Right Side Version Shown

**DETAIL A**
SCALE 1 : 1

### Resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>Material</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3/16&quot; Thick Diamond Plate</td>
<td>As Required</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1-3/4&quot; SQ 6063 Aluminum Tubing 1/8&quot; thick wall</td>
<td>96 inches [243.8 cm]</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3/4&quot; x 3/4&quot; 6063 Aluminum U-Channel, 1/8&quot; thick wall</td>
<td>49.5 inches [125.7 cm]</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1/8&quot; thick 6061 Aluminum Sheet</td>
<td>As Required</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hinge Aluminum 3&quot; x .09&quot;, 1/4&quot; Pin</td>
<td>32 inches [81.3 cm]</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2&quot; Black Velcro Hook</td>
<td>32 inches [81.3 cm]</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2&quot; x 18&quot; Black Velcro Loop</td>
<td>16 inches [40.6 cm]</td>
<td></td>
</tr>
</tbody>
</table>

### PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>GE-11041-01</td>
<td>Main Plate</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>GE-11041-02</td>
<td>Glass Holder</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>GE-11041-04</td>
<td>Foot Plate</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>GE-11041-03</td>
<td>Top &amp; Bottom Braces</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>GE-11041-05</td>
<td>Hinge, Stop Plate</td>
</tr>
</tbody>
</table>

#### DRAWN
9/30/2010

#### DRAWN BY

#### CHECKED

#### TITLE
Modified End Panel, Corner

#### SIZE
C

#### SWG NO
GE-11041

#### REV

#### SCALE

#### UNLESS OTHERWISE SPECIFIED
TOLERANCES (INCHES)

<table>
<thead>
<tr>
<th>FRAC.</th>
<th>+/-</th>
<th>.00</th>
<th>+/-</th>
<th>.000</th>
<th>+/-</th>
<th>.25 Deg.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The right side version is shown throughout the rest of the drawing.
DETAIL E
SCALE 1 : 1

Channel sits on top of
the diamond plate

3/8"  2-15 1/2

No Penetration
into channel

3/8"  2-15 1/2

TOLERANCES: (INCHES)

FRAC.  +/-  1/32

.00  +/-  .01

.000  +/-  .005

ANGULAR  +/-  .25 Deg.
Velcro Loop

Velcro Hook on top and bottom side of foot plate

Weld Applicable hinge fingers
2 per stop plate Hinge

DETAIL G
SCALE 1 / 2
NOTE:
1.) Material: 1/2" thick Smoked Polycarbonate, 713 Gray
2.) Remove burrs and sharp edges

TOLERANCES: (INCHES)

+/- .25 Deg.

8.88 [225.4 mm]

29.87 [758.8 mm]

30.38 [771.5 mm]

31.50 [800.1 mm]

27.25 [692.2 mm]

+/- .00

+/- .01

+/- .000

+.005

+.25 Deg.

8.88 [225.4 mm]

29.87 [758.8 mm]

30.38 [771.5 mm]

31.50 [800.1 mm]

27.25 [692.2 mm]
Manufacturer: Huffy Spaulding
Model: 7800s
Description: Huffy 7800 "Slam Jam" breakaway basketball rim
Retailers: www.amazon.com
www.sears.com
www.competitiveedgeproducts.com

Vendor: McMaster-Carr
Part Number: 9573K68
Description: Chrome-Silicon Steel Die Spring, 1.25" OD, 2.5" Long, 180 lb Load
Retailer: www.mcmaster.com

Notes:

1. Remove stock net. It will not be used for competitions. It if fine for practice, but the length may not be compatible for the rest of the field components.

2. Remove stock spring from the backboard and replace with the specified spring from McMaster. Once again, the stock spring is probably good enough for practice, but the McMaster spring has more give to it.

