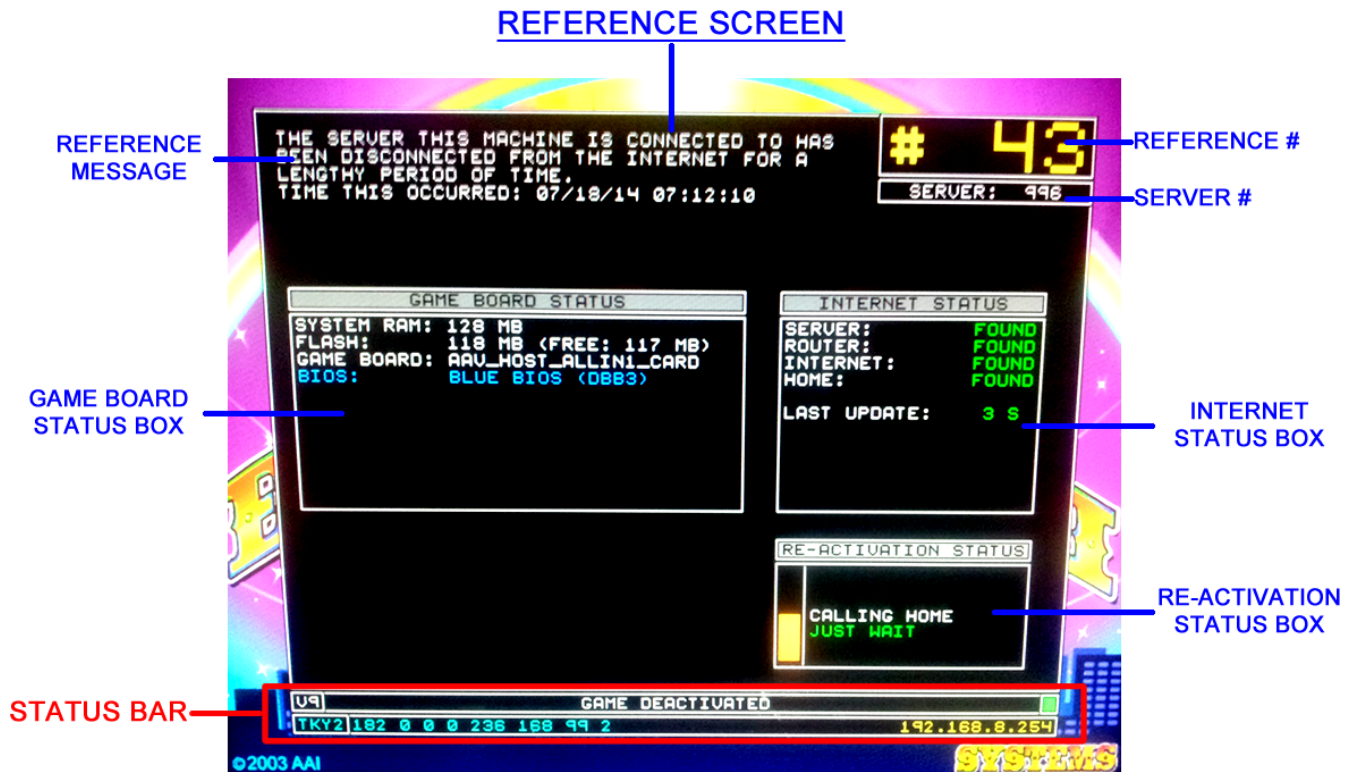


Boot Loader Info – Version 9

July 2014

If you're at all familiar with our boot loader software, you'll notice quite a few new features have been added to Version 9 (v9). This document will guide you through the features of v9 and give you some hints and tips for each situation you may find yourself in.



