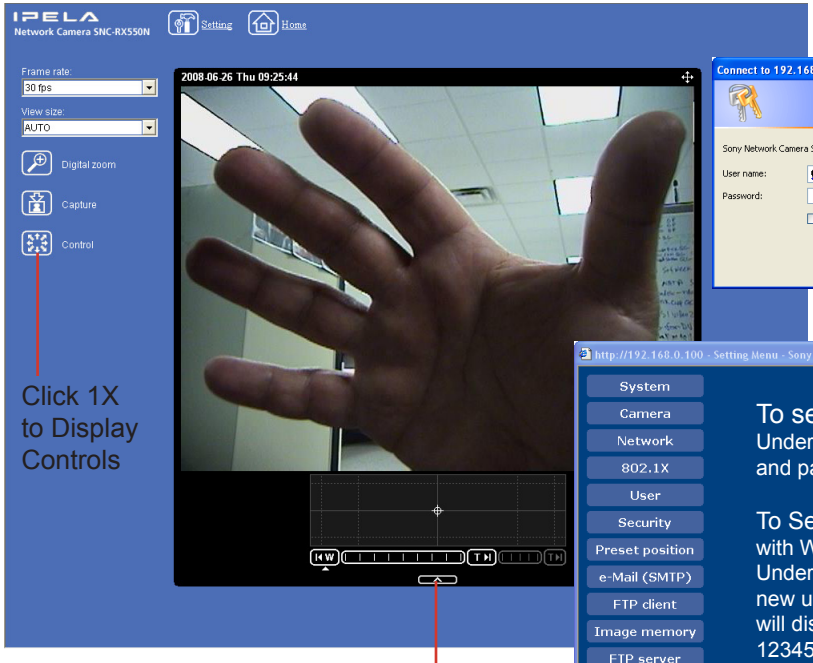
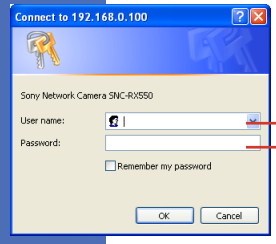
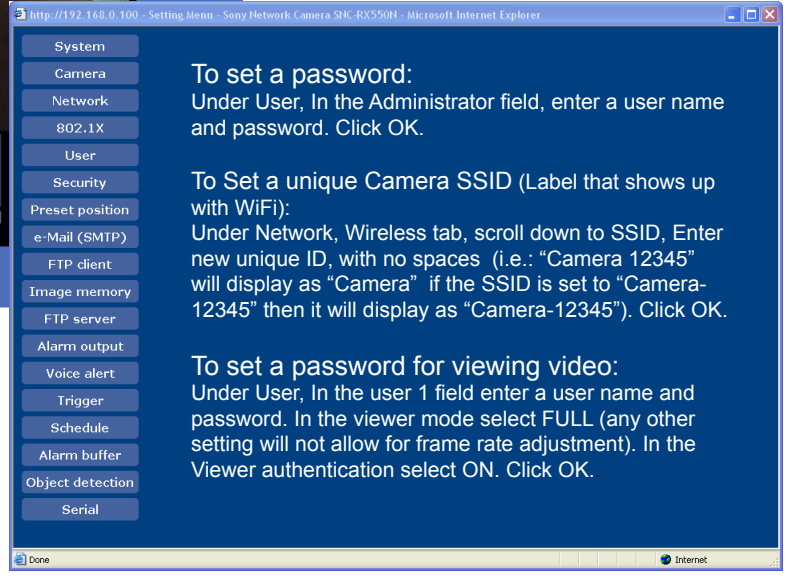


Click 1X to Display Controls

Show/Hide Controls



Enter User Name = admin
Password = admin
Click OK to Display *Settings*
Create a unique Password for security.



To set a password:

Under User, In the Administrator field, enter a user name and password. Click OK.

