

ARRAKIS SYSTEMS



DIGILINK

HD



Remote Access Manual



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Table of Contents

- Section 1 – Overview.....4
- Introduction.....4
- General Instructions.....4
- Internet Speeds.....6
- Network Basics.....8
- Remote Access Options.....11
- Section 2 – Gateway to Gateway.....12
- Introduction.....12
- Setup Steps.....12
- DHD-Tools Setup.....14
- How to Find the IP Address of a Computer.....15
- How to Add Audio to Remote Studio.....16
- Remote Desktop Operation.....16
- Troubleshooting.....18
- CISCO Customer support.....18
- Section 3 – Remote Access Server.....19
- Introduction.....19
- Setup Steps.....19
- How to Setup Automatic Backup.....22
- Remote Access of Network.....22
- Troubleshooting.....23
- Section 4 – Other Instructions.....24
- DSL Setup instructions for Gateway router.....24
- Authenticating a Router.....25
- How to Find the IP Address of a Computer.....25



Section 1 – Overview

Introduction

Welcome to Remote Access with Digilink-HD. The remote access packages are an optional add-on to the Digilink-HD automation program. It allows users to remotely connect to their stations, or connect entire Local Area Networks (LAN), to create a Wide Area Network (WAN).

There are 2 different options for Remote Access: Gateway to Gateway & Remote Access Server. Both have different costs and feature sets. For simplicity, we have combined both manuals together in one, but you may only have one of the remote access options. In which case, please refer to the part of the manual for the product you have purchased.

General Instructions

In this section of the manual, we will discuss the basics behind remote access. This manual assumes a basic knowledge of computers and connectivity. There are hundreds of books and manuals that go into greater depth on networking, but for operating your Remote Access, we have simplified it so you don't have to be a network technician.

Remote access is becoming more and more common as internet speeds become faster and access points are more numerous. This gives the users more power to access their computers and perform necessary functions.

This also creates security concerns. If the user can log on remotely, then theoretically anyone can log on remotely. This is why Arrakis Systems has teamed up with CISCO & Microsoft to use their remote access protocols that have been tested with millions of customers and developed over decades of use. As a result, your system and your stations are protected.

BASIC TERMS

Network / Networking – A number of computers (2 or more) linked together to share resources. Other devices such as smart phones or tablets can also connect to your network.

LAN – Local Area Network. This is 2 or more devices connected to each other (either wireless or wired) to create a local area network. This network is typically connected via a router or



switch. This allows you to transfer files, or remotely control other devices.

WAN – Wide Area Network. This is the combination of multiple Local Area Networks. This can be 1 or more LAN's connected.

Gateway to Gateway – This is the creation of a WAN by combining two networks that are not collocated.

Server – This is a computer that its sole purpose is to be a backup point for other computers on the network, as well as provide remote access and security.

Router – A physical device (the Gateway to Gateway option uses a CISCO VPN router) that connects two networks and allows data to be sent and received between them. It connects you to the internet, and can also connect you to another LAN. The router also can be used to network multiple computers together.

Switch – This is a HUB point where you may connect multiple computers together to create a LAN. Typically a wired switch that uses Ethernet cables.

Modem – An electronic device that makes it possible to transmit data to and from a computer via telephone or other communication lines. This is usually provided by the ISP.

IP Address – This is an address used by the Internet Protocol to identify a computer or device's location on the network. There is an IP address for your entire LAN that is provided by your ISP (such as 75.166.139.98). And there is an IP address assigned to each device connected to your LAN (such as 192.168.1.12).

ISP – Internet Service Provider. This is the company that you go through to connect to the internet. The ISP may use different technology to connect you to the internet. Such as a Cable connection, DSL (over your phone lines) or satellite (using a dish).

Static vs. Dynamic – By default, both your LAN IP address (assigned by your ISP) and your individual device IP addresses on your network are dynamic addresses. This means that the address can change at any time. The LAN IP address is changed by your ISP and is completely random. Your device IP address (such as your desktop) can typically change every time you turn your computer on and off (when you lose connection and reconnect to your LAN). There are methods to make your IP address Static so that the address is always the same, both for your LAN and your individual device.

VPN – Virtual Private Network. This is a protocol used to connect the user to a LAN (such as your office) from a remote location (such as from your home).



Internet Speeds

The operation of remote access is 100% determined by your internet speed at your remote location, and at the studio. Whatever is the slowest speed will determine how fast you can transfer files and perform all operations. For example:

Studio 1 = 1Mb upload / 3Mb download \longleftrightarrow **Remote studio 2** = 14Mb upload / 20Mb download

In this example, Studio 1 has the slowest speed of a 1Mb upload and 3Mb download. So regardless of the fact that the Remote studio 2 has fast speeds of 14Mb up / 20Mb down, it is handicapped by Studio 1's slow upload speed of 1Mb and download speed of 3Mb. IF you want to utilize your internet speeds, then you will want to have both Studios at the same fast speeds. Or your bottleneck will always limit your performance.

Specifically, there are 2 scenarios with this example:

SCENARIO 1 – If you were sending audio from Remote studio 2 to Studio 1, then: Remote Studio 2 has a 14Mb upload, but Studio 1 only has 3Mb download. Therefore, you will be sending audio at only a 3Mb speed (max).

SCENARIO 2 – If you were pulling audio from Studio 1 to Remote studio 2, then your Remote Studio 2 has a download speed of 20Mb while your Studio1 only has an upload speed of 1Mb. Therefore you will transfer your file at only a 1Mb speed.



IMPORTANT NOTE: *Your ISP (Internet Service Provider) ALWAYS misinforms about their speeds. You're paying for an advertised speed, but you will NEVER reach that speed. To get a true test of your internet speed, go to www.speedtest.net. This website will test your true internet speed and give you the results. Check with your ISP if your true internet speeds are substantially far off from what you are supposed to get.*

It is common for if your ISP tells you that you are getting 1Mb upload, that you will likely get around 600kb (0.6Mb). IF you are supposed to get around a 12Mb down, then you will likely get around 6Mb to 10Mb. This will vary by time of day and how many people around you are using the same internet connection. Your neighbors, even though they are not on your LAN, can and will affect your internet speeds.

