****Items Needed to Install the Hi-Striker X-treme provided by the Park****

Pad Layout

1) Level Concrete foundation per specification.
2) 3/4-10 rod installed in concrete per specification (American Hi-Striker WILL provide 'lifting eyes' with 3/4-10 thread) for guy wire attachment points.
3) All electrical conduit run per specification.

Crane

• Must have a 45-60' reach to lift and erect a 32' Hi-Striker. Total weight 525 lbs. (An experienced operator is required).

Cherry Picker

• 30-35' reach to lift a person up to the back of the tower to disconnect the crane from its attachment points.

Fencing

• To securely enclose the Hi-Striker play field before operation.

Labor

• Please have adequate staff to help with the basic assembly and to erect the tower.

Power

• Please have the required power (220v @ 20amp) run to the location. Also, temporary power will be needed for testing prior to erecting of the Hi-Striker.

To expedite the installation process please have the location properly prepared before installation.

See the recommended layout for the details.

Instructions for Hi-Striker X-treme Assembly and Installation

1) Start by placing the sawhorses that will support the tower while assembling (you will need 4 to give you a level surface). **Note - During the assembly process, place the Top Sign where the base will be mounted when the game is assembled & erect.

2) Place the upper tower section onto the sawhorses (LED side facing upward).

3) Place the lower tower section onto the sawhorses with the LEDs facing upward also.

4) Slowly slide the upper tower section into the bottom section. When the two-tower section are close enough, start connecting the mating white Molex connectors. When sliding the upper section into the lower section be careful not to allow the wires to be pinched between the tower sections. These connectors should be able to be connected without removing the back panels. However, if needed you can remove and re-install the panels.

5) Remove the lower LED board from the upper tower section. Start by gently pulling back the black gasket on either side of the LED board to expose the screws. Once the tower sections are close enough, plug the upper LED board of the lower section into the LED board on the upper section (short cable w/red connector).

6) Reinstall LED board screws and secure LED gasket back into place.

7) Bolt the tower sections together using the (4) 3/8 x 1" hardware included in the hardware kit.

8) Once the tower sections are securely bolted together, use the weatherproof tape provided on the Lexan seam. Be sure that the tape goes under both of the Lexan gaskets and is securely adhered to the Lexan. This is a crucial part of weatherproofing the game.

9) Rotate the full tower body so that the LEDs are now facing downwards.

10) Slide the base onto the pole of the lower tower section. Be sure to leave enough room to run the wires from the tower section into the base. **Note - The transformer faces to the back of the tower.

11) Slowly bolt the base to the tower section. Be sure no wires get pinched between the base and tower section.

12) Install the PCB enclosure. Be careful not to damage the black connectors on the back of the box or tower. Gently angle and lower the control box into place while

sliding the box onto the two screws that are backed out. Lower the box so the connectors mate together and screw into place with the 1/4-20 hex bolts. **Note- Be sure the gray foam gaskets are securely in place around the black connectors on the back of the tower.

13) Remove the top back panel on the upper section.

14) Install lamps and lenses on the Top Sign. The lenses need to be installed with Red on the outer most row and then work into the orange, yellow, green, blue and violet. Repeat as needed until reaching the center lamp with a clear lens. **NOTE - The Center Lamp will be a repeating strobe and NOT a 60volt lamp.

15) Slide Top Sign pole into the upper tower section and remove the back panel of the Top Sign. Then run the wires through the hole in the tower section.

16) Connect all of the mating Molex connectors and reinstall the back panel on the tower section.

17) Bolt the Top Sign onto the tower section using the hardware provided and BOTH black gaskets. Re-install the back panel on the Top Sign.

18) Install the guy wire cables. The longest ones go to the upper section and the shorter ones go to the lower section. For a 45' game there will be 3 different lengths and 3 guy wire attachment points on the tower.

19) Install the 'Pull Up' cable to the same stud as the guy wire cable on the BACK of the upper tower section. Remember when installing the guy wire cables Do Not over tighten them. They should be snug, but the cable should be able to freely move back and forth.

