the VG-Pad is not allowed. Removing one of the above will automatically end the warranty insured by NextPlay LTD. on the entire system.

FCC

The FCC Wants You to Know

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician.

FCC Warning

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

Overview

Active Arena® is a computerized system that controls a number of personal operating stations.

The system activities are displayed through a projector or any other type of VGA supported screen connected to the main computer. An amplification system produces the background sounds that accompany the system. The amplification system connects to the computer.
The system operates by the Arena Activities 2.X program, or a later version.
When operating the system, the program will operate automatically in its initial state: exiting the system is not possible unless the whole computer is turned off.

Hardware

Main computer

The main computer is a standard Windows XP operated PC.
The computer contains a graphics card, control card, network card, a keyboard & mouse entrance and an optional printer exit.

The entire system's hardware connects to the main computer through connectors found on the back panel of the computer. All the connectors are standard connectors for PC.

Back panel
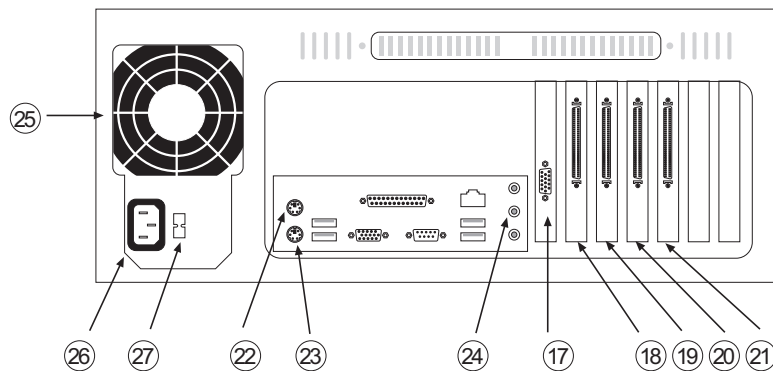
17… VGA connector exit
22… Mouse connector
23… Keyboard connector
24… Standard audio connector exit
25… Ventilator

26… High voltage socket
27… Voltage regulator
28… COM 1 (RS232) Connector
29… LAN connector

Front panel
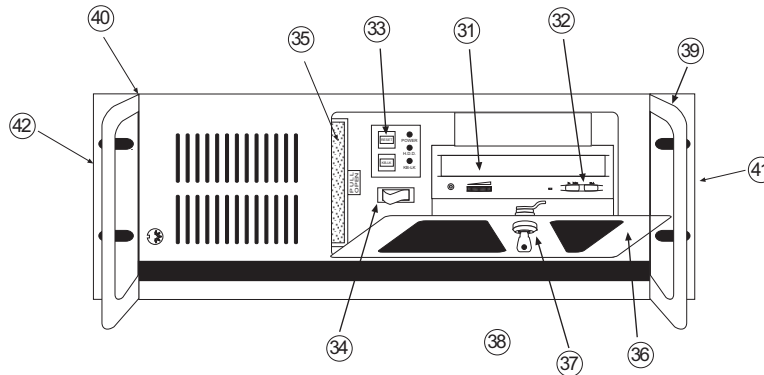
31… CD – ROM for installation disks	35… Ventilation filter
32… Installation disk entrance/exit button	36… Protective shield
33… Reset button	37… Protective shield lock
34… Power button	39-40 Gripping handles
41-42 Gripping panels for placing in a communications box	

Wireless system

The wireless units system is based on a two-way wireless unit called **VG-Pad**.

The information transports from the VG-Pad to the PC and back to the VG-Pad by wireless control device called **VG-Base**

The VG-Base is wired to an adaptor called **Tricon 81,** which is wired to the COM Port (RS232 connector) of the PC.

Any VG-Base can wirelessly communicate with 100 VG-Pads. If more then 100 VG-pads are needed, a data cable should connect a number of VG-Bases.

