i*RISupply*™

Installation and Assembly Guide

// MOBILE // ASPECTS //

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PREFACE

This installation guide is to be used when installing the iRISupply™ Cabinet System. This installation guide is considered a permanent part of the iRISupply™ Cabinet System, and should remain with the iRISupply™ Cabinet System at all times.

The information and specifications included in this publication were in effect at the time of approval for printing. Mobile Aspects reserves the right, however, to discontinue or change specifications or design at anytime without notice and without incurring any obligation whatever. No part of this publication may be reproduced without written permission.

4.2. Appendix B – Required Tools

#	Item	Qty	Use
1	Box Cutter	1	Remove Shipping Materials
2	Diagonals	1	Remove cable ties holding bags of keys and bolts to the cabinet
3	½″ box wrench	2	Bolting Cabinets Together
4	9/16″ box wrench	1	Raising/Lowering Leveling Legs
5	Two-Pronged Spanner Bit (#10 size)	1	Removing panels
6	Phillips Head Screw Driver	1	Adjust cabinet brackets and hardware
7	¼″ box wrench	1	Adjust lock plate
8	Matching Box	2	Replacement Parts
9	VSWR Meter and Cable	1	Tuning Matching Box
10	Straight-Blade Screwdriver	1	Tuning Matching Box
11	Crossover Cable	1	LAN connectivitiy

Term	Definition
Cabinet	The power emanating from this cabinet is independent from the Control Cabinet.

Revision History

Date	Version	Description	Author
09/11/03	1.0	Original Version	S. Maderia
05/11/04	2.0	Revision for FCC/CSA Certification	K. Yu

Table of Contents

4.   Appendix

4.1.   Appendix A - Glossary

Term	Definition
Auxiliary Cabinet	An auxiliary cabinet does not contain a control compartment. It typically consists of 1 to 3 doors and 1 to 3 compartments. Its standard size is 77″ H x 29″ W x 36″ D.
Cabinet	iRISupply™ is a modular storage unit that is made up of a cabinet system. There are two main types of cabinets: Auxiliary and Control.
Cluster	A cluster is a grouping of one or more cabinets. Each cluster must have one control cabinet and 0 to 4 auxiliary cabinets.
Compartment	Each cabinet is segmented into sections known as compartments. Compartments are bounded by their physical access point, or in other words, by the door access.
Control Cabinet	A control cabinet contains a control compartment in the top section of the cabinet. Below the control compartment are compartments for storing inventory items.
Control Compartment	The control compartment contains the user interface for iRISupply™. Inside the control compartment are the electronics required to operate the iRISupply™ system.
Powered Auxiliary	An auxiliary cabinet wired to contain power strip within each compartment.

- Access the customer's network via dial-up modem line or VPN customer. The actual method will depend on the customer.

- Attempt to ping the cabinet via the remote access connection. Use the same procedure as listed above to ping the cabinet.

- Use the Huey tool to remotely control the machine. Huey will need to be configured with the proper IP address and port (usually 5662) to make this work.

If the Huey tool connects and works then the remote access connections are working properly. If not, work with technical support to resolve the issue.

1.   Safety Considerations

The iRISupply™ Cabinet System is designed to provide safe and dependable service if operated according to instructions. Read and understand the associated documentation before operating the system. You can prevent accidents by being familiar with the systems controls, and by observing safe operating procedures.

1.1.   Label Locations

These labels warn you of potential hazards that can cause serious injury. Read them carefully. If a label comes off or becomes hard to read, contact Mobile Aspects for a replacement.

"Warning:Do Not Plug In External Devices" Label: Placed on the two power strips located inside the control cabinet.

"FCC/CSA" Label: Placed on the bottom back of control cabinet.

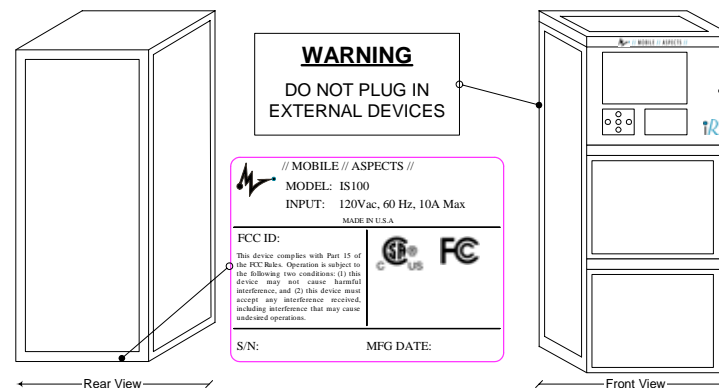*"Rating" Label:* Placed on power strips inside compartments.

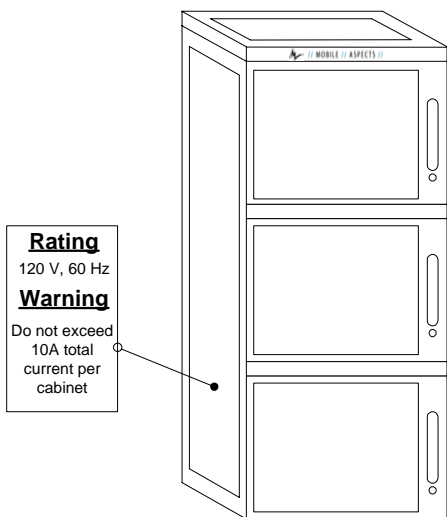**Figure 1 - Master Cabinet Safety Label Location**

Rating
120 V, 60 Hz
Warning
Do not exceed 10A total current per cabinet

Figure 2 - Powered Auxiliary Safety Label Location

1.2.   General Safety Information

The following are generating Warning Messages that will appear in this Installation and Assembly guide. These warning messages should be followed at all times.

