

# USER MANUAL

## MST2-36 Mobile Shield

Patent Pending

Manufactured by:

Cellular Materials International, Inc.

1201 Five Springs Rd.

Charlottesville, VA 22902

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Distributor:

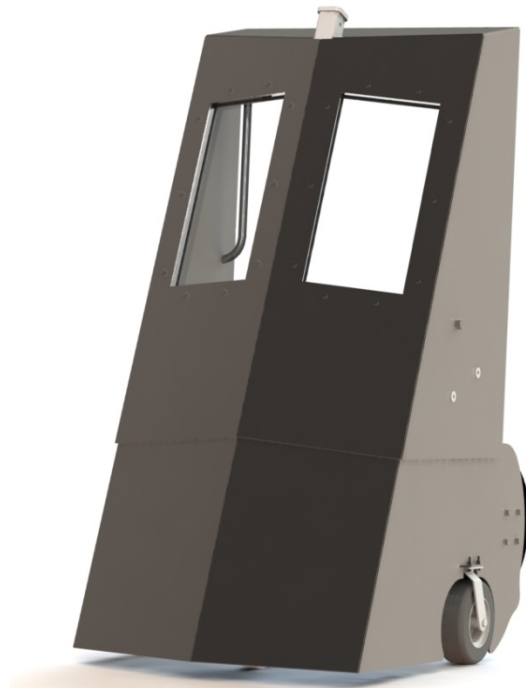
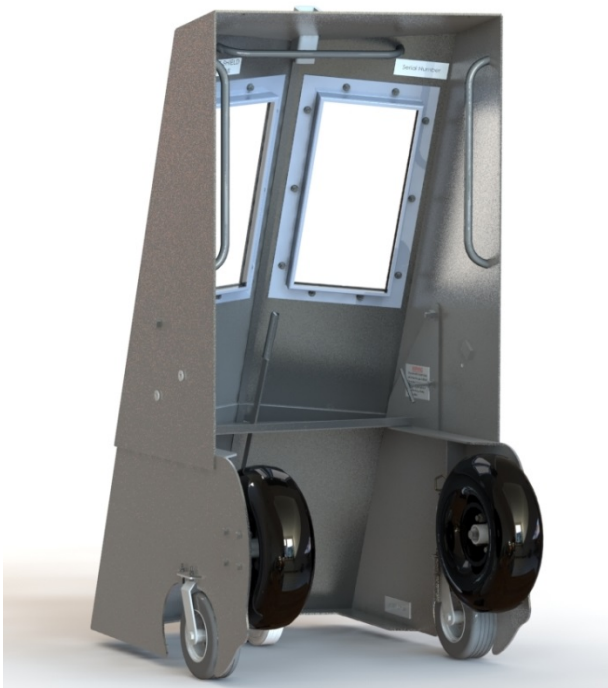
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## Capability Chart:

<b>National Institute of Justice (NIJ) Standard 0101.04 Ballistic Test Chart</b>					
NIJ Certified – US NIJ Standard 0101.04 is a standard for Ballistic Resistance of Police Body Armor developed by the law enforcement standards laboratory of the National Institute of Justice (NIJ), US Department of Justice, Washington DC.					
Armor Type	Test Round	Test Bullet	Bullet Weight/Grain	Reference Velocity	Max Backface Deformation
<b>I</b>	1	.22 Caliber LR LRN	2.6 g/40 gr.	1080±30 ft/s (329±10 m/s)	1.73 in (44 mm)
	2	.380 ACP FMJ RN	6.2 g/95 gr.	1055±30 ft/s (322±10 m/s)	1.73 in (44 mm)
<b>IIA</b>	1	9 mm FMJ RN	8.0 g/124 gr.	1120±30 ft/s (341±10 m/s)	1.73 in (44 mm)
	2	40 S&W FMJ	11.7 g/180 gr.	1055±30 ft/s (322±10 m/s)	1.73 in (44 mm)
<b>II</b>	1	9 mm FMJ RN	8.0 g/124 gr.	1205±30 ft/s (367±10 m/s)	1.73 in (44 mm)
	2	.357 Mag JSP	10.2 g/158 gr.	1430±30 ft/s (436±10 m/s)	1.73 in (44 mm)
<b>IIIA</b>	1	9 mm FMJ RN	8.2 g/124 gr.	1430±30 ft/s (436±10 m/s)	1.73 in (44 mm)
	2	44 Mag SJHP	15.6 g/240 gr.	1430±30 ft/s (436±10 m/s)	1.73 in (44 mm)
<b>Levels for Hard Shields Only:</b>					
<b>III</b>	1	7.62 mm NATO FMJ	9.6 g/148 gr.	2780±30 ft/s (847±10 m/s)	1.73 in (44 mm)

