EXPLORER HARDWARE OVERVIEW

1. Introduction

The GameTech International Explorer, Figure 1-1, is a touchscreen, wireless handheld gaming player unit that communicates via 802.11abg WiFi with an onsite server. The server and associated equipment (i.e., the access points) are configured according to the specific jurisdictional requirements governing the location. Each specific configuration controls player unit operation to ensure that all units are in compliance. This product was defined to use in business environment; such as Gambling House.The device may not be marketed for home use.
Players purchase game-play items at a point-of-sale station and, to play Bingo, enter the card pack number on the keypad. To play other games, players enter a player ID number in the keypad. Players can use either the touchscreen or the keypad to enter data on the player unit.

Figure 1-1. Explorer hand-held gaming device; "win" LEDs surround the display

2. Specifications and hardware overview

The electronic platform in the Explorer includes a System On Module (SOM), which is a small form-factor computer. It utilizes a Freescale i.MX31 processor operating at 400 MHz, with 128 MB of SDRAM, and a 64MB NAND flash.

The SOM is mounted on a Baseboard PCB. All of the interface components and circuits, such as internal power supplies, various connectors, and battery recharging circuits, are also mounted on the baseboard.

The baseboard has an SD card slot for the 2GB SD card for the WIN CE 6.0 OS and the game application.

An IEEE standard 802.11a, b and g wireless module is installed in a second SD card slot. Two dual-band antennas are utilized for optimum wireless communication with the system, with each antenna being capable of reception and transmission at both 2.4 and 5 GHz. The two antennas provide 'diversity' for the RF signal path. One antenna may experience a nullification of the RF signal due to RF multipath, where the signal interferes with itself due to cancellation. In such instances the other antenna is likely to be unaffected.

The WiFi access points shall be set-up and configured by GameTech Int'l authorized personnel according the instructions for that equipment to ensure compliance with the specific RF regulations governing the installation location. The access points automatically control the player units' RF to fully comply with regulations for allowable 802.11 channels (RF frequencies) and transmit power. The players and hall operations personnel shall have no control over these parameters once the parameters are set.

Only GameTech Int'l authorized personnel are allowed to set up the WiFi client by accessing the technician menu to set the SSID, authentication mode, security mode, and to enter the security key or password.

WiFi "AdHoc" or peer-to-peer mode is not supported in the Explorer system.

NOTES

1. Operation of this device in the 5150 MHz to 5250 MHz range (802.11a) is restricted to indoor use only.
2. Changes or modifications not expressly approved by GameTech Int'l could void the user's authority to operate the equipment.
3. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.
4. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

The capacitive keypad, Figure 1-2, is backlit.

The full color display is a 10.2-inch LCD with an integrated touch screen. A molded, high impact polycarbonate front case is transparent so that the "win" LEDs are visible through the plastic without being exposed (see Figure 1-1 above).

Figure 1-2. Backlit capacitive keypad

The Explorer incorporates two high-capacity Li Poly rechargeable batteries for long playing time. Both batteries are mounted in slots on the back (see Figure 1-3). The player unit operates exclusively from these 'lap-top style' battery packs.

Battery charging is accomplished when the player unit is installed to its charging and storage crate. Discrete contacts make the electrical power connection between the crate and player units. The crate is powered from any standard 90-264VAC / 50-60Hz power source.

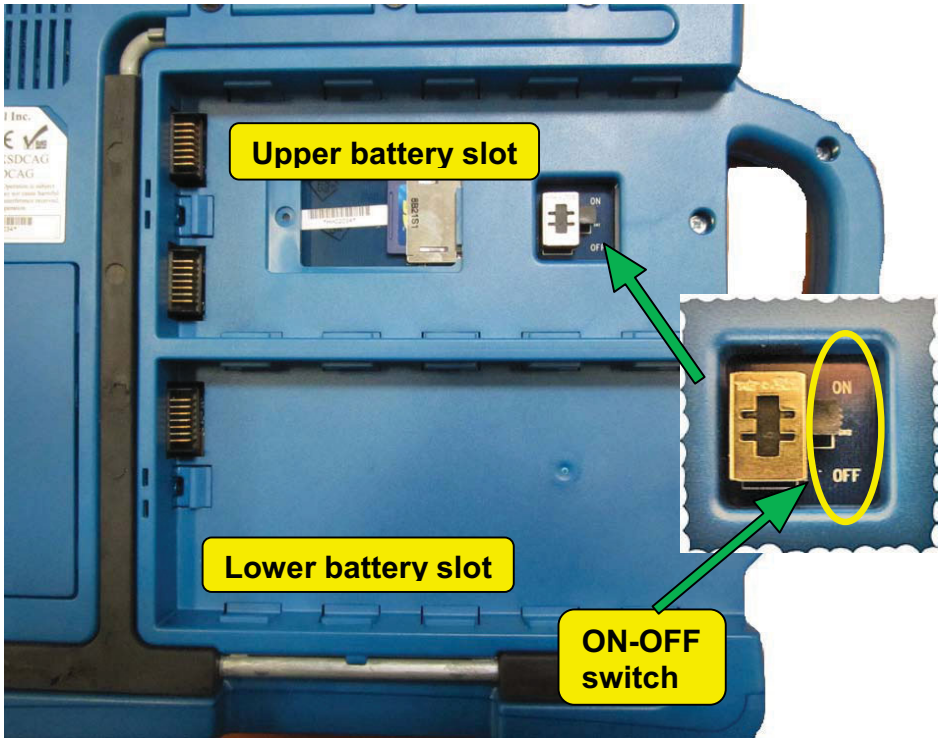

Figure 1-3. Battery slots on back showing ON-OFF switch location

The main power **ON-OFF** switch is located under the upper battery when the battery is installed. The switch is shown in the **ON** position in Figure 1-3. To gain access to the switch, the battery must be removed using the battery release tool (see Figure 1-4). Place the tool in the two slots as shown, firmly press down on the tool to free the latch from the battery, and carefully slide the battery out of the slot.