3. Once the stock spring has been replaced, tighten the nut holding the spring in place until the end of the bolt is flush to the outside surface of the nut.
**Manufacturer:** Lifetime

**Description:** Lifetime Basket Ball Net, 120 gram. White.

**Part Number:** #0790

**Sold at:**

- www.buylifetime.com
- www.competitiveedgeproducts.com
- www.farmandfleet.com
DETAIL A
SCALE 1 : 1

DETAIL B
SCALE 1 / 2

\(0.88\) [22.2 mm]

\(0.80\) [20.0 mm]

\(0.75\) [19.0 mm]

\(0.70\) [17.8 mm]

\(0.63\) [16.0 mm]

\(0.50\) [13.0 mm]

\(0.38\) [12.7 mm]

\(0.27\) [6.7 mm]

\(0.13\) [3.2 mm]

\(2.88\) [73.0 mm]

\(25.00\) [635.0 mm]

\(22.25\) [565.2 mm]

\(3.00\) [76.2 mm]

\(2.00\) [50.8 mm]

\(7.00\) [177.8 mm]

\(8.38\) [232.7 mm]

\(42.98\) [1090.0 mm]

\(44.46\) [1123.5 mm]

\(49.09\) [1248.0 mm]

\(50.80\) [1300.0 mm]

\(53.00\) [1346.0 mm]

\(56.00\) [1422.4 mm]

\(62.63\) [1595.7 mm]

\(71.00\) [1803.4 mm]

\(6.7\) mm

Thru

4 Places

4 Places

2.00

\(3\)/\(16\)

\(3\)/\(16\)

8 Places

8 Places

Backboard Frame

DRAWN

6/1/2011

6.11

200 Bedford Street, Manchester, NH 03101

(063) 666-3906 -- FAX (603) 666-3997

UNLESS OTHERWISE SPECIFIED

TOLERANCES: (INCHES)

FRAC. +/- 1/32

+.00 +/- .01

+.000 +/- .005

ANGULAR +/- .25 Deg.
Item: 1, GE-12016-01, Bottom Vertical
Resource: 1
Scale: 1:1
QTY: 4

Item: 2, GE-12016-02, Bottom Horizontal
Resource: 1
Scale: 1:1
QTY: 1
Item: 5, GE-12016-05, Middle Horizontal
Resource: 1
Scale: 1:1
QTY: 1

Item: 6, GE-12016-06, Spacer
Resource: 3
Scale: 2:1
QTY: 6

DRAWN BY:  
CHECKED:  
6/1/2011

200 Bedford Street, Manchester, NH 03101  
(603) 666-3906  FAX (603) 666-3907

UNLESS OTHERWISE SPECIFIED
TOLERANCES: (INCHES)
FRAC. +/- 1/32
.00 +/- .01
.000 +/- .005
ANGULAR +/- .25 Deg.

Backboard Frame

SIZE SWG NO REV  
C GE-12016 B
Steel leader cable that is attached to the ramp to be zip tied to bridge at this location. (4 places)

Note: Ball Ramp Assembly has been flipped over from the original position to aid in ball deflection.

PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>GE-12018</td>
<td>Bridge Deck</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>GE-12022</td>
<td>Base Assembly, Bridge</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>GE-12019</td>
<td>Bridge, Frame</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>GE-12095</td>
<td>Bridge Surface</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>GE-12017-01</td>
<td>1&quot; Hook Velcro, Adhesive Backed, 47 feet total</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>GE-12017-02</td>
<td>1&quot; Loop Velcro, Adhesive Backed, 47 feet total</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>HW-00072</td>
<td>Hex head bolt 3/8-16 x 6.5&quot;</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>HW-00026</td>
<td>Nut, Nylock 3/8-16 Zinc Plate</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>GE-12064</td>
<td>Ball Ramp Assembly</td>
</tr>
</tbody>
</table>

Note: Ball Ramp Assembly has been flipped over from the original position to aid in ball deflection.
Notes:

1. All velcro applied to Bridge Deck should be 1" Hook Velcro, Adhesive Backed.
2. Surfaces should be cleaned prior to application.
3. Bottom surface velcro may be applied easier, by attaching the hook velcro for the Bridge Deck bottom to the corresponding loop velcro on the Bridge Frame then pulling the plastic covering the adhesive off and laying the Bridge Deck in its proper location.
4. The white colored Bridge Deck will have a large FIRST logo centered on the Top Surface.
Notes:

1. All velcro applied to Bridge Frame and Bridge Surface should be 1" Loop Velcro, Adhesive Backed.
2. Surfaces should be cleaned prior to application.
Note: Material to be 1/2" thick HDPE in blue, red or white.
Note: If holes are not dimensioned here they are dimensioned on the piece parts on sheets 6-7 and can be drilled prior to welding.
Notes:
1. Items 10, 11 and 12 are used for scoring systems sensors, and are not required for normal non-competition bridge operation.

