AMANA® BRAND AX GATEWAY (DP01A)
QUICK START GUIDE
For PTAC Models

Product Description
The DP01A on Amana® Brand AX is a compact embedded processor platform with flash memory for backup. It provides integrated control, supervision, as well as direct, on-board I/O for monitoring and control of Amana® Brand PTAC's with wireless DT01A Antennae.

Installing The Amana® Brand AX
Now that you have installed the DigiSmart devices on all of your Guestroom PTAC units, you are ready to install the Amana® Brand AX Platform.

Let's review a short checklist.

1. Room Numbers have all been configured in each PTAC/PTHP unit equipped with DigiSmart devices. This is extremely important since the Amana® Brand AX will configure the screen graphics based upon those room numbers. If you have not configured the room numbers, the Amana® Brand AX cannot distinguish one room from another.
2. You have selected a location for the Amana® Brand AX that is within 75 feet of at least 1 of the rooms with DigiSmart devices. Your wireless HotelLink Network will work most efficiently if the Amana® Brand AX is close to several units, but it is **essential** that it be within 75 feet of at least 1 unit.

⚠ WARNING

HIGH VOLTAGE!
Disconnect ALL power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury or death.

Safety Precautions
1. Make sure all connections are in accordance with national and local electrical codes. Use copper conductors only.
2. To reduce the risk of fire or electrical shock, install in a controlled environment, relatively free of contaminants.

Special Notes - Picking a Location
The Amana® Brand AX should be mounted to a wall surface no more than 6 ft. high at the top of the enclosure.

This product is intended for indoor use only. The unit should not be exposed to ambient conditions outside of the range of 0°C (32° F) to 50°C (122° F) and relative humidity outside the range 5% to 95% non-condensing (pollution degree 1).

The unit is designed to be wall mounted with the battery situated towards the bottom of the unit. For proper airflow at temperature extremes, do not mount the unit oriented in any other way.

The following installation instructions are for a typical installation.
Please contact your PTAC salesperson for additional assistance and explanation
prior to ordering materials or cutting openings.

ATTENTION INSTALLING PERSONNEL

As a professional installer, you have an obligation to know the product better than the customer.
This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings.

Remember, it is **your** responsibility to install the product safely and to know it well enough
to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting.
Most dealers have a list of specific, good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

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RF Mesh Structure Description

The Amana® Brand AX should be mounted to a wall surface no more than 6 ft. high at the top of the enclosure.

The Amana® Brand AX comes with an 8 ft. long, 110 Volt standard power cable that will need to be plugged into a 110 Volt convenience outlet. Do not power other devices from the transformer of the Amana® Brand AX. The transformer should be dedicated to running the Amana® Brand AX. *(See complete list of items included on page 11.)*

The Amana® Brand AX Gateway Antenna also has a cable and connector that need to get plugged in to the Serial Port of the Amana® Brand AX using the adapter connector supplied with the Gateway antenna. The antenna body should be mounted on the wall directly above the Amana® Brand AX enclosure and at least 8 ft. above the floor or as high as possible as the room ceiling will allow.

You should not select a room location for the antenna that has many electrical panels like electrical closets. ***Remember***, *the antenna signals are disrupted and blocked by metal, so an electrical closet that has wall to wall, ceiling to floor metal enclosures (like circuit breaker panels) is NOT a good location for the Amana® Brand AX antenna.*

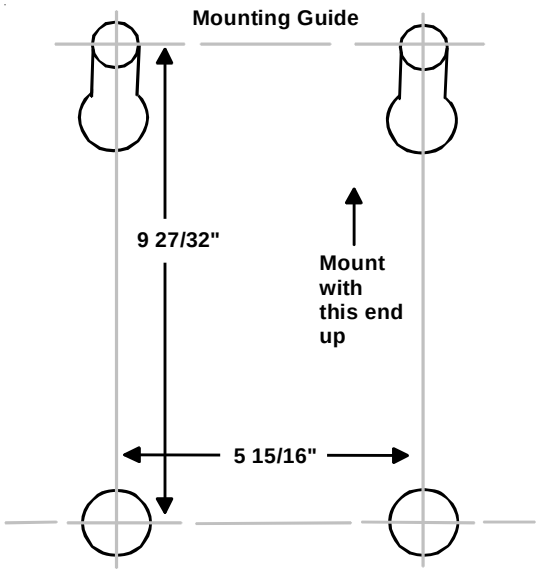
Even though the IT closet where your Internet service equipment is located (and the Amana® Brand AX network cable will eventually connect to) might seem to be the easiest place to install the Amana® Brand AX and antenna, it might not be the best. The most important feature of the room where the Amana® Brand AX is located is that it is not surrounded by metal. You can acquire a CAT5 network cable of any length and install the Amana® Brand AX in a suitable location where antenna transmissions are not blocked.

