PRODUCTS/ USE/ INSTALLATION/ COSTS

V. BIRD NET

- ➤ Bird Net 2000:
 - o Bird Net 2000 is the most efficient and effective method for total exclusion.
 - o It is manufactured from "super strong" knotted polyethylene twine.
 - o Flame-Resistant. (Flame Retardant is also available.)
 - Available in Black, Stone and White.
 Note: Black Color Net should be used in direct sunlight situations.

> <u>Species:</u> All Birds. (See Bird Type)

Bird Pressure: Light to Heavy.

Bird Type: - 2" Net: Pigeons and Larger Birds.

- 1-1/8" Net: Starlings, Pigeons.

- ¾" Net: Sparrows and smaller birds.
- 4" Net: For Gulls and Larger Birds.

Application: For roofs and open areas such as warehouses, loading

docks, airline hangars and other exposed enclosures.

Positives: - 100% Exclusion of Pest Birds.

- Long Term Bird Control.

- 10 Year Guarantee.

Negatives: - Experience is required (Rarely a simple installation).

- Netting Structures is Labor Intensive.

- Since cost of netting structures is usually significant, there may be "sticker shock" to the customer.

> Common Mistakes:

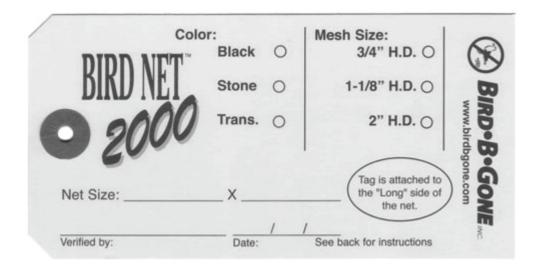
- o Taking on a netting job that you have not properly been trained to do!
 - Call for help!
 - Sub-Contract the Job.
- Under bidding the job!
 - Know your costs and mark-up accordingly!
 - Material
 - Lift Rental
 - Labor



OPENING YOUR BIRD NET

Identification:

- Most bird net comes in a bundle, which resembles a big pillow.
- Upon opening the bundle, you will notice an <u>identification tag</u> from Bird-B-Gone.



This tag tells you:

- Mesh Size
- Color
- Net Size.

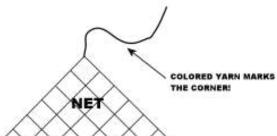
The example above is a 3/4" mesh black, 25' x 25' piece of net.

Identifying the Corner:

- It is important that upon opening up your net that you locate the most important <u>CORNER</u>.
- All corners are marked with a piece of colored yarn or string.

Stretching the Net:

- The net will not appear to be "square"....but it is!
- Simply grab the corners (with help from a partner) and stretch the net into its original square shape.
- If you have questions at this stage...Call 1-800-392-6915! WE WILL HELP!





Installation Time: It varies!

Installation Overview:

- It is important that you use the correct hardware for the surface into which you are securing your bird net.
 - Bird Net attached to a wood frame will take different hardware than Bird Net that is attaching to concrete or steel.
- The most critical part to every netting job is securely attaching the tensioned cable to the affected structure.
 - Once the cable is secured, attach the netting to the cable frame with "hog rings".

Installation Instructions:

- Corner & Intermediate Attachments.
 - **Corner attachments** are under the most pressure and <u>must be the strongest part of the system</u>...or the system will fail.
 - Corner attachments are used where the cable begins/ ends and where the cable turns corners.
 - <u>Example</u>: If you must net off a square or rectangular building, corner attachments would be placed/ secured in all four corners.
 - Examples of Corner Attachments Include:
 - Wood: Galvanized or Stainless Screw Eyes.
 - <u>Concrete:</u> Expanding Net Bolts.
 - Steel: Eye Bolts & Nut (This it the only item that

needs to be drilled into the steel).

Hilti Attachments.

- Intermediate attachments also hold the cable to the structure.
 - Intermediate attachments must hold the cable TIGHT against the wall/ structure.
 - Properly spaced and secured, intermediate attachments will prevent the net from bowing and/ or giving the birds room to enter/ exit the area of coverage.
- o Installation of Intermediate attachments should be every 12-24 inches.
 - For sparrows and smaller birds, intermediate attachments should be placed no more than <u>18 inches apart.</u>
 - Otherwise, the birds may have the room to enter/ exit the area of coverage.



Examples of intermediate attachments include:

Wood/ Concrete: Anchor Rivets & Split Pins,
 Multi-Purpose Cable Brackets. These provide low visibility as well as strength.

Steel: Girder Clips. These are installed by hammering on to a steel beam. Be sure not to hammer all the way, or the cable will not be able to run through jaws of the bracket.