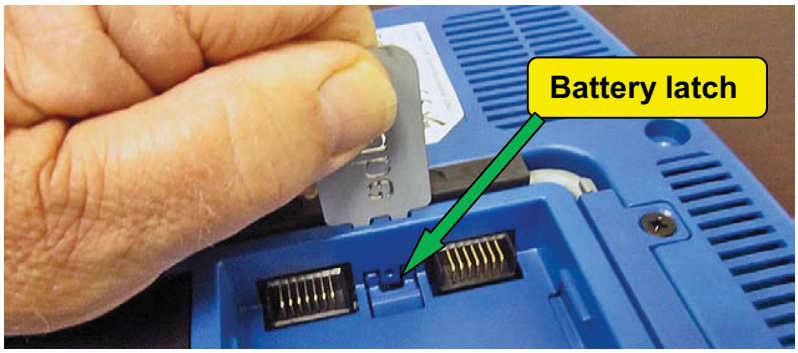

Figure 1-4. Inserting the battery release tool

To insert a battery, place the Explorer front-down on a clean surface, firmly grip the left side of the Explorer, position the battery label-side down into the slot guides, then carefully slide the battery fully to the left until it latches in place (see Figure 1-5).

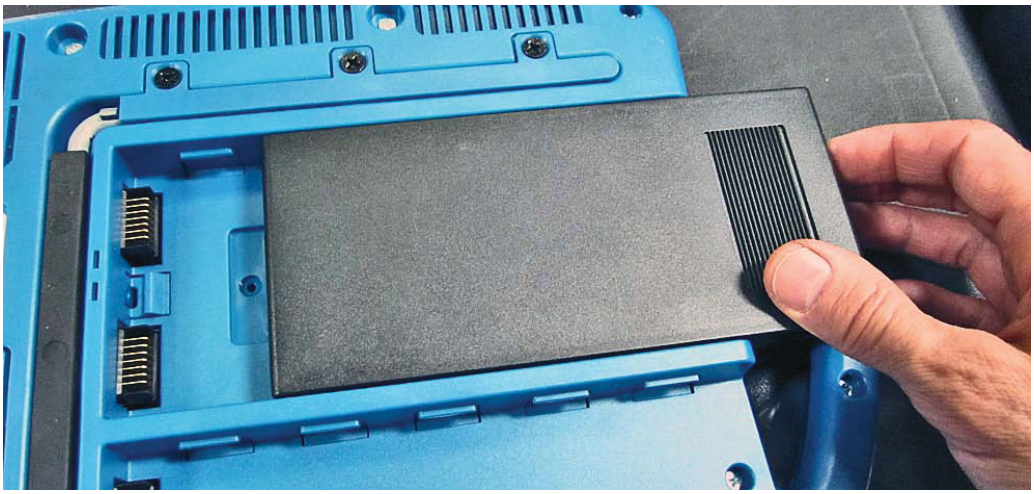

Figure 1-5. Sliding battery into the upper slot

A fold-up stand is on the back of the Explorer that, when unfolded, allows users to view the display at a comfortable angle. The stand features a friction swivel that holds the stand in any chosen position (see Figure 1-6).

Figure 1-6. Back of Explorer showing unfolded stand

To release the stand from the back of the Explorer case, perform the following:

1. Place the Explorer front-down on a clean surface and firmly grip the top of the Explorer.
2. Press all four fingers beneath the metal cross bar of the stand, as shown in Figure 1-7, and push in and up to release the stand from its secured position.

Note

If unable to release the stand by using finger pressure, insert a wide, straight-slot screwdriver beneath the metal crossbar and turn it 90 degrees left or right to release the stand (see Figure 1-8).

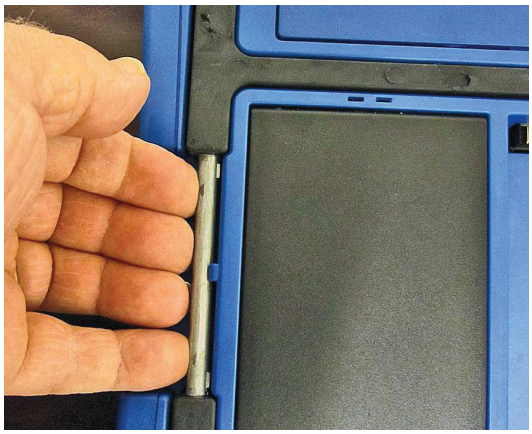

Figure 1-7. Fingers pressing in and up on the stand

Figure 1-8. Screwdriver inserted beneath stand crossbar

3. Beginning game play

With the Explorer powered on, players can begin Bingo game play by entering the card pack number on the keypad that is displayed. To play other games, players enter a player ID number on the keypad (see Figure 1-9). If the device is in a "sleep" mode, tap on the touchscreen to display the keypad.

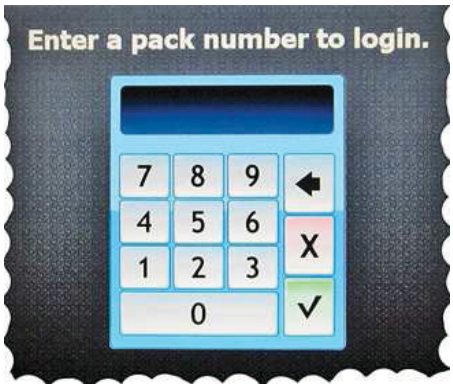

Figure 1-9. Sign-on keypad