Adhere 4" velcro the entire length of channel. Both flanges of channel.
NOTE:
1.) Material A36 HR Steel
2.) Black Oxide Finish
3.) Remove all burns and sharp edges
NOTE:
1.) Material A36 HR Steel
2.) Black Oxidized
3.) Remove all burrs and sharp edges
NOTE:
1.) Material: Cold Rolled, Sheet Steel
2.) Remove all burns and sharp edges
3.) Plating Spec: Zinc with Clear Chromate
Apply 2" Hook Velcro to this surface.

Side View
DETAIL A
SCALE 1:1
Item: 1, GE-12026-01, Main Support
Resource: 1
Scale: 1/2
QTY: 1

Item: 2, GE-12026-02, Connector Pin
Resource: 3
Scale: 1/1
QTY: 2
Item: 3, GE-12026-03, Top Rail Mount
Resource: 1
Scale: 1/1
QTY: 1

Item: 4, GE-12026-04, Half Connector Pin
Resource: 3
Scale: 1/1
QTY: 1
Item: 5, GE-12026-05, Foot
Resource: 2
Scale: 1/2
QTY: 1

Item: 6, GE-12026-06, Mounting Bracket
Resource: 4
Scale: 2/1
QTY: 4
Apply 2" velcro to this surface

DETAIL A
SCALE 1 : 1

(1/2) 1-4
(1/2) 1-4

3/16

3/16

3/16

3/16
Item: 1, GE-12027-01, Main Support
Resource: 1
Scale: 1/2
QTY: 1

Item: 2, GE-12027-02, Connector Pin
Resource: 3
Scale: 1/1
QTY: 2

Hoop Upright, Right

TOLERANCES: (INCHES)
FRAC. +/- 1/32
.00 +/- .01
.000 +/- .005
ANGULAR +/- .25 Deg.
**Item:** 3, GE-12027-03, Top Rail Mount  
**Resource:** 1  
**Scale:** 1/1  
**QTY:** 1

**Item:** 4, GE-12027-04, Half Connector Pin  
**Resource:** 3  
**Scale:** 1/1  
**QTY:** 1
Item: 5, GE-12027-05, Foot
Resource: 2
Scale: 1/2
QTY: 1

Item: 6, GE-12027-06, Mounting Bracket
Resource: 4
Scale: 2/1
QTY: 4
DETAIL C
SCALE 1:1

Weld applicable hinge fingers
2 per stop plate hinge

Flush when opened

DETAIL B
SCALE 1:3

1/16 - 1" max
1 Places

1/16
2 Places
END PANEL, CENTER

DETAIL D
SCALE 1 / 2

DETAIL E
SCALE 1 / 2

TOLERANCES: (INCHES)

FRAC. +/- 1/32

.00 +/- .01

.000 +/- .005

ANGULAR +/- .25 Deg.

Note:
1.) Drill thru holes after welding, as shown.

10/10/2011

200 Bedford Street, Manchester, NH 03101
(603) 666-3906 -- FAX (603) 666-3907

FIRST

DRAWN BY:

CHECKED:

UNLESS OTHERWISE SPECIFIED

END PANEL, CENTER

SIZE SWG NO. REV.

C GE-12028 B
Item: 1, GE-12028-01, Panel, Diamond Plate
Resource: 1
Scale: 1/6
QTY: 1
Item: 2, GE-12028-02, Plate, Stop
Resource: 5
Scale: 1/2
QTY: 2

Item: 3, GE-12028-03, Support, Top and Bottom
Resource: 3
Scale: 1:1
QTY: 2
Item: 6, GE-12028-06, Mounting Bracket, Chute
Resource: 6
Scale: 2:1
QTY: 6
NOTES:
1. Material: 1/8" Red or Blue HDPE
2. Remove all burns and sharp edges
3. Apply 1" Hook Velcro to the outside perimeter of the Key plastic.
Remember that for each pair of Key plastic, the velcro needs to go on opposite sides from one another to make the "mirrored" parts.
NOTE:
1.) Material 1/4" Thick Clear Polycarbonate
2.) Remove burrs and sharp edges
1.) Material: 12 Gauge 5052 Aluminum
2.) Remove all burrs and sharp edges
NOTE:
1. Drill thru holes after welding
Item: 2, GE-12053-02, Shelf Support
Resource: 1
Scale: 1:1
Quantity: 2
NOTE:
1.) Material 6061, 1" x 1/8" Thick Aluminum Angle
2.) Remove all burs and sharp edges
NOTE:
1.) Material: 1/4" Thick clear polycarbonate
2.) Remove all burrs and sharp edges
NOTE:
1.) Material: 1" Schedule 40, 6061 Aluminum Pipe
2.) Remove burrs and sharp edges
LEFT