• For Long Runs (Over 30'), it is advisable to use an M-6 Eye Bolt every 20' to 30' as an intermediate attachment for strength.

Straining Wire/ Cable

Once you have installed the corner and intermediate attachments, it is time to run your straining wire.

- Straining wire (or cable) is available in galvanized or stainless steel.
 - Stainless Steel cable (AND HARDWARE) is primarily used in areas that are near the ocean (i.e. salt air).
 - Most installations only require galvanized wire and hardware.
- There are two (2) different sizes of cable/ wire:
 - 1/16" for most jobs.
 - 3/32" for bigger jobs which require long runs (in excess of 70')

Ferrules

Ferrules are used at the first corner attachment, and then later at the turnbuckle.

- Run two (2) aluminum or copper ferrules through the end of the cable.
 - Use aluminum ferrules for galvanized wire and copper ferrules for stainless steel.
- Loop the cable through the first corner attachment and back through the ferrules.
- Secure/ crimp the ferrules to lock cable into place with a ratchet crimper.
 - Use crimp tool to fully crush the ferrules around the cable.
 - This will create a strong loop.
- Run cable through all intermediate attachments and finally through the turnbuckle at the end of the cable run.
 - Secure/ crimp the ferrules to lock cable into place after looping through the turnbuckle.



o **Turnbuckles**

- Turnbuckles are used to tighten your straining wire.
 - Use one turnbuckle for each "length" of cable.
 - For Example: If you are netting a square, there are 4 sides (or lengths) of cable. Use one (1) turnbuckle for each side (or a total of 4 turnbuckles for this example).

Turnbuckles are available in galvanized or stainless steel (in M6-Medium or M8-Large).

- Turnbuckles must be well anchored since they are exerting a great deal of tension on the cable/ straining wire.
- Medium turnbuckles (M6) are designed for cable runs up to 75 feet.
- Large turnbuckles are designed for cable runs 75 feet and above.
- Make sure that turnbuckles are "fully open" prior to installing.

o Hog Ringing the Net to the Cable

The netting is secured with "hog rings" to the cable frame using a HOG RING TOOL. This tool loops a small metal ring (the hog ring) around the netting and cable. Each Hog Ring Tool holds 50 Hog Rings. Hog Rings are packaged 2,500/ Box. The tool is easy to use and usage instructions are enclosed with every tool.

- For 4", 2" and 1-1/8" Net: A hog ring should be attached for every square of netting to secure the net to the cable.
 - Failing to hog ring every square could allow enough room for birds to enter/ exit the area of coverage.
- For 3/4" Net: A hog ring can be used every other square to secure the net to the cable.

Start Attaching the Bird Net in One Corner.

- Attach the netting to the cable with hog rings, starting in one corner and proceeding along a straight line <u>(stay on the same mesh row!)</u>.
- Proceed about six (6) feet and stop.
- Then going back to the same corner, start attaching the net along the perpendicular side (the other direction) for six feet.
- Complete hog-ringing the "long side" of the net all the way to the next corner.
- Complete hog-ringing the short side of the net all the way to the next corner.
- At this point, one long side and one short side of the net should be hog ringed to the cable.
 - Proceed by hog-ringing the opposite "long side" to the cable.
 - Remember to stretch it tight and to <u>stay on the same mesh</u> <u>row</u> while hog-ringing.
 - If you do not stay on the same row, the net will appear "wavy" and crooked when installed.



Start Attaching the Bird Net in One Corner (continued).

- Complete the job by attaching the final short side to the cable.
- Trim off excess netting with scissors, leaving an extra 2" overlap of netting (this prevents persistent birds from trying to enter behind the cable).
- Inspect all attachments as to strength.
- Look for mistakes...and correct as necessary.

Zippers

Once the net has been installed, there may be a need to access lighting, plumbing fixtures, safety equipment, etc. Installing a zipper offers easy "open & close" access for these purposes. Zippers come in three standard lengths – 1 ft.; 3 ft. & 6 ft. Longer zippers (custom sizes) are available upon request.

- Choose the area for access (directly below lights, etc.).
- Keep the zipper closed!
- Hog ring the cloth part of the zipper through the material and around the strand of net.
 - Use one hog ring every 2-3 inches.
- Assure that the zipper is in place and secure.
- Open (un-zip) the zipper and cut the middle strands of net.
 - This creates a "hole".
 - Now you have access!
 - Simply zip-up to close the area.

Support Cables:

A support cable is simply additional sections of cable placed at various intervals to help strengthen the overall net structure.

- They should support horizontal nets over 60' in length.
 - For example: A support cable would be attached at 30'.
- Support cables usually run underneath the net.
- They do not need to be hog-ringed...but this does help!
- CALL US if you need advise on support cables: 1-800-392-6915.