Mounting

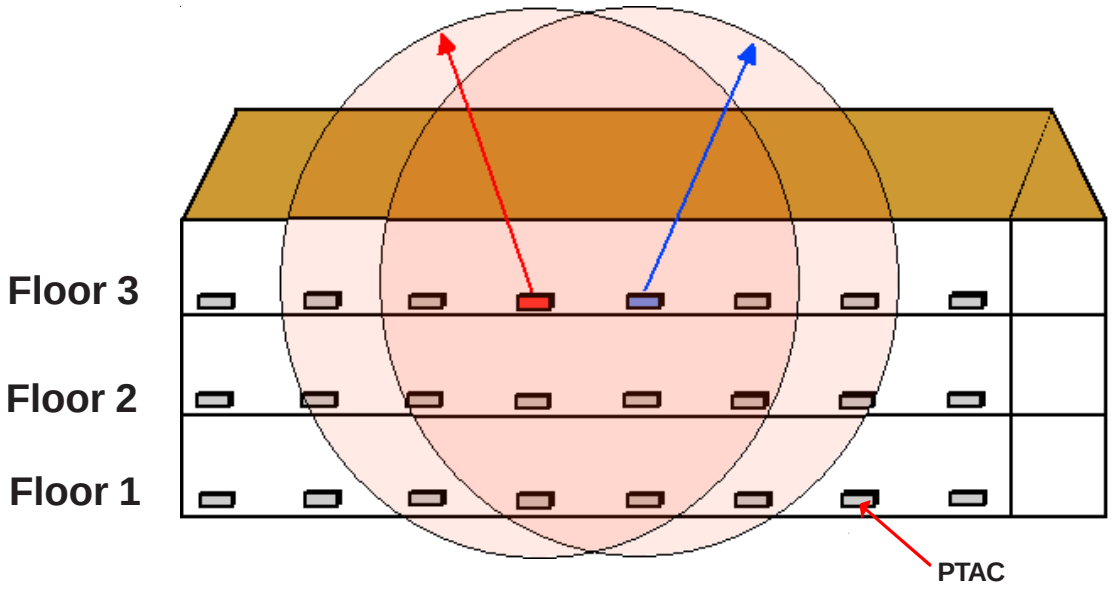
Mount the Amana® Brand AX, allowing clearance for wiring, servicing, and module removal. For mounting details refer to figure below

Static Discharge Precautions

Static charges produce voltages high enough to damage electronic components. Discharge any static electricity you may have accumulated. Discharge static electricity by touching a known, securely grounded object.



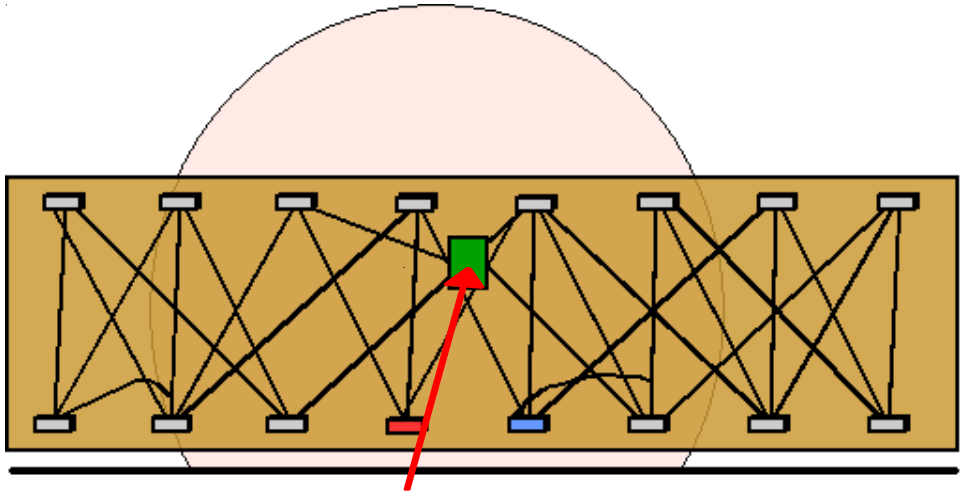
Front View



The diagram above shows the nominal transmission radius of the Router Transceivers of the DT01A devices installed in the PTAC/PTHP units in a 3- story Hotel. They form a communication mesh much like a web. When a communication signal needs to get from the most remote Guestroom PTAC unit to the Amana® Brand AX or vice versa, the signal is routed from unit to unit to make the communication path. The signals can normally penetrate two floors up or down and depending upon the interior construction materials used in your facility, through up to 6 drywall walls and up to 3 CMU or brick walls horizontally. The red PTAC has neighboring units that it communicates to directly, as does the blue PTAC. Some of those neighboring units are the same for both and some are not.

The diagram below shows the building viewed from above. The transmission radius of the red PTAC also captures a horizontal group of neighbors as well. The overall transmission pattern is spherical except for behind the PTAC, or in this example, everything below the red line. The reason is that the metal housing of the PTAC itself blocks the signal of the DT01A RF router / transceiver.