General Diagram
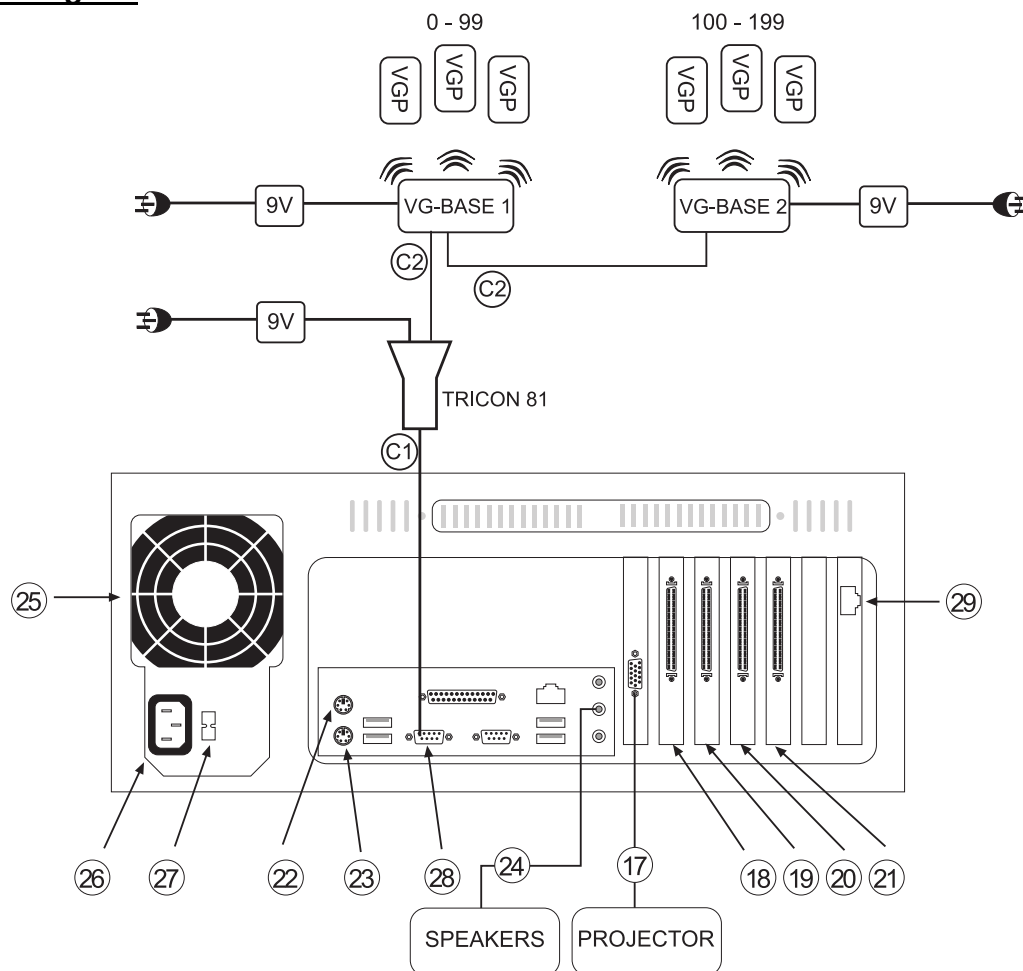
Wireless Units: *VG-Pad* (Vote & Game Pad)

The remote is divided into 4 large and easy-to-operate keys enabling the majority of activities, plus 12 keys intended for various expanded activities, making the device extremely simple to operate by the nonprofessional user.

## Features and Capabilities

- Operation of up to 800 remotes in one territory or in parallel in a number of territories.
- Two-directional (sending information to and from) communication.
- LCD screen for the display of the participant's personal details or group or personal messages.
- Internal screen lighting.
- Sending replies with one click, for greatest ease of operation.
- Sending a multiple digit reply (up to 4 digits) that is simultaneously displayed on the personal screen.
- Internal menu from which the participant selects the desired orders, games, etc.
- Typing of personal password for user identification (ID, credit card, entry password).
- Personally adjusted screen guard that can be changed at any time.
- Beeper signal to prevent theft and to locate a lost device.
- Changing RF channels according to the environment.
- External battery charging.
- User battery status alerts on the personal screen and on the central computer.
- Modification of saved statements and menus at the stations, by a single software command, by wireless.

VG-Pad Diagram

Bottom view   Top view
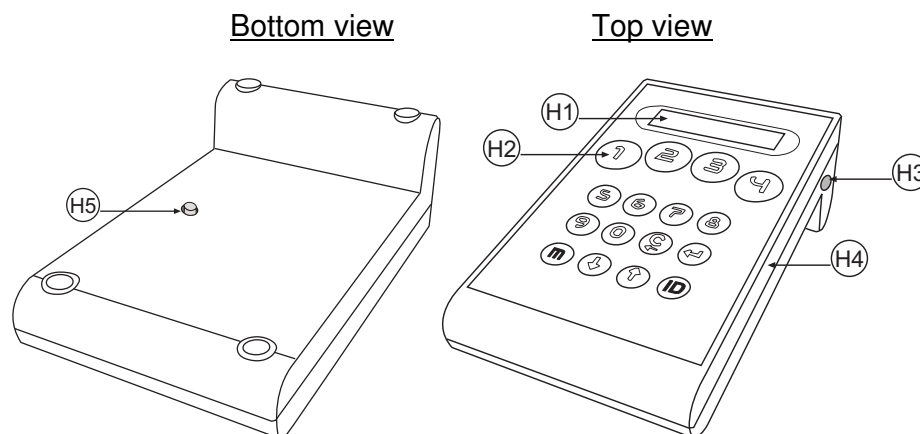
H1…   16X2 Characters LCD screen
H2…   16 Buttons Keypad
H3…   12V DC connector for battery charging