To Set a unique Camera SSID (Label that shows up with WiFi):

Under Network, Wireless tab, scroll down to SSID, Enter new unique ID, with no spaces (i.e.: “Camera 12345” will display as “Camera” if the SSID is set to “Camera-12345” then it will display as “Camera-12345”). Click OK.

To set a password for viewing video:

Under User, In the user 1 field enter a user name and password. In the viewer mode select FULL (any other setting will not allow for frame rate adjustment). In the Viewer authentication select ON. Click OK.

You should change your User Name and Password to help protect your MiniBox-4 from unauthorized access. The Settings Page (right) offers many customizable security features.

A

D

Kenwood Radio Operation

1. Begin working with the radio after it has charged overnight. Make sure that the antenna is securely connected, then turn the unit ON.
2. Check the frequency for activity. If you have to, change both the radio and MiniBox-4 RX channels.
3. The radio has been configured to transmit when any DTMF key is depressed without having to hold down the PTT switch. With practice, this allows one-hand, no-look operation.
4. The right arrow button toggles high-low power.

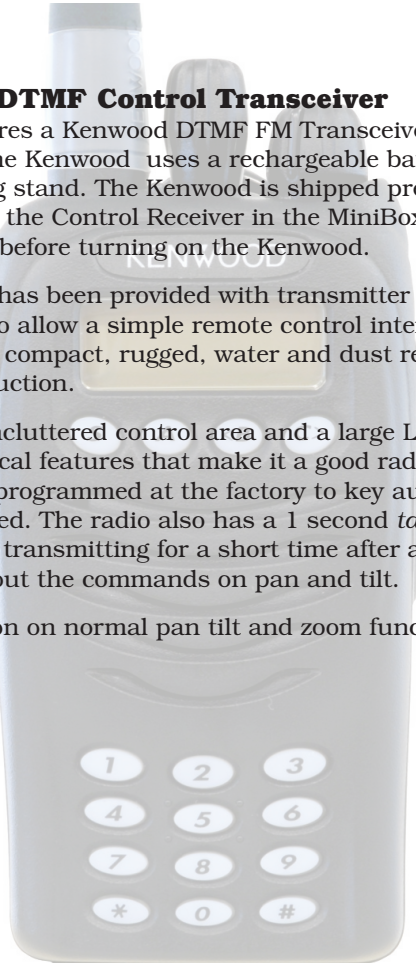
Kenwood Radio DTMF Control Transceiver

The MiniBox-4 features a Kenwood DTMF FM Transceiver for remote control operation. The Kenwood uses a rechargeable battery and has its own battery charging stand. The Kenwood is shipped pre-programmed for communication with the Control Receiver in the MiniBox-4. Make sure the antenna is attached before turning on the Kenwood.

The Kenwood Radio has been provided with transmitter models of the MiniBox-4 in order to allow a simple remote control interface for the camera. The radio is compact, rugged, water and dust resistant and has Mil-Spec 810 construction.

This radio has an uncluttered control area and a large LCD display. The radio also has practical features that make it a good radio for DTMF control. It has been programmed at the factory to key automatically, when a DTMF key is pressed. The radio also has a 1 second *tail* programmed. This keeps the radio transmitting for a short time after a tone is sent. This can help to smooth out the commands on pan and tilt.

One handed operation on normal pan tilt and zoom functions is easy.



DTMF Control

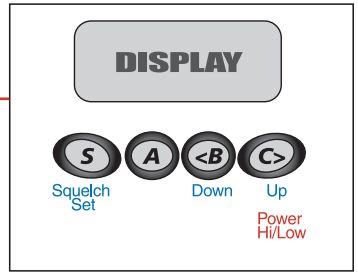
With the transmitter-equipped MiniBox-4 powered ON, the unit can be controlled by DTMF commands--using the Kenwood radio. Ensure that the Kenwood is set to the same frequency as the control receiver in the MiniBox-4 (see Control Panel). Make sure that the Kenwood's antenna is installed prior to operation.

