NM-MODLAMP
(SCM2 SCM3)

Color	Day/Night Color

Modulated Camera
Indoor/Outdoor Weather Resistant

The NetMedia MODLAMP (SCM2, SCM3) self contained camera and modulator converts its video signal to a selected television channel. It is powered over the same coax cable that returns the video broadcast signal for One Wire Video™ installation. It mounts to a typical round 4 inch junction box and is viewed with a television tuner. Other junction boxes from your local hardware store may also be used after replacing the round base with another that has a 1/2 inch diameter hole for the elbow bracket. Equipment that does not have a tuner, such as a security monitor, Quad display, or DVR, will require a demodulator (any TV tuner device with a composite video output such as a VCR) to convert the video for its use.

Product Includes:
1. Camera Assembly (Camera, Modulator, Housing, Housing Cap, Elbow Bracket, Locking Ring, Base, Gasket, Video/Power Connector).
2. Power Injector and 12V DC 300mA Power Transformer (Center Conductor Positive).
3. Mounting hardware (Mounting Screws, Grounding Strap, and Screw).

Housing
Available in Ivory only:

Model	Camera Type
(SCM2) NM-MODLAMP-CI	Color
(SCM3) NM-MODLAMP-DI	Day/Night Color

Modulator
Not Shown - Behind Camera Bracket.
Switch bank sets output channel:
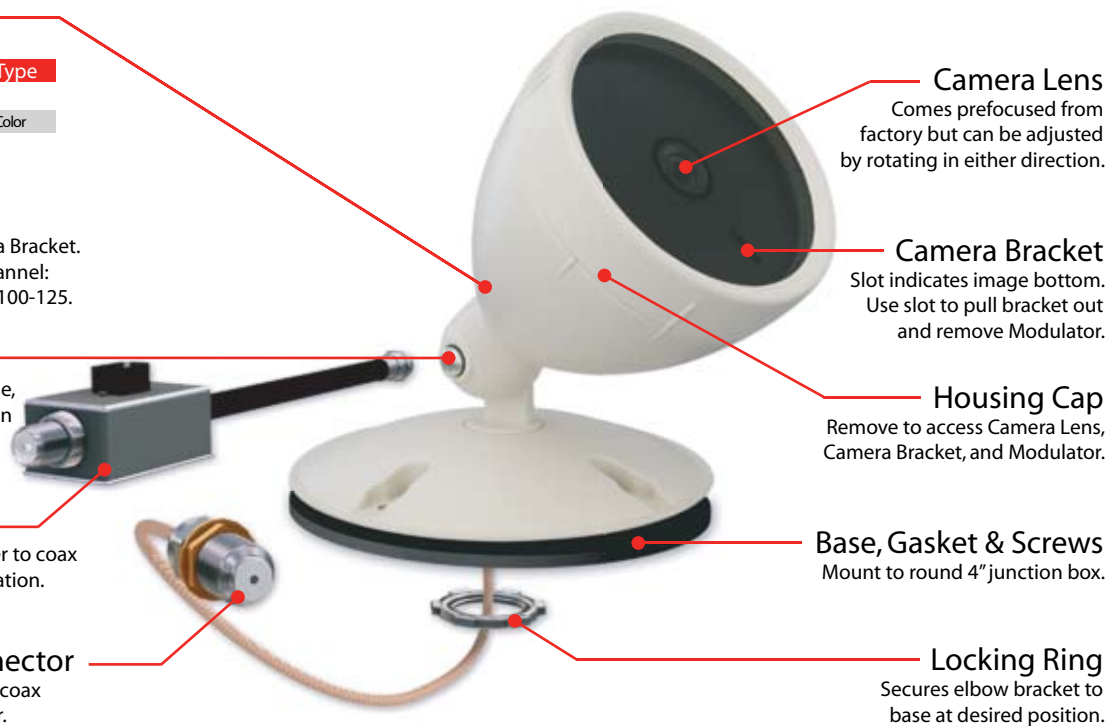UHF 14-69 or CABLE 70-94, 100-125.