H4…   Plastic enclosure
H5…   VG-Pad Power button
H6…   internal 4.8V 1800MAH Battery

VG-Base

The platform consists of a central unit transmitting to the deployed remotes and transferring the information to a personal computer by means of a simple data transfer cable.

Features:
- Full control of receipt and dispatch of messages from the stations.
- Expansion possibility to control 100 to 400 remotes.
- Transmission and reception radius of stations – 150 feet in an open area.
- Transfer of data to a specific unit or to a group.
- Full communication with a help program on the computer, enabling utilization of all the system's capabilities.
- Synchronizing of RF channel with the end stations.

VG-Base Diagram

Rear view   Top view
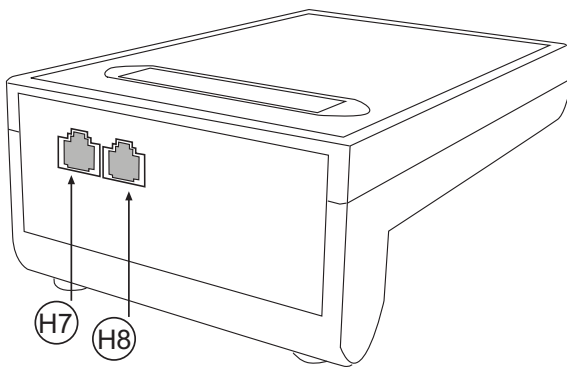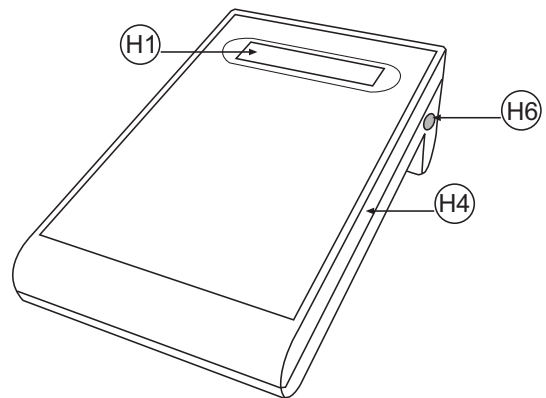
H1…	16X2 Characters LCD screen
H4…	Plastic enclosure
H6…	VG-Base **9v** DC connector
H7-H8.	RJ-11 adaptor for connecting data wires to the PC and other VG-Base units.

Tricon-81 adaptor
Unique adaptor connected between VG-Base and PCs RS232 port.
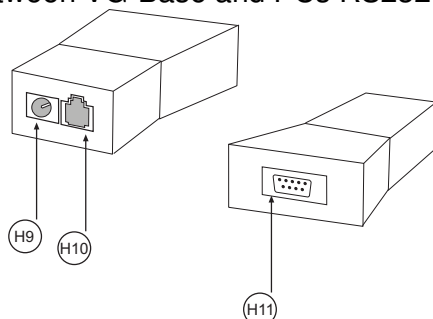
H10… **9v** DC connector
H11… RJ11 connector for connecting the VG-Bases data wire
H12… D-type connector for connecting the PC-RS232 data wire

VG-Pad battery Charger:
Battery voltage – 4.8v
Battery Capacity 1800mA
Battery Type – NMh

9V DC adaptor (not included):
Standard 115v to 9v adaptor 300mA
Used for VG-Base and Tricon-81.

Cables (for wireless system):

Cable C1 – 9 wires cable with D-type connector (Cross standard RS232 cable)

Cable C2 – 5 wires data cable with RJ11 connector (6 pins)

Cable C5 – standard 110/220V Cable for PC.

Program managing options

There are a few program-managing options:
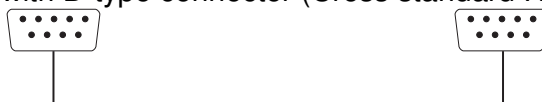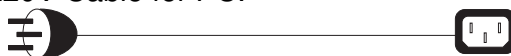
- Managing from another computer with LAN protocol
- Regular wireless VG-Pad defined as VG-Pad no. 000

Software

The installed software is the Arena Activities 2.X program, or a later version. The program operates the logic of the game based on the clients' wishes, according to the basic definitions dictated by the system.