WARNING:

Prior to installation and maintenance always unplug iRISupply™ from the power outlet.

WARNING:

Unplug iRISupply™ from its power source prior to making any wiring changes.

WARNING:

Do not plug external devices into the iRISupply™ Cabinet System power strips during service.

3.3.6.   Network Connectivity

To test proper LAN connectivity, complete the following steps:

1. From a DOS command prompt type in the command: Ping "ipaddress". The 'ipaddress' will correspond to the ip location of the cabinet in question.

2. The system should respond with output similar to that shown in Figure 44.

Figure 44**: Ping Results**

3. If the message "Reply from 'ipaddress' :…." is returned 4 times, the computer is properly configured on the network.

3.3.7.   Remote Access Testing

Once the cabinet is properly configured and on the network, the remote access functions can be tested. Each installation will vary depending on the remote access method and specific software used. The general process will be as follows and will be executed by somebody located at Mobile Aspects' offices. Execute the following steps:

will be highlighted by a magnifying glass. This symbol indicates that the cabinet is performing an inventory of the compartment (Figure 42).

Figure 42 - iRISupply™ Compartment Scanning Screen

5. When the cabinet has completed its inventory of the compartment, a 'delta' screen will appear (Figure 43). This screen will indicate the number of items added or removed from the compartment.

Figure 43 - iRISupply™ 'Delta' Screen

6. Repeat steps 1-5 for each compartment.

2.   iRISupply™ Pre-Installation

Prior to installation of iRISupply™, the customer site must be evaluated and reviewed. Specific considerations will be evaluated to determine the feasibility and success of installation and use of iRISupply™ at the customer location.

2.1.   Physical Site Dimensions

Each site must be evaluated to validate its physical dimensions. The following requirements should be noted:

- iRISupply™ dimensions: 77″ H x 29″ W x 36″ D

- Cluster footprint: A cluster of three iRISupply™ cabinets occupies a floor space of 87″ W x 36″ D. With the cabinet doors open the total space consumed by the cabinets is 87″ W x 61.5″ D. Figure 3 shows the dimensions and footprint of a three cabinet cluster.
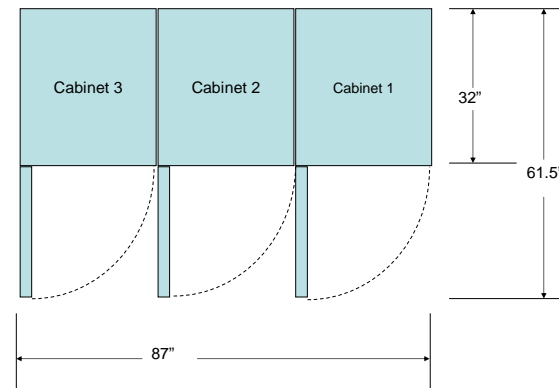

Figure 3: iRISupply™ Cluster Footprint

- Cluster Configuration: Within a cluster, one of the cabinets must be a control cabinet. The remaining cabinets in the cluster are auxiliary cabinets. The maximum number of auxiliary cabinets that can be placed on a single side of a control cabinet is 3. The maximum number of cabinets (including the control cabinet) in a cluster is 5.

- Door Swing: Cabinets can be ordered with doors that open from the right or left. The door swing needs to be identified at the time the order is placed. The above figure shows doors that open from the right (left hinge.)

- Cabinet Access: It will be necessary to have access to the rear of the cabinets for service and maintenance. Because the cabinets are on wheels, they may be placed against the rear wall during normal operation. The site must have enough available space to roll the cluster out from the wall during service calls.

Figure 40 - iRISupply™ 'Patient List' Screen

3. Select a patient on the list, or click on the 'Override' button. This will take you to the 'cluster' security configuration screen (Figure 41). This screen will indicate when doors in the cluster you will have access to. Validate that the doors highlighted in green are unlocked and the doors highlighted in red are locked.

Figure 41 - iRISupply™ Cluster Security Screen

4. Open a door and remove items from its compartment, and then close the door. The door in question will change color from green to red, and

4. The 'Identification Changes' pop-up window will appear (Figure 39). In this window, alter the computer name based on the designated nomenclature. Click on the 'OK' button to save the changes.
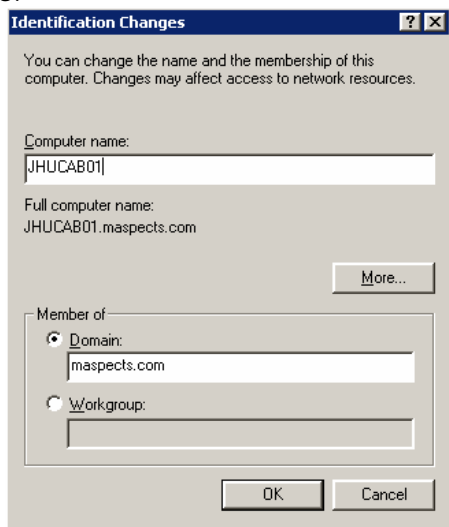