TIPS TO INCREASE YOUR INTERNET SPEED

1. The most obvious tip is to purchase the fastest speed available from your ISP. The faster the better.
2. Make sure that your Modem is capable of handling the advertised speeds. Your ISP can help you check to see what speeds your modem may handle.
3. ONLY put your studios on the same internet connection (LAN). DO NOT put other auxiliary



computers onto the same network. You are making a mistake if your secretary is using the same internet connection that your On-Air studios are on. While they are surfing Facebook, you are losing performance.

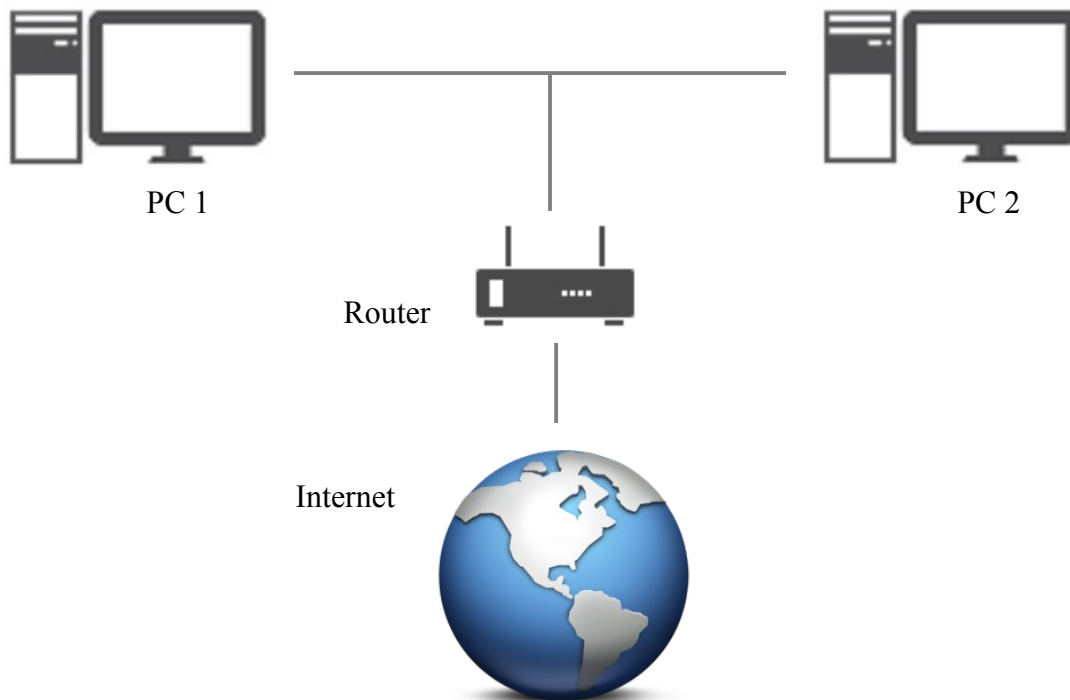
4. Wired connections are faster and more reliable than Wireless connections. Use Wired Ethernet connections when you can.
5. The more Switches, or HUBs, the slower your speeds will likely perform. Try to have the least amount of HUB's to your studios (have a direct route to your router).
6. Limit your Internet usage. If someone on the network is downloading something large, then everyone's speed will slow down. If your browser is on, then you are using up internet speeds. This goes for applications that run in the background that may be downloading or uploading things that you are unaware of. Therefore you should limit the amount of software running on your LAN computers.
7. For specifically using the Remote Voice Track feature, it is required to convert all music files (that will be used for voice tracks) to the MP3 format (256kbps). WAV files are too large to send over the small internet bandwidth.



Network Basics

There are a handful of ways to connect to the internet, and connect other devices to each other on the LAN. This section will explain the basic concepts of this networking.

BASIC LAN:



In this example, PC 1 and PC 2 are connected on a Local Area Network. Since both computers are connected via the router (this can be a wired or wireless connection), the router gives both PC's the ability to connect to each other. Depending on the individual PC security settings, these PC's can send files to and from each other, as well as remotely access/control each other.



IMPORTANT NOTE: *By default PC's do NOT provide access to each other. You cannot transfer files to and from each PC by default. This is to protect the user from unwanted access to the PC. To allow remote access and file transfer, the user must change the PC settings.*

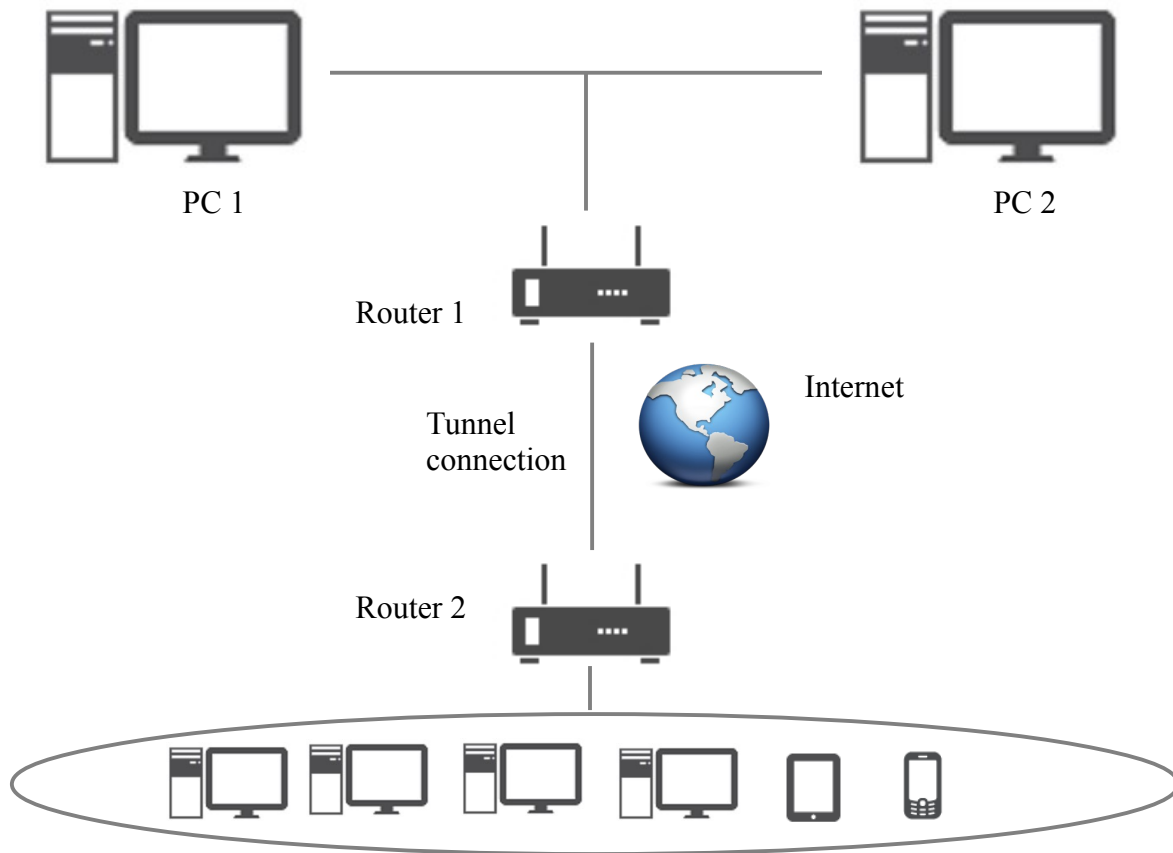
The router also connects both PC's to the Internet as well.

