INSTEK DIGITAL

A complete system to provide high resolution, long-term digital video
storage and an IP based CCTV solution on a scalable and reliable platform

DVR-1U Quick Start Guide
(HR-DR53xx-1U, HR-DR54xx-1U)

THANK YOU FOR PURCHASING A QUALITY PRODUCT FROM INSTEK DIGITAL.

THIS QUICK START GUIDE WILL PROVIDE YOU WITH THE INSTRUCTIONS NEEDED TO CONFIGURE YOUR DVR (SERVER) AND VIEW THE VIDEO FROM THE COMMAND CENTER LITE APPLICATION (CLIENT SOFTWARE).

INSTEK DIGITAL SEPERATES THE CLIENT SOFTWARE FROM THE SERVER INTO TWO DISTINCT ENTITIES. THIS SETUP ALLOWS YOU (THE CUSTOMER) TO PLACE YOUR SERVER IN A SECURE, TAMPER-PROOF LOCATION, FURTHER ENHANCING YOUR SECURITY PROTOCOLS.

The MatriVideo™ Hybrid Digital Video Recorder (hDVR) is a state-of-the art recording system that provides DVD quality video (CIF~D1) by using the most advanced H.264 compression technology. It is based on the Linux operating system which is considered to be the most stable and secure operating system in the world.

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6. Screws (Set) x1

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NETWORK CONNECTION OVERVIEW

FRONT PANEL OF THE 1U DVR

LCD Display   USB Ports   Power Switch

REAR PANEL OF THE 1U DVR

1. PS/2 ports for keyboard and mouse

2. Power input

3. VGA Port

4. COM Ports

5. USB ports

6. LAN Port

7. Video in Ports (8/16 channels)

8. Audio in Ports (8/16 channels)

STEP 1: CONNECT YOUR DVR

a. Open the top cover of the DVR by removing the screws on the top and sides of the unit.

b. To install a SATA II HDD inside the DVR, first locate the empty HDD tray then remove the single screw that secures it to the base. (install HDD1 first)

front
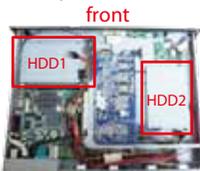
c. Use the provided screws to secure a SATA II HDD onto the HDD tray and snap the combined unit back onto the base.

d. Attach the cable to the rear of the HDDs as shown.

e. Put the DVR cover back on and tighten all the screws.
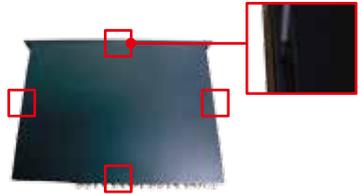
f. Connect one end of the BNC cable to the camera and the other to the video and audio-in ports. (Red on the AV line indicates video, white indicates audio.)

g. To connect a PTZ camera, connect an RS-232 cable between the converter and the DVR COM1 port.

h. Connect the PTZ camera and the RS-232 RS-485 converter by using the control cable.

i. To connect the DVR to the network, connect one end of the RJ45 to the switch and the other end to the RJ45 port on the DVR.

j. For extra COM port or RS485 direct connection, please contact Instek for the optional USB to RS232/485 converter.

STEP 2: POWER ON THE DVR

a. Connect the power cord.

b. Power on the DVR from the rear panel. The booting process will take a few minutes to complete.

c. Once the boot-up is complete, you will see the following information: (System Version,IP Address, Network Connectivity Information, and the System Date & Time) on the front LCD Panel.
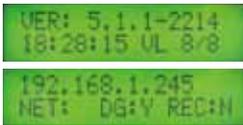
STEP 3: INSTALL COMMAND CENTER LITE

a. Insert the Command Center Lite CD into the CD-ROM drive of your personal laptop or desktop and run the Command Center Lite Setup .

STEP 4: CONFIGURE THE DVR

a. Configure the DVR via PuTTY (see step **b**) or connect a keyboard and a monitor directly to DVR (see step **c**).

b. PuTTY is a Secure Shell (SSH) client used to securely connect to the DVR remotely. To launch PuTTY navigate to **Start** ->**Programs** ->**Instek Digital** ->**Command Center Lite** -> **PuTTY**. In the text box labeled **Host Name** or **IP Address**, enter the IP address of the DVR found on the front panel LCD (the default IP address is 192.168.1.245). Click **Open** to initiate the remote connection to the DVR.
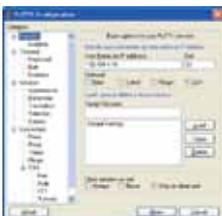
c. The DVR uses an embedded Linux Operating System. Once the DVR has a keyboard and monitor connected, you will see a login prompt. The DVR's default username is **root** and the password is **id**.