Top View



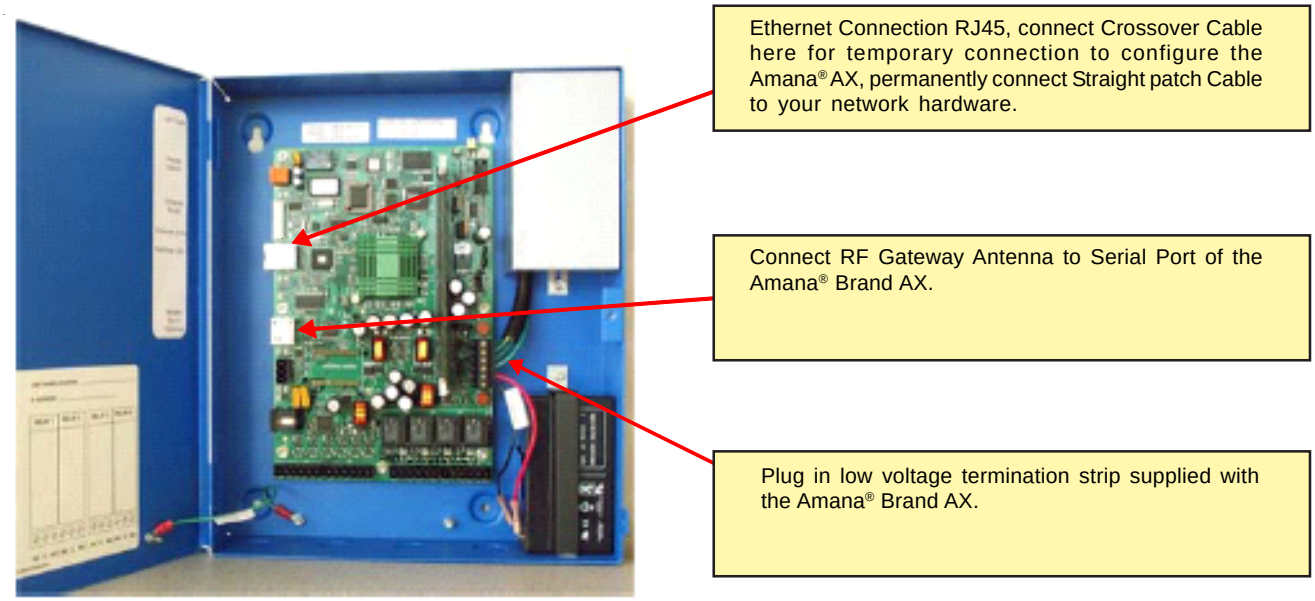
The mesh structure may actually look like this if you could see the pathways of the radio communications on a particular floor. So when you power the Amana® Brand AX, it joins the Mesh as the Mesh Coordinator and will have many paths to route communications to the PTAC's located in the farthest corners of your building.

Logging In the First Time

Checking the Heartbeat LED

When power is first supplied to the controller, the red heartbeat LED will come on solid for approximately 10 seconds, then begin to blink. The blink pattern of the heartbeat LED under normal operation will differ for each installation (depending on station activity). But, in general, the LED should blink about once per second. The rate will be slower when the control engine is executing the station database and as more objects are added.

To login to the Amana® Brand AX Appliance you will need a computer with an RJ45 Network Connection and a Crossover Patch Cable. (These are available at most retail stores like CompUSA etc., and are usually yellow.) The Crossover Cable allows for direct connection between two PC's. The Amana® Brand AX is a PC for all practical purposes.



Ethernet Connection RJ45, connect Crossover Cable here for temporary connection to configure the Amana® Brand AX, permanently connect Straight patch Cable to your network hardware.

The Amana® Brand Appliance comes from the factory with certain default settings.

The default IP Address is 192.168.1.140, and the Default Gateway setting is 255.255.255.0.

You will need to configure your Computer's Network Connection address to use the specific settings listed below.

The IP Address of your computer must be set to 192.168.1.101

Default Gateway of your computer must be set to 255.255.255.0

Connect your crossover cable to the Ethernet Port of the Amana® Brand AX and the other end of the Crossover cable to your computer's RJ45 Ethernet Jack.

Open the Internet Browser on your computer, clear the URL address line and type in 192.168.1.140 and hit "Go".

Your display screen should look like the example on page 5.

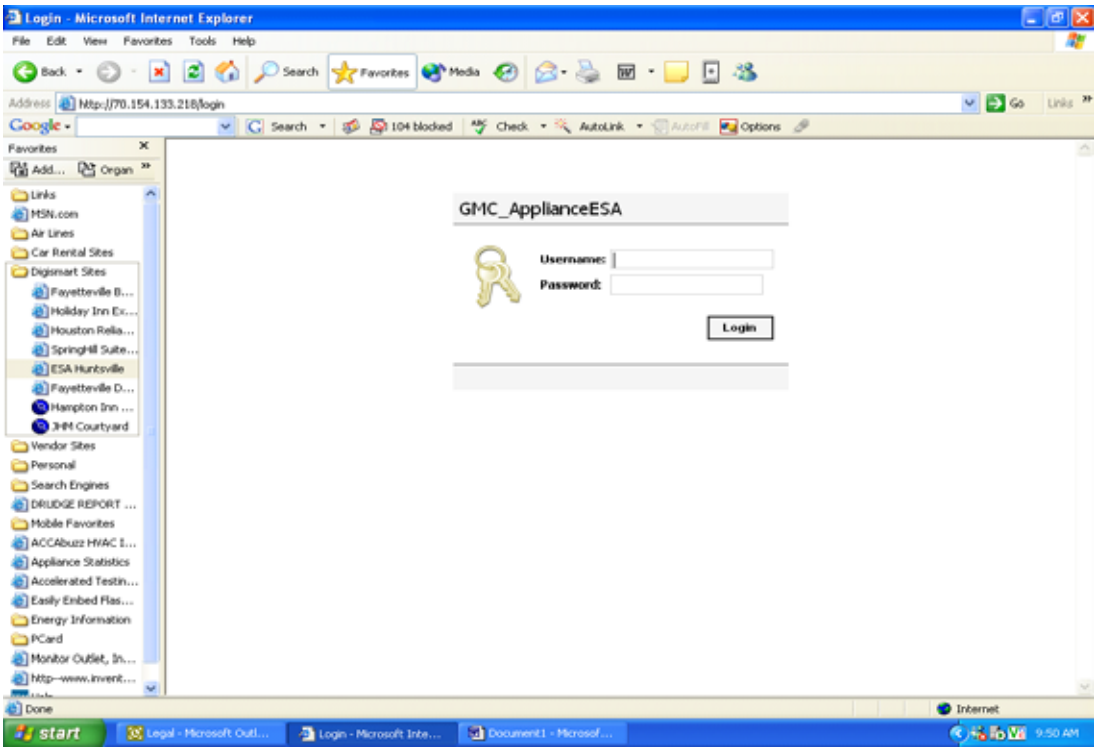
Once this screen is displayed, you are ready to "Log In".

