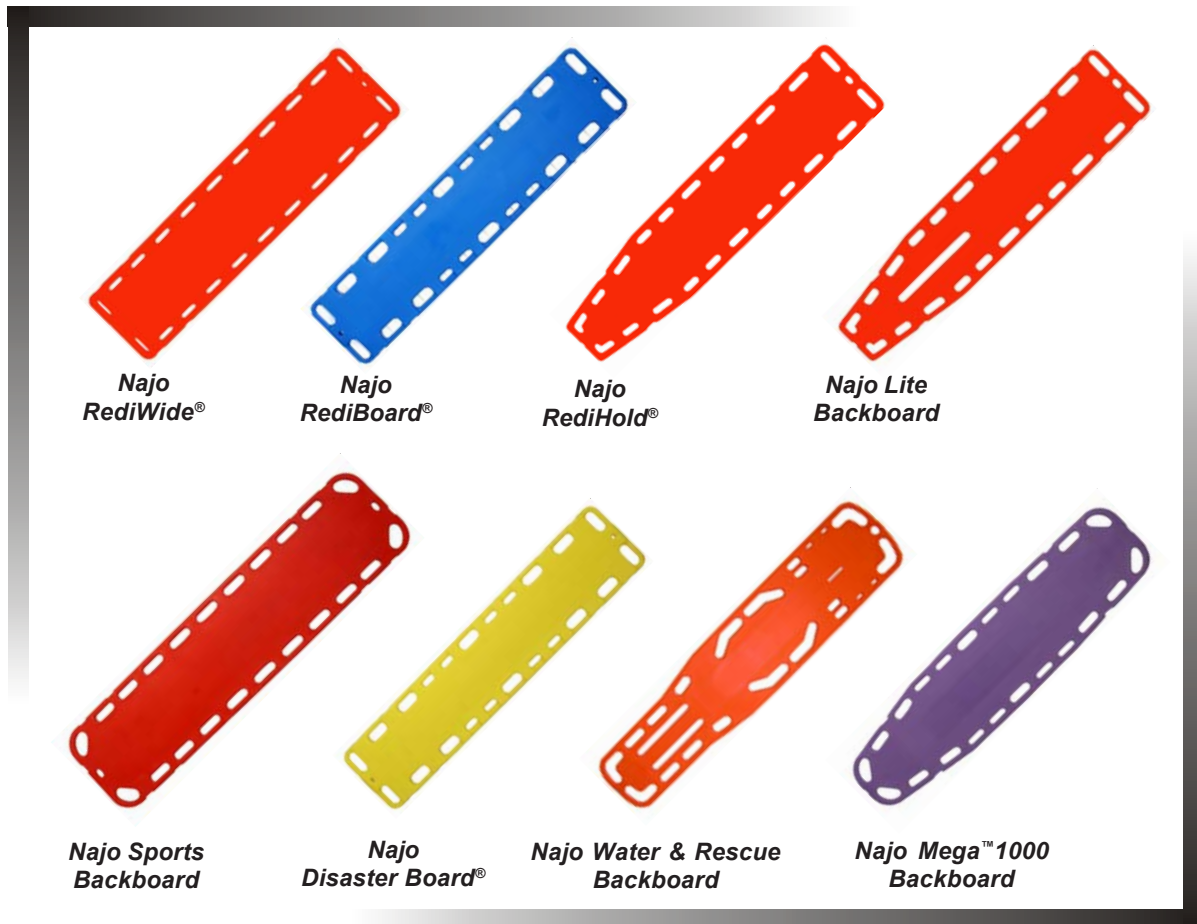




# ***FERNO***

When it's critical.™

## ***Users' Manual***



# **Najo® Backboards by Ferno**

**February 2006 GLO**

**Pub. No. 234-3237-00**

**Disclaimer**

This manual contains general instructions for the use, operation and care of this product. The instructions are not all-inclusive. Safe and proper use of this product is solely at the discretion of the user. Safety information is included as a service to the user. All other safety measures taken by the user should be within and under consideration of applicable regulations. It is recommended that training on the proper use of this product be provided before using this product in an actual situation. Retain this manual for future reference. Include it with the product in the event of transfer to new users. Additional free copies are available upon request from Customer Relations.