Routers typically only have 4 wired ethernet connections and therefore can only connect up to 4 wired computers together. The wireless connection typically only connects up to 50 devices by default. This



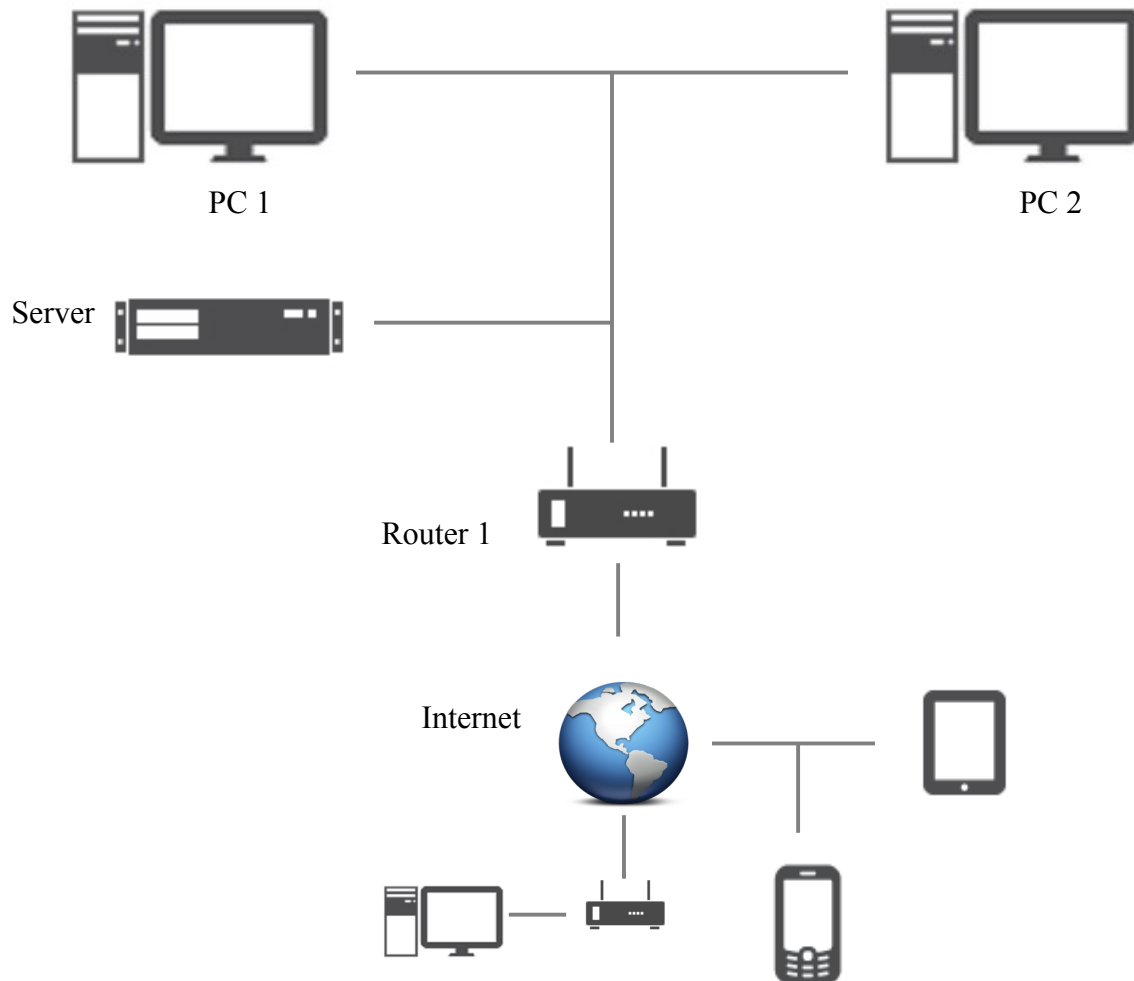
means if you want to have more than 4 wired devices connected to each other, you will then need to get a Switch. A Switch is a HUB that has more wired connections and can connect many devices together. A common switch will have 20 connections, allowing you to connect up to 20 different wired devices.

GATEWAY to GATEWAY (WAN):



In this example, there are 2 networks connected to each other, via a Gateway to Gateway connection. These 2 LAN's are at 2 different physical locations, such as Austin and Dallas Texas. These routers setup a tunnel access to each other so that all the PC's at Router 2 and all the PC's at Router 1 can access each other. In this setup, only the PC's located at Router 1 or Router 2 can access each other. The tunnel protects the 2 LAN's and doesn't allow anyone at any other location to access each other.