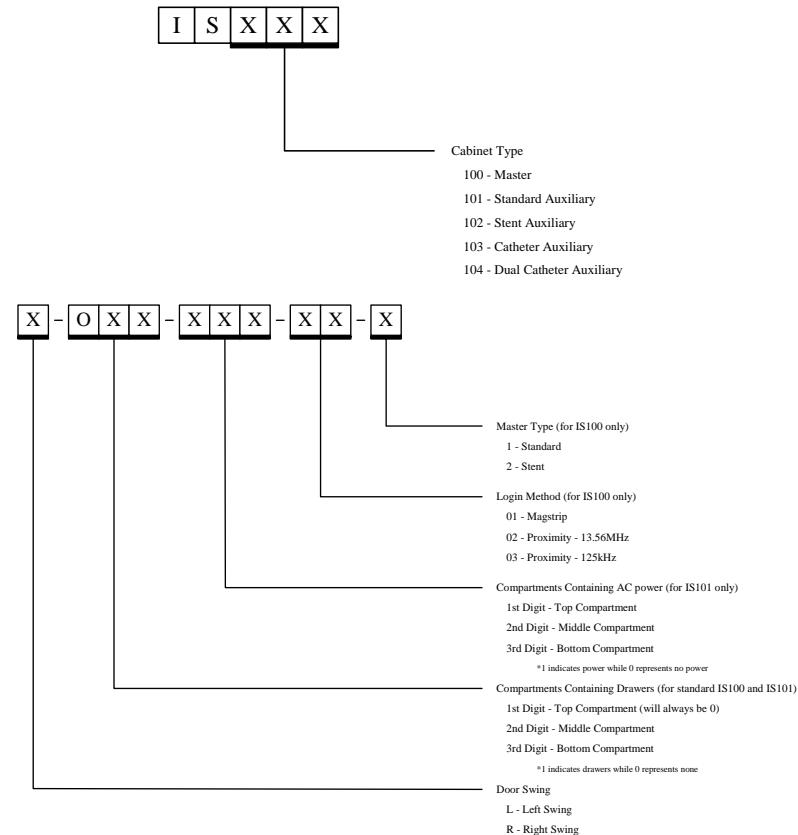**Figure 39 - 'Identification Changes' Pop-Up Window**

3.3.5. Compartment Testing

Once the system is powered up, validate that the individual scanning and locking functionality of each compartment in the cluster. To do this, complete the following step (for each compartment).

1. Log onto the iRISupply™ using the specified means of entry. This may vary by customer location. (See section X…include your login pages)

2. Once the user has logged into iRISupply™, the 'Patient List' screen will appear (Figure 40).

2.2.   Cabinet Configuration

When conducting the site survey, the Model and Configuration Number must be noted for each cabinet and cluster to be ordered. The Model and Configuration Number follows the following format.

I	S	X	X	X

Cabinet Type
100 - Master
101 - Standard Auxiliary
102 - Stent Auxiliary
103 - Catheter Auxiliary
104 - Dual Catheter Auxiliary

X	–	O	X	X	–	X	X	X	–	X	X	–	X

Master Type (for IS100 only)
1 - Standard
2 - Stent

Login Method (for IS100 only)
01 - Magstrip
02 - Proximity - 13.56MHz
03 - Proximity - 125kHz

Compartments Containing AC power (for IS101 only)
1st Digit - Top Compartment
2nd Digit - Middle Compartment
3rd Digit - Bottom Compartment
*1 indicates power while 0 represents no power

Compartments Containing Drawers (for standard IS100 and IS101)
1st Digit - Top Compartment (will always be 0)
2nd Digit - Middle Compartment
3rd Digit - Bottom Compartment
*1 indicates drawers while 0 represents none

Door Swing
L - Left Swing
R - Right Swing

Note: Place zeroes in sections that are not applicable for your configuration

2.3. Power Requirements

iRISupply™ requires a single** 120V/60Hz AC grounded receptacle (Type 5-15R). Current draw is less than 4.5 amps. For maintenance and service requirements, a second Type 5-15R receptacle is required.**

⚠	WARNING:	⚠

Prior to installation and maintenance always unplug iRISupply™ from the power outlet.

2.4. IT Requirements

iRISupply™ requires that all customer sites provide LAN Connectivity as well as remote access capabilities.

2.4.1. LAN Connectivity

LAN Connectivity for iRISupply™ allows users to access supply management data located within the control compartment.

Table 1 - LAN Connectivity Requirements	
Requirement	**Description**
LAN Connectivity	10/100 Base-T Ethernet, UTP5 cable w/RJ45 connectors. One is required for the iRISupply™. To assist with installation and maintenance, a second LAN connection is required.

** If the cluster includes a powered standard auxiliary cabinet(s), an additional outlet will be required for each powered auxiliary cabinet.
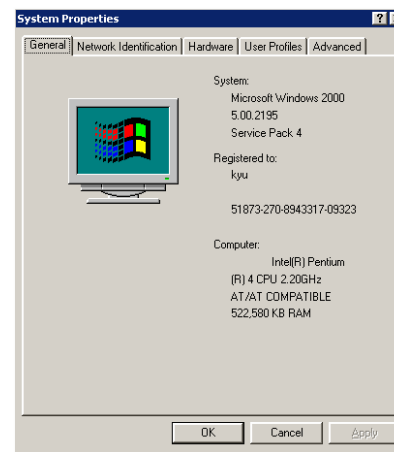
Figure 37 - System Properties Window