**Proprietary Notice**

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## 1 - SAFETY INFORMATION

### 1.1 Warning

The following warnings appear in this manual.

#### WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the backboard.

Improper use of the backboard can cause injury. Use the backboard only for the purpose described in this manual.

An unattended patient can be injured. Stay with the patient at all times.

An unrestrained patient can fall off the backboard and be injured. Use restraints to secure the patient on the backboard.

Helpers can cause injury or be injured. Maintain control of the backboard and direct helpers.

#### WARNING

Improper maintenance can cause injury. Maintain the backboard only as described in this manual.

Improper parts can cause injury. Use only Ferno parts on the backboard.

### 1.2 Important

Boxes like the one below emphasize important information.

#### Important

Do not attach lifting devices such as ropes or bridles to the backboard handholds or pins. Always lift and carry the backboard by hand, grasping the handholds. In heavy rescue situations, secure the backboard in a transport basket and attach lifting devices to the basket.

## 2 - OPERATOR SKILLS AND TRAINING

### 2.1 Skills

- Operators need a working knowledge of emergency patient-handling procedures.
- Operators need the ability to assist the patient.
- Operators need a complete understanding of the procedures described in this manual.

- Practice with the backboard before using it in regular service.
- Keep training records. A sample training record is provided on page 11.

### 2.2 Training

- Follow a training program designed by your training officer.
- Read this manual.

#### WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the backboard.

### 3 - ABOUT THE BACKBOARDS

#### 3.1 Backboard Description

Najo Backboards by Ferno are emergency patient-handling devices designed to provide rigid support while moving patients with suspected injuries of the spine, hip, pelvis, or lower extremities.

The backboards are for professional use only. A minimum of two trained operators and two helpers is required. Additional help may be needed with heavy loads.

All models are constructed in one piece from high-density polyethylene with polyurethane foam fill. All are x-ray translucent and impervious to body fluids.

The Water Board model is specially designed for aquatic rescue situations, but all models are suitable for use in water provided the buoyancy ratings are observed. See *General Specifications*, next page, for buoyancy ratings, load limits, features, and options.

#### ! WARNING

**Improper use of the backboard can cause injury. Use the backboard only for the purpose described in this manual.**

#### 3.2 Special Features

##### REDI HOLD®



- Two oversized handholds at tapered end
- Smooth head area for good adherence by all head immobilization devices
- Angled edges for log rolling

##### REDI WIDE®



- 18 in. (46 cm) wide
- Rectangular for patient placement at either end
- Angled edges for log-rolling

##### NAJO LITE



- Two oversized handholds at tapered end
- Angled edges for log rolling
- Central slot for individual leg immobilization

##### REDI BOARD®



- Quick patient positioning because there's no designated front, back, top, or bottom
- Good for water rescue; floats 275 lb (125 kg)

##### DISASTER BOARD®



- Same features as RediBoard but sold in sets of 35 for mass casualty disaster
- High-visibility yellow color

##### WATER RESCUE BOARD



- For all water and land rescue
- Tapered end without foam fill allows easier submersion beneath patient in water rescue
- Two center slots for individual leg immobilization

##### MEGA 1000™



- 18 in. (46 cm) wide
- 1000-lb (454-kg) load capacity
- Two tapered ends for transport flexibility

##### SPORTS BOARD




- 20 in. x 80 in. (51 cm x 203 cm)
- Large size allows immobilization of athletes wearing bulky equipment
- Angled handholds at all four corners