REMOTE ACCESS SERVER:



In this example, a server has been added to the LAN. This server allows users to connect to the LAN anywhere there is an internet connection, using user names and passwords. The server can also be used to automatically backup PC1 and PC2.

The big drawback of using the Server for remote access is that you cannot stream audio real time, and therefore cannot do remote voice tracks. You may however have access to upload and download files.



Remote Access Options

There are two options for Remote Access for Digilink-HD. Each has its own benefits and limits. If you purchase both options, then there are no limits and are given full access. Pricing and information may change at anytime, without notice:

Gateway to Gateway

\$1,200 per Host (includes VPN Router)

\$800 per Client (includes VPN Router and DHD-Tools license)

Features:

- Remote On-Air control.
- Remote Voice Track.
- Remote Library Manager.
- Remote Scheduling.
- Remote Reports.
- Remote Production.
- Extremely secure.

Limits:

- Can only access from one of those sites (where the router is).
- No Automatic Backup.

Remote Access Server

\$1,800 per server. One server needed per LAN. (DELL R310 PowerEdge rack mount server.

~1TB drive. 4 drive bays.)

Features:

- Remote On-Air control.
- Remote Library Manager.
- Remote Scheduling.
- Remote reports.
- Remote production.
- May access from ANYWHERE there is an internet connection.
- Server can auto-backup all of the On-Air machines for comprehensive backup.
- Extremely secure.

Limits:

- Cannot do remote voice tracking. You can't get the audio to the system. You can transfer complete audio files, but not audio real time.
- Sending audio to the system is a little time consuming.



Section 2 – Gateway to Gateway

Introduction

Welcome to the Remote Access Gateway to Gateway option. If you have purchased this option then you should have received:

- CISCO Router (router model and specs may change at any time). Qty determined by how many Host and Clients you purchased. 1 router per host or client.
- Instruction manual.
- DHD-Tools license. Qty 1 per host/client.

CUSTOMER SUPPORT PROVIDED:

As part of the remote access options, we will provide limited customer support to help get the system setup. We will:

- 1) Provide steps and walk through the basics for wiring your router to your network.
- 2) Remotely access one of your local computers and setup the CISCO router settings for remote access. This will require the setup of GoToMyPC onto your computer.
- 3) Provide training on using DHD-Tools with the Gateway to Gateway.

We will NOT be able to:

- 1) Provide ongoing Network support for your LAN. Any LAN issues should be handled with a network administrator.
- 2) We will not be able to provide support if there are extensive issues with connecting your router to the internet. This may require the user to contact CISCO for customer support. They provide support for up to 1 year after purchase.
- 3) General internet issues should be handled through your ISP.

Setup Steps

Here are the steps for setting up the Gateway to Gateway option for Digilink-HD. With the Gateway to Gateway option, you are connecting 2 or more Local Area Networks together with the CISCO routers. There needs to be at least 1 VPN CISCO router per network.

STEP 1 – Establish internet connection at site. You must purchase and establish an internet connection at each of your sites. We strongly recommend at least 1MB upload and 3MB



download speeds. The faster the connection, the better your performance. The more reliable your internet connection, the more reliable your performance. Do NOT connect other auxiliary computers to this network. Computers for Secretaries or your Sales Team should not be on this same network. Their use will slow down your performance.

STEP 2 – Wire your CISCO router to the internet. This may mean that you need to connect to a modem or other device. Please contact your Internet Service Provider for instructions. If you are using DSL, then you will need to get a PPPoE user name and password that is provided by the ISP. Special instructions for setting up for DSL may be found at the end of this manual.

STEP 3 – Setup a Dyn DNS account. You may find them at: www.dyn.com
You will want to get their DynDNS Pro account which is usually around \$25 per year. This allows you to have a static IP address so that you can remotely log on. This is significantly cheaper than getting a static IP address from your ISP, which will usually cost hundreds per month. Create a unique domain for each Host / Client.

STEP 4 – Contact the Arrakis Systems support team to setup a time to log on and configure the router settings. The support team will email GoToMyPC instructions so that they may log on to a computer on the LAN.

The Arrakis Systems team will then:

STEP A – Add DynDNS Update Clients software to the PC at each location.
cdn.dyn.com/windows/DynUpSetup.exe. This computer must be on at all times, and should, if possible, not be installed on the On-Air machine.

STEP B – Change the IP address for each LAN.

1. In the router settings, go to **Networking**.
2. Select **Ipv4 LAN**.
3. Change the **Starting IP Address** to new address. Such as 192.168.12.100.
4. Change the **Ending IP Address** to 192.168.12.254.
5. Click **Save**. The router will then need to restart. You may need to unplug power from the router, give it 10 second and then replug.

STEP C – Setup Gateway to Gateway.

1. In the router settings, go to **VPN**.
2. Click on **IPsec**.
3. Select **Basic VPN Setup**.
4. Select **Gateway**.
5. Give a **New Connection Name**.
6. Enter a **Pre-Shared Key** password.
7. Select **FQDN** for **Remote Gateway Type**.
8. Enter the DynDNS account domain address for the remote location.
9. Select **FQDN** for **Local Gateway Type**.
10. Enter the DynDNS account domain address for the **Local Gateway Type**.



11. Enter the **Remote LAN IP Address, Subnet Mask & the Local LAN IP Address and Subnet Mask.**
12. Repeat the steps at the other location.

STEP D – Turn off Windows Firewall on the studio PC, and then create shortcuts to the various C: drives (and Import Audio folders) onto the desktops of each computer. You will need to know the IP address of each PC in order to do this. To access the C: drive, you will type into the Windows Search box (for example): \\192.168.12.218

STEP E – Setup Remote Desktop.

1. Right click on **Computer.**
2. Select **Properties.**
3. Click on **Remote settings** on the left side.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure).**
5. You must have a User name and Password in order to use this function.

STEP E – After the Arrakis Systems team has setup the Gateway to Gateway to both locations, you may now access either locations from one of the networks.