3. Click on the 'Network Identification' tab. On the 'Network Identification' tab click on the 'Properties' button (Figure 38).
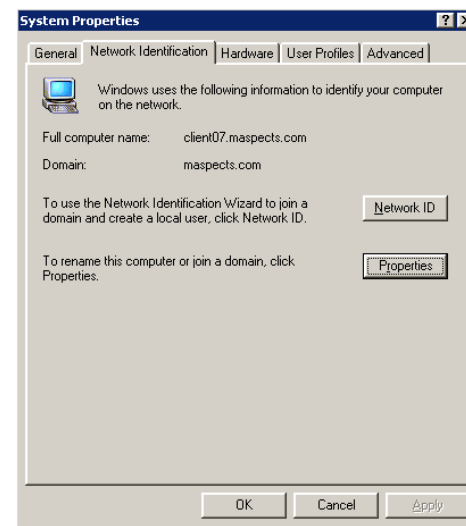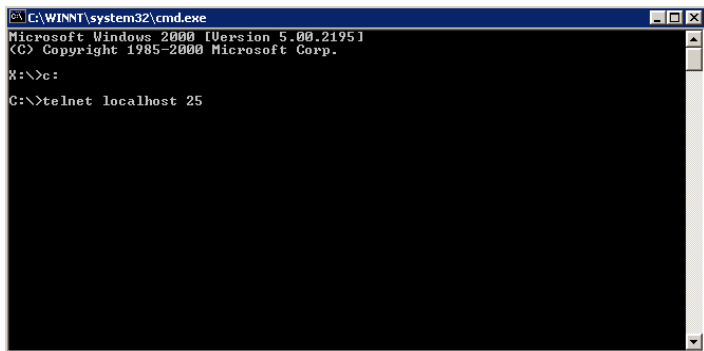

Figure 38 - 'Network Identification' tab

Figure 36 - Telnet Prompt

2.   The system should provide the response: 'Microsoft ESMTP Mail Service Version 5.0.2195.2966'

3.3.4.   Computer Name

Each cluster must define a computer name. The computer name will identify the iRISupply™ on the customer network. The standard format is 3 initials for the hospital followed by CABxx where xx is the cluster number. For example, JHUCAB01 is the first cluster at Johns Hopkins (JHU.)

Utilizing the following actions to set the computer name:

1. Go to the Control Panel, located on the Start Menu.

2. Click on the 'System Icon'. The follow 'System Properties' window will appear.

Table 1 - LAN Connectivity Requirements	
Requirement	**Description**
Network Protocol	TCP/IP – Mobile Aspects must know the IP configuration (IP address, DNS, gateway address, etc.) to configure for DHCP. **NOTE** *This may have implications for the Remote Access requirements detailed in Table 2*
Computer Name	iRISupply™ is based on Windows 2000. Consequently, iRISupply™ retains the ability to participate in a Windows network. **NOTE** *If there is a specific computer name for iRISupply™ it should be provided to Mobile Aspects.*
Email	The software has the ability to send email to support@mobileaspects.com for problem reporting, status updates, etc. For this function, an SMTP email address must be established on the customer's email system.

2.4.2.   Remote Access

Mobile Access requires the ability to remotely access iRISupply™ for the purposes of monitoring, supporting and maintaining the system. Mobile Aspects will work with the customer's IT group to determine the best method of providing access. Some sample scenarios are listed in the following table.

Table 2: Remote Access Requirements	
Remote Access Options	**Description**
Assign global IP address to cabinet	If the IP address is reachable from outside the customer location, Mobile Aspects will use remote control software to access iRISupply™ across the Internet. Access will be password protected and only Mobile Aspects will have the User IDs and Passwords. The remote access software will encrypt the data that is transferred between remote access server and customer.
NAT	Customer can assign a unique TCP Port number to each iRISupply™ cluster. The IP Address/Port combination will be opened in the customer's firewall to permit remote access to that particular cabinet over that particular port. Mobile Aspects will be able to access iRISupply™ via their remote control software using the IP Address/Port Number. All access to the system will be password protected.
VPN Connectivity	Customer can permit Mobile Aspects to access their network via VPN connection. Once connected over the VPN, Mobile Aspects can use remote control software to access iRISupply™.

3.3.3. SMTP Port Settings

The iRISupply™ System will periodically send status update email messages to Mobile Aspects. These emails are facilitated via a SMTP Server. The SMTP Server must therefore be validated. To do so, follow these steps:

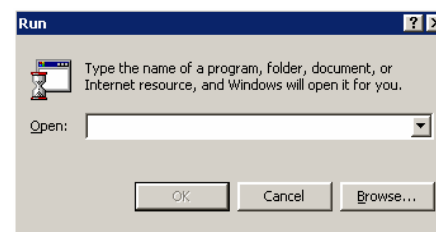1. Open a DOS run command window be clicking on Start --> Run.

Figure 34 - Windows 'Run' function

2. Type the word 'CMD' into the prompt and press the 'Enter' key.

3. At the dos prompt, validate that the prompt is pointing to the local C drive. If not 'type in C:' and hit the enter key to change to the C drive.
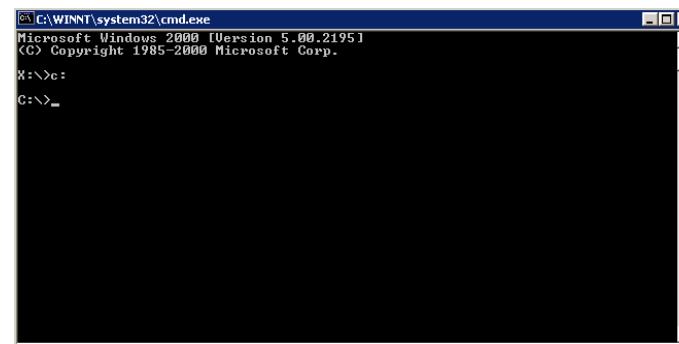