Elbow Bracket
Adjusts camera angle at base, screw, and housing. Installs in 1/2" junction box covers.

Power Injector
Connects power transformer to coax for One Wire Video™ installation.

Video/Power Connector
Power and video share one coax through female F connector.

Camera Lens
Comes prefocused from factory but can be adjusted by rotating in either direction.

Camera Bracket
Slot indicates image bottom. Use slot to pull bracket out and remove Modulator.

Housing Cap
Remove to access Camera Lens, Camera Bracket, and Modulator.

Base, Gasket & Screws
Mount to round 4" junction box.

Locking Ring
Secures elbow bracket to base at desired position.

FEATURES

- Modulator built into camera
- One Wire Video™ installation
- Combines with existing TV channels
- Viewable on multiple televisions
- Excellent image quality
- Tough aluminum housing
- Weather resistant enclosure
- Internally routed cables
- Mounts to standard electrical fixtures
- Mounts directly to walls and ceilings
- Works in low light conditions
- Adjustable camera angles
- Tamper resistant wiring
- Includes power supply and power injector
- One year limited warranty

SPECIFICATIONS

	Color	Day/Night Color
Camera Lens:	3.7mm	3.6mm
Image Sensor:	1/4" CCD	1/3" CCD
Resolution:	470 lines	540 lines
Field of View:	54° Horizontal	72° Horizontal
Min Illumination:	0.5 Lux F1.2	0.1 Lux
Infrared Sensitivity:	No	Yes
Modulation Method:	Digital Crystal PLL	
Output Channel:	UHF 14-69, CABLE 70-94, 100-125	
Output Level:	+30dBmV	
Output Connector:	Female F, 75 Ohm	
Cable Type:	RG59, RG6 or better	
Power Requirement:	12V DC, 300mA	
Power Connector:	5.5mm OD, 2.1mm ID, center positive	
Housing Size:	2.13" dia. x 3" long	
Base Size:	4.5" dia., .75" high, 1/2" hole	
Mounting Holes:	3.5" centers	
Weight:	1 lb.	

(subject to change without notice)

MAN-MODLAMP REV1002A

NM-MODLAMP (SCM2 SCM3)

DO NOT CUT OR SPLICE THE CAMERA'S CABLE. MODIFYING THE UNIT IN ANY WAY WILL VOID THE WARRANTY.

Installation Procedures:

1. Remove the Housing Cap from the camera assembly and pull the Camera Bracket out to set the channel with the switches as shown in Figure 1. Choose an unused channel that matches the tuning mode of the televisions. With antenna tuning, choose a UHF channel from 14-69. With cable tuning, choose a CABLE channel from 70-94 or 100-125. There must be at least one blank channel on either side of the modulated channel to separate it from any other broadcast, cable, or modulated source. When combining with cable service, be aware that digital data typically interferes with channels 80-117, even when not subscribed to digital services. Channels 120-125 often work without any filtering.

2. Ensure that the camera is grounded with the ground strap as shown in the FCC Information. Connect a coax cable from the camera's F connector to the "MOD" side of the Power Injector. Connect the "TV" side of the Power Injector to the grounded coax from a television or distribution system. Connect the 12V DC 300mA power supply to an AC outlet and the Power Injector. The camera picture is now available on the programmed TV channel.

3. Mount the base to the junction box (not included) and adjust the camera assembly for proper viewing. When satisfied, secure all adjustment points.

CABLE Channel 125

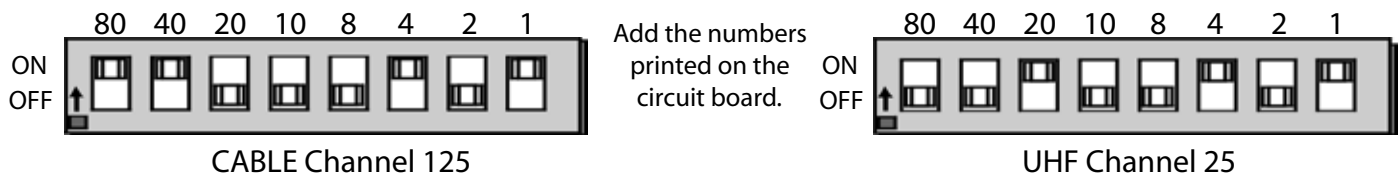Add the numbers printed on the circuit board.