DHD-Tools Setup

SET NETWORK PATHS – In order to see the schedules and audio library, it is necessary to path DHD Tools to the appropriate On-Air machines. To do this:

- 1) Go to **File.**
- 2) Select **Setup.**
- 3) Select **Set Network Paths.**
- 4) This will bring up a screen in which you can set paths to connect to multiple studios. Choose the studio that you want to path.
- 5) It will ask you if you would like to setup the path, select **Yes.**
- 6) Create a name for this studio and click **Save.**
- 7) You will now need to path DHD Tools to the **Click on this File to set a Network Path.txt** file that is contained in the **C:DHD** folder. To do this, go to the **C:** drive of the On-Air machine that you want to path to. You will likely use the shortcut to the C:

Choose Studio	Studio Name	Path to Studio
Studio 1	KARC-FM	C:\DHD
Studio 2	KARC-AM	\\Melissa-pc\c\NEW-WAVE
Studio 3	KWBY	C:\NEW-WAVE
Studio 4	KCLW	C:\NEW-WAVE
Studio 5	WNEV	C:\NEW-WAVE
Studio 6	WKRP	C:\NEW-WAVE
Studio 7	not assigned	

- drive that is on the desktop for the networked drive.
- 8) Open the **DHD** folder.
 - 9) Double click on the **Click on this File to set a Network Path.txt** file. You are now pathed to the machine.
 - 10) To create a path to another studio, simply follow instructions 1 – 9 again.

Once you are pathed to the remote machine, you may perform all DHD-Tools task as normal. You may update the Library information, change the schedules and voice track your schedule. All these operations are described in detail in the DHD instruction manual.



IMPORTANT NOTE: All music files that are used for voice tracks must be converted to MP3 format (256kbps) if you are to use the Remote Voice Track feature. WAV files are too large to transfer over a small internet bandwidth.

How to Find the IP Address of a Computer

It is often necessary to find the IP address of a computer, such as to access the C: drive. To get the IP address:

- 1) Go to the desired computer.
- 2) In the Windows search bar in the Start menu, type in the search **cmd**.
- 3) Open the **cmd.exe**.
- 4) Type in the term: **ipconfig** and press Enter.
- 5) You may now find your IP address in the field **IPv4**. In this example, the remote PC IP address is: **\\192.168.12.219**.

```
C:\Windows\system32\cmd.exe

Connection-specific DNS Suffix . : Cisco
Link-local IPv6 Address . . . . . : fe80::3423:7114:8f87:d931%11
IPv4 Address. . . . . : 192.168.12.219
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.12.1

Tunnel adapter isatap.Cisco:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : Cisco

Tunnel adapter Local Area Connection* 11:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :

Tunnel adapter Teredo Tunneling Pseudo-Interface:

Connection-specific DNS Suffix . :
IPv6 Address. . . . . : 2001:0:4137:9e76:283a:3f47:3f57:f324
Link-local IPv6 Address . . . . . : fe80::283a:3f47:3f57:f324%14
Default Gateway . . . . . :

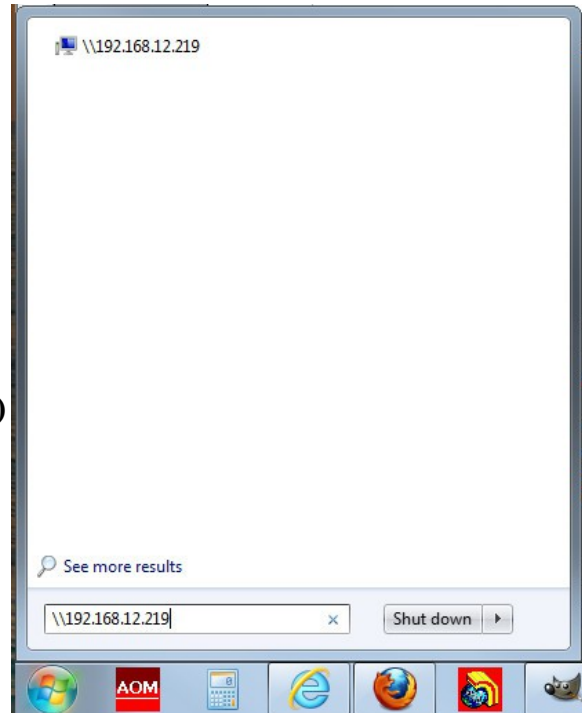
C:\Users\On-Air>
```



How to Add Audio to Remote Studio

You will still use the Import Audio folder to add audio to the remote system. Simply:

- 1) Find the C: drive of the remote computer. Ideally there should be a shortcut on the desktop. This may require you to know the IP address of the computer that you are accessing. If you type the IP address into the Windows search bar, you should get access to the PC. In this example, the remote PC IP address is: \\192.168.12.219.
- 2) Hit enter, and it will now show you the C: drive. Open the C: drive.
- 3) Open the **DHD** folder.
- 4) Find the **Import Audio** folder, and right click on it and select **Send to > Desktop (create shortcut)**
- 5) This will put a shortcut to the **Import Audio** folder to your desktop.



You will now use this Import Audio folder for adding audio to your system.



IMPORTANT NOTE: *The upload speed of your audio files are 100% determined by your internet speed at your remote location, and at the studio. Whatever is the slowest speed will determine how fast you can transfer files. Check the Internet Speeds section of this manual to learn more.*

Remote Desktop Operation

Remote Desktop allows you to take control of another computer. To use Remote Desktop, it must be enabled on the Remote Computer (the computer you want to take control of). To do this:

1. Right click on **Computer**.
2. Select **Properties**.
3. Click on **Remote settings** on the left side.
4. Select **Allow connections from computers running any version of Remote Desktop (less secure)**.
5. You must have a User name and Password in order to use this function. This is found in Control Panel in the Users section. Make sure to write down the User name and Password for later use.