20) Test the tower. Things to check are:

- Sound
- LED boards
- Strobe Boards for Proper tower height
- Top Sign lamps and strobe
- Skill Select operation
- Bolts between tower sections are secure
- Weatherproofing on Lexan and between tower section and Top Sign
- All back panels are overlapping
- LED gaskets are securely in place
- Guy wires are secure
- Top Sign bolted into place and back panel re-installed
- Striker

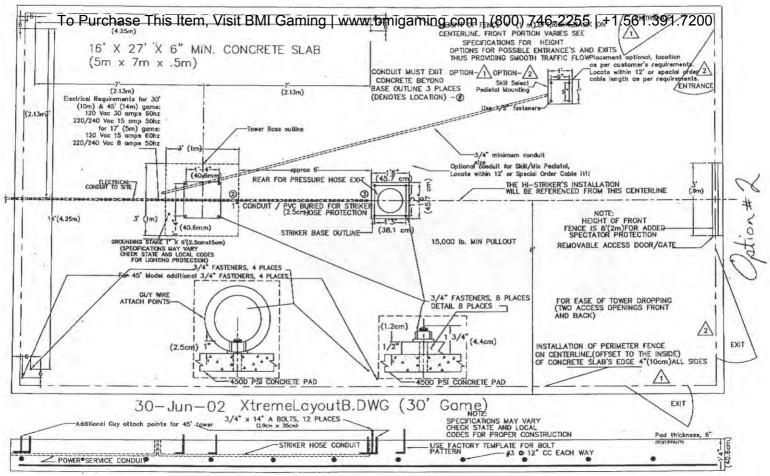21) Using a crane, lift the complete tower and lower it onto the studs mounted into the concrete.

22) Once the tower is standing leave the crane attached and attach the guy wire cables to the lifting eyes. Each cable will have its own "D" shackle, Thimble, Rope Clamp (x2) and Turnbuckle.

23) Use a high reach or cherry picker to remove the crane from the Pull Up bracket.

24) Install the red base covers.

25) Install the Striker, Skill Select and Permanent power.

26) Power Game up and spray the PCBs and into the power supplies with the moisture displacer supplied.

27) Run a bead of silicone around the base and tower section. This is another critical weatherproofing step.

Tools Needed for Hi-Striker X-Treme

- 7/8" open/box end wrench (Tower/Base Hardware)
- 3/4" open/box end wrench (Skill Select Mounting Hardware)
- 9/16" open/box end wrench (Guy wire Bracket Hardware)
- 7/16" open/box end wrench (PCB Enclosure)
- 3/8" drive ratchet
- 7/8" socket (Pocket Top Sign Bolts)
- 3/4" socket (Packing hardware)
- 9/16" socket (Guy wire hardware)
- 1/2" socket (New Style Park Guy wire Clamp)
- 1/8" Allen Wrench / Bit (Top Sign Back Cover)
- Large Crescent Wrench (Base & Striker Mounting, Turnbuckle nuts)

Other Items (suggested)

- Cordless Drill w/ spare batteries (Unpacking)
- Magnetic bit holder and Phillips tip (Unpacking)
- Wire Cutters (Zip Ties/Wires)
- Standard Blade Screwdriver
- Phillips Screwdriver
- Small Slip Joint Pliers
- Utility Knife

16' X 27' X 6" MIN. CONCRETE SLAB
(5m x 7m x .5m)

(4.25m)

7' (2.13m)

7' (2.13m)

14' (2.13m)

Electrical Requirements for 30'
(10m) & 45' (14m) game:
120 Vac 30 amps 60hz
220/240 Vac 15 amp 50hz
for 17' (5m) game:
120 Vac 15 amps 60hz
220/240 Vac 8 amps 50hz

Tower Base outline

3' (1m)

ELECTRICAL
CONDUIT TO SITE

14' (4.25m)

3' (1m)

1' 4" (40.6mm)

1' 4" (40.6mm)

②

①

CONDUIT MUST EXIT
CONCRETE BEYOND
BASE OUTLINE 3 PLACES
(DENOTES LOCATION) – ⊕

OPTION ① OPTION ②
Skill Select
Pedestal Mounting

Use 1/2" fasteners

3/4" minimum conduit
Optional Conduit for Skill/Mic Pedestal,
Locate within 12' or Special Order Cable !!!