The control codes for DTMF operation are listed starting on page 24. Controlling the Kenwood is straightforward. Use the keys shown below to adjust squelch and hi/low power level. Volume and channel controls are on top. The Kenwood is factory programmed with channels that correspond to the DTMF receiver in the MiniBox-4.

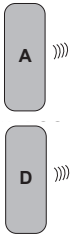
NOTE The DTMF Control Radio can overload the receiver if it is too close. For testing purposes, stand at least 10 feet from the MiniBox-4 and set the Kenwood to Low Power.

The **C>** key toggles Hi/Low transmitter power

The **S** key enables/ disables Squelch Set Mode. Use **<B** and **C>** keys to set squelch level. Observe display. Press **S** key again to exit Squelch Set Mode.

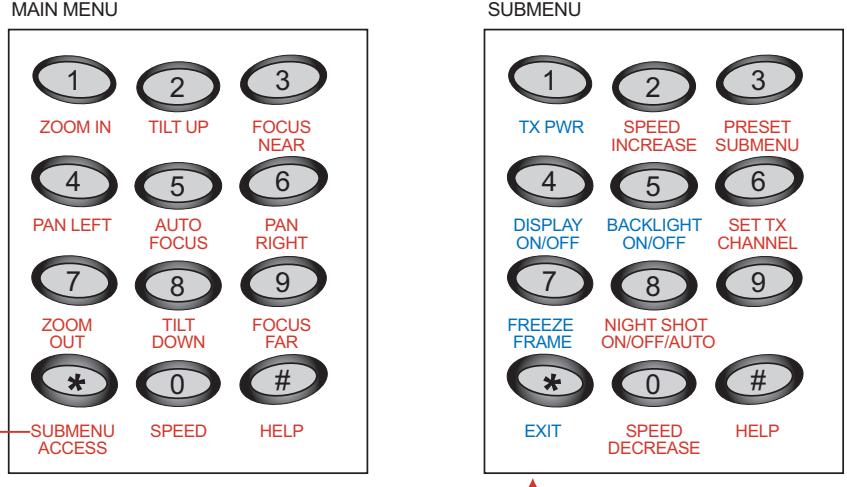


RED = Basic Commands
Blue = Squelch Commands



DTMF Commands

Below are the DTMF commands available on the Kenwood radio for the MiniBox-4. Main Menu items are quickly accessible; pressing the * button enables the SubMenu. A single button-press of a BLUE item in the SubMenu will automatically return you to the Main Menu. RED SubMenu items allow you to make multiple adjustments before pressing the * key to return to the Main Menu.



Submenu functions in BLUE will return to the Main Menu automatically once selected.

The following table lists the various remote functions of the MiniBox-4 and the DTMF codes that activate them. See Submenu on page 29 for advanced features.

FUNCTION	DTMF CODE
Pan left	4
Pan right	6
Tilt up	2
Tilt down	8
Zoom in	1
Zoom out	7
Focus near	3
Focus far	9
AutoFocus ON/OFF	5
Speed	0 (Enter number from 0 to 7 to set speed)
Nightshot On/Off/Auto	*8
TX Power	* 1

NOTE: On-screen text is visible in transmitted video only. It does not display on the video available at the Video Out ports on the Control Panel or on IP-monitored video.

NOTE: FOCUS NEAR and FOCUS FAR commands only work when the camera is in MANUAL mode (AutoFocus OFF).

NOTE: The TX Power command toggles the RF output ON/OFF for DIGITAL transmitters and HIGH/LOW/OFF for ANALOG transmitters.

DTMF Menu Structure

The DTMF control structure for the MiniBox-4 is set up in two layers: the Main Menu and the Submenu. These menus will be discussed in turn.

