Wireless Interactive Keypad System (WIKS) User's Manual

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Introduction

This invention relates to an apparatus and methods implemented by software and executed by the host Personal Computer (PC) to interactively transmit and receive messages from a group of handheld Radio Frequency (RF) interface devices (typically support up to50 users simultaneously) in a classroom or training room environment.   The invented system including software modules, base station and handheld devices is called the Wireless Interactive Keypad System (WIKS). The handheld device is called the Wireless Interactive Keypad (WIK). The primary function of the WIKS is to facilitate an automated and paperless test held in the classroom. It can also be used to survey or prioritize opinions from group participants in a face-to-face meeting. A schematic diagram that illustrates the functional applications is shown in figure 1. More users can be supported at the expense of longer response time. The base station is connected to the host computer either through RS232 or through USB interface structure. The base station can also be controlled offsite through the Internet. The host PC software and base station serves as a central message broadcast and receives apparatus. The WIK receives messages from the base station and also transmit requested information from each user to the base station.

Computer based training and teaching becomes an important part of learning process for school students as well as corporate employees and executives. Face to face instruction in the classroom or conference room setting is still the most effective method. It allows direct teacher and student interactions and facilitates peer discussions.   To evaluate students' progress, quiz or survey becomes an effective means to provide feedback to the instruction. This new interactive apparatus can provide instructions, questions or comments to attendees and receive responses or question answers from attendees. A set of software that resides in the host computer or loaded through Internet can monitor test progress in real time and instantly analyze the responses and report group as well as individual results. This software technique not only saves instructor or facilitator time and effort to grade tests but also understands the strength and weakness of the class. The students get their confidential test results instantly after the test. This significantly reduces student's anxiety waiting for their test results.

Installation

The WIKS is very easy to install. The installation procedures are described in the following.

1. Install software into the host PC (The minimum requirement for the PC is 100 MHz and supports Window 98. The recommended PC speed is 400 MHz or above)

2. Plug in power for the base station
3. Double Click the "Triumph Technology" ICON
4. Enter <u>Class</u> and <u>Test</u> information (Comma Delimited format)
5. Click "START" to start the test or survey
6. Each student or participant gets one WIK (Wireless Interactive Keypad)
7. All students power on the WIK

Operation

1. Teacher distributes test questions paper (multiple choice or true/false) to each student
2. Each student answers his/her question through WIK
3. Press "Clear" when answer confirmed and validated by the host computer
4. Continue answering all the questions
5. When the test is completed for the whole class, his/her score for the test will appear on the WIK display
6. Turn off power and return the WIK to teacher