RIGHT

NOTE:
1. Surface "A" must be parallel to the centerline of the tube.
Item: 2, GE-12057-01, Channel, Net Support
Resource: 1
Scale: 1:1
QTY: 1
R.13 [3.3 mm]

4.00 [101.6 mm]

6.00 [152.4 mm]

.12 [3.0 mm]

NOTE:
1.) Material: Cold Rolled, Sheet Steel
2.) Remove all burrs and sharp edges
3.) Plating Spec: Zinc with Clear Chromate

REVISION HISTORY

<table>
<thead>
<tr>
<th>ZONE</th>
<th>REV</th>
<th>DESCRIPTION</th>
<th>DATE</th>
<th>APPROVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>A4</td>
<td>A</td>
<td>Added Plating Spec and mm to all dimensions</td>
<td>10/3/2011</td>
<td>MLC</td>
</tr>
<tr>
<td>A4</td>
<td>B</td>
<td>Changed plating to Zinc with Clear Chromate</td>
<td>11/1/2011</td>
<td>MLC</td>
</tr>
</tbody>
</table>

DRAWN
dfoster  6/20/2011

CHECKED

200 Bedford Street, Manchester, NH 03101
(603) 666-3906 -- FAX (603) 666-3907

UNLESS OTHERWISE SPECIFIED

TOLERANCES (INCHES)

<table>
<thead>
<tr>
<th>FRAC.</th>
<th>+/- 1/32</th>
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<tbody>
<tr>
<td>.00</td>
<td>+/- .01</td>
</tr>
<tr>
<td>.000</td>
<td>+/- .005</td>
</tr>
<tr>
<td>ANGULAR</td>
<td>+/- .25 Deg.</td>
</tr>
</tbody>
</table>

TITLE

Center Field Channel

SIZE

DWG NO

REV

SCALE

GE-12058
DETAIL A
SCALE 1:1

DETAIL B
SCALE 1:1

NOTES:
1. Material: 1/2" thick HDPE red or blue
2. Remove burrs and sharp edges
NOTE:
1.) Material 1/4" Clear Polycarbonate
NOTE:
1) Material: 1/4", 6061 Aluminum
NOTE:
1.) Material: 1/4" Clear Polycarbonate
NOTE:
1.) Material: 6061 Aluminum 1/8" Thick
2.) Remove all burrs and sharp edges
Notes:
1. Steel Leader Cable can be purchased at www.TCHWEB.com. Part Number: #514-2124852. Other flexible cable, rope, or twine can be used if available.
Items 2 and 3 to be glued to Item 1.

DETAIL B
SCALE 1:1

<table>
<thead>
<tr>
<th>Resources</th>
<th>Description</th>
<th>QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/8&quot; x 10&quot; Clear</td>
<td>1/4 sheet</td>
</tr>
<tr>
<td>2</td>
<td>1/8&quot; Clear</td>
<td>1/8 sheet</td>
</tr>
</tbody>
</table>

PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>GE-12070-01</td>
<td>Side</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>GE-12070-02</td>
<td>Front</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>GE-12070-03</td>
<td>Back</td>
</tr>
</tbody>
</table>

DRAWN BY:
10/25/2011

CHECKED:

TOLERANCES (INCHES):

FRAC. +/- 1/32
.00 +/- .01
.000 +/- .005
ANGULAR +/- .25 Deg.
DETAIL C
SCALE 2 : 1

Item: 1, GE-12070-01, Side
Resource: 1
Scale: 1:4
Quantity: 1

5X \( \phi .27 \) [6.7 mm] thru
note: holes may be drilled before or after assembly.
Items 2 and 3 to be glued to Item 1.

**DETAIL A**

**SCALE 1 : 1**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/4&quot; Clear Polycarbonate</td>
<td>1/4 Sheet</td>
</tr>
<tr>
<td>2</td>
<td>1/8&quot; Clear Polycarbonate</td>
<td>1/8&quot; Sheet</td>
</tr>
</tbody>
</table>
Notes:

1. Aluminum Extrusion can be purchased at www.mcmaster.com
Part number: 8429444. Aluminum H-Channel Edge Trim 6'L,
5/32" Channel (A), 0.375/64" Leg H (B)
2. Cut extrusion into 4.5" lengths, qty 4.