## Product Specifications:

**Model** ..... MST2-36

**Protection level** .....NIJ-III

**Steel**... Astralloy, V2 armor plate, 0.25" thick

**Glass** .... Hawkins Glass, Laminated ballistic NIJ-3

**Window area** ..... 2 at 2 sq. ft. each

**Caster wheels**... 10" semi -pneumatic

**Transport wheels size**.... 8" with 4 - 1/2 lugs

**Wheel lug nut torque**.... 60 ft. lbs.

**Total transport wheel size**....18"

**Transport tire max pressure**.... 50 psi

**Transport tires size**.... 5.70-8, load range B, Cap.

715 lbs. ea.

**Max height**.... 75"

**Max depth**.... 56.5"

**Max width inboard wheels**.... 36"

**Max width outboard wheels**.... 49"

**Weight, all attachments plus hitch bar**.... 720 lbs.

**Ball hitch size**....2"

**Hitch pin**....5/8"

**Recommended vehicle hitch height**.... 18"

**Maximum safe transport speed**... 35 mph

**Transport wheels location**....inboard or

outboard, as per customer request

**Window bolts and transport wheel flange**

**plate**.... Grade 8 bolts

**Standard Color**.... Powder Coat Black

## Deployed Position – Rolling:

There are two positions for rolling:

- Smooth Terrain
- Rough Terrain

Modes are changed by repositioning the brake lever.

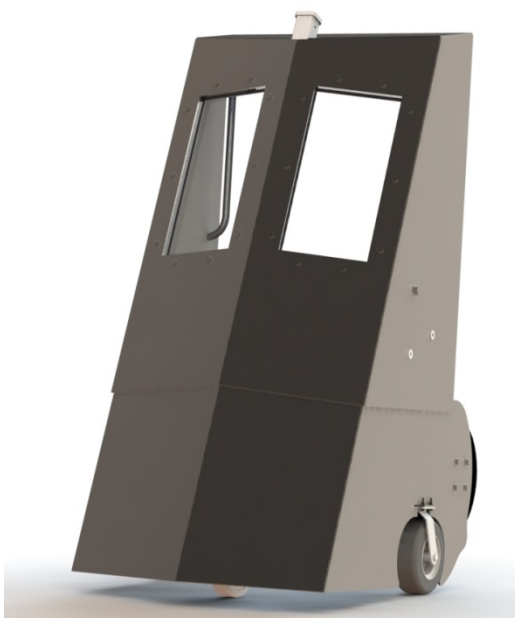
See pictures of brake lever below. Brake lever should be in the center position for smooth terrain. Brake lever should be in the left position for rough terrain. Place your foot on the front wheel caster tire while repositioning the brake lever.