REFERENCE SCREEN

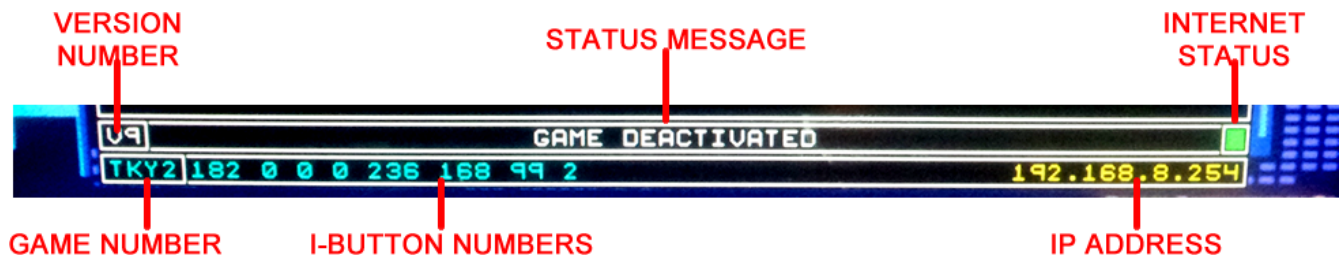
- **Reference Message**
 - If the machine ID can't be found on the server, the Reference Screen will appear. You will receive one of two messages at the top of the screen.
 - *"This machine appears to be new to the network. Please write down this reference number."*
 - This will generally appear when you're setting up a new game or swapping out an I-Button and the Status Message is "NEW TO THE NETWORK".
 - *"The server this machine has connected to has been disconnected for a lengthy period of time."*
 - This will generally appear when a game has been automatically deactivated when the server has been disconnected from the Internet for too long and the Status Message is "GAME DEACTIVATED". Re-establish the Internet connected (using the Internet Status Box as a guide) and the game should enter the Re-Activation Mode (see Re-Activation Status Box).
 - At the bottom of the message, you'll see the date and time this screen appeared.
- **Reference Number**
 - This is a number assigned to the game by the server. This is used to help identify the cabinet when speaking to Tech Support.
- **Server #**
 - This is the server's ID number. This is used to help identify the server so that Tech Support can connect to the correct server.

- **Game Board Status Box**
 - This box gives you information on the Game Board itself and can be useful in diagnosing problems.
 - *SYSTEM RAM*: The amount of memory on the Game Board. This is different from storage space and is soldered to the board. If the game requires more memory than the board has, the board will need to be replaced.
 - *FLASH*: This is the amount of storage space on the Flash card (and the amount unused). Some games require more Flash card storage space. Just simply replace the Flash card.
 - *GAME BOARD*: This is simply a label for the type Game Board that's in the machine.
 - *BIOS*: This will give you the version of the BIOS chip that is installed in the Game Board. The most current is BLUE BIOS.

- **Internet Status Box**
 - Every 15 seconds, the boot loader will ping the server and update the information in this box. There are 4 separate connections it checks for and should help diagnose connection issues. If all 4 are found, Tech Support should theoretically be able to connect to the Server.
 - *SERVER*: This will tell you if the Game Board is receiving updates and actively communicating with the Server. If this is Not Found, it's because the Game Board cannot see the Server at all. This will likely be due to either no connection between the two or something on the Server is not communicating correctly.
 - *ROUTER*: This will tell you if the Server is communicating with the Internet Router. If it's not, check the connection and try power cycling the Internet Router.
 - *INTERNET*: This will tell you if the Server can access the Internet through the Internet Router. If it cannot, it's likely due to the Internet Router being physically disconnected from the Internet line or the Internet Router is not properly configured.
 - *HOME*: This will tell you if the Server can communicate with the Mother Server, which records it's numbers and sends the Server updates. If it cannot, it's likely the Internet Router is not properly configured.

- **Re-Activation Status Box**
 - This will only appear when the Status Message is "GAME DEACTIVATED". Once the Internet Status messages are all "FOUND", the Re-Activation process will start and attempt to Re-Activate the game on it's own, without having to contact Tech Support.
 - The colored bar is the Progress Bar, the closer to full, the closer the game is to rebooting and coming back up.
 - Here are the various messages you'll see in this box:
 - *NO SERVER*: Game Board cannot communicate with the server. Re-Activation will not progress while this message is visible. Refer to the Internet Status Box and attempt to fix the connection issue.
 - *NO INTERNET*: Server cannot communicate with the Internet. Re-Activation will not progress while this message is visible. Refer to the Internet Status Box and attempt to fix the connection issue.
 - *CALLING HOME*: Server can see the Internet and is attempting to communicate with the Mother Server.
 - *ALMOST THERE*: Server is communicating with the Mother Server and is sending game play numbers and checking for any updates.
 - *ACTIVATED*: Server is done communicating with the Mother Server and the game has been reactivated. A reboot will happen shortly.
 - During the *CALLING HOME* and *ALMOST THERE* statuses, you'll also see a message underneath it. This reports the status of the communication with the Mother Server.
 - *JUST WAIT, TAKING A WHILE* and *NOT ENCOURAGING*. These all relate to the amount of time the communication is waiting. Just sit tight during these messages and don't mess with the Internet connection.
 - If it says *CALL FOR HELP*, you'll need to contact Tech Support, as there is probably an issue that will need to be addressed through a remote connection.