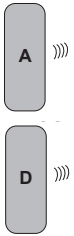
Main Menu

The Main Menu is where the DTMF Control is set when the system is first turned-ON. The Main Menu is where you will remotely control the MiniBox-4 most of the time.

SubMenu (*)

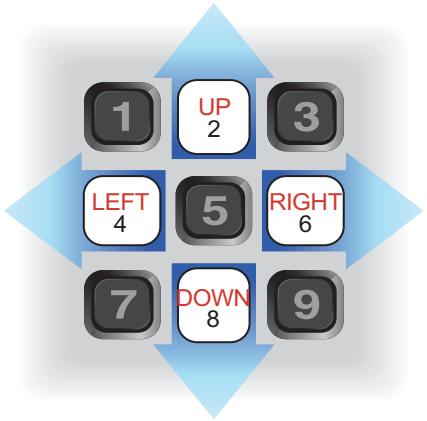
The Submenu contains more advanced and less-often used commands.

OPERATION



MAIN MENU

1 = ZOOM IN
2 = TILT UP
3 = FOCUS NEAR
4 = PAN LEFT
5 = AUTO FOCUS
6 = PAN RIGHT
7 = ZOOM OUT
8 = TILT DOWN
9 = FOCUS FAR
0 = SPEED
* = SUBMENU ACCESS
# = HELP



SUBMENU

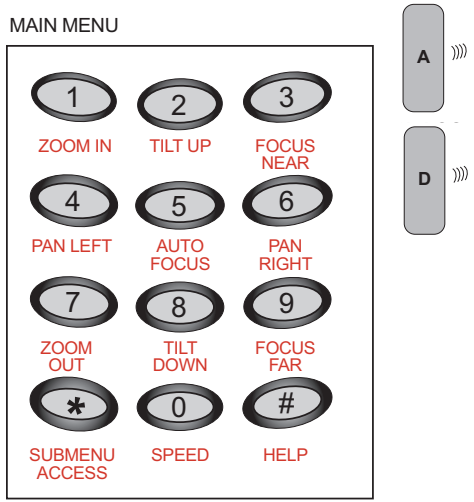
1 = TX PWR HI/LO/OFF (Analog)
ON/OFF (Digital)
2 = SPEED INCREASE
3 = PRESET SUBMENU
4 = DISPLAY ON/OFF
5 = BACKLIGHT ON/OFF
6 = SET TX CHANNEL
7 = FREEZE FRAME
8 = NIGHTSHOT ON/OFF/AUTO
0 = SPEED DECREASE
* = EXIT
# = HELP

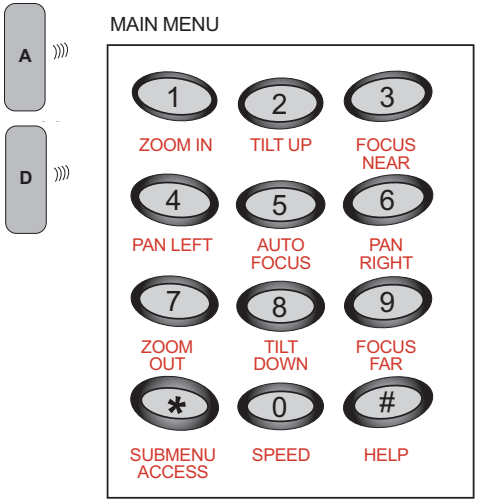
Submenu functions in BLUE will return to the Main Menu automatically once selected.

Main Menu

At power up, MiniBox-4 will come up in the Main Menu mode. The DTMF commands available at this level are:

Key	Description
1	**Zoom In** This key causes the Sony camera to zoom in (more telephoto).
2	**Tilt Up** This command causes the tilt system to point the camera upwards.
3	**Focus Near** This command causes the camera to focus toward closer objects. AutoFocus must be OFF.
4	**Pan left** This command causes the camera to sweep left.
5	**Auto focus** This command will put the Sony camera back in auto focus mode.
6	**Pan Right** This command causes the camera to sweep right.
7	**Zoom Out** This key causes the Sony camera to zoom out (more wide).
8	**Tilt Down** This command causes the camera to point downwards.
9	**Focus Far** This command causes the motorized zoom lens to focus toward farther objects. It also causes the Sony camera to switch to manual focus and begin to focus toward farther objects. AutoFocus must be OFF.