Connection via PuTTY

Direct Connection via the DVR
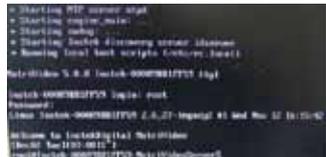
d. Under the OS prompt type in *hdsm* to run the hDVR System Manager.
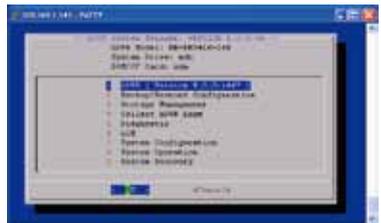
e. **Change the Time Zone**
   System Configuration -> **Time Zone Change** -> Select Continer or Ocean -> Select Country/Region. Select **Yes** to confirm.

f. **Change the Date / Time**
   System Configuration -> Date / Time Change -> Select **Proceed** to stop the process and wait for a few seconds -> Use [TAB], Up Arrow, Down Arrow to change the Year, the Month and the Data. Use [TAB], UP Arrow, Down Arrow to change the Hour,the Minutes and the Seconds -> Select **Proceed** to accept the changes.

g. **Change the IP Address**

System Configuration ->Network Settings -> IP Configuration? Select eth0 -> Enable eth0 -> Static IP Configuration -> Enter the IP address, Netmask, Gateway -> Press "OK" to proceed. The eth0's IP address is changed to "192.168.1.10" in the document. Please wait for a few moments for the changes to take effect.

Note: Keep the value of MTU as default (1500) unless you have other devices such as a SAN connected to the same network.
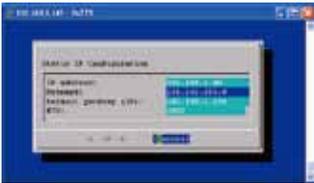
h. **Add Storage to the DVR:** The first HDD will automatically be in use by the DVR. Subsequent HDDs will need to be added via the hDSM.

Navigate to **Storage Management** -> **Add Storage Repository** and select the available storage repositories to add to the DVR. This can be done individually or by using **All** to select all available storage repositories. Select **OK**. Proceed to the menu option **Detect Available Disk Volume** to check the status of the HDDs. The status of the HDDs should display **In Use**.

i. Remember to go back to HDSM main menu -> hDVR -> Start the DVR services. This will take a few seconds to complete.

STEP 5 : SUBSCRIBE THE DVR

a. Run the Command Center Lite software. During the first run, you will be asked to subscribe (or add) the DVR to the video recorder subscription list.

b. Type in the IP address, Command Port, Live Port and Playback Port of the NVR.

Command Port: 80

Live Port: 3514

Playback Port: 60006

Note: Do not change these port numbers if connecting the DVR in a LAN environment. Click **Add** to continue. You can add additional DVRs in a similar fashion. When all the DVRs have been added, click **Next** to continue.

c. Finish the configuration wizard and log into the Command Center. The default username is **admin** and the default password is **id**
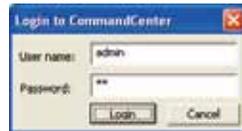
STEP 6 : TIME SYNC WITH THE DVR

a. Click on the MatriVideo Command Center Setup (or Command Center Lite) tab on the bottom left corner of the screen.

b. Type in the IP address of the DVR or an available time server. This will keep the time in sync between the DVR and your PC running the Command Center application.

STEP 7 : SETTING UP THE CAMERAS

a. Right-click on the DVR (labeled by its IP address) in the camera tree panel and click Video Recorder Setup. When asked to login the default username is **admin** and the password is **id**.
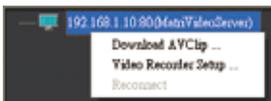
b. Click the Camera Setup tab.

c. Click Camera Setup Basic tab. Click the Active box next to the camera name(s) to enable the camera. Analog Cameras can be setup on the top part of the window and the IP cameras can be setup on the bottom part of the window. You can also change the camera name by clicking on the camera name row for each camera, such as "Cam-01", "Cam-02".

d. For setting up IP cameras, please go to step e. Note: Before continuing, you must configure the IP address of each camera to ensure it is in the same network segment as the DVR. Refer to your camera's user manual for more information on how to do this.

e. In the IP Camera table, type a descriptive Camera Name.

f. Select the Camera Type.

g. Type the IP Address of the IP cameras. Domain names are supported if available on the surveillance network.

h. The Port number is dependent on the IP camera. Ch refers to the channel number of the video server. See the IP camera or video server manual for additional information.

i. The Login option is used to access the camera configuration settings. Refer to the camera user manual for additional information.

j. Click Audio, if supported. Refer to the camera's user manual for additional information.

k. Select the Resolution for the camera from the drop-down list box.

l. Click the **Video Stream** tab to set up the **Frame Rate** and **Quality** (Bitrate) for each individual camera.

m. To setup 24x7 recording, click the **Recording
   Setup** tab and then click **Basic Setup**. Select a
   camera from the camera panel and change the
   recording mode to **24x7**. Alternatively, select **24x7**
   and then at the bottom of the screen click **Copy to
   All** to apply the setting to all cameras in the group.

STEP 8 : VIEW THE VIDEO

a. Click on the "+" icon next to the IP address of the
   DVR to expand your camera tree.

b. Drag and drop the video source from the camera
   tree to the blank patterns (1x1, 2x2, 3x3 or 4x4) to
   view your video.
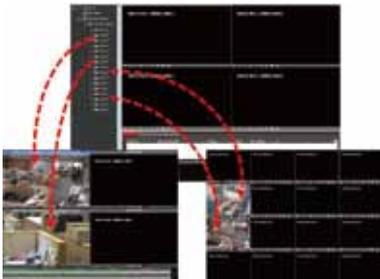
CONTACT INFORMATION

We graciously thank you for investing your
faith in Instek Digital and being a valuable
part of our corporation. Instek Digital's prime
goal is to deliver leading technology in
addition to exceptional customer service and
technical support.

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