The Arena Activities 2.X program is responsible for all the calculations of the game, dictating the graphics, controlling the output and input to the playing stations, playing the sound and controlling the added instruments, such as, computerized lighting and all the control and low voltage aids.

The Arena Activities 2.X program loads automatically when turning on the computer system and cannot be turned off.

Game Parts

1. Opening and dividing into groups
2. Demo question
3. Game rounds that include questions, and passages
4. Declaration of the winners (players and groups)

Opening and dividing into groups

- Welcome movie, including instructions in order to divide into groups
- The dividing is not time limited, and will continue after an order of the operator

Demo question

- Graphical and vocal, similar to the game round graphics

Game Rounds

- Round declaration – graphical and vocal
- Each round has two parts (multiple choice question and right/wrong questions)
- Every two rounds are separated by a movie passage
- The graphics of the game is divided into a number of areas (see drawing)

Declaration of the winner

- Graphical and vocal declaration of the winner in the round
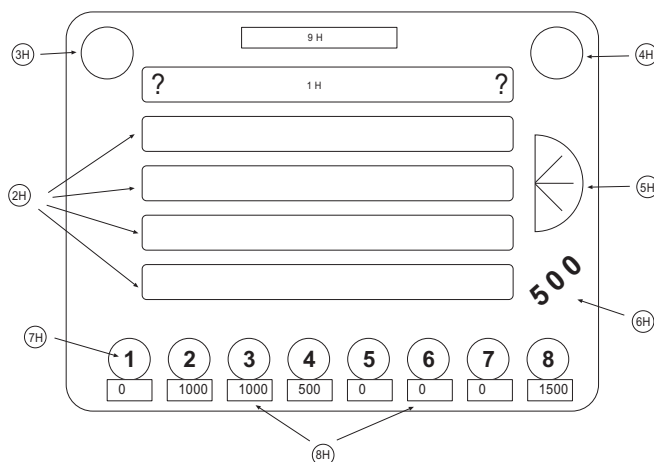
1H… Display of the question
2H… Display of the possible answers
3H… Display of the question's number

4H… Displaying the amount of time left to answer
5H… Degree of difficulty of the question
7-8H… Display of leaders

Introduction of the question

- Displaying 4 possible answers
- Counting the amount of time left in a numeral or graphical form
- Checking the input, from the stations
- Displaying the results in a numeral or graphical form
- Declaration of the right answer

Scoring logic

- Every right answer credits both the player with an added amount of points, and his group
- A player who answers after the given reply time, will not receive any points
- A player who answers incorrectly will not receive any points
- The winners of the game are in two areas. The winning player is the one who has gained the highest score, and winning group is the group that has gained the highest score.
  - ☑ The winning player will not necessarily be part of the winning group
- In case of a tie, establishing the winner will be by the number of correct answers
- In case of a tie in the amount of correct answers, the winner will be established by the total amount of reply time