Figure 35 – Change to C Drive

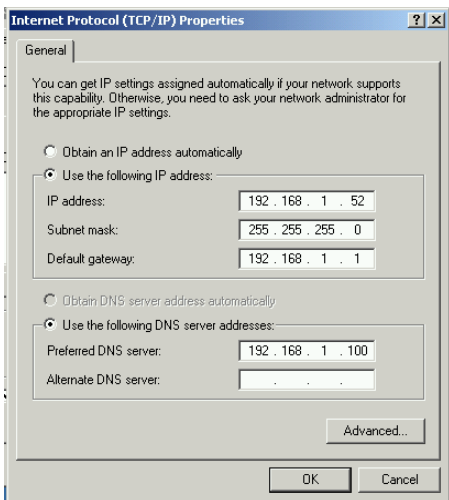1. At the C prompt, type in 'telnet localhost 25'

Figure 32: TCP/IP Properties Window

4. Once the addresses have been configured, click OK on each window to have the addresses take effect. To verify IP address assignment, use the 'ipconfig' command in a DOS prompt as shown in Figure 33.
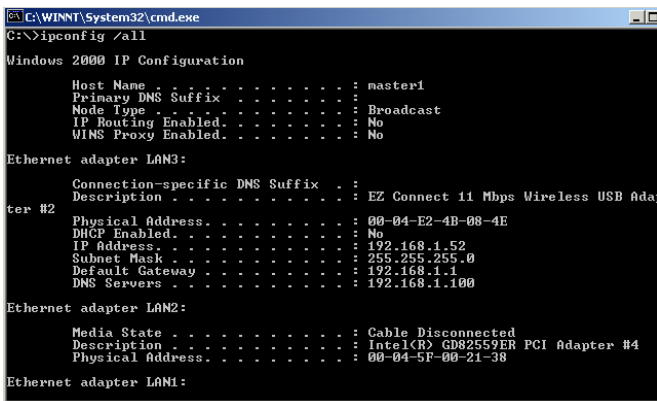

Figure 33: ipconfig output

2.5. Pre-Installation Checklist

The following list is a pre-installation checklist of facilities and network requirements for iRISupply™.

Table 3 - Pre-Installation Checklist		
Area	**Requirement**	**Complete Date**
Facilities	Adequate floor space.	
	Identification of cabinet location, site dimensions, and model/configuration number.	
	Availability of (2) 5-15R power receptacles at the cabinet location.	
	Availability of (2) 10/100 LAN drops installed and activated.	
Networking	IP Addressing parameters.	
	Identification of computer name for iRISupply™.	
	Email address configured for sending support emails.	
	Remote Access configuration and procedures defined.	

3. iRISupply Installation

Installation of iRISupply™ involves various activities, including: wiring connections, physical mechanical assemblies, and functional testing and validation.

3.1. Wiring Connections

The cabinets are identified in a left to right manner. The left-most cabinet is defined as 'A' and the right-most cabinet is defined as 'E' (in instances when there are 5 cabinets in the cluster). Each auxiliary cabinet has three types of cables that must be connected. These cable types are Lock/Switch cables, matching board power cables and antenna cables.

NOTE
Unplug iRISupply™ from its power source prior to making any wiring changes.
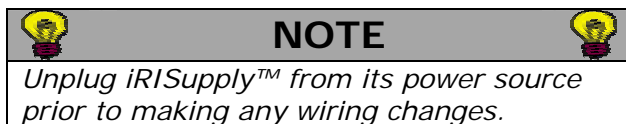
All of these cables will plug into the appropriate connector on the patch panel inside the control cabinet. The patch panel, as shown in Figure 4 is labeled 'A' through 'E' to accommodate all cabinets that could be in the cluster.
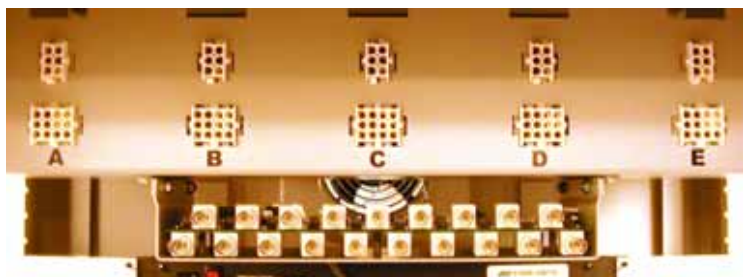

Figure 4 - Patch Panel

Cables are run through the wiring trays located at the top rear of the cabinets (Figure 5). Holes are

2. To configure the adapter, click on the Properties button. This will launch the Properties window as shown in Figure 31. The TCP/IP configuration is set by selecting Internet Protocol (TCP/IP) and clicking the Properties button.
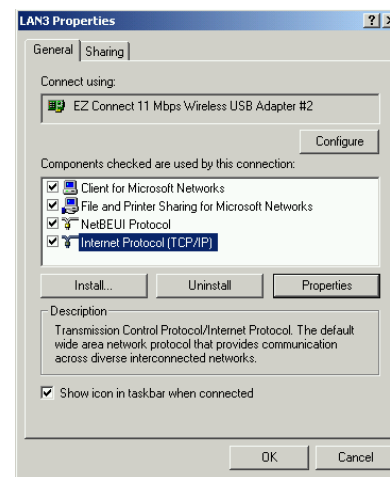

Figure 31: LAN Adapter Properties

3. The Internet Protocol (TCP/IP) Properties window is where the IP address is configured. The customer will provide the IP address, Subnet mask, Default gateway and DNS addresses (Figure 32).