-Slide Chute, Left Side into the aluminum extrusion grooves.
Do not glue. Hold the assembly together with 50# Zip ties (B).

Apply contact cement to one side of the aluminum extrusion.
Push aluminum extrusion on to the Chute, Right Side. Center
it between the holes as you push it on. Allow to dry.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>GE-12071</td>
<td>Chute 1, Right Side</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>GE-12070</td>
<td>Chute 1, Left Side</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>GE-12072-01</td>
<td>Aluminum Extrusion, see note</td>
</tr>
</tbody>
</table>

FIRST
200 Bedford Street, Manchester, NH 03101
(603) 666-3906 ~ FAX (603) 666-3907

DRAWN: 11/20/2011
CHECKED: 11/20/2011

UNLESS OTHERWISE SPECIFIED
TOLERANCES: (INCHES)
FRAC. +/- 1/32
.00 +/- .01
.000 +/- .005
ANGULAR +/- .25 Deg.

SHEET 1 OF 1
NOTE:
1.) Material 5052 Aluminum
2.) Remove burrs and sharp edges

Full Radius Thru 2 Places

R.38

1.9
[48.9 mm]

2.25
[57.2 mm]

.50
[12.7 mm]

50
[12.7 mm]

.63
[16.9 mm]

2.00
[50.8 mm]

1.9
[48.9 mm]

2.25
[57.2 mm]

.63
[16.9 mm]

2.00
[50.8 mm]

4.00
[101.6 mm]

3.50
[88.9 mm]

50
[12.7 mm]

6.27
[16.7 mm]

Thru 3 Places

REVISION HISTORY
ZONE REV DESCRIPTION DATE APPROVED
D-3 A Added Dimension to slot edge from edge of part 11/9/2011 MLC

FIRST
DRAWN BY: 10/3/2011
CHECKED:

UNLESS OTHERWISE SPECIFIED
TOLERANCES: (INCHES)
FRAC. +/- 1/32
.00 +/- .01
.000 +/- .005
ANGULAR +/- .25 Deg.

TITLE Bracket, Backboard

200 Bedford Street, Manchester, NH 03101
(603) 666-3906 FAX (603) 666-3907

SWG NO GE-12073
SIZE C
REV A
SCALE 1:1
SHEET 1 OF 1
NOTE:
1.) Material: 1/2" thick Smoked Polycarbonate, 713 Gray
2.) Remove burrs and sharp edges

TOLERANCES: (INCHES)

<table>
<thead>
<tr>
<th>Angular</th>
<th>Frac.</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/- .25 Degree</td>
<td>+/- 1/32</td>
<td>+/- .01</td>
</tr>
<tr>
<td>+/- .00</td>
<td>+/- .005</td>
<td>+/- .01</td>
</tr>
</tbody>
</table>

REV. A-3 A
Added Material Color Specification 1/24/2012 DAF

ZONE
REV
DESCRIPTION
DATE
APPROVED
A-3
A
Added Material Color Specification
1/24/2012
DAF
NOTE:
1.) Material: 1/2" thick Smoked Polycarbonate, 713 Gray
2.) Remove burrs and sharp edges
NOTE:
1. Material: 1/2" thick Smoked Polycarbonate, 713 Gray
2. Remove burrs and sharp edges

REV
A
10/4/2011

FIRST
200 Bedford Street, Manchester, NH 03101
(603) 666-3906 -- FAX (603) 666-3907

UNLESS OTHERWISE SPECIFIED
TOLERANCES: (INCHES)

FRAC.
+/- 1/32

.+00
+/- .01

.+000
+/- .005

ANGULAR
+/- .25 Deg.

SIZE
C

TOL.

REV
A

DRAWN
mcyr
10/4/2011

CHECKED

TITLE
Backboard Bottom

REV
A

ZONE
A-3

DESCRIPTION
Added material color specification

DATE
1/24/2012

APPROVED
DAF

REV
A

NOTE:
1. Material: 1/2" thick Smoked Polycarbonate, 713 Gray
2. Remove burrs and sharp edges"
Notes:
1. Items 1, 2, and 3 should be colored red or blue depending on field end.
2. When applying velcro follow these steps:
   a. Apply hook velcro to the wooden bases roughly as shown. Use staples to hold the velcro to
      the plywood more securely.
   b. Attach the loop velcro to the hook velcro applied in the last step. Adhesive surface should
      be facing out. Remove protective wrapping from the loop velcro.
   c. Place Items 1, 2 and 3 as shown. Press firmly so the velcro adheres securely to the plastic.