CENTERLINE. FRONT PORTION VARIES SEE
SPECIFICATIONS FOR HEIGHT
OPTIONS FOR POSSIBLE ENTRANCE'S AND EXITS
THUS PROVIDING SMOOTH TRAFFIC FLOW Placement optional, location
as per customer's requirements.
Locate within 12' or special order
cable length as per requirements.
ENTRANCE

①

②

approx 6'

REAR FOR PRESSURE HOSE EXIT

1' 6" (45.7 cm)

③

(457 cm)

1' 3" (38.1 cm)

THE HI–STRIKER'S INSTALLATION
WILL BE REFERENCED FROM THIS CENTERLINE

3' (.9m)

1" CONDUIT / PVC BURIED FOR STRIKER
(2.5cm)HOSE PROTECTION

STRIKER BASE OUTLINE

GROUNDING STAKE 1" X 5'(2.5cmx15cm)
(SPECIFICATIONS MAY VARY
CHECK STATE AND LOCAL CODES
FOR LIGHTING PROTECTION)

3/4" FASTENERS, 4 PLACES
For 45' Model additional 3/4" FASTENERS, 4 PLACES

GUY WIRE
ATTACH POINTS

(2.5cm) 1"

4500 PSI CONCRETE PAD

15,000 lb. MIN PULLOUT

3/4" FASTENERS, 8 PLACES
DETAIL 8 PLACES

(1.2cm)

1/2"

1 3/4" (4.4cm)

4500 PSI CONCRETE PAD

NOTE:
HEIGHT OF FRONT
FENCE IS 8'(2m) FOR ADDED
SPECTATOR PROTECTION
REMOVABLE ACCESS DOOR/GATE

FOR EASE OF TOWER DROPPING
(TWO ACCESS OPENINGS FRONT
AND BACK)

INSTALLATION OF PERIMETER FENCE
ON CENTERLINE, (OFFSET TO THE INSIDE)
OF CONCRETE SLAB'S EDGE 4"(10cm) ALL SIDES

①

EXIT

②

Option # 2

30–Jun–02 XtremeLayoutB.DWG (30' Game)

Additional Guy attach points for 45' tower

3/4" x 14" A BOLTS, 12 PLACES
(1.9cm x 35cm)

STRIKER HOSE CONDUIT

POWER SERVICE CONDUIT

USE FACTORY TEMPLATE FOR BOLT
PATTERN
#3 ⊙ 12" CC EACH WAY

NOTE:
SPECIFICATIONS MAY VARY
CHECK STATE AND LOCAL
CODES FOR PROPER CONSTRUCTION

EXIT

Pad thickness, 6"
minimum

20' X 30' Game Area
(6m x 9m)

18'
(5.50m)
For 32' (10m) Tower
these dims can be
reduced to 14'
(4.3m)

9'
(2.75m)

9'
(2.75m)

9'
(2.75m)

HEIGHT OF FENCE 4' (1 m) LEFT,RIGHT,BACK ON ENTRANCE
CENTERLINE. FRONT PORTION VARIES SEE
SPECIFICATIONS FOR HEIGHT
OPTIONS FOR POSSIBLE ENTRANCE'S AND EXITS
THUS PROVIDING SMOOTH TRAFFIC FLOW

OPTION-1 OPTION-2

ENTRANCE 1
ENTRANCE 2

Placement optional, location
as per customer's requirements.
Locate within 12' or special order
cable length as per requirements.

Skill Select
Pedestal Mounting

Use 1/2" fasteners

Electrical Requirements for 30'
(10m) & 45' (14m) game:
~120 Vac 30 amps 60hz
220/240 Vac 15 amp 50hz
for 17' (5m) game:
120 Vac 15 amps 60hz
220/240 Vac 8 amps 50hz

ELECTRICAL
CONDUIT TO SITE

Tower Base outline(DENOTES LOCATION)

CONDUIT MUST EXIT
CONCRETE BEYOND
BASE OUTLINE 3 PLACES

3" (1m)

4" 4"
(40.8mm)

approx 8'

REAR FOR PRESSURE HOSE EXIT

3/4" minimum conduit
Optional conduit for Skill/tic Pedestal,
Locate within 12' or Special Order Cable ////

THE HI-STRIKER'S INSTALLATION
WILL BE REFERENCED FROM THIS CENTERLINE

3" (1m)
4" 4"
(40.8mm)

1' CONDUIT / PVC BURIED FOR STRIKER
(2.5cm)HOSE PROTECTION

STRIKER BASE OUTLINE

1' 6"
(45.7 cm)

18"
(45.7 cm)

1' 3"
(38.1 cm)

NOTE:
HEIGHT OF FRONT
FENCE IS 8'(2m) FOR ADDED
SPECTATOR PROTECTION

REMOVABLE ACCESS DOOR/GATE

18'
(5.50m)
For 32' (10m) Tower
these dims can be
reduced to 14'
(4.3m)

GROUNDING STAKE 1" X 8'(1.5cm×15cm)
(SPECIFICATIONS MAY VARY
CHECK STATE AND LOCAL CODES
FOR LIGHTING PROTECTION)

