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firmCHANNEL™ Installation Procedures

For On-site Technicians

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firmCHANNEL™ Installation Procedures

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1.0 Determining Location Requirements

1. How many firmCHANNEL units has the client purchased?

2. How many displays will be connecting at this location?

3. How many displays does this location already have hooked up?

4. How far approx. is the firmCHANNEL unit from the display?

VGA Connections Max = 100'

DVI Connections Max = 50'

Greater than 100' > Requires Transmission Hardware

5. What type of video connection will be used from the player?

6. How many firmCHANNEL units will be used?

7. Does the setup require audio?

YES / NO

If Yes then include audio wiring under Necessary Equipment

If No then disregard wiring for audio

8. Is there network connectivity available?

YES / NO

9. Is there enough AC power outlets available for the displays and the firmCHANNEL units?

YES / NO

Notes:

If video transmission is greater than 100', transmission hardware must be utilized. Avocent is recommended but not required. When using transmission hardware, note that you will need an additional video cable to go from the player to the transmitter, then the same cable type from the receiver to the display.

1.0 Determining Location Requirements – Continued

Existing Displays Information:

Brand:	Model:	Supported resolution:	Video Type (VGA/HDMI)	Supported refresh rate:	Audio (Built-in/External Speakers)	RS232 Support:
Example	Example	720P/1080P	HDMI	60hz @ 720P	Built-in	Yes

Recommended display resolution for output is 720P.

IP Address Allocation (Setting up Static IP Addresses)

System	IP Address	Subnet Mask	Default Gateway	Preferred DNS
Example	192.168.1.23	255.255.255.0	192.168.1.1	192.168.1.1

Proxy Address	Port	User	Pass	Caching* (Yes or No)

* If proxy caching is enabled a rule set must be added to the proxy server stating all traffic from enterprise server is not cached.

2.0 Necessary Equipment

Necessary Equipment is equipment that must be obtained to successfully complete the firmCHANNEL installation. Referring specifically to what cables will be needed to connect each unit to each display.

At least 1 video cable required per-firmCHANNEL unit.

SP-100 / SP-200 offers 1 VGA connection as well as 1 DVI connection.

SP-50 / SP-75 offers 1 DVI connection.

FC Unit	Display	Video Connection Cables	Transmitter
Example: SP100	42" Panasonic LCD Wall Mount	10' DVI to HDMI	N/A
Totals:			

*Total of Displays should not be greater than total of Video Connection Cables

3.0 Pre-Install Configuration

3.1 System Setup

1. Connect firmCHANNEL unit to a display along with a keyboard/mouse.
2. Ensure network connectivity which will be used for activating the unit
3. Once the firmCHANNEL unit is booted up and online, hit the “Windows” key to bring up the start menu.
4. Install any wireless adapters before continuing to activate the unit as adding additional hardware will result in having to re-activate again.
5. Double click on the clock and set the correct time and timezone.
6. Go to “**Programs**”, and then launch Internet Explorer. Point the browser to <http://localhost/>
7. Activate the unit by reading over the End User License Agreement, and filling out the form at the bottom of the page. Click the “Complete Activation” button to proceed to the login page.

****Continue only if system is being hooked up to an Enterprise Server. Otherwise you have completed System setup.**

8. Using **admin** for the user name and **admin** for the password, login to the system.
9. Click the “**Settings**” button in the top right of the screen. Click the “**Enterprise**” tab along the row of buttons.
10. Enter in the information corresponding to the clients enterprise server. Enter player name, server address (example.firmchannel.com), username, and password. Click “**Activate Enterprise**”
11. Login to the enterprise server to confirm player connection and to finish enterprise connection.

These steps should be performed before installing on location to avoid problems.

