# **Network Setup/Connection for Sigmax DVR**

To Access Sigmax DVR remotely through Internet connection, the following requirements are necessary:

DVR (server) side:

High speed Internet connection (DSL, ISDN, T1, Cable modem, etc.)

Client side:

1. Any Internet connection.

2. Installation of Sigmax Client software, Remote Center.

If a direct phone line is used for the internet connection, no setup is required for the DVR server. Otherwise, set up the network as follows:

## Set up server network WITHOUT a router

- 1. Obtain a high speed Internet service with either a static IP address (follow step 2 and 3 to complete setup) or a dynamic IP address (follow step 2, 3 and 4 to complete setup).
- 2. Connect the DVR network port to or via a hub to Internet access point (or the DSL modem if a DSL service is used) with a Cat 5 patch cable.
- 3. If you must put the DVR behind a firewall, make sure the following ports are enabled (forwarded): 8000, 8100, and 8200 for the DVR access and 80 for web browser support.
- 4. For users of Internet service with dynamic IP addresses assigned each time they log on to the Internet, they need to go to <u>www.dyndns.org</u> and register and obtain free Dynamic DNS service that allows users to alias a dynamic IP address to a static hostname via which they can access the DVR anytime regardless of varying IP addresses.

#### Set up server network WITH a router in use

- 1. Obtain a high speed Internet service with either a static IP address (follow step 2, 3, 4, 6 and 7 to complete setup) or a dynamic IP address (follow step 2, 3, 5, 6 and 7 to complete setup).
- 2. Connect the DVR network port to a router that connects directly to Internet access point.
- 3. Open Internet Explorer and type the router's default IP address (e.g. 192.168.1.1) in the address field to connect to the router (username and password may be needed for authentication).
- 4. In Basic Setup, follow the instructions provided by the ISP to select proper Internet connection type and enter static IP address in proper field. Then go to step 6 for packet forwarding setup.
- 5. In Basic Setup, follow the instructions provided by the ISP to select proper Internet connection type and enable "DDNS Service". Go to <u>www.dyndns.org</u> and register and obtain free Dynamic DNS service that allows users to alias a dynamic IP address to a static hostname

via which they can access the DVR anytime regardless of varying IP addresses.

6. Set up Packet Forwarding in router configuration to allow external users to reach DVR server with a private IP address (inside LAN) via appropriate ports. Check User Guide for particular router to enable packet forwarding and configure port numbers: 8000, 8100 and 8200 for DVR server and 80 for web browser support. Take Linksys WRT54G as an example, under Applications & Gaming tab, click Port Range Forwarding and enter "dvr" and "dvrweb" in Application column. Put "8000" and "8200" in start and end field for "dvr", and "80" in start and end field for "dvrweb". In IP Address field enter local IP address assigned for DVR. See configuration of Linksys WRT54G below.

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Applications & Gaming	Setup	Wireless Security			Access Ar Restrictions &		
	Port Range For	ward	Port Triggerin	ng I	DMZ	1 (	
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	Application	Start	End	Protocol	IP Address	s Enable	
		8000 to	8200	Both 🕶	192,168,1, 1	105 17	
	dvr	8000 to	10200	Dom	132.100.1.14	and the second second	

Save all the changes made and close Internet Explorer window.

IP Setup can be accomplished by following the procedures below:

Network	TCP/IP Properties ?	×
Configuration   Identification   Access Control   The following network components are installed:	Bindings         Advanced         NetBIOS           DNS Configuration         Gateway         WINS Configuration         IP Address	 s
Client for Microsoft Networks  Comportents alle installed.  Client for Microsoft Networks  Comportent NIC (3C9058-TX)  Comportent NIC (3C9058-TX)  File and printer sharing for Microsoft Networks	An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.	
	○ <u>O</u> btain an IP address automatically	
Add Remove Properties	Specify an IP address:	
Primary Network Logon: Windows Logon	IP Address: 192.168.1.1	
Eile and Print Sharing Description TCP/IP is the protocol you use to connect to the Internet and	Subnet Mask: 255.255.255.0	
i CF7/F is the protocol you use to connect to the internet and wide-area networks.		
OK Cancel	OK Cancel	

Figure 1-1 Advanced Networking Setup

Figure 1-2 TCP/IP Properties

#### Under Windows 98/Me :

- 1. Select the proper TCP/IP network component from the list and click the "Properties" button. This will open the TCP/IP Properties window (Figure 1-2).
- 2. Select "Specify an IP address", and enter the Static IP address into the "IP Address" box. Also set the "Subnet Mask" to the value provided by the ISP.
- 3. Click the "Gateway" tab on the top, and set the gateway IP address to the value provided by the ISP.
- 4. Click the "DNS Configuration" tab to add DNS Server address.
- 5. Click the "OK" button to close the TCP/IP Properties window.
- 6. Click the "OK" button to close the Advanced Networking Setup window.

### Under Windows XP/2000 :

1. Right click Connection icon (Figure 1-3) and select "Properties" tab to bring up Connection Properties window (Figure 1-4).



Local Area Connection Properties ? × General Authentication Advanced Connect using: III Marvell Yukon 88E 8001/8003/8010 Configure... This connection uses the following items: Client for Microsoft Networks ☑ ➡ File and Printer Sharing for Microsoft Networks 🗹 📇 QoS Packet Scheduler Internet Protocol (TCP/IP) Install. Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. Show icon in notification area when connected Notify me when this connection has limited or no connectivity OK Cancel

Figure 1-3 Connection icon

**Figure 1-4 Connection Properties** 

- Select the Internet Protocol (TCP/IP) component from the list and click the "Properties" button. This will open the TCP/IP Properties window (Figure 1-5).
- 3. Fill in IP address, Subnet mask, Default gateway, DNS server address in the TCP/IP Properties window.
- 4. Click the "OK" button to close the TCP/IP Properties window.

94 . 38
94 . 38
94 . 38
255 . 248
94 . 33
1 . 196
7 . 196

Figure 1-5 TCP/IP Properties

Click the "OK" button to close the Advanced Networking Setup window.

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