UHF Channel 25

Figure 1 - Setting the modulated channel with the switches. Valid channels are UHF 14-69, CABLE 70-94, 100-125.
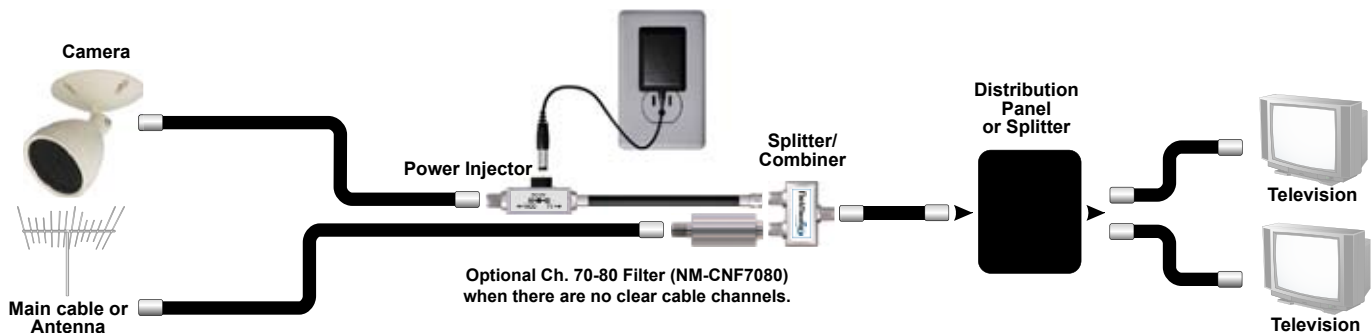

Figure 2 - Connecting the camera to an antenna or cable service and distributing to multiple televisions.
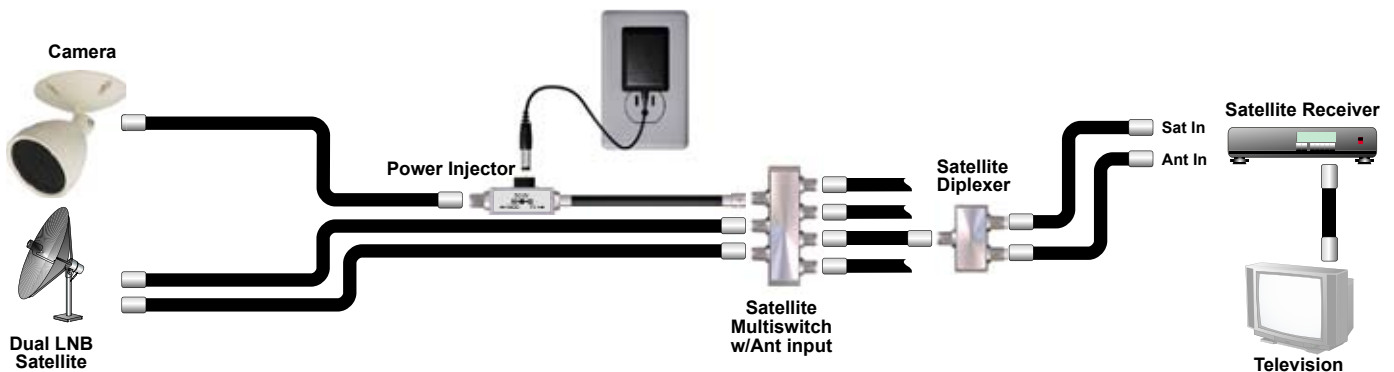

Figure 3 - Connecting the camera to a satellite system and distributing to multiple televisions.

x

x

NM-MODLAMP (SCM2 SCM3)

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Installation Procedures:

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2. Ensure that the camera is grounded with the ground strap as shown in the FCC Information. Connect a coax cable from the camera's F connector to the "MOD" side of the Power Injector. Connect the "TV" side of the Power Injector to the grounded coax from a television or distribution system. Connect the 12V DC 300mA power supply to an AC outlet and the Power Injector. The camera picture is now available on the programmed TV channel.