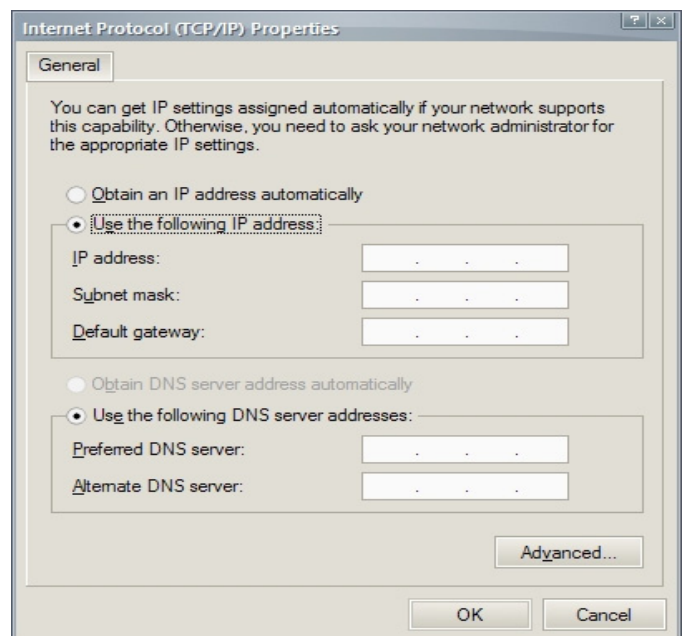
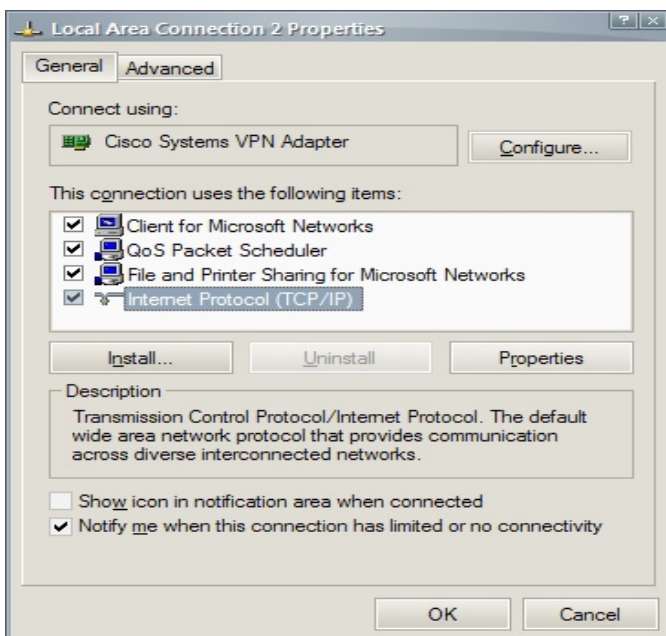
3.0 Pre-Install Configuration

3.2 Network Setup

If the client is providing the technician with pre-defined network configuration, do the following:

1. Press the Windows Key on the keyboard to bring up the Start Menu. Go to Settings then click **“Network Connections”**
2. Right Click **“Local Area Connection”** and go to Properties. Left click on **“Internet Protocol (TCP/IP)”** then click properties.
3. Change the radio button to **“Use the following IP address”**. Enter in the IP address information that has been provided by the client’s network administrator.
4. Follow the same steps from part 3 for DNS Server addresses.

If using wireless internet, install the wireless adapters drivers before system activation.



4.0 Setting up firmCHANNEL On-Site

4.1 Equipment

During an install you may run into issues with the setup. The best way to troubleshoot and resolve any issues during this process is to come prepared with the necessary equipment.

Equipment to bring during an install:

- Keyboard (USB/PS2)
- Mouse (USB/PS2)
- PC Monitor/Display Device (Supporting either VGA OR DVI)
- Extra firmCHANNEL hard drive. (If provided by distributor)
- Spare DVI to HDMI Cable
- Spare VGA Cable

Finally, make sure to bring all hardware which the customer has purchased along with the accessory kit which accompanies each firmCHANNEL unit.

4.2 Troubleshooting

Problem	No video signal is being outputted to display device.
Solution	Directly connect extra monitor to the back of the firmCHANNEL unit to confirm video is not being displayed. Try both VGA cable as well as DVI. If no signal is present after hooking up extra monitor confirm that the firmCHANNEL unit has power by checking for the fans spinning. If still no results, the power supply is most likely faulty.

Problem	Only see firmCHANNEL splash screen during startup on display.
Solution	This means that the display has a valid connection to the firmCHANNEL player, however the display mode is incompatible. This can be resolved by logging into the player and changing the refresh rate or resolution via a remote computer or by changing the settings via enterprise if the player has already been setup on the enterprise server. Consult the owner's manual of the display to determine the native refresh rate for the resolution you have selected.

Problem	Display is fuzzy/Out of sync.
Solution	This problem indicates that the refresh rate is too low for the display at the set resolution. Login to the player locally or on enterprise if already connected to change the refresh rate to higher settings. Consult the owner's manual of the display to determine the native refresh rate for the resolution you have selected.

4.2 Troubleshooting - *continued*

Problem	Output does not fit entirely on screen.
Solution	This problem only occurs when the firmCHANNEL unit is hooked up via VGA cable. First start by going into the menu of the TV screen and finding the PC option to perform an “Autofit” or “Autoadjust”. If this does not resolve the issue, go into the menu of the TV once again and look for manual adjust button which will allow you to move the picture to the desired location on the screen. Lastly, if none of the above have worked, try changing the resolution to that specified in the owner’s manual of the display. The key thing you are looking for is the “native resolution” which means the resolution that the display was designed to run at.