Main Menu (continued)

0 **Speed** (on the Main Menu) Sets the motor drive speed on pan, tilt, and zoom. The range of speed control is 0 through 7. Slowing the pan and tilt speed is important when the lens is zoomed-out (towards telephoto) as the *apparent* speed of these functions appears to increase with the level of magnification. Setting the pan or tilt to a specific target becomes much easier at slower speeds. See Speed Increase and Speed Decrease commands in the Submenu.

***** **Submenu Access** The Star key causes the MiniBox-4 to enter the sub-menu. At this point, the commands in the main menu are no longer valid and submenu commands are accessible.

**HELP** The pound command causes the MiniBox-4 to display help information about Main Menu functions on top of the video (microwave link only).

Submenu

There are some additional features available in the Submenu. To enter this menu, you must select * (star) on the Main Menu (see left).

The functions available in the Submenu are:

1. **TX PWR** This function remotely cycles the transmitter from High to Low to OFF (analog transmitters) or ON to OFF (digital transmitters).
2. **Speed Increase** (on the Submenu) Increases the motor drive speed on pan, tilt, and zoom up by one step every time the key is pressed. The range of speed control is 0 through 7. See Speed command in the Main Menu and Speed Decrease in the Submenu.
3. **Preset Submenu** Up to five *Preset* combinations of Pan, Tilt, and Zoom, can be stored using the Set function in the Preset Submenu. This will allow the user to preset a doorway or a driveway, for instance, and then look there instantly by pressing the Preset Submenu Goto (number). The Clear function will remove the Preset.

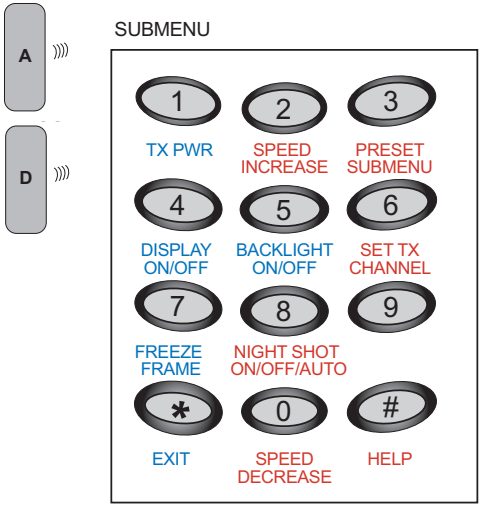
   Set: 1

   Goto: 2

   Clear: 3

   (any other key to exit)

WARNING: The TX Power OFF command will cause loss of the video signal; the TX Power Low command (analog only) may also cause loss of video signal in some situations. The DTMF TX/RX will still operate, but there will be no text information to visually confirm button-presses. The MiniBox-4 transmitters take a few seconds to turn ON. Make sure you practice TX Power commands in a safe environment *before* deployment.



Submenu (continued)

4 **Display ON/OFF** This command turns the menu display line at the top and bottom of the screen ON or OFF.

5 **Backlight ON/OFF** This command will toggle ON/OFF the Sony camera's Back Light Compensation (BLC) feature. BLC compensates for unwanted backlighting (eg: car headlights) that would otherwise cast the subject matter into shadows.

6 **Set TX Channel** This command allows the user to remotely set the TX channel for the MiniBox-4. Analog TX channels are 1-0 (where 0 means 10); digital TX channels are 1-8 (where 9 or 0 will also mean 8).

7 **Freeze Frame** Turning ON this command temporarily stops on a still frame of video until the user turns this feature OFF.