3. Mount the base to the junction box (not included) and adjust the camera assembly for proper viewing. When satisfied, secure all adjustment points.

80 40 20 10 8 4 2 1

ON
OFF

CABLE Channel 125

Add the numbers printed on the circuit board.

80 40 20 10 8 4 2 1

ON
OFF

UHF Channel 25

Figure 1 - Setting the modulated channel with the switches. Valid channels are UHF 14-69, CABLE 70-94, 100-125.

Camera

Power Injector

Splitter/ Combiner

Distribution Panel or Splitter

Television

Television

Main cable or Antenna

Optional Ch. 70-80 Filter (NM-CNF7080) when there are no clear cable channels.

Figure 2 - Connecting the camera to an antenna or cable service and distributing to multiple televisions.

Camera

Power Injector

Satellite Multiswitch w/Ant input

Satellite Diplexer

Sat In

Ant In

Satellite Receiver

Television

Dual LNB Satellite

Figure 3 - Connecting the camera to a satellite system and distributing to multiple televisions.

NM-MODLAMP

NetMedia, Inc., 10940 N. Stallard Place, Tucson, Arizona 85737 (520) 544-4567 Fax: (520) 544-0800 Email: sales@netmedia.com www.netmedia.com

NetMedia®

MAN-MODLAMP   REV1002A

FCC Information (U.S.A.):

Important: This product, when installed as specified below, meets FCC requirements. Modifications not expressly approved by NetMedia may void your authority, granted by the FCC, to use the product. Failure to follow all installation instructions could void your FCC authorization to use the product in the USA.

Modulated Cameras:
FCC compliance requires fastening the included grounding strap from the camera's F connector to the camera's base as shown in Figure 4. The connecting cable's shielding must be grounded. If the cable is not grounded, the camera base must be mounted to a grounded metal electrical junction box.

Compliance Information Statement
(Declaration of Conformity Procedure)

We,
NetMedia, Inc.
10940 N. Stallard Pl.
Tucson, AZ 85737
(520-544-4567)
declare under our sole responsibility that the following products,

Type of Equipment: Security Camera

Model: MODLAMP-CI (SCM2)   Model: MODLAMP-DI (SCM3)

Figure 4 - Grounding the camera through the base with a grounded coax

to which this declaration relates are in conformity with the Title 47 of the US Code of Federal Regulations, Part 15 covering Class B digital devices.

Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
* Reorient or relocate the receiving antenna.
* Increase the separation between the equipment and receiver.
* Connect the equipment to a different outlet on a circuit other than the one the receiver is connected to.
* Consult the dealer or an experienced radio/TV technician for help.

One Year Limited Warranty

NetMedia, Inc. warrants this product to be free from defects in materials and workmanship under normal use and service for One Year from the date of purchase or NetMedia will repair or, at its option, replace the defective product. Please keep your purchase receipt. In the unlikely event that you need warranty service, call NetMedia at 1-520-544-4567 for a Return Material Authorization (RMA) number. Then, return the product, with the RMA number clearly marked on the package, by a traceable method with freight pre-paid and accompanied by a copy of the purchase receipt to:

Attn: Customer Service, NetMedia, Inc. 10940 N. Stallard Place, Tucson, AZ 85737-9527