*Smooth Terrain Position*



*Smooth Terrain Brake Lever Position*



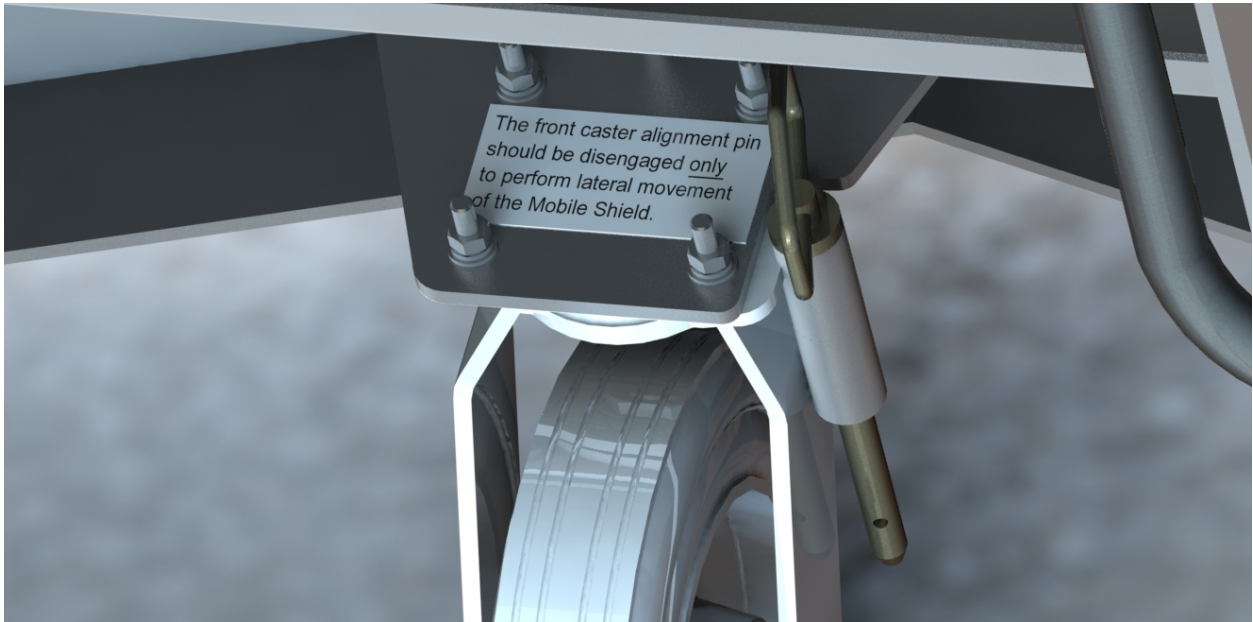
*Rough Terrain Position*



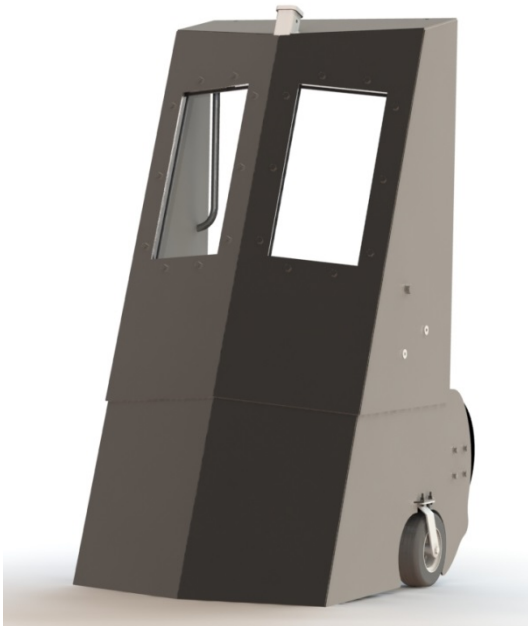
*Rough Terrain Brake Lever Position*

## Deployed Position – Lateral Movement:

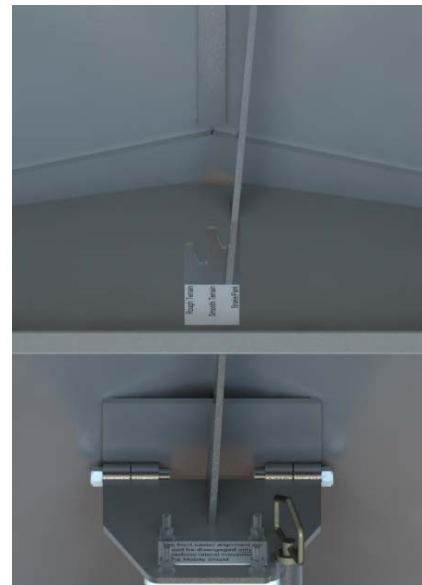
To move the Mobile Shield through narrow doorways, remove the front locking pin and push the unit sideways (lateral movement). Otherwise, locking pin should remain in place at all times.



## Deployed Position – Brake/Park:



*Brake/Park Position: Front of shield is on the ground*



*Brake/Park Lever Position*

## Storage Position:

The storage position was designed to keep the Mobile Shield's weight on the frame instead of the casters, which will prolong caster life. The threaded locking pins must be engaged prior to rotating the unit into or from the storage position.



## Folded Position:

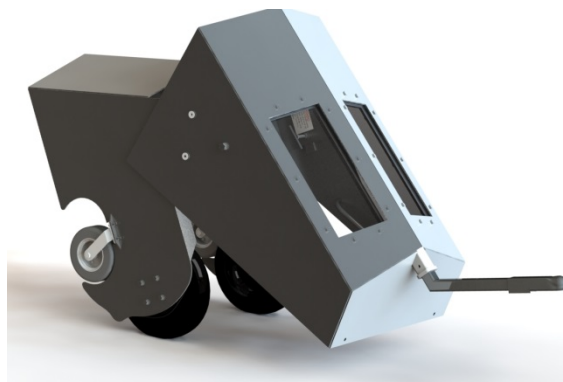


**WARNING:** Remove the threaded locking pins to rotate the upper shield and then reinstall locking pins. Locking pins must be tight at all times when moving or towing the Mobile Shield. If the pins are not reinstalled, the shield will unfold resulting in abrupt change in center of gravity that may cause serious bodily harm.