<table>
<thead>
<tr>
<th>RESOURCES</th>
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<thead>
<tr>
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<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
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<tr>
<td></td>
<td>1</td>
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<td>GE-12083</td>
<td>Front</td>
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<td></td>
<td>2</td>
<td>2</td>
<td>GE-12084</td>
<td>Sides</td>
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<td></td>
<td>3</td>
<td>2</td>
<td>GE-12085</td>
<td>Top</td>
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<td></td>
<td>4</td>
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<td>GE-12103</td>
<td>Fender, Assembly (1 Right, 1 Left)</td>
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<tr>
<td></td>
<td>5</td>
<td>AR</td>
<td>GE-12078-01</td>
<td>1&quot; Velcro Hook, Adhesive Backed</td>
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<tr>
<td></td>
<td>6</td>
<td>AR</td>
<td>GE-12078-02</td>
<td>1&quot; Velcro Loop, Adhesive Backed</td>
</tr>
</tbody>
</table>
DETAIL A
SCALE 1:1

Items 2 and 3 to be glued to Item 1

9.00 [228.6 mm]

4.50 [114.3 mm]

PARTS LIST

<table>
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<tr>
<th>ITEM</th>
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<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>GE-12087-01</td>
<td>Side</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>GE-12087-02</td>
<td>Bottom</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>GE-12087-03</td>
<td>Top</td>
</tr>
</tbody>
</table>

FIRST
200 Bedford Street, Manchester, NH 03101
(603) 666-3906 – FAX (603) 666-3907

DRAWN: 11/3/2011
CHECKED:

TOLERANCES: (INCHES)
FRAC. +/- 1/32
.00 +/- .01
.000 +/- .005
ANGULAR +/- .25 Deg.
Push Chute 2, Left Side into grooves of aluminum extrusion. Do not glue. Secure the two sides together with 50# zip ties (5).

Apply contact cement into one groove of the aluminum extrusion. Push aluminum extrusion onto the Chute 2, Right Side. Center extrusion in between the holes as shown.

Notes:
1. Aluminum Extrusion can be purchased at www.mcmaster.com
   Part Number: 8429444 Aluminum H-Channel Edge Trim
   6"L, 5/32" Channel (A), 1-3/64" Leg H (B)
2. Cut channel into:
   12" length - qty 1
   8" length - qty 1

PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>GE-12086</td>
<td>Chute 2, Left Side</td>
</tr>
<tr>
<td>1</td>
<td>GE-12087</td>
<td>Chute 2, Right Side</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>20&quot; GE-12088-01</td>
<td>Aluminum Extrusion, See Note</td>
<td></td>
</tr>
</tbody>
</table>

DRAWN: 10/11/2011
CHECKED:

200 Bedford Street, Manchester, NH 03101
(603) 666-3906 -- FAX (603) 666-3907

FIRST

CHUTE 2 ASSEMBLY

SIZE: C
SWG NO: GE-12088
SCALE: ANGULAR +/- .25 Deg.
REV:
Item: GE-12089-01, Horizontal Member
Resource: 1
Scale: 1:2
Qty: 2

Item: GE-12089-02, Vertical Member
Resource: 1
Scale: 1:2
Qty: 2

Item: GE-12089-03, Tube
Resource: 2
Scale: 1:2
Qty: 2
Material: 6063 Aluminum
Zip tie the netting to the aluminum tubes.

PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>GE-12089</td>
<td>Corral Frame, Right</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>GE-12092</td>
<td>Corral Frame, Left</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>GE-12093</td>
<td>Net, Corral Side</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>GE-12094</td>
<td>Net, Corral Rear</td>
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<tr>
<td>5</td>
<td>2</td>
<td>GE-12090-01</td>
<td>Bar, Corral Rear</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>HW-00065</td>
<td>Retainer pin 1/4&quot; x 2-1/2&quot; long</td>
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Resources