3/4" FASTENERS, 4 PLACES
For 45' Model, additional 3/4" FASTENERS, 4 PLACES

GUY WIRE
ATTACH POINTS,
30' Model 4 places,
45' Model 8 places

3/4" FASTENERS, 8 PLACES
DETAIL 8 PLACES

15,000 lb. MIN PULLOUT

FOR EASE OF TOWER ERECTION
(TWO ACCESS OPENINGS FRONT
AND BACK)

(1.2cm)
1/2"

1 3/4"
(4.4cm)

(2.5cm) 1"

4500 PSI CONCRETE PAD

4500 PSI CONCRETE PAD

INSTALLATION OF PERIMETER FENCE
ON CENTERLINE,(OFFSET TO THE INSIDE)
OF CONCRETE SLAB'S EDGE 4"(10cm)ALL SIDES

3/4" dia. A307 Eye-Bolt, Anchor Bolt with 12"
embedment or all-thread with Chemical equivalent
fastening and Lifting Eye.

See "Guy Footer
Detail"

EXIT

EXIT

See "Guy Footer
Detail"

Additional Guy attach points for 45' footer

3/4" x 14" A307 Anchor Bolts, 12 PLACES

STRIKER HOSE CONDUIT

POWER SERVICE CONDUIT
#3 @ 12" O.C. T&B EACH WAY

Tower
Footer

Striker
Footer

#3 bars at 12" o.c. bottom each
way

NOTE:
SPECIFICATIONS MAY VARY
CHECK STATE AND LOCAL
CODES FOR PROPER CONSTRUCTION

Pavers, Asphalt, or
other durrable play
surface

USE FACTORY TEMPLATE FOR BOLT
PATTERN

2" min or local code

Guy Footer Detail

3" Square

3" clear

3" Square

15-Mar-03
XtremeLayoutD.DWG (30 & 45' Game)

Option #1

American Hi-Striker X-Treme

Programming Setup And Options

This product has been designed to give the Operator a number of different setup options and tower functions, which can be programmed after the tower has been assembled. The AMERICAN HI'STRIKER XTREME should not be used until it is programmed. The AMERICAN HI'STRIKER XTREME comes from the factory preprogrammed for operation as indicated in the programming sheet. These may be changed by the operator to suit any particular type of operation.

The Operator's Button Console or Coin/Ticket Pedestal Buttons, or the keyboard can be use to program the Hi'Striker.

Using the Operator's Console or Coin/Ticket Pedestal Buttons:

To program the AMERICAN HI'STRIKER XTREME use the following procedure.

1. Power up the Hi'Striker and press the CHILD'S Handicap Button (button will light) while the "ENTER PROGRAMMING" message plays on the LED sign face. This message plays for approximately 2 seconds after power up of the game. When the display indicates "MENS nnn" (nnn being a 3 digit number), the Hi'Striker has entered the Programming Mode. Also the RED (MEN'S Handicap) and YELLOW (WOMEN'S Handicap) buttons will light.

2. The Mens Handicap selection or RED button, will advance through the Functions that can be programmed, and the Women's Handicap button will be used to change or select the function. Continuing to step through the Functions using the RED button will cycle back through, and to the first Function.

   Use the YELLOW button to change the function value. Holding the YELLOW button down (Women's Handicap) will automatically advance through the setting's numerical values. This is used when the handicap number is to be set to a lower value than current. Since the value can only be increased to the maximum before rolling over to a lower number, this is useful in getting to the new desired setting quickly.

   When the Function is selected, using the RED button, will advance to the next function an it will be displayed along with its' setting. Pressing the RED button again continues to step through the Functions.

   For Example: After entering the Programming mode, "MENS nnn" being shown on the Sign display, use the RED button to step to "WOMENS nnn" by pressing once. Pressing the YELLOW button will change the current setting, by advancing the numeric value of the handicap. At this point, the RED button can be used to set that new value by advancing to the next Function.

   *RED button (MEN'S Handicap) Sets and Advances through Functions.
   *YELLOW button (WOMEN'S Handicap) CHANGES Function Values.

Using the Keyboard to program the Hi'Striker:

1. Power up the Hi'Striker and press the <ESC> key while the "ENTER PROGRAMMING" message plays on the LED sign face. This message plays for approximately 2 seconds after power up of the game. When the display indicates "Sel Funct F1-F12", it is now in the programming mode.