Enter the Username "manager"

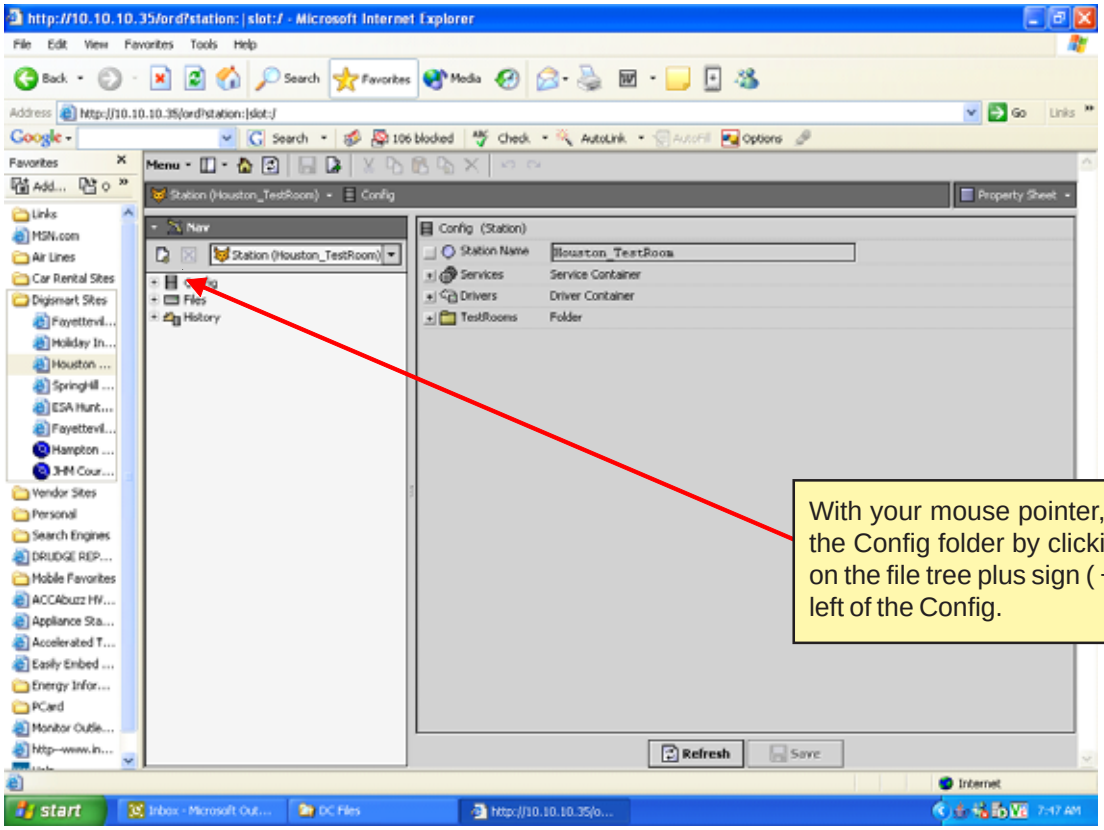
Enter the Password "firsttime".

After you have entered these in their respective boxes click on the "Login" button.

This password will allow all you to make all entries required for setting up the Amana® Brand AX.

