Wards Sniper MK 3 Manual

Easy Set Up

HD or Film

The set up for the MK 3 is the same for HD as it is for Film cameras. The Sniper works best when positioned as close and parallel to the lens on the camera. This relationship narrows the parallax between the Sniper and the camera lens, this does not affect the functionality of the Sniper but allows the user easier fine tuning of the laser once the frame has been established.

1. Establish which DC power out port from the camera the MK 3 will use during operation. (12-24v)

2.Plug MK3 camera power cable into port and let dangle for the moment.

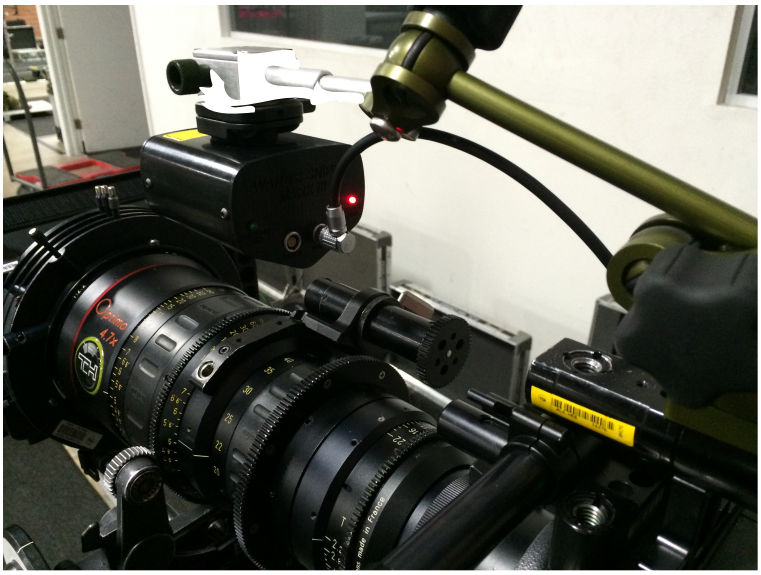
3.Attach base of Sniper Articulating Arm to camera, the arm will allow the user to position the MK3 over or under the lens depending on the situation or shot.

4.Slide Articulating Angled Adaptor on to Arm Base with the angle of the base facing the direction of the Matte Box. Leave the Arm loose at this point. This allows the Arm to function properly in the direction of filming also, making an overall lower profile.

5. While the Arm is loose, attach the Pan &Tilt Bracket to the Sniper Arm, screwing it into the provided 1/4-20 Helicoil Thread at its base. Thumb tight is sufficient. (If the Pan &Tilt bracket is not used, simply attach MK 3 to the Arm by screwing the Arm into the Sniper directly with the 1/4-20 Helicoil thread on the V Lock of the MK 3.)

6. Attach the MK 3 to the Pan & Tilt Bracket and test the quick release V lock to ensure a positive lock.

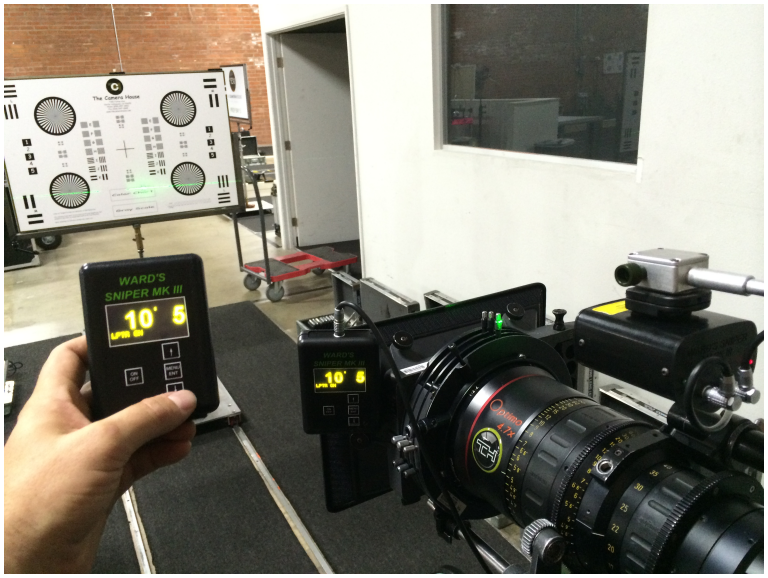
7. While still loose all over, position the MK 3 in desired position over or under the lens. Start locking the Arm in position. (To aid in horizontal alignment, turn on Targeting Laser to project the green horizontal line through the Holographic Lens of a Xylon if attached already.)