3.3.2. LAN Connectivity

Connect the LAN cable to the computer board by plugging it into the right RJ-45 port (as viewed from the front of the cabinet) on the single board computer in the control compartment. The LAN cable is routed out through one of the cable holes at the bottom of the control cabinet and plugged into a customer-supplied LAN jack. The plastic plug in the cable hole will need to be cut with an 'X' to allow the cable to pass through. This can be accomplished with a utility knife.

Once the cable has been connected it is necessary to configure the TCP/IP parameters in the Windows Operating system.

1. To access the network configuration, click on Start -> Settings -> Network and Dial-up Connections. Then select the appropriate LAN connection. If the cable is connected and the jack is active, the connection will be the one that does not have a red 'x' through it. Double-click this connection to get to the Status screen as shown in Figure 30.
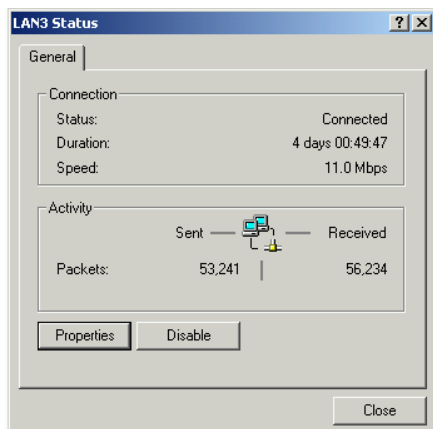

Figure 3O: LAN Status Window

strategically placed at the top rear corners of the cabinets to allow wiring from the auxiliary cabinets to exit and wiring for the control compartment to enter.

Not all holes will be used in the installation process. Those used must have an 'X' cut into them using a utility knife.

Figure 5 - Wiring Tray

3.1.1. Lock/Switch Cables

The lock/switch cables (Figure 6) are comprised of two different connector types.

Figure 6 - Lock/Switch Cable

The following procedure describes how to connect the lock/switch cables.

🔆	**NOTE**	🔆

Do not unplug the lock/switch cable when the locks are energized.

1. Ensure that the lock/switch cables are appropriately connected to its corresponding compartment door (Figure 7).

Figure 7 - Lock/Switch Cable to Hardware Connection

2. Route the lock/switch cables from the compartment to the control cabinet through the wiring trays provided on the top rear of the cabinets.

3. Route the lock/switch cables into the control cabinet through the holes at the end of the trough of the control cabinet. Use the hole nearest the cabinet being connected

4. Connect the lock/switch cable to the appropriate connector in the patch panel (Figure 8). Remember that the cabinets are identified from left to right as A through E.

Figure 28 - Key at 'Standard' Position

4. If the cabinet does not power up, ensure that everything is plugged into the power strips in the back of the cabinet and that both power strips have their ON/OFF switch in the ON position.

5. Power up testing is complete when the system display shows the Mobile Aspects Logo (Figure 29).

Figure 29 - iRISupply™ 'Start-Up' Screen

Figure 27 - Key at 'On' Position

2. Depress the 'Power' button. At that time the computer will boot-up and the IRISupply™ software should load and start running.

3. When the computer has turned on, turn the power key vertically (Figure 28). The central Blue LED will now be illuminated because the computer has been powered-up. If the Blue LED is not illuminated, you have not successfully turned on the unit. Repeat step 2 and hold the 'Power' button down for a longer period of time.
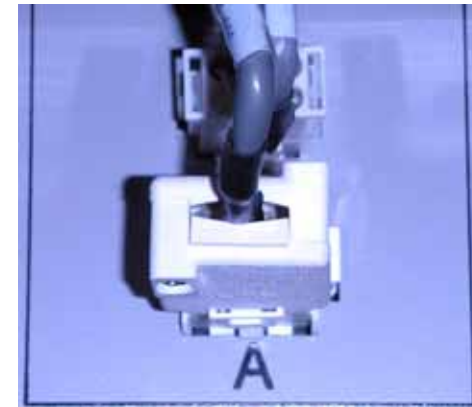

Figure 8 - Lock/Switch Cable to Patch Panel Connection

NOTE
Insert all lock / switch cables into the control cabinet first before inserting the other cabling due to the size of the connector.

3.1.2. Matching Board Power Connections

Each matching board needs to have power supplied to it from the control cabinet. The power cables are plugged into the upper connectors on the patch panel at the appropriate cabinet location. This connector is identified as the 6-position white connector (see Figure 9). The connector is keyed so that it will only connect in one way. The following procedure describes how to connect the power cables.
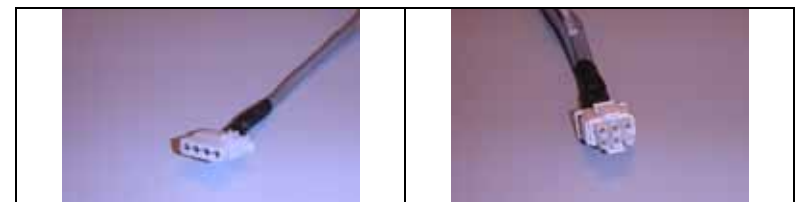

Figure 9 - Matching Board Power Connector

1. Ensure that the matching board cables are properly connected to the match boxes which are located on the back of each compartment (Figure 10).

Figure 10 - Matching Board cable connected to Match Board Box.

2. Route the matching board power cables from the cabinet to the control cabinet through the trough provided on the top rear of the cabinets.

3. Route the matching board power cables into the control cabinet through the holes at either end of the trough of the control cabinet. Use the hole nearest the cabinet being connected.

4. Connect the matching board power cable to the appropriate connector in the patch panel (Figure 11). Remember that the cabinets are identified from left to right as A through E. Each port in the patch panel is labeled appropriately.