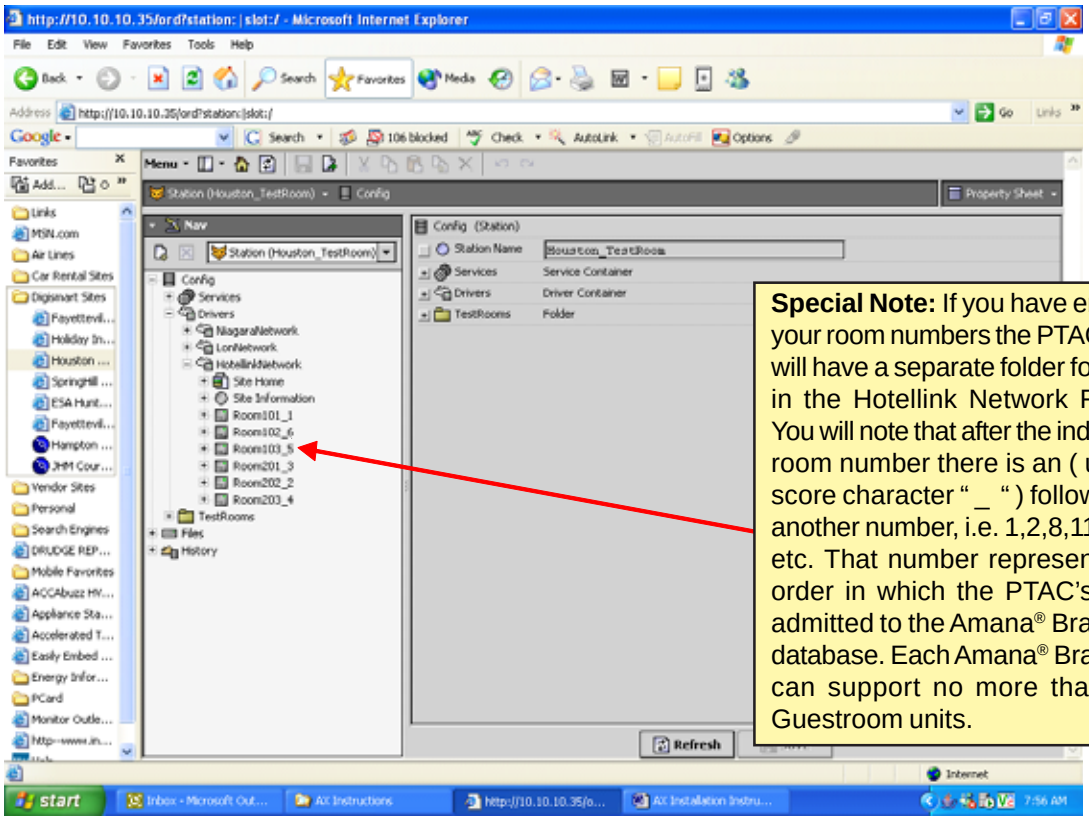


After you click on the login button, you will see a dialog box that asks if you will always trust applets provided by Tridium. Answer yes. The Amana® Brand AX will then upload a number of files on your PC, which will take approximately 2 minutes. After the Amana® Brand AX has finished uploading files, your display will look like the one below.



After you expand the Config folder, expand the Drivers folder, and then expand the Hotellink folder.

Your display screen will now look like this, and you will notice that a number of your PTAC Guestroom units may have been learned by the Amana® Brand AX. Not all may have been learned by the time you actually login. It can take up to several hours for the Amana® Brand AX to learn the entire population of Guestroom units and then self configure all links, graphics, report functions and test functions. The reason it can take a long time to self-discover and self-configure the site is because initially the Mesh network devices all try to report their status at the same time to the newly discovered Mesh Coordinator Gateway antenna. This causes a large amount of data to fill up the memory buffers of the individual DT01A routers in the PTAC's. It should take the first PTAC units approximately 5 minutes to be configured and appear in the Amana® Brand AX database and then about 3.5 minutes per PTAC to be admitted into the Database of the Amana® Brand AX.



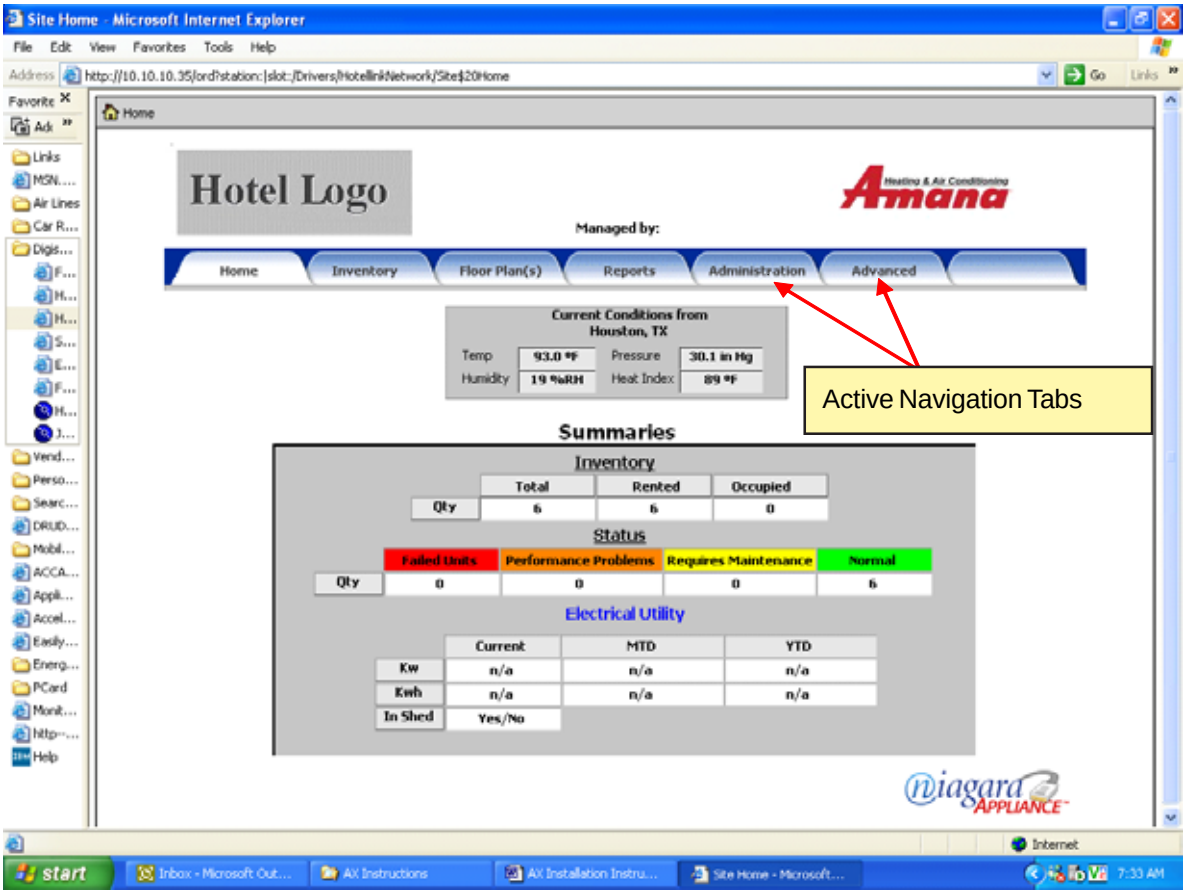
Special Note: If you have entered your room numbers the PTAC units will have a separate folder for each in the Hotellink Network Folder. You will note that after the individual room number there is an (under-score character " _ ") followed by another number, i.e. 1,2,8,113,223 etc. That number represents the order in which the PTAC's were admitted to the Amana® Brand AX database. Each Amana® Brand AX can support no more than 250 Guestroom units.