Installation

Installing the computer enclosure inside the communications box

The computer enclosure is 19" standard for communications boxes.
The enclosure should be placed on a rail, which is at least 4U tall (U= 1.75").
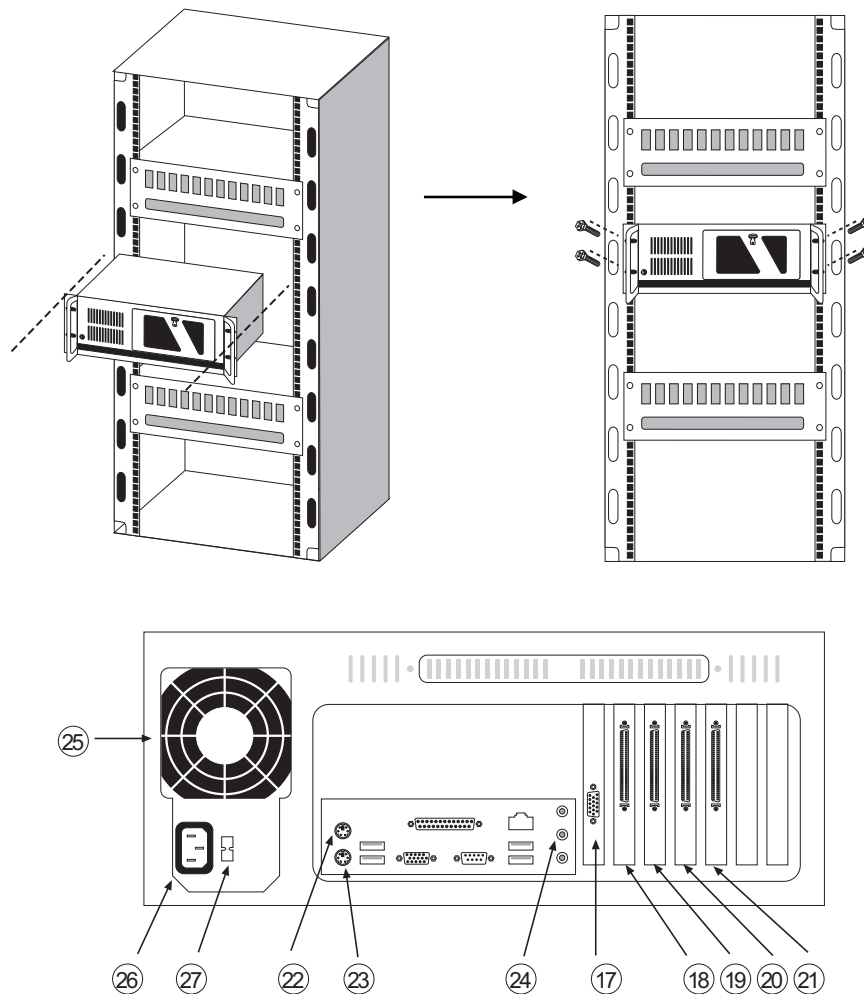
Basic computer wiring:
1. Connect the 110/220V power cable (C5) to the 110/220V entrance of the PC (26)
2. Please pay attention to the current entrance voltage marked on the PC switch (27)
3. Connect the PC mouse to the mouse connector on the PC back panel (22)
4. Connect the PC keyboard to the keyboard connector on the PC back panel (23)
5. Connect the amplifier system to the PC audio output (24)
6. Connect the display device to the VGA connector on the PC back panel

Installing wireless units system

General diagram

Placing the VG-Base:

Rear view

Top view
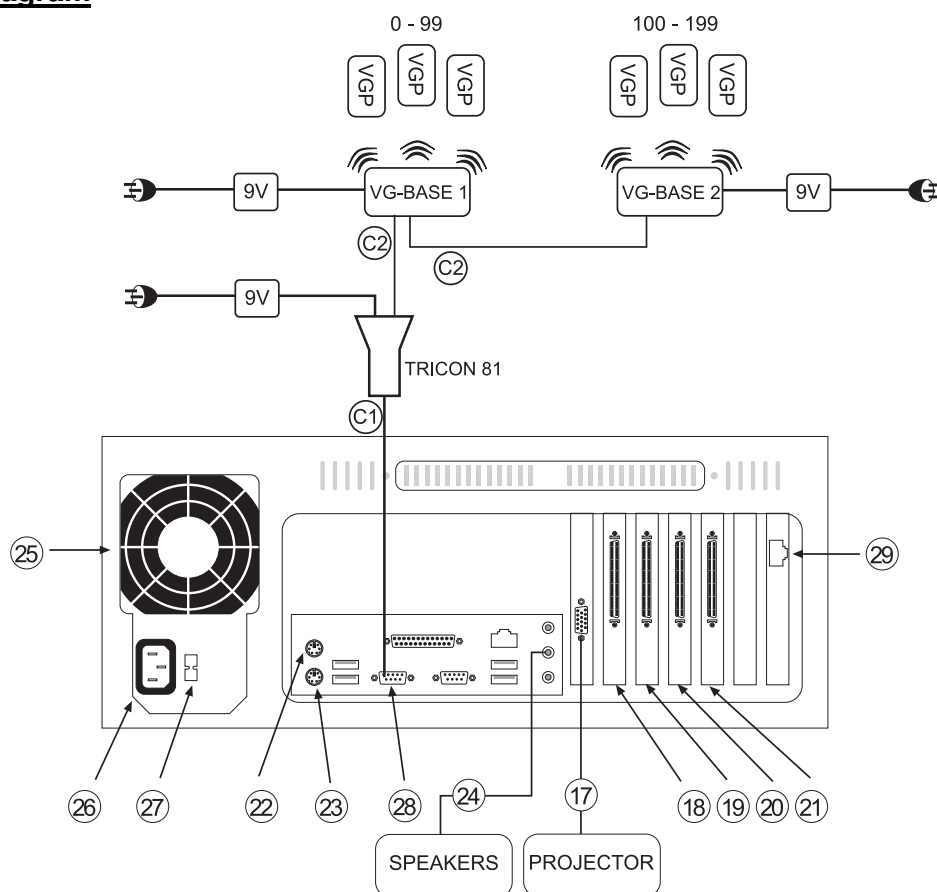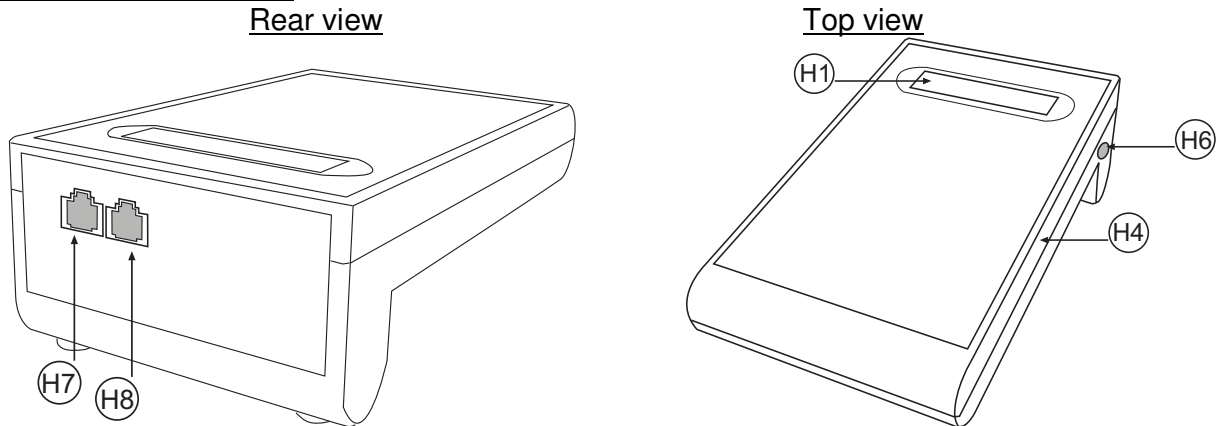
- The VG-Base should be placed where the RF reception will be maximal.
- The optimal reception range is 4 meters although the reception ranges between 2-100 meters. Depending on the site limitations
- The VG-Base should not be placed less than 2 meters from the VG-pads. Placing it in a smaller range than specified will damage the reception and transmission.