3.3. Functional Test and Verification

When the iRISupply™ Cabinet System has been installed, the system must be tested to ensure optimal operation. This includes antenna tuning, power-up testing, validating LAN connectivity, and functional compartment verification.

3.3.1. Power-Up Testing

Prior to powering up the cabinet for the first time ensure that:

1. All antenna cables are connected to the multiplexer;
2. The RFID reader is connected to its port on the multiplexer; and
3. The antenna terminator is connected to the first port on the multiplexer.

NOTE
If these cables are not connected prior to starting the cabinet, damage to the reader can occur.

Once the cabinet is plugged in, powering up the cabinet will include the following steps:

1. Insert the cabinet power key into the cabinet. Turn the key all the way to the right. The 'Power' and 'Reset' buttons will turn red (Figure 27).

Figure 26 - iRISupply Power Socket

Affix one end of the provided power cord to the iRISupply™ Master Cabinet power socket connector, and the opposite end to the power supply. When completed, ensure that the power socket switch is at the on-position. When the system is turned on, the iRISupply™ System will begin its power-up processes.
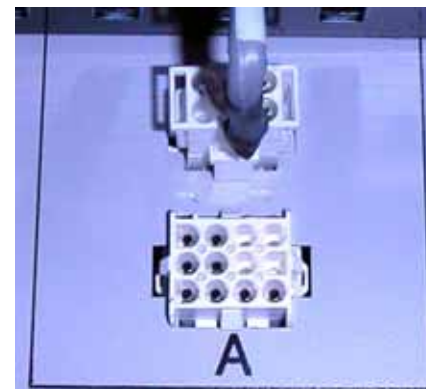

Figure 11 - Matching Board Cable to Patch Panel Connection.

3.1.3.   Antenna Connectivity Cables

The antenna connectivity cables emanate from each cabinet (Figure 12).

Figure 12 - Antenna Connectivity Cable

The number of antenna connectivity cables varies by cabinet type (See Table 3).

Table 3 – Number Antenna Cable by Cabinet Type	
Type of Cabinet	**Number of antenna cables**
Standard	3
Standard w/Power	3
Control, Standard	2
Control, Stent	3
Catheter	1
Dual-Catheter	2
Stent	5

Each antenna cable will be numbered. Cable number one will always be the top antenna in the cabinet. The highest numbered cable will be the bottom antenna.

The antenna connectivity cables will be routed through the wire tray on the top of the cabinets and into the control cabinet. In the control cabinet, the antenna connectivity cables will be connected to the appropriate port on the multiplexer. The multiplexer has 19 BNC connectors. The connectors serve the following functions:

Table 4 – Connector Function on Main Multiplexer	
Number	**Function**
1	Dummy Load
2 through 8	Antenna Connections
9	Output to Additional MUX #1
10	RFID Reader Input Connection
11	Output to Additional MUX #2
12 through 19	Antenna Connections

- Level each cabinet so that they are level and at the same height as its neighboring cabinet. This is most easily done by rolling the cabinets around on the floor until they are at the same height. The leveling legs should be utilized to assist in the leveling effort.
- There are 4 bolts that hold two cabinets together. Two are in the front (top and bottom) and two are in the rear (top and bottom.)
- The cabinets are bolted together using the lugs at the top and bottom of the cabinets. Use a ½″ wrench to tighten the bolts. A flat washer should be used on the bolt and the nut. Figure 25 shows how the front bolts are installed.

Figure 25 - Cabinet Bolts

🔆	**NOTE**	🔆
Prior to bolting the cabinets together, remove the back panels to verify that the antenna cables and matching board power cables are properly connected to the matching boards.		

3.2.4. Connecting Power to iRISupply™

When the physical and wiring connections have been completed, connect iRISupply™ to a standard power outlet.

At the rear of the iRISupply™ Master Cabinet is a power socket connector (Figure 26).

3.2.2. Cabinet Leveling

The cabinets should be leveled when installed. Leveling ensures proper door swing and closure, prevents items from sliding out of the cabinets, and assists in aligning cabinets in instances when the site floor is not level. Each cabinet has leveling legs controls its relative position to the floor.

In some installations it may not be possible to use all of the leveling legs. This is especially true when the cabinets are pushed up against a wall and access to the back of the cabinet is only possible by pulling out the cabinet. In scenarios similar to this only the front leveling legs can be used. For each installation, at a minimum the front leveling legs must be lowered to provide stability and prevent the cabinets from tipping forward.

The leveling legs are raised and lowered with a 9/16" wrench. The leveling legs are shown in Figure 24.

Figure 24 - Leveling Legs

3.2.3. Physical Cabinet Connections

The auxiliary and control cabinets will bolt together at its four corners. Bolting the cabinets will secure them to each other. To bolt the cabinets together:

Table 5 – Connector Function on Additional Multiplexer	
Number	**Function**
1 through 8	Antenna Connections
9	Not Used
10	RFID Reader Input Connection from main MUX
11	Not Used
12 through 19	Antenna Connections

The cables should be routed to the cabinet and connected to the multiplexer in the following manner:

1. Ensure that the antenna cable is properly connected to the matching board box of the respected cabinet (Figure 13).

Figure 13 - Antenna Cable to Matching Board Box Connection

2. Route the antenna cables from the auxiliary cabinet to the control cabinet through the wire tray at the top rear of the cabinets.

3. Route the antenna cables into the control cabinet through the holes at either end of the trough of the

control cabinet. Use the hole nearest the cabinet being connected.

4. Connect the antenna cables to the appropriate connector on the multiplexer. The antenna cables are connected sequentially to the multiplexer in order of cabinet (A → E) and antenna cable number (Lowest to Highest).