Once Remote Desktop is enabled on the Remote Computer, then you can begin using it. To use Remote Desktop:

- 1) First establish that you have a Gateway to Gateway access between your 2 networks.
- 2) Open the **Remote Desktop** application.
- 3) For Computer, enter in the remote IP address. In this example, it is **192.168.12.245**.
- 4) For the user name, enter in the user name that you assigned on your Remote PC. In this example, it is **windows8pc**.
- 5) Then enter the password that you assigned to your user profile. Both of these are what were created on your remote PC.
- 6) You should now be able to view the remote PC and operate it as though you were present.



IMPORTANT NOTE: *Only 1 user may use the computer at one time. So if you log on to the computer remotely, then it will kick off anyone who is either logged on remotely, or at the location. It will always give a warning message and will always give you the option to kick someone off.*



Troubleshooting

If you lose connection to the remote computer, it may be a result of these common problems:

- 1) Make sure that both the local and remote PC's are turned on and are connected to the Internet.
- 2) Make sure that the DynDNS IP address updater is turned on at the remote location, and has the correct IP address. You can see the correct IP address by Google searching the term "What is my IP." This will tell you the IP address for your LAN and it should be the same address as seen by the DynDNS software.
- 3) Make sure the DynDNS IP address is correct for the local address as well.
- 4) You may have to turn Windows Firewall off at both locations.
- 5) Double check the steps taken in STEP 4, that was performed by the Arrakis Systems support team.
- 6) You may only use Remote Desktop to connect to PC's that have a Windows OS Pro or higher. Windows Home, or Media editions do not allow you to remote in. Only remote out.

CISCO Customer support

If you purchased the Gateway to Gateway option, then you are using a CISCO router. This router has a 1 year warranty in which you can receive free customer support for that year. Their support team is extremely helpful for diagnosing and fixing internet connection problems and can assist you if we are unable. Their support phone number is:

CISCO Support

1-866-606-1866

Have the router serial number ready for when you call.



Section 3 – Remote Access Server

Introduction

Welcome to the Remote Access Server option. If you have purchased this option then you should have received:

- Dell Rack Server (model and specs will vary).
- Instruction manual.

CUSTOMER SUPPORT PROVIDED:

As part of the remote access options, we will provide limited customer support to help get the system setup. We will:

- 1) Provide steps and walk through the basics for wiring your server to your network.
- 2) Walk you through and configure your Server to allow Remote Access.

We will NOT be able to:

- 1) Provide ongoing Network support for your LAN. Any LAN issues should be handled with a network administrator.
- 2) We will not be able to provide support if there are extensive issues with connecting your server to the internet. This may require the user to contact your ISP or Microsoft for support.
- 3) General internet issues should be handled through your ISP.

Setup Steps

Here are the steps for setting up your server to work with Digilink-HD. With the Remote Access Server option, you are connecting a Windows server (running a Windows server OS) to your Local Area Network. Once configured, you will be able to log on to your server, and use Remote Desktop to connect to any Windows PRO edition PC's that are on the Network.

STEP 1 – Establish internet connection at your site. You must purchase and establish an internet connection at your studio (where the server is connected). We strongly recommend at least 1MB upload and 3MB download speeds. The faster the connection, the better your performance. The more reliable your internet connection, the more reliable your performance. Do NOT connect



other auxiliary computers to this network. Computers for Secretaries or your Sales Team should not be on this same network. Their use will slow down your performance.

STEP 2 – Wire your server to the LAN. A hard wired (Ethernet) connection will be required.

STEP 3 – Activate UPnP in your router settings. These steps will be different depending on your router. Consult your router instructions for these steps. If you are using our Gateway to Gateway option, then we may assist with configuring this step. To do this with with the specific Gateway to Gateway router:

1. In the CISCO router screen, go to **Administration**.
2. Select **Discovery Settings**.
3. Select **Discovery - UPnP**.
4. Check mark the option **Enable** for **UPnP**.

STEP 4 – Setup your Server IP address to be static. These steps will be different depending on your router. Consult your router instructions for these steps. If you are using our Gateway to Gateway option, then we may assist with configuring this step. To do this with with the specific Gateway to Gateway router:

1. Find out what the server IP address currently is. You may find instructions on this in the **How to Find the IP Address of a Computer** section of this manual.
2. Go to **Status**.
3. Click on **Available Local network Hosts**. Get the IP Address and MAC address for the Server.
4. Now go to **Networking**.
5. Select **LAN**.
6. Select **Static DHCP**.
7. Click on **Add**, and then enter the IP Address and MAC address. Click **Save**.

STEP 5 – Setup Port Forwarding in your Router settings. These steps will be different depending on your router. Consult your router instructions for these steps. If you are using our Gateway to Gateway option, then we may assist with configuring this step. To do this with with the specific Gateway to Gateway router:

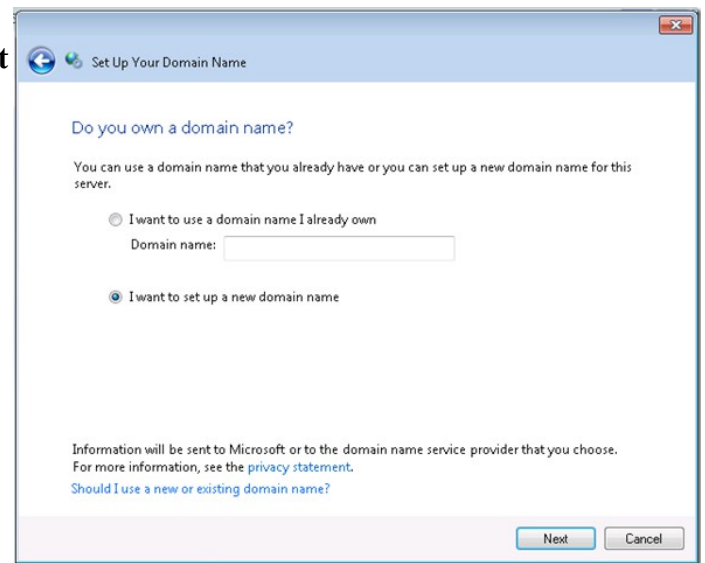
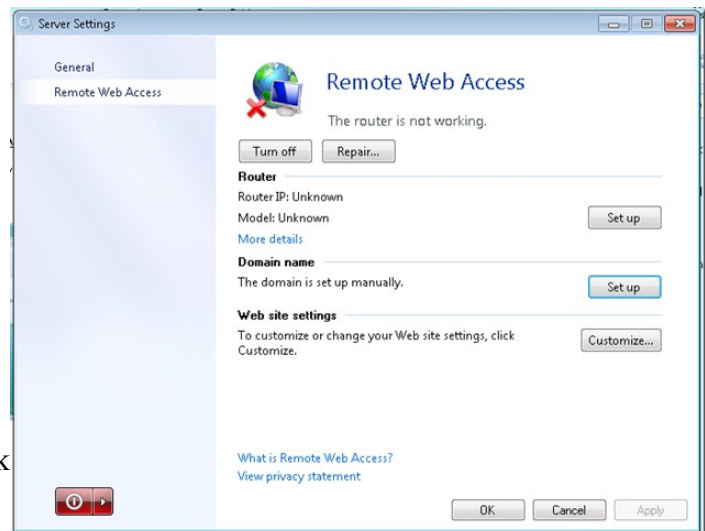
1. In the CISCO router screen, go to **Firewall**.
2. Select **Port Forwarding**.
3. Click on **Add**.
4. Select **Always Allow**, for the **Action**.
5. Choose **HTTP** as the **Service**.
6. Select **Any** for **Source IP**.
7. Enter in the Server IP address for **Destination IP**.
8. Enter **80** for the **Internal Port**.
9. Click **Save**, and then repeat steps 3 & 4.