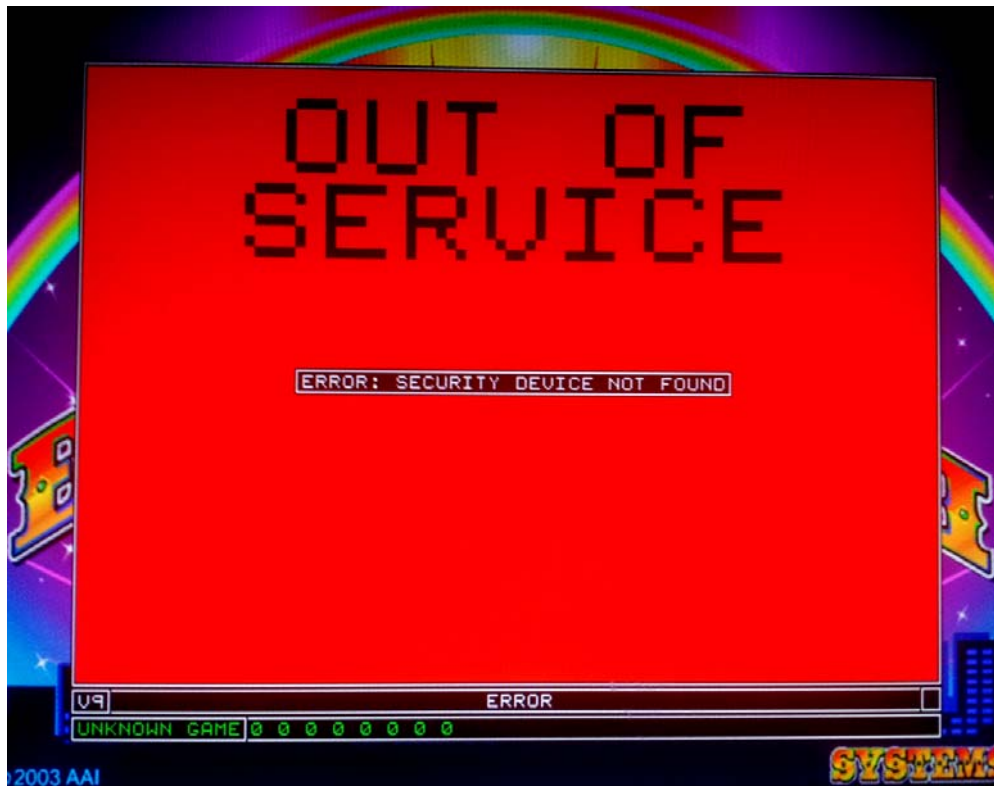
STATUS BAR



- **Version Number**
 - This is the version of the Boot Loader that's running on the board (V9 = Version 9).
- **Status Message**
 - This will describe the current status of the Loading Process for you. These are much more descriptive than our old status codes so they are pretty self-explanatory. Here are some of the most common messages you'll see:
 - **NEW TO THE NETWORK:** This message will be displayed when the Server does not recognize a Game Board's I-Button. The Reference Screen will appear when this happens. Tech Support will need to update the Server before it can progress.
 - **GAME DEACTIVATED:** This message will be displayed when the Server has been disconnected for the Internet for a lengthy period of time. The Reference Screen will appear when this happens. Once a connection is re-established, the Re-Activation Process will begin. Refer to the Internet Status Box and Re-Activation Status Box sections for more information on this process.
 - **NETWORK DOWN TERMINAL RESET IN XX SECONDS:** This appears when the Game Board fails to communicate with the Server when the Boot Loader first initializes. It will reboot the machine in 60 seconds and attempt again. In the mean time, check you connections between the Game Board and the Server. If multiple games are doing this, check the Network Switch that they are connected to.
 - **NETWORK RECEIVE X% / NETWORK WRITE X% (alternating):** This means that the Game Board and the Server are communicating and sharing information. LOADING – PLEASE WAIT should appear shortly.
 - **LOADING – PLEASE WAIT:** When this appears, all of the setup and initializing is complete and the Game Software is being brought up. Some errors can still occur during this stage, but this generally means everything is working correctly and the game will be up and running within several minutes.
 - **ERROR:** There are several different Error messages that can be displayed here. More importantly, errors will trigger a large, red error graphic that will appear in the same area as the Reference Screen. In the Error Screen will be an error message. See the Error Screen section for more information.
- **Internet Status**
 - This is a color-coded "light" that will inform you of the current Internet connection status, even when the Reference screen is being displayed.
 - **BLACK:** Has not received the Internet Status from the Server yet. You'll probably have a red Error Screen if it is this color for more than a few seconds. Refer to the Error Screen section in that case
 - **RED:** The Server is not communicating with the Internet Router. Check the connection and try power cycling the Internet Router.
 - **YELLOW:** The Server can communicate with the Internet Router, but the Router is not connected to the Internet, likely due to the Internet Router being physically disconnected from the Internet line or the Internet Router is not properly configured.