### 3.3 General Specifications

	Najo Lite	RediWide®	RediBoard®	Redihold®	Disaster Board	Mega 1000	Water Board	Sports Board
Length	72 in. 183cm	72 in. 183cm	72 in. 183cm	72 in. 183cm	72 in. 183cm	72 in. 183cm	72 in. 183cm	80 in. 203cm
Width	16 in. 41cm	18 in. 46cm	16 in. 41cm	16 in. 41cm	16 in. 41cm	18 in. 46cm	16 in. 40.5 cm	20 in. 51cm
Thickness	1-3/4 in. 4.5 cm	1-3/4 in. 4.5 cm	2-1/4 in. 6 cm	1-3/4 in. 4.5 cm	2-1/4 in. 6 cm	2-1/4 in. 6 cm	2 in. 5.8 cm	2-1/4 in. 6 cm
Weight	14.5 lb 6.6 kg	16 lb 7.2 kg	16 lb 7.2 kg	16 lb 7.2 kg	16 lb 7.2 kg	20 lb 9 kg	14 lb 6.3 kg	27 lb 12 kg
Load Limit	450 lb 204 kg	600 lb 272 kg	600 lb 272 kg	600 lb 272 kg	600 lb 272 kg	1000 lb 454 kg	450 lb 204 kg	1000 lb 454 kg
Flotation* (at 1.2 buoyancy)	154 lb 69 kg	172 lb 78 kg	276 lb 125 kg	136 lb 62 kg	276 lb 125 kg	206 lb 93 kg	122 lb 55 kg	360 lb 163 kg
Available with Optional Speed Clip Pins	X	X	X	X		X	X	X
One Tapered End	X			X			X	
Two Tapered Ends						X		
Rectangular		X	X		X			X
Angled Edges	X	X		X		X	X	
Handle Surface Recessed for Strap Placement		X	X	X	X			
Compatible with all head immobilization devices	X	X	X		X	X	X	X

\* Flotation rate is defined as the capability of the backboard to float with a person of a particular buoyancy on it. The average person with deflated lungs has a buoyancy of 1.1, meaning the person is 1.1 times denser than water. The buoyancy rate of 1.2 used to calculate the flotation rate in this table is an estimated figure to account for the person having deflated lungs and wearing wet clothing.

*Ferno reserves the right to change specifications without notice.*



If the load limit has been exceeded, inspect the backboard. See *General Specifications*, above, for load limits, and *Inspecting the Backboard*, page 9, for inspection points.

## 4 - USING THE BACKBOARD

### 4.1 Before Placing the Backboard in Service

1. Require all personnel who will work with the backboard to read this manual.
2. Inspect the backboard and confirm that it has been received in good order (see *Inspecting the Backboard*, page 9).
3. Set up the backboard with restraints. To attach restraints, follow instructions in the restraint users' manual.

### 4.2 General Guidelines for Use

1. Using the backboard requires a minimum of two trained operators and two helpers. Additional help may be needed for heavy patients. For information about placement and direction of helpers, see *Using Additional Help*, page 8.
2. Follow local emergency patient-handling procedures and protocols when using the backboard.
3. Stay with the patient at all times.
4. Always use patient restraints (not supplied).

### 4.3 Restraints and Head Immobilizer

- Always use patient restraints. Use a head immobilizer and cervical collar as required by your local protocols.
- Each backboard model has slots for handholds, patient restraints, and head-immobilizer straps. Use the restraint style(s) and configuration(s) selected by your service and required by local protocols.
- If your board has speed-clip pins installed, make sure the restraint speed clips are securely fastened around the pins (Figure 1).
- Do not use the speed-clip pins as part of a system for lifting the backboard. Always lift and carry the backboard by hand, grasping the handholds.

#### **! WARNING**

**An unattended patient can be injured. Stay with the patient at all times.**

#### **! WARNING**

**An unrestrained patient can fall off the backboard and be injured. Use restraints to secure the patient on the backboard.**

#### **Important**

Do not attach lifting devices such as ropes or bridles to the backboard handholds or pins. Always lift and carry the backboard by hand, grasping the handholds. In heavy rescue situations, secure the backboard in a transport basket and attach lifting devices to the basket.



**Figure 1 - Restraint with Speed Clip Attached to Speed Clip Pin**



## 4.4 Using the Backboard

1. Follow local EMS stabilization guidelines and procedures before placing the patient on the backboard.
2. Apply any appropriate cervical or extrication collars needed for head and neck support.
3. Follow local EMS procedures for applying the backboard.
4. Secure the patient on the backboard with restraints (not supplied).
5. Confirm that restraints are properly configured and buckles are securely fastened.