While the Amana® Brand AX is learning the rest of you PTAC population, you can set up the rest of the site parameters.

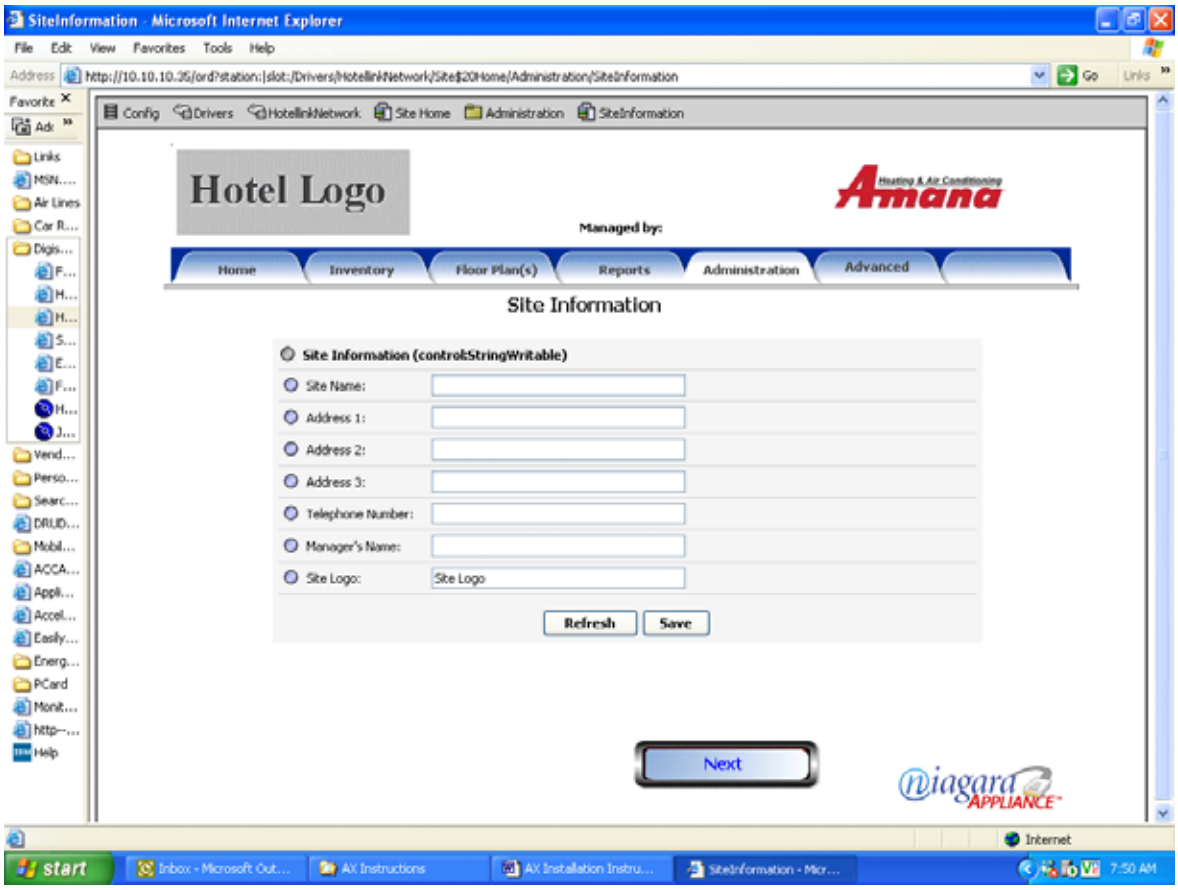
Double click on the Icon called **Site Home**. Your display screen will now appear as it would for all users logging in with a standard web browser.

This is the normal Navigation Page users will use. There are 6 tabs titled (**Home**, **Inventory**, **Floor Plans**, **Reports**, **Administration** and **Advanced**) that allow you to set up and interrogate the Amana® Brand AX.

The first step is to click on the Administration tab so that you can identify the site, set the time, set the permanent IP address, etc.



Administration Tab



All of the Data that you enter on this page will show up on the Home Page of the Amana® Brand AX.