8 **Night-Shot On/Off/Auto** The *8 command causes the MiniBox-4 to sense light levels and automatically activate the Night-Shot function on the Sony camera .

***** **Exit** This will exit the Submenu. It will return to Main Menu.

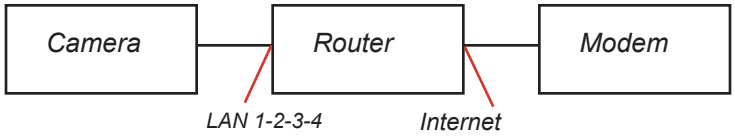
0 **Speed Decrease** (on the Submenu) Decreases the motor drive speed on pan, tilt, and zoom up by one step every time the key is pressed. The range of speed control is 0 through 7. See Speed command in the Main Menu and Speed Increase in the Submenu.

**Help** This command produces a list of Submenu features on the display until another command is pressed.

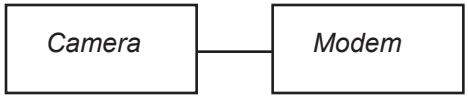
Consult your IT professional for your specific network. To setup your user-provided option, complete the following steps:

1. Ensure that your device, when combined with all other AC devices plugged-in to the four MiniBox-4 outlets, does not exceed 5 Amps total.
2. Secure your device in place in the slot provided. Maximum size is approximately 3"w x 7.5"d x 7"h (including the power cube and cables). Typical block diagrams appear below:

CAUTION: Make sure the Push ON button (master power) is set to OFF (out) before applying power or plugging any device into the MiniBox-4 outlets.



NOTE: The CAT5 cable from the camera is a crossover type. To create a straight-through type, use the straight adapter provided with another crossover cable (not provided).



OPTIONAL WIRELESS CELLULAR MODEM

Cellular Modem Option Installed on Top Shelf

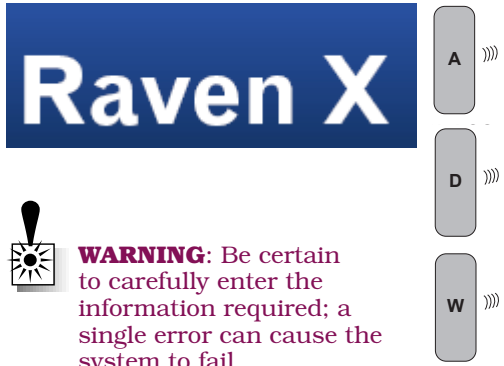
NOTE: When an IP address is assigned automatically, it is known as a *Dynamic* IP address; when manually configured to use the *same* IP address each time it powers up, this is known as a *Static* IP address.

Setup

If your MiniBox-4 was ordered with the wireless cellular modem option, it is shipped outside of the MiniBox-4 and needs to be installed in the top accessory slot (see photo left). To set-up the modem you must first gain access to the label on top of the modem.

Complete the following steps:

1. Gently unpack the modem and write down the serial numbers on the label located on the top of the modem.
2. Next, contact the specific cellular carrier that your cell modem is designed to work with: SP = Sprint, VE = Verizon, AL = Alltel, AT = AT&T/Cingular. You will need to provide the serial numbers from the top of your cell modem to your cellular carrier. **You must request that your cellular carrier assign a *static* IP address to your cell modem.**
3. Install the antenna to the jack marked antenna on the back of the cell modem. Position the antenna as vertical as possible.
4. Connect the CAT5 cable, located in the top accesssory slot, to the Ethernet jack on the cell modem.
5. Pass the DC Power connector from the power cube through the grommet hole into the top accessory slot. Plug into the DC jack on the cell modem. Make sure the Push ON button (master power) is set to OFF (out) position and plug the power cube into one of the AC outlets inside the MiniBox-4 as desired.
6. Strap the cell modem in place as shown using the Velcro® straps provided in the top accessory slot.