☑ The recommended location is on the ceiling of the site above the players.

☑ It's recommended not to place the VG-Base close to loud electronic noise sources such as sound speakers.

After placing the VG-Base, connect it to a 9V DC adaptor connected to the site's 110/220V electricity net.
The adaptor should be connected through the DC connector (H6).

☑ If a number of VG-bases are needed, they should be placed more than 2 meters apart

After connecting it to the 9V DC adaptor, an ID representing the serial number of the VG-base should appear on its LCD screen (H1).
ID=1 represents VG-Base communication with VG-Pads no. 0-99.
ID=2 represents VG-Base communication with VG-Pads no. 100-199 etc'.
In addition a channel number representing the RF channel of transmission and reception will appear. The VG-Pads communicating with the specific VG-Base will be set accordingly.

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Placing the Tricon-81 adaptor:
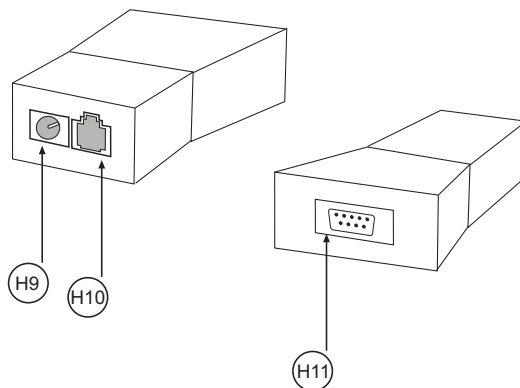
The Tricon-81 adaptor should be placed stably close to the PC.
After placing the adaptor at a stable spot, connect it to a 9V DC adaptor, connected to the site's electricity net, through its DC connector (H6).

Wiring the wireless system:

Cable C1 – 9 wires cable with D-type connector (Cross standard RS232 cable)

Cable C2 – 5 wires data cable with RJ11 connector (6 pins)

Connect the PC to the Tricon-81 adaptor with a cable (C1) that connects the PCs RS232 adaptor (28) and the D-type connector of the Tricon-81 (H11).
Connect the Tricon-81 adaptor and the VG-Base by a data cable (C2) which connects the RJ11 on the Tricon-81 adaptor (H10) to one of the RJ11 connectors of the VG-Base (H7-H8).
If the system requires more than one VG-Base, a cable (C2) from the free RJ11 of the first VG-Base should be connected to one of the RJ11 connectors of the next VG-Base and so forth to the third and fourth.