Figure 14 - Antenna Cable to Multiplexer Connection

5. The terminator is connected to the first port of the multiplexer.

6. Cable 1 from cabinet 'A' will connect to the 2nd BNC connector of the multiplexer (connector number 2.) It will be followed by cables 2 through 5 (as appropriate and depending on cabinet type) for cabinet A.

7. Once cabinet 'A' has been fully connected, cabinet 'B' will have its first antenna cable connected to the next available BNC connector.

8. Connections are made to the main (upper) multiplexer until no more ports are available. If additional ports are required, additional multiplexers (up to two) can be added below the main MUX. Ports are populated from left to right as described above and conforming to the information provided in the previous table.

Each service panel is connected to the frame by a grounding wire (Figure 22). The grounding wire is a green wire with yellow stripes.

Figure 22 - Grounding Wire Connection

When reattaching the individual service panels, you must ensure to reattach the grounding wire. Validate that the connectors fit snuggly, by inserting the blue connector into the white connector (Figure 23).

Figure 23 - Grounding Wire Connectors

Figure 20 - Electrical Connections in the Powered Auxiliary Cabinet

3.2. *Mechanical Assembly*

The mechanical assembly of iRISupply™ involves rolling the cabinets into place, bolting them together and leveling the cabinets.

3.2.1. Securing the Service Panels

When the physical and wiring connections for the cabinets have been completed, you must securely enclose the iRISupply™ System by mounting all of the required service panels. Each iRISupply™ Cabinet (including both the master and auxillary units), contain four service panels - 2 Side Panels, 1 Top Panel, and 1 Back Panel (Figure 21).
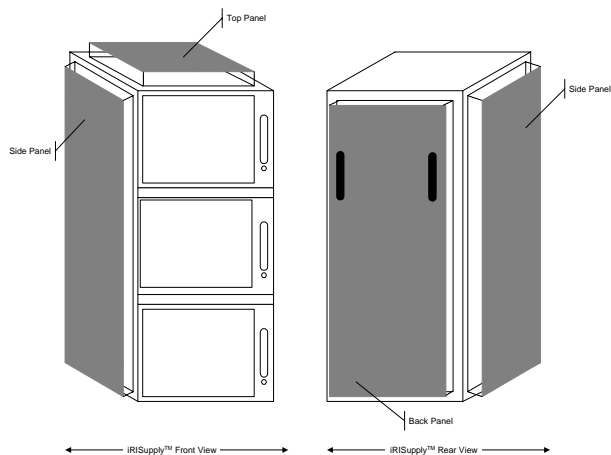

Figure 21 - iRISupply(TM) Cutaway with Service Panels Visible

3.1.4. Antenna Tuning

Each matching box must be tuned prior to system power up. Complete the following steps to tune the matching box.

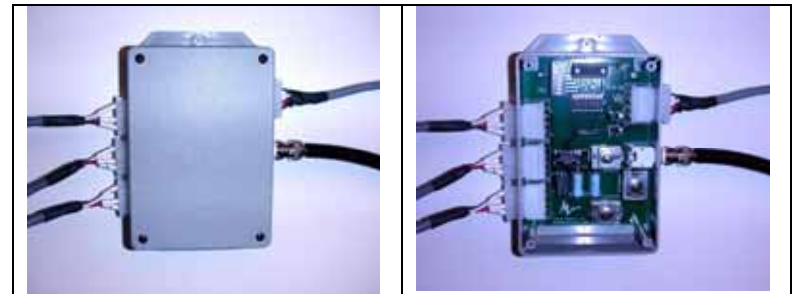• Remove the cover from the matching box (Figure 15).

Figure 15 - Matching Box

• Disconnect the antenna cable. Connect one end of a 24 ft co-axial cable to the matching board, and the other end to the SWR Meter (Figure 16). Ensure that the SWR Meter is set to 13.56 MHz.

Figure 16 - Matching Board to SWR Meter Connection

• Utilizing a flat-head screwdriver, adjust the three variable capacitors (Series 1, Parallel, and Series 2 in Figure 17). First, adjust the Parallel variable

capacitor until you find the minimum SWR. Second, adjust the Series 1 and Series 2 variable capacitors to find the minimum SWR.
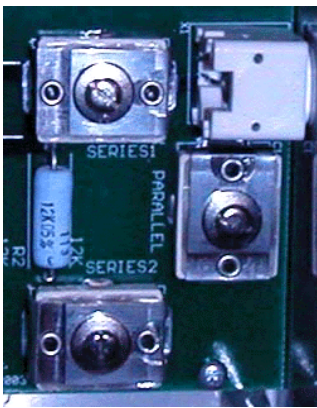

Figure 17 - Variable Capacitors

- Repeat step 3 until the SWR Meter registers a resistance ("R") value of 70, and a reactance ("X") value of 0 (Figure 18).

Figure 18 - Tuned Matching Board with optimal SWR values.

NOTE

The meter may go to sleep. This will be indicated by the values 'SLR' on the SWR display screen. To re-activate the SWR meter, press the 'Mode' button.

When the matching board has been tuned, reattach the matching board cover as well as the antenna cable.

3.1.5. Powered Auxiliary Compartments

A cluster configuration may contain a Powered Auxiliary Compartment (Figure 19).

Figure 19 - Powered Auxiliary Compartments

Prior to operation, the Powered Auxiliary Compartments must be properly wired. Ensure that the individual power cords for each of the Powered Auxiliary compartments are connected to the master surge protector located in the back of the cabinet (Figure 20).