<table>
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<tr>
<th>Number</th>
<th>Description</th>
<th>QTY</th>
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<tbody>
<tr>
<td>1</td>
<td>zip tie, 25# tensile strength or more, 8 inches long</td>
<td>~30</td>
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</tbody>
</table>
Manufacturer: Gourock
Description: Net, #44 X 1-3/4" (350 lb./twine) 210D Braided-Knotless Nylon Netting Black Square Mesh with 1/4" Dacron Perimeter Rope Borders Installed (overlock-stitched)
Overall Size: 45.75" x 48"
Part Number: NA
Sold at: www.gourock.com
Manufacturer: Gourock
Description: Net, #44 X 1-3/4" (350 lb./twine) 210D Braided-Knotless Nylon Netting Black Square Mesh with 1/4" Dacron Perimeter Rope Borders Installed (overlock-stitched)
Overall Size: 24" x 65"
Part Number: NA
Sold at: www.gourock.com
Material: Polycarbonate, Clear
Insert Item 33 through the backboard and backboard frame from the front side. There will be two available holes along the bottom edge. Secure with Item 36. Typical for all 4 backboards.

Steps for installing the backboards:

1. Rest the angle bracket mounted to the backboard on the aluminum tube of the backboard frame as shown.

2. Slide the backboard over so that the spacer/washer combination on the backboard frame engages with the slot in the angle bracket. At this point the hole in the bracket should line up with a hole in the backboard frame.

3. Secure the backboard by inserting a pin through the bracket and the frame (shown in Detail B). Repeat for both brackets that are mounted to the frame.

Typical for all backboards
Zip tie the net to the available holes on the chute assemblies.

Typical for all chute attachment.

Typical for the bottom three sensor boxes.

Typical for the bottom three sensor boxes.
Note:
1. Retro-reflective vision target material: Reflexite GP020, 50mm
2. Vision target material can be held on to the backboard by any high quality double sided tape.
2" Wide Retro-Reflective Fabric (as supplied in the FRC Kit of Parts)

2" Wide Black Gaffer's Tape

2" Wide (Electric Blue or Red) Gaffer's Tape

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Retro-Reflective</td>
</tr>
<tr>
<td>2&quot; Red or Electric Blue Gaffer's Tape</td>
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<tr>
<td>Black Gaffer's Tape</td>
</tr>
<tr>
<td>2&quot; Wide Double Sided Tape</td>
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</tbody>
</table>

Note:
1. Retro-reflective vision target material: Reflectite GP020, 50mm
2. Vision target material can be held on to the backboard by any high quality double sided tape.
2" Wide Retro-Reflective Fabric (as supplied in the FRC Kit of Parts)

2" Wide Black Gaffer's Tape

Note:
1. Retro-reflective vision target material: Reflexite GPQ20, 50mm
2. Vision target material can be held on to the backboard by any high quality double sided tape.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Description</td>
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<td>Retro-reflective</td>
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<tr>
<td>2&quot; Rod or Electric Blue Gaffer's Tape</td>
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<td>2&quot; Black Gaffer's Tape</td>
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<tr>
<td>2&quot; Wide Double Sided Tape</td>
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DRAWN: | CHECKED: |
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UNLESS OTHERWISE SPECIFIED:
| TOLERANCES: (INCHES) |
| FRAC. | +/- .125 |
| .000 | +/- .005 |
| ANGULAR | +/- .25 Deg. |

FIRST
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TITLE: Backboard Assembly, Right
Note:
1. Retro-reflective vision target material: Reflexite GP020, 50mm
2. Vision target material can be held on the backboard by any high quality double sided tape.
Notes:

1. Use glue and wood screws as required for assembly.
2 x 4 Supports to be flush to Front, Plywood (Typ.)

SECTION D-D
SCALE 0.11 : 1

SECTION C-C
SCALE 0.11 : 1

Note: Top is hidden for clarity of support structure.
Manufacturer: On Deck Sports
Description: #30 Nylon LAX Custom Netting Panel with rope border around the entire perimeter - Black - twisted knotted nylon
Overall Size: 22' 2" x 48"
Part Number: #SNCUSNP-30L-B
Sold at: www.ondecksports.com
Notes:
1. Part to be painted red or blue to match field end color.
2. One sheet of plywood will make two ramps.
Notes:

1. Purchase at www.aluminum-spacers.com, part number #AS38-14-20
2. Material: 6061-T6 Aluminum
Notes:

Manufacturer: Igus
Part number: MFI-0608-06
Description: M250 Flange Bearing, 3/8 shaft size, 3/8" Length, ½ housing bore.