10. This time select **HTTPS** as the **Service**.
11. Select **Any** for **Source IP**.
12. Enter in the Server IP address for **Destination IP**.
13. Enter **443** of the Internal Port. Click Save.

STEP 6 – You will now need to setup Remote Web Access. To do this:

1. In the SBS 2011 server, go to **Dashboard**, and click **Server Settings**.
2. Then go to **Remote Web Access** and click **Set Up**.
3. In the **Remote Web Access** screen, click on **Setup** for the **Router**. This will take you through the automatic setup for the router. It should automatically setup. If there is a problem, it will come up with an error.
4. After the router is setup, then click on **Setup** for the **Domain name** section.
5. It will now ask you if you own a domain name. Select **I want to set up a new domain name**.
6. Then select **Get a personalized domain name from Microsoft**.
7. Enter your Windows Live **User name** and **Password**. You may need to setup a Windows Live account.
8. Accept the **Privacy statement and Agreement**.
9. Then create a domain name. This can be any name that is easy to remember. Click on **Set up**.
10. Click on **Visit Remote Web Access** to view the page.



More information may be found on the Microsoft Website at:

http://social.technet.microsoft.com/wiki/contents/articles/922.windows-home-server-router-setup.aspx#Reality_Check



How to Setup Automatic Backup

The server is capable of automatically backing up any PC on the network. We strongly recommend that the server should only backup the On-Air computers. Other computers such as secretaries, or sales staff should have their own backup on a different server or hard drive. The intention is for the Remote Access Server to be a backup for the On-Air machines.

To set this up:

1. Connect the On-Air PC to the same LAN as the server.
2. When the PC is connected, it will automatically setup a daily backup for the PC. To change the settings, go to Computers and Backup.
3. Click on **Additional client computer backup tasks**.
4. Change the backup to run overnight.
5. To disable a PC from backup, click on **Customize Backup for the computer** and select **Disable**.
6. To change what will be backed up, click on **Customize Backup for the computer** and select **Add or remove backup items**.

This will create a comprehensive backup that can be used in the scenario of a hard drive failure.

Remote Access of Network

Any Windows Pro version allows you to use Remote Desktop. All On-Air machines that we ship have the Pro version of the Windows OS. To use Remote Desktop to control one of your On-Air machines:

1. Open Internet Explorer, or any web browser.
2. Type in the URL with the Domain name that you created when you setup Remote Web Access in STEP 6.
3. This will bring you to the main page and will ask for your User name and Password. This information is created within the server.
4. Find the computer that would like to connect to, and click on Connect.
5. Enter in the password for connecting to the PC.
6. You will now be able to use the computer as though you were at the computer.



Troubleshooting

If you lose connection to the remote computer, it may be a result of these common problems:

1. Make sure that both the local and remote PC's, as well as the server, are turned on and are connected to the Internet.
2. You may have to turn Windows Firewall off at both locations.
3. Double check steps 1 through 6 and make sure all steps have been taken for setup.
4. You may only use Remote Desktop to connect to PC's that have a Windows OS Pro or higher. Windows Home, or Media editions do not allow you to remote in. Only remote out.

More help may also be found at this link here:

<http://social.technet.microsoft.com/Forums/en-US/smallbusinessserver/threads>



Section 4 – Other Instructions

DSL Setup instructions for Gateway router

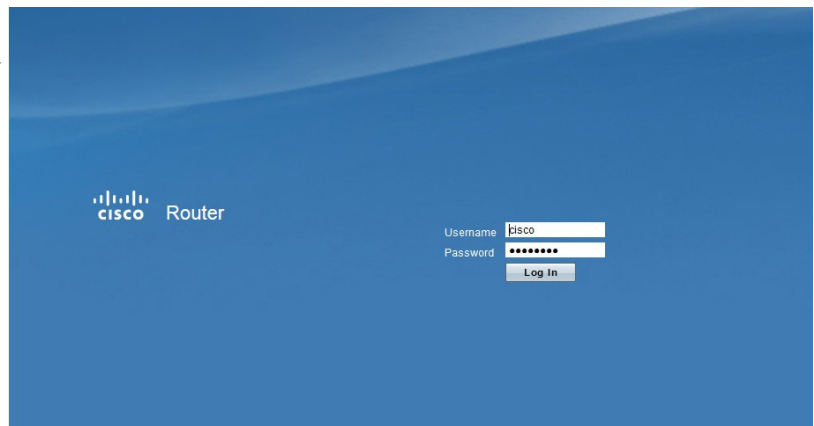
If you have a DSL connection, then it will be necessary to enter in some information into the router for internet access.

STEP 1 – Wire a Ethernet connection from the router to your PC.