No expressed or implied warranty is made for any defects in this product which result from accident, abuse, failure to operate the product in accordance with relevant instructions, neglect, immersion in or exposure to chemicals or liquid, extreme climate, excessive wear and tear and defect resulting from other extraneous causes such as unauthorized disassembly, repair and or modification. Any implied warranty arising from the sale of this product, including implied warranties of merchantability and fitness for a particular purpose, are limited to the warranty stated above. NetMedia shall not be responsible for any loss, damages or expenses, whether direct, consequential or incidental that arise from the use or inability to use this product. Some states do not allow limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights, which vary from state to state.
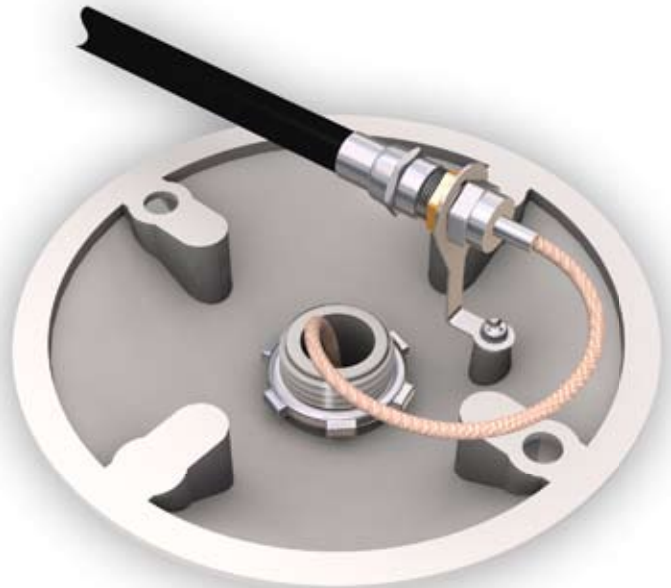
NM-MODLAMP

Frequently Asked Questions

Q- Why do the light areas of the picture look washed out?

A- The camera's automatic iris must decide how much to open for shadow areas or close for light areas. When a picture has both light and shadow, the camera adjusts the iris based on the percentage of each area in the image. If it decides to open more for the shadow portions then the light areas will be overexposed. In addition, cameras that are designed for low light or infrared sensitivity typically favor the shadow areas and look more washed out under bright conditions. Try adjusting the image field so that more light areas are visible and see if the iris closes to improve the picture. It is normal though, that as the lighting conditions change throughout the day, so will the camera iris and the picture's dark or light areas.

Q- Why are the shadow areas too dark to see much detail?

A- This is like the washed out question above except opposite. In this case, the camera's automatic iris is opening more for the light areas at the expense of the shadow areas. Try adjusting the image field so that more shadow areas are visible and see if the iris opens to improve the picture. Keep in mind though, that the camera still does need some kind of light in order to see. If necessary, add some lighting to the dark area to improve visibility.

Q- How do I find out if the camera is working when I can't see it on any televisions?

A- Start with a basic setup: connect camera to coax, coax to power injector, power injector to TV with no amplifiers, splitters, filters, cable boxes or other devices involved. Set the camera to a channel that matches the TV mode: 14-69 for Antenna tuning; 70-94 or 100-125 for Cable tuning. If the TV can tune channel 70 or above, then it is probably in Cable tuning mode. Set a simple channel like 20 or 120 and look for it on the TV. Check power, power injector direction, connections, cables, TV tuning mode, and camera switches to correct any problems. You must see the camera picture to confirm that it works in this basic setup before moving on to more complex setups.

Q- Why does the camera or cable service picture go bad when the two are combined together?

A- The signals should be combined at the beginning of the distribution system before the cable service goes through any splitters. Make sure you are not using any diplexers to split or combine. Once done, there is either interference or the signals are not balanced. Most interference comes from invisible digital data that is on the line even when not subscribed to it. Set the camera for a clear channel, try 120, or use a filter to remove the digital/analog interference. When there is no interference you can balance the signals by amplifying the weaker, snowy one before the two are combined. 10 to 20dBmV is usually enough, too much will degrade the other signal.

Q- Can the camera be combined with digital cable service?