Problem	Player is not connecting to enterprise
Solution	<p>Multiple answers:</p> <p>Always determine if the player has an active internet connection by trying to load their enterprise page. http://example.firmchannel.com</p> <ol style="list-style-type: none"> 1. Lock file is present, a lock will be placed on the system when it is updating to ensure that it doesn't try and connect to the enterprise server two times simultaneously. The lock can be removed by going on another computer or the actual unit itself and typing http://ipaddress/blank.php?module=defaults&action=clear_enterprise_lock 2. Firewall is blocking enterprise connection. If location has strict firewall policy you will need the network administrator to allow ports 20/21/80 to be forwarded to the internal IP address of the firmCHANNEL unit. The incoming connections will be coming from the IP range of 69.42.54.* (the firmCHANNEL server farm). Once these rules have been established on the firewall the player should now be able to connect and download from enterprise.

4.2 Troubleshooting - *continued*

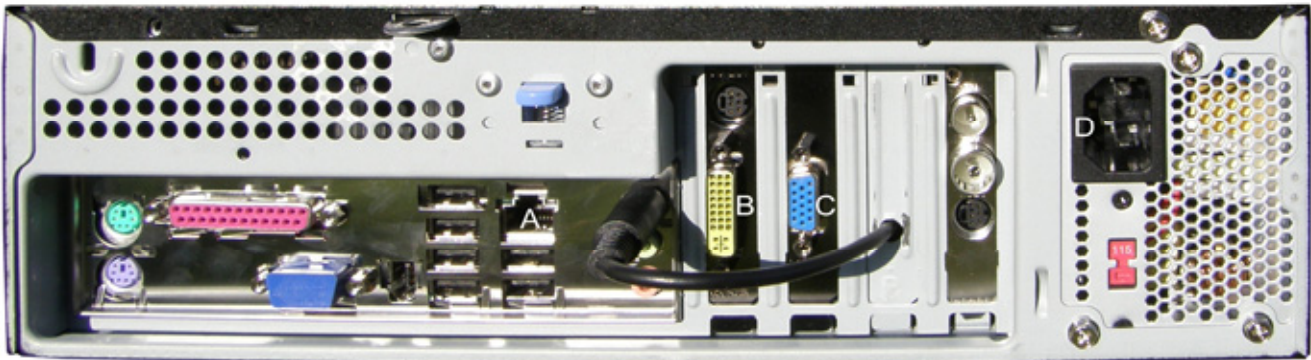
Problem	Player is not connecting to enterprise
Solution	<p>Multiple answers:</p> <p>Continued</p> <ol style="list-style-type: none"> 3. Settings are incorrect on the enterprise tab of the firmCHANNEL unit. Check by pressing the “Check Settings” button. If you have received a “Connection Successful” message then the settings are correct. 4. Proxy server is blocking connection. Go to the “Network” tab on the player interface. Enter in the proxy address (obtain from network administrator) and enter in the username/password if necessary.

Problem	When using DVI connection, screen not displaying connection
Solution	<p>Multiple answers:</p> <ol style="list-style-type: none"> 1. The problem occurs when the player is turned on before the display is on. When using DVI, it sends EDID information from the display to the player. If the display is not turned on to do this, the player will not be able to detect the signal to send out. This can be resolved by turning the player off and confirming that the display is turned on first. 2. If this is happening each night when a display is turned off and when the player does its nightly reboot. A small device can be placed at the player which will retain the EDID information of the display. The name of this device is DVI doctor and can be ordered as necessary. Even if the display is not on, the DVI doctor will tell the player the EDID information from the display. When the display is then turned on, it will have an active connection.

5.0 Field Technician – Skills Assessment

The purpose of this skills assessment is to obtain detailed information regarding your qualifications for the position of firmCHANNEL field technician. Since the requested information will be used to assist us in screening and assessing applications, it is to your advantage to be as complete as possible in responding to the following questions.

1. What is the difference between a VGA signal and a DVI signal?
2. How would you go about finding the firmCHANNEL units IP address?
3. What is the maximum cable run of a VGA connection?
4. What is the maximum cable run of a DVI connection?
5. On a display, Native Resolution refers to?
6. Explain the difference between a displays resolution and refresh rate:



7. Please label the following diagram:

A: _____ B: _____

C: _____ D: _____

6.0 Post Installation Procedures

- The most important step is showing the client how to connect to their firmCHANNEL Unit. Start off by letting them know they can access the unit from any computer on their network as long as they have the IP Address to the firmCHANNEL unit.
- Once they are logged into the firmCHANNEL interface, direct them to the help menu where they can find answers to all the questions they have regarding how to create and schedule content on the player.
- Check with the client to make sure all their concerns have been addressed and that they are happy with the installation.

Distributor Specific Post Installation Instructions:

Use the space below for any additional Installation instructions for the technician:

7.0 Hardware Reference

Video Cables:

Network Cables:

VGA



DVI - HDMI



CAT5e



Audio Cable:

Specialty Cable:



**3.5mm Audio (Back of SP100)
RCA Audio (Into Display)**



VGA to Composite/S-Video