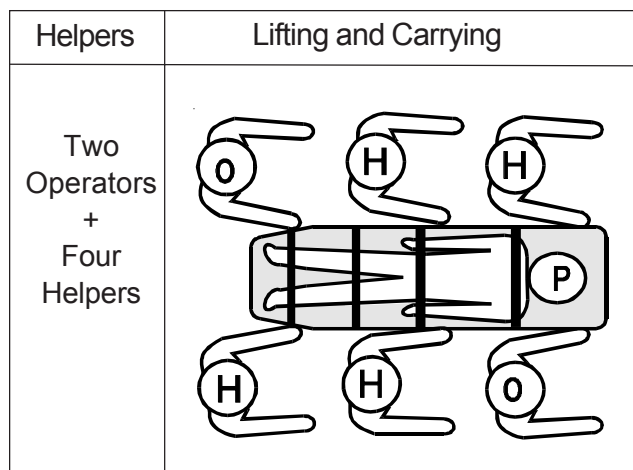
If using restraints with speed clips, confirm that they are securely attached to the speed clip pins.

6. Use as many helpers as needed to safely lift and carry the weight of the backboard and patient.
7. If you place the patient/backboard package on a cot for transport, secure the patient/backboard package to the cot using the **cot** restraints.

## 4.5 Using Additional Help

When using additional help, operators should maintain control of the backboard and direct the helpers.

The diagram at the upper right shows suggested placement of operators and helpers.



**Figure 2 - Placement of Operators and Helpers**

### ! WARNING

**Helpers can cause injury or be injured. Maintain control of the backboard and direct helpers.**



If the load limit has been exceeded, inspect the backboard. See *General Specifications*, page 6, for load limits, and *Inspecting the Backboard*, page 9, for inspection points.



## 5 - MAINTENANCE

### 5.1 Maintenance Schedule

The backboard requires regular maintenance. Set up and follow a maintenance schedule.

The schedule at the right represents minimum maintenance. A sample maintenance record sheet is provided on page 11.

When using maintenance products, follow the manufacturers' directions and read the manufacturers' material safety data sheets.

Maintenance Schedule	Each Use	As Needed	Monthly
Disinfecting (this page)	•		
Cleaning (this page)		•	
Inspecting (this page)		•	•

### 5.2 Disinfecting the Backboard

Wipe or spray all surfaces of the backboard with disinfectant. Follow the disinfectant manufacturer's directions.

Ferno recommends inspecting the backboard for obvious damage as you disinfect it.

### 5.3 Cleaning the Backboard

1. Clean all surfaces of the backboard with warm water and a mild detergent. If necessary, use a stiff-bristled brush (but not a wire brush).
2. Rinse the backboard with warm water.
3. Dry the backboard with a towel or allow it to air dry.

### 5.4 Inspecting the Backboard

Have your service technician check the following:

- Is the backboard free of cracks, crevices, and punctures?
- If the backboard is fitted with speed clip pins, are all pins solidly in place and free of cracks or damage?

If inspection shows damage to any part of the backboard except the speed clip pins, remove the backboard from service and destroy it to prevent accidental use. Speed clip pins are replaceable; see information at right.

**! WARNING**

**Improper maintenance can cause injury. Maintain the backboard only as described in this manual.**

**! WARNING**

**Improper parts can cause injury. Use only Ferno parts on the backboard.**

**Important**

Do not attempt to repair the backboard except to replace speed clip pins. Repairs to the backboard can cause unpredictable performance and will void the warranty.

**SPEED CLIP PIN REPLACEMENT KIT**

Use Parts Kit 090-5802 to replace damaged or missing speed clip pins for Najo Backboards by Ferno.

In the U.S.A. and Canada, order the replacement pin kit from EMSAR at:

**1.800.73EMSAR (Phone)**  
**1.937.383.1051 (Fax)**  
**www.EMSAR.com (Internet)**

Outside the U.S.A. and Canada, contact your Ferno distributor or call Ferno Customer Relations +1.937.382.1451.

## 6 - FERNO CUSTOMER RELATIONS

Customer service and product support are important aspects of each Ferno product. For assistance, please contact Ferno Customer Relations:

Telephone (Toll Free) ..... 1.877.733.0911  
 Telephone ..... +1.937.382.1451  
 Fax (Toll Free) ..... 1.888.388.1349  
 Fax ..... +1.937.382.1191  
 Internet ..... www.ferno.com

Please have the date of manufacture of your backboard available when calling Ferno Customer Relations, and include it in all written communications.