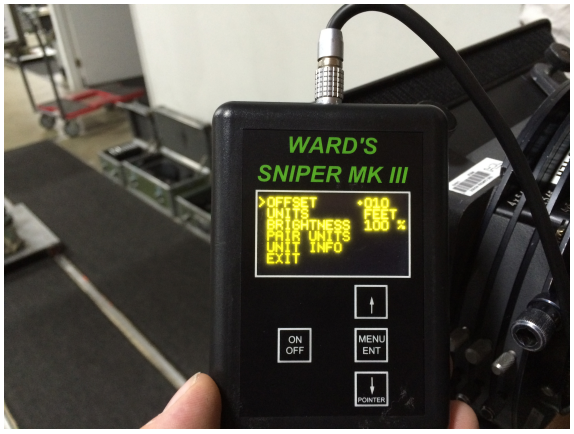
8.Attach power cable from camera to Sniper. (Red LED lights up on the back of the MK 3, this is the first check point for trouble shooting. If the power cable is attached and there isn't a red LED on the back of the MK 3, check camera battery level, 12-24vdc nominal for proper operation.)

9. Attach MK 3 Display to the Matte Box, or desired location and hardwire display with provided cable labeled Sniper Display, (no 9v in Display, this will not charge the 9v so don't try) The first setup out of

the box should be done this way to ensure proper pairing of display and MK 3. Plug Display cable end into MK 3 while Red LED is on. Then plug into Display. "Wards Sniper" logo appears on Display once



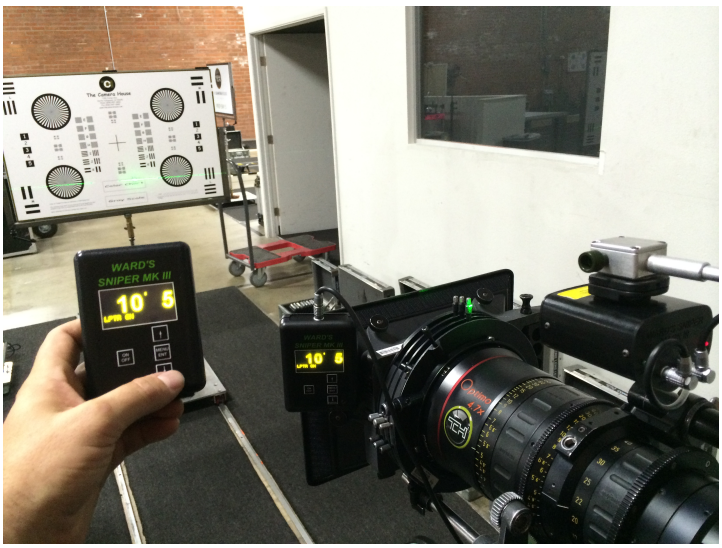
Power button is pushed on Display. This is the pairing, once the Logo disappears and measurements start, the unit is paired and doesn't need to be repeated again. (This pairing happens first at our facility and is a double check only for new purchases.) If a second display (sold separately) is needed, it has to be hard wired, leaving the other display wireless ONLY while two displays are used with the same MK 3.



10.Offset setup. Measure from the front face plate of the MK 3 to the film plane of the camera. For example: the offset measurement is 14 inches, on the Display press the menu button, scroll up or down until the cursor is beside the offset in the menu. Press enter and the cursor moves over to the increments. Either Metric or ANSI is chosen at this point. Select which Standard is appropriate. Then press the up/down arrow on the

display inputting the offset amount previously measured. In this case, -14 inches. Press enter. This sets the offset and moves the cursor back to the menu outline. Scroll down or up to exit and press enter. This procedure lets the MK 3 know where it is in space and where to start measuring from.

11. Target acquisition. Press the down arrow on the Sniper Display. This turns on the daylight visible green Targeting Laser on the MK 3 (for alignment only, care should be taken ensuring no prolonged direct contact in eyes with Targeting Laser, the blink reflex of the human eye prevents any harm but prolong direct contact to eyes should be avoided, this could be compared to looking straight at the sun without eye protection like sunglasses.) with the Targeting Laser on, (green LED on back panel of MK 3 blinks while on) fine tune the laser to desired target with Pan&Tilt bracket if used. If not used, loosen arm and align manually.