**WARNING:** The rear caster alignment pins must be engaged prior to rotating the Mobile Shield from the deployed position to the folded and towing positions. Upon redeployment, remove rear caster pins for proper mobility and steering.

## Towing Position:

Insert the tow bar, which is stowed at the base of the Mobile Shield, and rotate the unit onto the tires.





## Moving from deployed position to towing position

Mobile shield is ready to transform:



1. Place locking pins in rear castors.



2. Remove hitch bar.



3. Remove both T-pins.



4. Fold unit over.



5. Replace T-pins.





6. Install hitch bar.



7. Install hitch pin.



8. Hitch to 2" ball; 18" hitch height recommended.



9. Install safety chain.

Attach the safety chain to the Mobile Shield's tow rod and attach the opposite end to the appropriate location on the vehicle.



**Safety chain**

**Tow rod**



10. Tow down the road, not to exceed 35 mph. Due to the narrow track of the travel tires, take corners carefully and slowly.



11. Upon arrival, reverse the above instructions. Remember that the T-pins must be secured in each and every position.

### **Interior Cleaning Instructions for Ballistic Glass**

1. Rinse with clean water or glass cleaner to remove abrasive dust and dirt.
2. Wash with soap or mild detergent using a soft cloth - **DO NOT SCRUB**. Rinse and dry with a soft cloth.
3. To remove labels, stickers or grease, rub gently with a cloth wet thoroughly in VM & P naphtha, kerosene or isopropyl alcohol. Wash and rinse. Do **NOT** allow interior surface to come in contact with other solvents, razor blades, scrapers or squeegees.
4. For repair or replacement contact Hawkins Glass.  
Email: [angele@hawkinsglass.com](mailto:angele@hawkinsglass.com), Phone: 703-339-2194.

### Product Warranty

CMI will guarantee all workmanship to be free of defects for one year from date of shipment. This warranty covers welding, assemblies and moving parts, such as wheels and castors, from manufacturing defects. This does not cover damage from normal wear and tear, or misuse, abuse or damage caused by a hostile battle environment.

Any unauthorized changes made to the MST2 will void this warranty. Paint is not covered by this warranty. Items such as the glass will not be covered by CMI, but may be covered by the glass manufacturer's own warranty.

DISCLAIMER AND PRODUCT USE AGREEMENT

THE PURPOSE OF MOBILE SHIELDS IS TO PROVIDE PROTECTION FROM SPECIFIC THREATS AND IT IS IMPOSSIBLE FOR CELLULAR MATERIALS INTERNATIONAL INC. (CMI) TO PROVIDE PROTECTION AGAINST ALL SUCH THREATS OR UNKNOWN CONTINGENCIES. THESE SHIELDS ARE BUILT USING MATERIALS DESIGNED, MANUFACTURED AND TESTED BY SUPPLIERS TO MEET A SPECIFIC THREAT, BASED UPON DATA THAT IS PROVIDED BY THE NATIONAL INSTITUTE OF JUSTICE (NIJ) PERFORMANCE STANDARDS. THE PURCHASER AND THOSE USING MOBILE SHIELDS AGREE TO ASSUME ALL RISKS AND LIABILITIES WHEN USING MOBILE SHIELD SYSTEMS INCLUDING, WITHOUT LIMITATION: RISKS AND LIABILITIES ARISING FROM INJURY OR DEATH OF ANY PERSON, AND RISKS AND LIABILITIES ARISING FROM DAMAGE TO, OR DESTRUCTION OF, ANY PROPERTY. PURCHASERS AND USERS AGREE BY USE OF MOBILE SHIELDS TO INDEMNIFY AND HOLD HARMLESS CMI FROM CLAIMS, DEMANDS, CAUSES OF ACTION, LOSSES, DAMAGES, PENALTIES, LIABILITIES, AND EXPENSES ARISING FROM, OR RELATING IN ANY WAY TO THE USE, TRANSPORTING AND HANDLING OF MOBILE SHIELDS. CMI MAKES NO CLAIM OF A LEVEL OF PROTECTION OUTSIDE NIJ STANDARDS AND ONLY WHEN SUBJECTED TO NIJ TESTING METHODS. CMI NEITHER ASSUMES NOR AUTHORIZES ANYONE TO ACCEPT ANY TYPE OF LIABILITY ON BEHALF OF CMI. MOBILE SHIELDS ARE DESIGNED TO PROVIDE A LIMITED LEVEL OF PROTECTION IN VERY DANGEROUS SITUATIONS. PURCHASERS AND USERS AGREE, BY THEIR USE OF MOBILE SHIELDS, TO BEAR ALL RESPONSIBILITY FOR THEIR OWN SAFETY.

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