Charging the VG-Pad battery:

The charging will take place inside cases, provided with the Pads. A power supplier, with 25 connecting cables will charge each case. Every connecting cable will connect to the DC adaptor (H3) of a pad.

The cases and the power suppliers will be stationed outside the interactive hall, in designated cabins. The cabins will be stationed in the control room. The suppliers should be connected to the site's electricity net, 115v, and powered on (by a power switch). Each supplier is set near the case it charges.

☑ There is no significance to the order of the VG-Pads.

VG-Pad installation:

Top view   bottom view
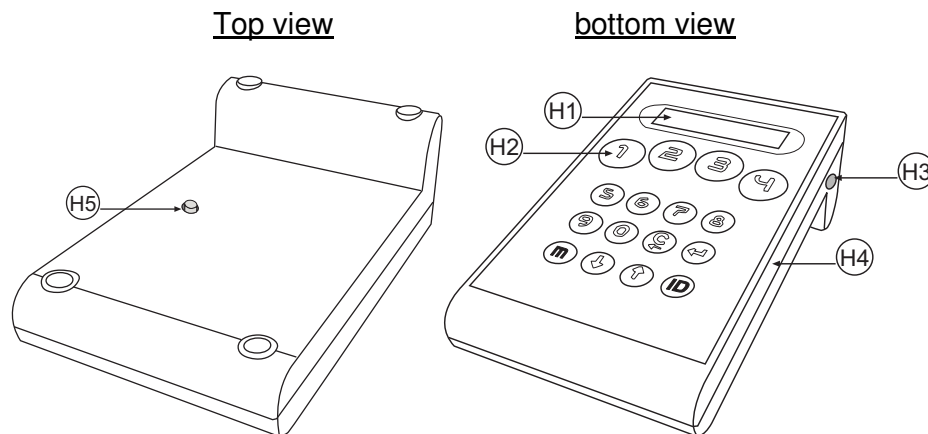
There are a number of definitions on the VG-Pad units that should be set and will adapt the units to the system.

The definitions are made by Technician mode.

In order to enter such a mode, press and hold the "M" button on the keypad of the VG-Pad (H2) while turning on the VG-Pad with the power switch at the rear of the unit (H5). Don't let go of the "M" button until the unit is set at Technician mode (appears on the LCD screen (H1)).

The technician mode has four stages. Skip between stages by pressing the "ENTER" button on the VG-Pad keypad.

First stage: VG-Pad number selection
Choose the unit's number from 0-999 with the number buttons on the keypad. Shift by using the arrows.
In your case, the VG-Pad should be configured to 1-99. The VG-Pad configured 0 is used as the master pad, to control the game.
After selecting the VG-Pad number press ENTER.

Second stage: RF channel selection:
Choose the transmission channel according to the channel showing on the relevant VG-Base screen (VG-Base with ID=1 represent VG-Pad units 0-99 etc.)
The RF channel should be 1.
After selecting a channel press ENTER.

Third stage: Pad Mode
Choose the transmission mode according to the channel showing on the relevant VG-Base screen (VG-Base with ID=1 represent VG-Pad units 0-99 etc.)
In your case, the transmission mode should be 2.
After selecting the pad mode press ENTER.

Fourth stage: Battery status check:
This stage shows the status of the VG-Pad battery status on a scale from 670-870.
A battery status under 780 should not be operated.
To exit this stage press ENTER. The unit will turn off.

In order to shutdown a VG-Pad opened in regular mode, press the following sequence:
M+ID+1+1+1+1

☑ **Important note: The VG-Pads are programmed to turn off after 8 hours of no use, to save battery charge.**

Routine check-ups and problem solving

Routine hardware & software check ups

Daily check ups

In order to make sure that the system is working properly, proper functioning must be checked at the beginning of every day by starting a demo game, and pressing buttons randomly.