12.The Targeting laser is bore sighted to be parallel to the infrared beams projected by the MK 3. This provides the greatest accuracy and ensures there is not a parallax issue between the infrared beams and the visible Targeting Laser. The infrared beams are one inch center to center distance to the Targeting laser and should be understood that they do the measuring and not

the green Targeting laser which is a direct representation of the infrared beams that can't be seen by the naked eye.

13. Xylon attachment and use. The Xylons are patented beam splitters that act like an aspheron lens for measuring. Let's explain: without the Xylons, the infrared beams of the MK 3 are approximately one inch in circumference. Those familiar with the MK 2 and MK 1 know this already, making the Sniper a great B camera tool for long tight lenses and critical overs. With the Xylons, the infrared beam is spread horizontally in a line, represented by the Holographic Lens that shapes the Targeting Laser into a visible line approximating the infrared beams. Thus allowing the user to see exactly where and what they are measuring. The ratio of expansion can be measured exponentially from the MK 3. For example: at ten feet with the 17 degree Xylon attached, the measurement line can be seen and measured to approximately 2.5 feet wide, at twenty feet the width would be approximately 5 feet wide. If this sounds familiar to some, this is with good reason, it's representing what a Panatape or Cinetape would be at that distance with one exception. Sonar devices, mentioned above, project a sound "doughnut". This doughnut, expands exponentially like the Snipers Xylons. At twenty feet, the "doughnut" is approximately five feet in diameter, whereas the Sniper is a horizontal line, not a circle. The five degree Xylon narrows this projection dramatically. The 5 degree Xylons are designed to be an in between choice from the narrow beam of the Sniper without a Xylon as compared with the 17 degree Xylon attached. The five degree spread is approximately 10 inches at ten feet, and thereby 20 inches at twenty feet and so on (Exponentially). In

effect giving the user three distinctly different tools instead of one and giving the user the best choice for either A or B camera.

14. If desired, the display can hold a 9v battery and then can be disconnected from the Sniper to go wireless. Keeping the battery in the display will not harm the unit if hard wired; the Sniper Display simply bypasses the battery and directly takes power from the camera. Keep in mind that hardwiring the Display will not charge the 520mAh 9v; the provided four bank charger is used for the 9v batteries.

15. Care and maintenance: The Sniper is water resistant, not proof and the same goes with the Display. The front elements should be treated like the lenses they are, dry and dust free. If a foreign object like a hair or fingerprint is on either the front element or a Xylon, the foreign object will act like a beam splitter and give a false reading or "jittery" numbers. If the Pan and Tilt Bracket's top stage starts to work itself loose, and play starts in, then a .05 Allen wrench is used to tighten the top stage at the back of the V Lock. This should be done periodically to ensure solid stability over the years of use.

16. Smoke Iris: when smoke is used on set, the Sniper sees it much like the human eye. If heavy smoke is used the Snipers range is affected. In order for the Sniper to see through heavy smoke or atmosphere the Smoke Iris needs to be used if a Xylon is used rather than the traditional narrow beam. We recommend only the narrow Sniper vision or at most the 5 degree Xylon in conjunction with the Smoke Iris as the 17degree Xylon gets to be too wide for the sensors with the smoke and will work only inside of 20 feet. With the narrow Sniper vision or with the 5 degree Xylon and the Smoke Iris attached,

normal functionality can be expected. Once the Smoke Iris is attached to the shoulder screw of the Green Optical flat or the 5 degree Xylon, the density of the atmosphere determines the severity of the Smoke Iris up to 80% coverage of one of the lenses, regardless of the Sniper position is right side up or upside down. We say this because some instances AC's like to mount the pan and tilt bracket differently, the coverage is the same for the Smoke Iris.

17. If the Smoke Iris is left on with out smoke, the MK3 will function normally.

18. Error Codes:

MK 3 UPGRADE AND ERROR CODES

August 19, 2013

1. Enhanced communication protocol with extraneous range elimination.
2. Completely new radio partnership routine.
3. INFO utility in menu for serial numbers and current radio partnership.
4. Additional error codes added to current list:
    a. No communication to display
    b. Measurement laser not responding
    c. Measurement laser having range error
    d. Laser module voltage too low (stops power to measurement laser)
    e. Display battery too low
5. Bigger distance measurement font on display screen.
6. Boot load utility for firmware upgrades.

Description	Current Display Code	Proposed N Code
No communication to display	COM ERR	COM ERR
Measurement laser not responding	NO RNG	LSR ERR
Target not found	RNG ERR	NO TARG
Laser module voltage too low	CAM PWR	CAM PWF
Display battery too low	LOW BAT	LOW BAT