To complete your setup, follow the steps given below:

1. After purchasing your activation from the specific cellular carrier corresponding to your modem, refer to the Raven X Quick Start provided on the CD (PDF). Follow the instructions provided by the manufacturer to invoke automatic activation (if available) or complete the Setup Wizard.
2. The Setup Wizard requires that you install the software CD that was provided with the Raxen X modem. Be certain to carefully enter the information required; a single error can cause the system to fail.
3. If possible, download the template file from the www.dtccom.com web site. This file can be used to populate all of the fields in the Setup Wizard to speed your installation. Be sure to download the correct file for your specific carrier. Contact Raven Custom Service at Sierra Wireless 760-476-8700 or 510-624-4200 or go to www.sierrawireless.com.

WARNING: Be certain to carefully enter the information required; a single error can cause the system to fail.

OPTIONAL VPN ROUTER

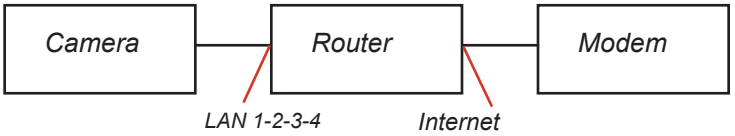
Setup

If your MiniBox-4 was ordered with the Linksys VPN router option, the VPN router is packaged for shipping and installed in the right accessory slot (see photo left). Remove the router, unpack and configure for your specific network.

Complete the following steps:

1. Refer to your IT Department for setup instructions for your specific network. There are hundreds of possible setups.

2. Note that the Camera is in DHCP mode by default.
   Typical block diagram appears below:



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A Division of Cisco Systems, Inc.

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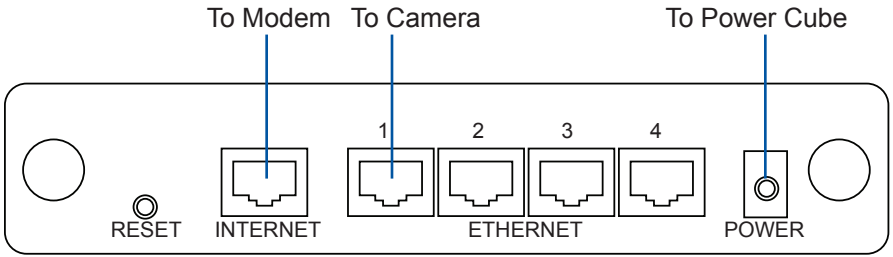
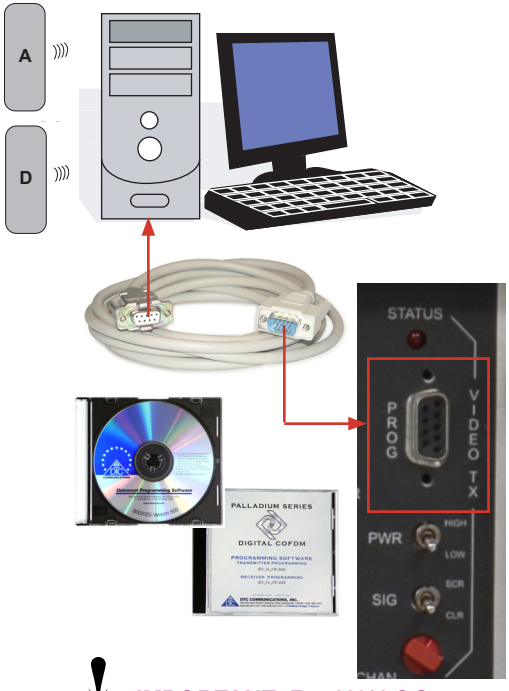
To install your VPN Router option, complete the following steps:

1. Power the system OFF.
2. Connect the Camera as shown below.
3. Connect the Modem as shown below.
4. Connect the Power Cube as shown below.
5. Turn on all system power from the Control Panel.