Identifying and solving problems

Symptom	Possible problem	Solution
No response of the VG-Pads to the program.	Failure of the VG-Base unit	Make sure the power is on, by checking the LCD display of the unit (H1)
		Resetting the VG-Base unit by disconnecting and re-connecting the power supply of the unit (H6)
		No display on the LCD screen. Contact the manufacturers' to replace the VG-Base unit.
	Failure of the connector connected to the RJ11 socket in the VG-Base unit (H7-8)	Disconnecting and re-connecting the cable (H7-8)
	Failure of the connector connected to the RJ11 socket in the Tricon-81 (H10)	Disconnecting and re-connecting the cable (H10)
	Momentary failure in the operating system	Resetting the system by pressing the reset switch on the computer's front panel (33)
	Failure of the VG-Base power supply unit (the red indicator is off)	Replace the power supply unit
	Failure of the Tricon-81 power supply unit (the red indicator is off)	Replace the power supply unit
No response of the program to the VG-Pad.	Momentary failure in the operating system	Resetting the system by pressing the reset switch on the computer's front panel (33)
Low battery status of VG-Pads	Failure of one of the power suppliers	Check the supplier in the cabins. In case of failure, contact the company for a replacement.
VG-Pad doesn't turn on	Low battery status	Re-connect the VG-Pad to the power supply.
No sound	Failure of the operating system.	Resetting the system by pressing the reset switch on the computer's front panel (33)
	Failure of the amplification system.	Test the amplification system according to the manufacturers guide

Symptom	Possible problem	Solution
	Failure of the connector connected to the sound connector in the computer's back panel	Disconnect and reconnect the relevant connector. Try replacing it.
No picture	Failure of the operating system	Resetting the system by pressing the reset switch on the computer's front panel (34)
	Failure of the connector connected to the VGA socket in the computer's back panel	Disconnecting and reconnecting the relevant connector
	Failure of the projector	Test the projector according to the manufacturers' guide

Overall failure

Symptom	Possible problem	Solution
Some VG-Pads turn off automatically	They were out of use for over 8 hours	The VG-Pads are programed to do so.
Game doesn't start	Failiure of communication between the ActiveArena computer to ShowControl	Turn off ActiveArena computer by pressing and holding the power switch (34), wait 5 minutes and turn it back on.
Smart light doesn't work		
Mouse Cursor appears in the middle of the game	The mouse connector is connected to the computer's back panel (22) and was moved	Disconnect the mouse from the computer and restarting the system by pressing the reset switch on the computer's front panel (33).
The system or the electrical system doesn't turn on	Electricity cable is disconnected	Disconnect and reconnect the cable; turn on the system by pressing the power switch (34) on the computer's front panel.
	The power supply of the local electrical network is disconnected.	Check the voltage of the socket with professional & safe means.
	Depreciation of the voltage supplier in the computer	Change the supplier (only with the help of a qualified technician from the company).

☑ After every test, repair or operation of the assistance program, restart the system by pressing reset on the computer's front panel (33).

Spare parts

In order to assure successive proper function of the system through the years, it's recommended to keep critical spare parts close to the system.

Changing parts

Changing parts is done only after receiving proper authorization from Next Play LTD., or a qualified technician in its behalf (Authorization will come in writing). Failure to uphold these terms will cause the loss of warranty given by Next Play LTD. for the system.
Part replacement will be done according to the instructions in this manual.
Part replacement will be done according to the problem solutions given in this manual
While changing parts make sure that, the system is turned off and is disconnected from the local electrical network.

Annex A

System Start up (every day!)

Turn on the system's computer by pressing the power button, located in the front panel of the computer.

The system will load automatically.

Press the "Trivia Theater" button on the panel inside hall, in order to turn on the projector and audio system.

Open all the VG-Pads with the power button on the backside of the units (H5), and check VG-Pads battery status. The battery status is displayed on turn on. The number that appears on the screen represents the battery voltage power. The battery check result should be between 670-870. A battery check result below 780 represents an empty battery. The recommended battery power is approximately 850 after charging.
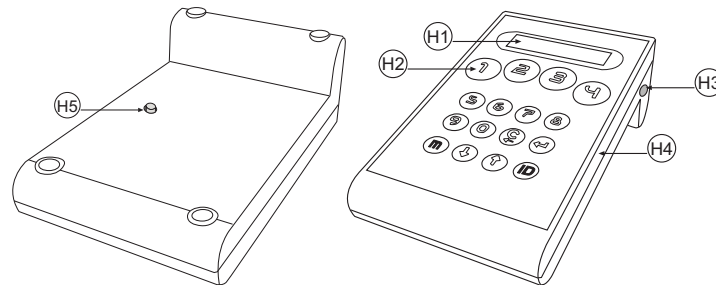
Turning off the system (every night!)

Plug all VG-Pad units to charging power, inside designated cabins. The units will turn off, and enter charging mode.

Turn off the trivia computer, by pressing and holding the power switch (34) for 5 seconds.