 - **BLUE:** The Server is connected to the Internet, but cannot communicate with the Mother Server. This is rare. It's likely the Internet Router is not properly configured. Generally, if you wait a few minutes, this issue will fix itself.
 - **GREEN:** No problems with the Internet Connection.

- **Game Number**
 - If the Game Board is connected to the Server and is recognized, the Game Number is displayed here. When there are multiple cabinets and you are speaking with Tech Support, you can use this to identify the machine.
 - If the Game Board is not recognized on the Server, “UNKNOWN GAME” will be displayed.
- **I-Button Numbers**
 - Each I-Button has a unique set of numbers and they are displayed here. If the Reference Screen is up, the Reference Number can be used to give Tech Support this same information.
 - If the I-Button, cannot be read by the Game Board, “0 0 0 0 0 0 0” will be displayed.
- **IP Address**
 - When the Game Board is successfully communicating with the Server, it receives an IP Address, which is displayed here.
 - If no IP Address is given to the Game Board, this area will be blank.

ERROR SCREEN



Any time you have a major error that needs to be dealt with, this screen appears and will display an Error Message in the red box.

- **ERROR: UNDETECTABLE GAME BOARD TYPE**
 - This is rare. Try rebooting the Cabinet and see if it happens again.
 - Try re-seating all of the chips on the Main Board and try again.
 - If you still can't get past this error, you'll probably have to swap out the Main Board.
- **ERROR: CAN'T FIND GAME SOFTWARE**
 - This can occur sometimes when swapping out Flash Cards.
 - Contact Tech Support to fix this issue.

- **ERROR: SECURITY DEVICE NOT FOUND**
 - The Game Board cannot properly read the I-Button, which is located on the Main Board itself.
 - First, try re-seating the I-Button. It's located near the connectors and is about the size of a dime but also a quarter-inch thick. Make sure the power to the board is off when you do this.
 - If you still receive this Error Screen, you'll need to replace the I-Button. Contact Tech Support once the new I-Button is in place and you have received a Reference Screen with a Reference Number.
- **ERROR: GAME BOARD CONNECTED TO INTERNET ROUTER**
 - This happens when the Game Board receives an IP Address from the Internet Router. The Game Board should never be connected to the Internet Router.
 - Check and make sure the Game Board or the Network Switch is connected only to the Server and not to the Internet Router.
- **ERROR: FILE TOO BIG (CALL FOR HELP)**
 - Contact Tech Support to deal with this issue.
- **ERROR: PROBLEM FETCHING GAME SOFTWARE**
 - Contact Tech Support to deal with this issue.

OTHER NEW FEATURES

- **Tech Support can now reboot the Game Board while on the Loading Screen.**
 - Requires an active Internet connection and a successful Tech Support remote connection.
 - Must also have a valid I-Button and a connection to the server.
 - Used to reboot games while in the Reference Screen.
- **Memory Expander Update comes packaged with V9 Boot Loader**
 - This will cut down on some occasional setup errors.