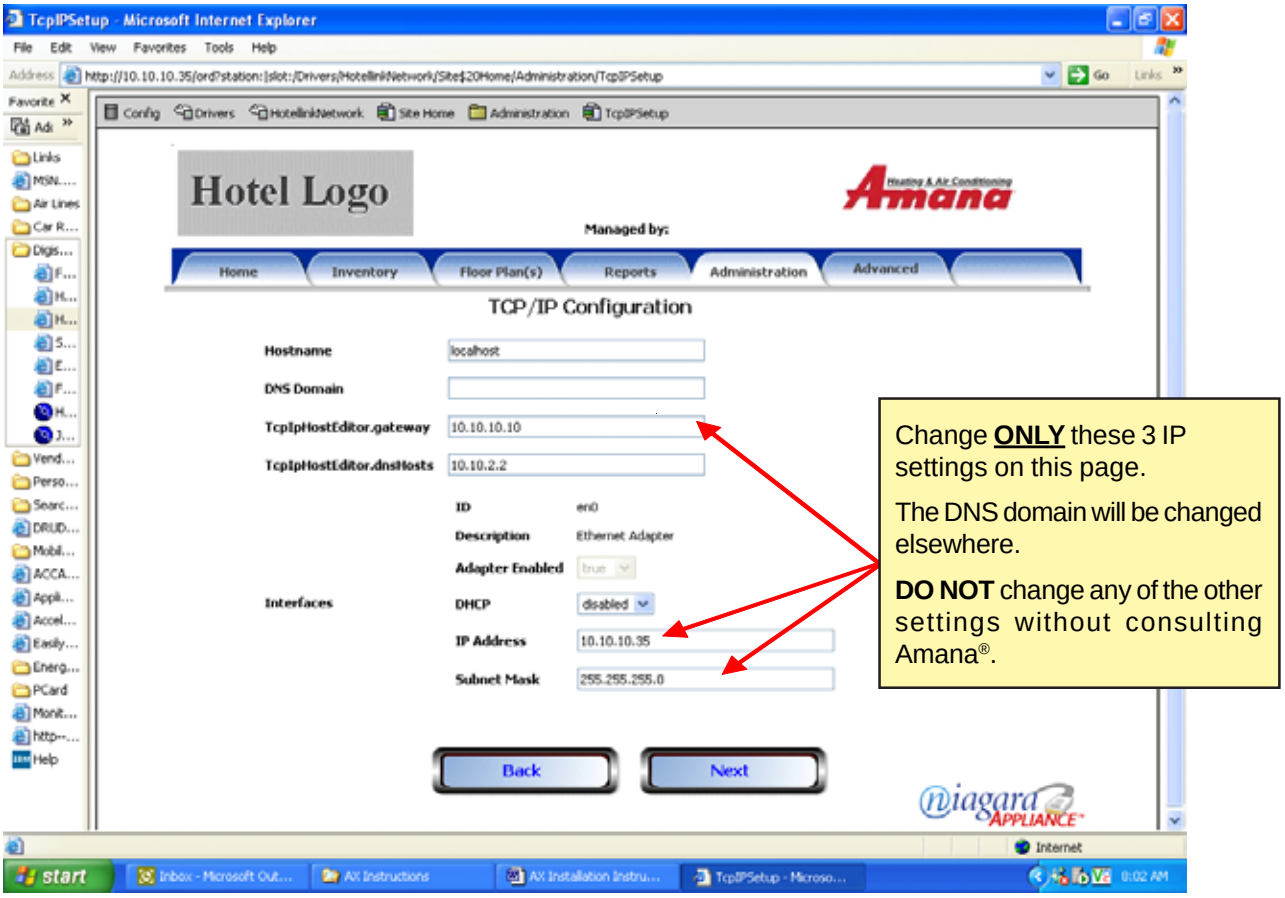
Site Name:	Your Hotel Name
Address 1:	123 Main Street
Address 2:	Anytown, USA 11111
Address 3:	(Your Hotel Number, Corporate Identifier)
Telephone Number:	555-555-5555
Managers Name:	Joe Smith
Site Logo:	***Do not attempt to enter anything here. That entry is done elsewhere.***

After you have entered the Site Information, click on the **Save** button and then click on the **Next** button.
The next display screen is where you will input some of the **TCP/IP Configuration settings**.

TCP / IP Configuration

There are only 3 settings that need to be configured here. Check with your IT department or Internet Service provider to acquire the proper setting values.

1. TcpIpHostEditor.gateway or Default Gateway
2. IP Address
3. Subnet Mask



Important !!!!

***DO NOT** click on **Next** until you have read the following information.*

After you have set the values to the appropriate setting check them over very carefully. If you make an entry error here it may not be possible to gain access to the Amana® Brand AX afterward. It's a good idea to write the IP information down on the inside cover of the Amana® Brand AX. We provide a space for this information on the label inside the door of the Amana® Brand AX. If you do not write the information down, or forget the settings, the only way the Amana® Brand AX can be accessed is to send it back to the Amana® Brand factory for reconfiguration.

If everything is correct click on the **Next** button.