STEP 2 – Open Internet Explorer on the PC that is wired to your router.

STEP 3 – In the URL, type: 192.168.1.1 and press enter.

STEP 4 – This will take you the main CISCO login page. Enter the username and password that is provided with your CISCO router instructions. Typically CISCO for username and cisco for password.

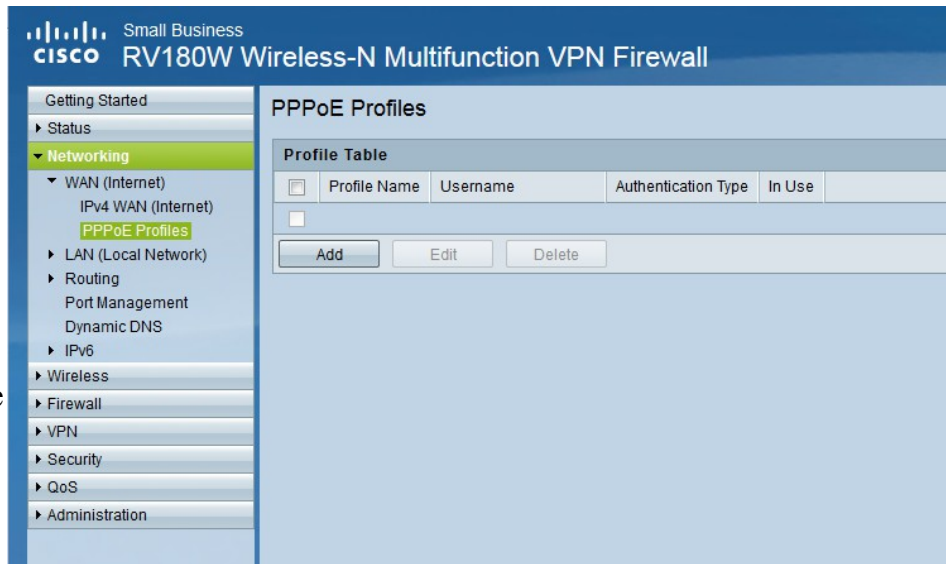


STEP 5 – On the left panel, select **Networking**.

STEP 6 – Select **WAN (Internet)**.

STEP 7 – Select **PPPoE Profiles**.

STEP 8 – Click on the **Add** button and enter in your user name and password that is provided by your ISP.





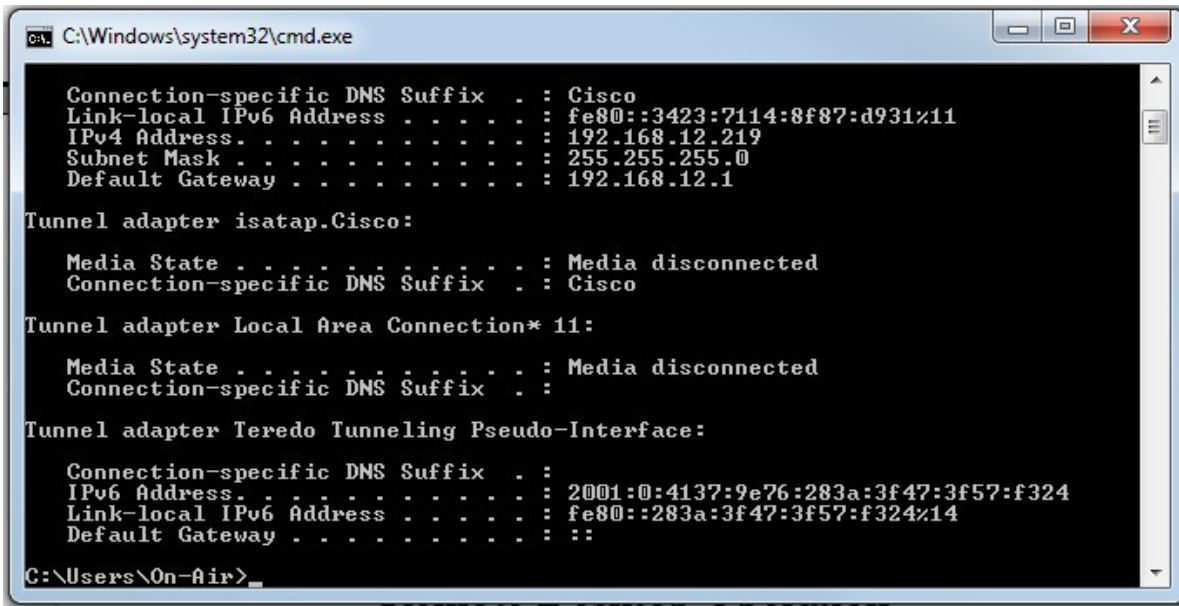
Authenticating a Router

Some ISP companies require you to authenticate a router. This process then enables you to use the internet. Check with your ISP if it is necessary to authenticate your router.

How to Find the IP Address of a Computer

It is often necessary to find the IP address of a computer, such as to access the C: drive. To get the IP address:

- 6) Go to the desired computer.
- 7) In the Windows search bar in the Start menu, type in the search **cmd**.
- 8) Open the **cmd.exe**.
- 9) Type in the term: **ipconfig** and press Enter.
- 10) You may now find your IP address in the field **IPv4**. In this example, the remote PC IP address is: **\\192.168.12.219**.



```
C:\Windows\system32\cmd.exe

Connection-specific DNS Suffix . : Cisco
Link-local IPv6 Address . . . . . : fe80::3423:7114:8f87:d931%11
IPv4 Address. . . . . : 192.168.12.219
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.12.1

Tunnel adapter isatap.Cisco:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : Cisco

Tunnel adapter Local Area Connection* 11:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . :

Tunnel adapter Teredo Tunneling Pseudo-Interface:

Connection-specific DNS Suffix . :
IPv6 Address. . . . . : 2001:0:4137:9e76:283a:3f47:3f57:f324
Link-local IPv6 Address . . . . . : fe80::283a:3f47:3f57:f324%14
Default Gateway . . . . . :

C:\Users\On-Air>
```