The date of manufacture is molded into the back of the backboard in one of the two styles shown below. If a series of letters and/or numbers is molded or stamped near the date wheel, please provide them, too.

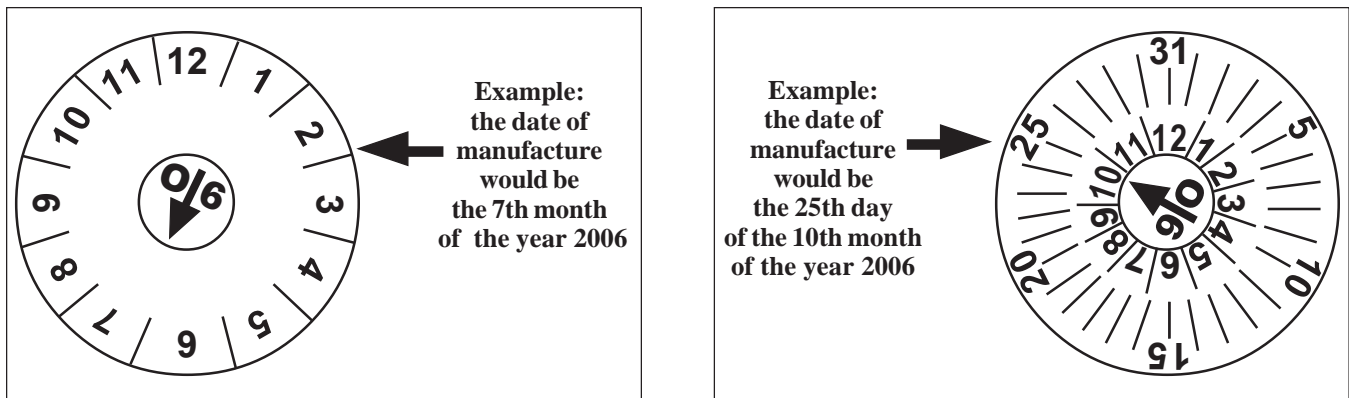


Figure 3 - Date-of-Manufacture Wheels

## 7 - LIMITED WARRANTY

### Limited Warranty Summary

Ferno products are warranted free from defects in material and workmanship for one year, except:

- External finishes (gelcoat, paint, powdercoat, decals, etc.) are warranted for 90 days.
- Soft goods (webbing, vinyl, fabric, foam, etc.) are warranted for 90 days.
- Fiberglass AquaCiser tanks are warranted against leakage for 5 years.
- Stainless hydrotherapy tanks are warranted against tank shell leakage and corrosion for 5 years.
- Mortuary products (except hydraulic parts and soft goods) are warranted for 2 years.
- Ambulance cots and transporters (except external finish and soft goods) are warranted for 2 years.
- EMS bags (replaceable bottom excluded) and backboards are warranted for lifetime replacement. (Damage caused by accident, abuse, misuse or improper care will be repaired at a reasonable charge for which you will be informed prior to the repair work being done.)
- Integrated Charging System (ICS) is warranted for 2 years.

Ferno repairs are warranted for 90 days from the date of repair.

This limited warranty applies only when the product is used as described in the instructions provided. The warranty period begins when the product is shipped from Ferno or when you receive it if you have proof of delivery. Shipping charges are not covered by this limited warranty. Ferno is not liable for shipping damages or damages sustained through using the product.

Non-Ferno products sold by Ferno retain the product manufacturer's original warranties. Ferno offers no warranties of any kind additional to those of the product manufacturer, nor does Ferno assume any liability for products manufactured by others.

### Limited Warranty Obligation

If a product is proven defective, Ferno will repair or replace it, or, at our option, refund the item's purchase price. In no event is Ferno liable for more than the selling price of the product. The purchaser accepts these terms in lieu of all damages.

This is a summary of the limited warranty. The actual terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are available upon request by calling 800-733-3766 or 937-382-1451.