After you click on Next, your display screen will look like this, and you will now be setting the

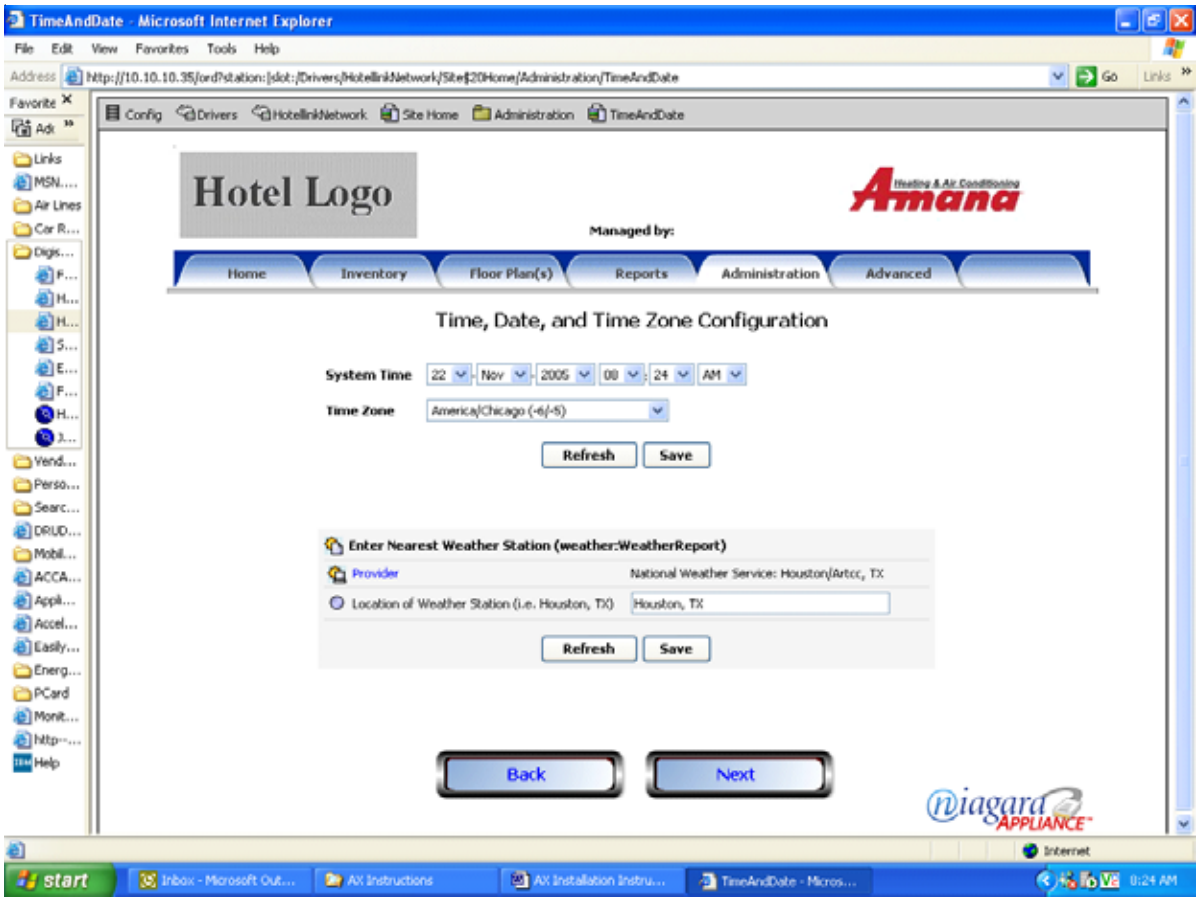
Time, Date and **Time Zone** settings.

Time, Date and **Time Zone** Configuration.

Use the pull down arrows to the right of each of the date and time values to set the correct date and time.

In the **Time Zone** categories, select your precise Time Zone. All 575 world time zones are represented, even those North American zones that do not recognize Daylight Savings changes.

After you have set the **Time, Date** and **Time Zone**, click on the **Save** button under **Time Zone**.



After you have saved the **Time, Date** and **Time Zone** settings, close out the session with the Amana® Brand AX. You will now log back into the Amana® Brand AX with the new IP settings.

You can now remove your Crossover Cable from the Amana® Brand AX and connect the Amana® Brand AX to the Infrastructure Port, DSL modem or Hub with a straight patch Cable.

You can now access the Amana® Brand AX from any PC with a web browser, from any location, by typing in the browser address bar the IP address that you have assigned the Amana® brand AX.

To finalize the setup process you need to login again over the web using the following Username and Password.

Username = admin

Password = firefox

Cleaning

If dust or metal filings are present inside the unit, clean with vacuum or compressed air. Otherwise, no cleaning inside the unit is required. Optionally if the outside of the metal enclosure becomes dirty, you can wipe it with a damp cloth.

Battery

The battery should provide dependable service for approximately three years (average). *To order a new battery, contact Goodman Service Parts.*

Certifications

This equipment generates, uses, and can radiate radio frequency energy. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules. Any unauthorized modification of this equipment may result in the revocation of the owner's authority to continue its operation.

Supplied Items with the Amana® Brand AX

1. Amana® Brand AX Antenna
2. 8 ft. 110 Volt standard power cable
3. Cable & adapter connector

Additional items needed for installation not included:

1. Computer with RJ45 Network Connection
   and a Crossover Patch Cable
   (Available at most retail stores like CompUSA, etc.)
2. CAT5 network cable
3. Straight patch cable
4. (4) Screws and wall anchors

NOTE: This equipment generates, uses, and can radiate radio frequency energy. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules. Any unauthorized modification of this equipment may result in the revocation of the owner's authority to continue its operation.