A- Yes. The difficulty is in finding a clear channel for the camera. The digital data usually takes up the analog channel range of 80-117 so channel 120 is a good place to start. Analog 120 on the TV will not conflict with digital 120 on the cable box. If you cannot find a clear channel then you will have to use a notch or low pass filter on the cable service before you combine it with the camera. Make sure the filter does not remove any subscribed digital services including an Internet connection. If only one location is using the digital services and it does not need to see the camera, you can split its run off before the main line is filtered and combined with the camera. This prevents the filter from disrupting the digital data while enabling the camera to appear on the rest of the TV's.

Q- What do the switches inside the "D" Day/Night camera adjust?

A- The Day/Night camera comes with a switch connected inside to adjust some of its performance characteristics. The switch functions are listed in Figure 5. The default settings (All OFF) are usually best but adjusting these may be helpful under certain conditions. The AGC switch will force the camera to remain in color mode instead of changing into black and white mode when the light level drops below its normal crossover threshold.

Switch 1: BLC
Switch 2: AES
Switch 3: AGC
Switch 4: Unused
Default: All OFF

Figure 5 - Day/Night Camera Switches

Q- How can I see the camera when the TV uses a cable box?

A- There are a few ways but they all involve bypassing the cable box and using the TV tuner to see the camera. Combine the camera with the cable service and check its picture by connecting the coax directly to the TV. Any splitters, filters, or amplifiers you use for combining are separate from the ones used to bypass the cable box. After verifying the camera picture, split the coax two ways with one side going to the cable box. If you use the cable box S-Video or composite output then the other side of the splitter goes directly to the TV. If you use the cable box coax output and there is only one coax input on the TV, then you must use a ch. 3/4 filter (included with NM-ACB3) and recombine the coaxes as shown in Figure 6. In any case, view the cable box through the appropriate TV connection, Video 1, ANT 2, channel 3/4, then change the TV (not the cable box) to the camera channel.

Camera

Cable Box

Power Injector

Splitter/Combiner

NetMedia Cable Box Bypass/Combiner Kit NM-ACB3

Main cable or Antenna

Optional NM-CNF7080 Ch. 70-80 Notch Filter when there are no clear cable channels. The notch filter does not bypass the cable box.

The kit filter does not make clear channels for the camera.
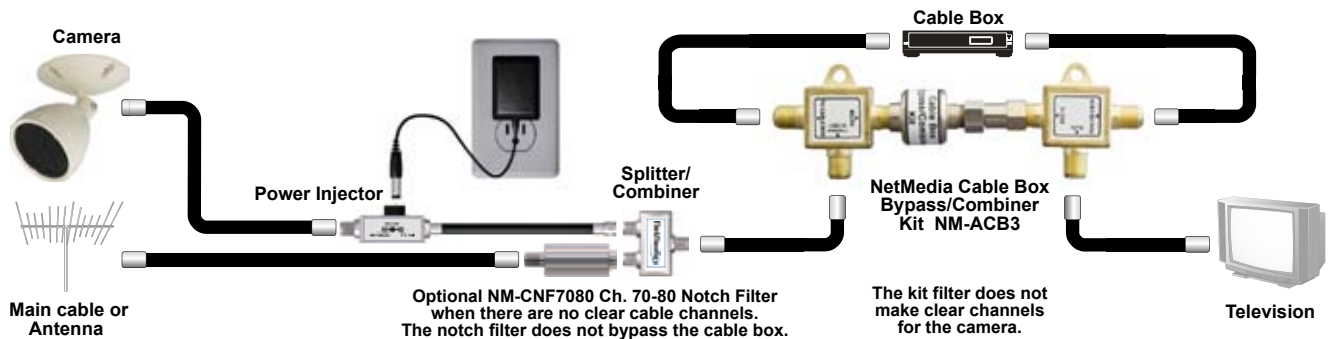
Television

Figure 6 - Bypassing a digital or analog cable box and recombining to a single coax input on the TV. The kit's filter removes any conflict on channel 3 or 4. Switch TV from the cable box to the camera channel.

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NM-MODLAMP