***IMPORTANT**: For ANALOG TX systems use the Universal Programming Software CD. For DIGITAL TX systems use the Palladium Series Software CD.*

Setup

If your MiniBox-4 is equipped with the optional digital transmitter use the Palladium Series Software CD only. If your MiniBox-4 is equipped with the optional analog transmitter use the Universal Programming Software CD only. A PC is required with an available RS232 Serial COM port to program the MiniBox-4 transmitter.

Complete the following steps:

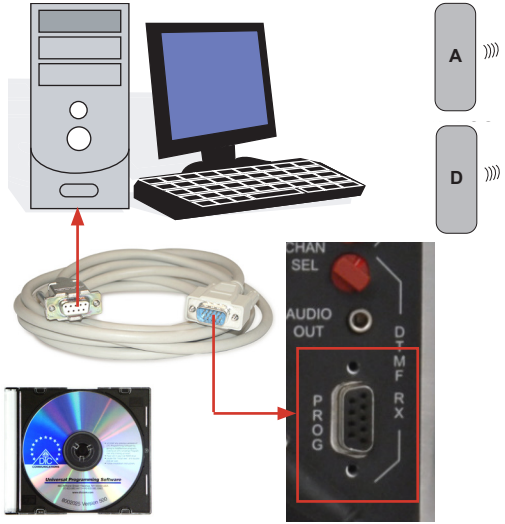
Programming of the system is available by using the software provided. Typically users may want to control settings such as frequency, scrambling keys, etc.

The digital transmitter is controlled by the application DTC_tx_ctrl_v1_3.exe (or higher). Installation of the digital control program is as simple as copying the file from the CD to a suitable location on the PC. No install shield routine is launched. Note that the application generates its own log and initialization files, so it is best to create a dedicated directory for these applications.

The analog transmitter is controlled by the Universal Programmer application, which is installed from the CD via an install shield wizard.

Setup

If your MiniBox-4 is equipped with an optional transmitter, it also has a DTMF Receiver, which may be programmed if desired. The DTMF Receiver is controlled by the Universal Programmer application, which is installed from the CD via an install shield wizard. NOTE: Do not make changes to the programming of the DTMF RX without providing the same settings in the Kenwood DTMF Transceiver.



***IMPORTANT**: For programming the DTMF Receiver in any MiniBox-4 transmitter model, use the Universal Programming Software CD.*

SPECIFICATIONS

Camera	Sony SNC-RX550 (or equivalent)
Type	Color Day/BW Night auto low light
Sensitivity	Min illumination 1 lux color, 0.15 lux BW
Zoom	26X optical, 12X digital
Horizontal Resolution	470 lines
Digital:	768 x 494 effective pixels
Compression format	JPEG, MPEG-4, H.264
Max frame rate	30 fps (640x480) JPEG/MPEG-4
	10 fps (640x480) H.264
PAN Travel	360 degree continuous*
Tilt Travel	-90 to 0 degrees*
Control Link	IP network and/or DTMF (on RF models) VHF 150-174 MHz
IP Communications	802.11g & b Wi-Fi PC Card (optional on RF models)
	Optional 3G Wireless RAVEN-X modem
Cellular Providers	Sprint, Verizon, AT&T, Alltel, Cingular
Internet Protocol (IP)	IPv6
Password Protection	IEEE802.1X port-based network access control
Multicast	MPEG-4 or H.264 multicasting
Optional Router	Linksys RVL200 (or equivalent)
	SPI firewall
	VPN support for SSL & IPSec tunnels
Power Input	90-125 VAC 50/60 Hz
Operating Temp Range	–20C to +50C, RH 20-80%, 96hrs
Storage Temperature	–20C to +60C, RH 20-95%, 96hrs
Dimensions	12.5” W X 24” H X 12.5” D
Weight	Approx. 30 lb

* = limited by windows

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