2. Use the F1 to F12 key along the top of the keyboard to access the functions directly. When the desired function is displayed, as indicated below, the value can be changed by either the <up arrow> (to increment), <down arrow> (to decrement), and set the value with either the <'s'> or <ENTER> keys. The <ESC> key bring you back to the "Function Selection Menu" and the <'q'> key quit the programming mode.

    Key functions for all function other than "Edit Message":
    <ESC> Exits the current function.
    <-> Increments or steps through a function's selections.
    <¯> Decrements or steps through a function's selections.
    <q> Quits the programming mode at the top menu.
    <s> Sets a function value in memory.
    <ENTER> Sets a function value in memory or selects message.
    <1….4> Enters a message number to edit.

    Key functions for "Edit Message" function:
    <ESC> Exits the current message being edited.
    <BkSp> Deletes the last character in the message being edited.
    <a…….z> Enters a letter into the message.
    <1……0> Enters a number into the message.
    <ENTER> Plays or Scrolls the current message being edited.
    <End> Saves and Scrolls the current message being edited.

    Summary of Functions:
    • F1: Men's Handicap Higher number, the harder to win
    • F2: Women's Handicap
    • F3: Children's Handicap
    • F4: Game Sound Volume Higher number, the louder
    • F5: Strike Trigger Setting Higher number the harder to trigger
    • F6: Number of Tower Sections 5 for FEC, 10 for 30', 15 for 45'
    • F7: Credits to Start Game 0 for no coin box
    • F8: Ticket Scheme (see below) 0 for no ticket dispenser
    • F9: Auto/Manual set Handicap Settings On for auto handicap tracking
    • F10: Linear gravity or Compress On for Compressed Scoring
    • F11: Automatic/Armed Operation Number of hits per button press
    • F12: Edit Messages 4 custom messages can be programmed

    These additional function available via the Handicap Button Console
    • Strobe Test
    • LED Display test
    • Sound volume and balance test
    • Exit to Game Pressing Women's, exits to game

3. **F1, MEN'S HANDICAP**

   When this FUNCTION is selected, the display will indicate the last or starting setting.

Use the RED button to cycle up through the possible selections from 20 to 99. Use the YELLOW button to set the desired number and advance to the next Function. Default is 65.
Please refer to the end of this chapter for a more
thorough description explaining how to setup the AutoSkill.

4. **F2, WOMEN'S HANDICAP**

This function is exactly the same as the MEN'S above. Minimum value is 8, and default is 25
Please refer to the end of this chapter for a more thorough description explaining how to setup the AutoSkill.

5. **F3, CHILD'S HANDICAP**

This function is exactly the same as the MEN'S above. Minimum value is 1, and default is 6
Please refer to the end of this chapter for a more
thorough description explaining how to setup the AutoSkill.

6. **F3, COMPUTER VOLUME SETTING**

This function has a value of 1 to 15, with 15 being the loudest. This loudness setting affects only the volume of the computer played sounds. The Master Volume is set with control on the bottom of the Control Box on the Hi'Striker Tower. Default is 4.

7. **F4, STRIKER TRIGGER SETTING**

If the Hi'Striker registers a hit without being struck, the base idle setting may have to be increased to prevent this false trigger. Again, use the RED button to cycle to the Function and set the desired TRIGGER level with the YELLOW button. The higher the number the harder the striker must be hit to trigger the Hi'Striker. This does not affect the handicapping. A typical value to be used if false triggering occurs is from 20 to 50. Note that this setting affect the use of the child's hammer, as this hammer is marginal in triggering the Hi'Striker. Too high of a number may negate the use of the Child's Hammer. Default is 20 and range is 5 to 50.

8. **F5, TOWER SECTIONS**

This setting is programmed at the factory and should not have to be set again unless a Main Control printed circuit board is replaced, OR the memory has been scrambled. This setting tells the Hi'Striker how many strobe sections it has; the factory default is 10 tower sections. Normal settings are 5, 10 or 15. The 18' Model has 5 Strobe sections, the 32' Model has 10 Strobe sections, and the 45' Model has 15 Strobe sections. Default is 10 and range is 3 to 15

9. **F7, START CRDS (Start Credits)**

This is used to indicate whether a coin console is present or not. If the value is set to '0', then only an operator's Skill Select Console is present. If the value is in the range of 1 to 20, then this is the number of credits to start the game using the coin console.

10. F8, TICKETS

This setting selects the Ticket Scheme to be used in the event that a ticket dispenser is installed. There are 11 basic Schemes with 2 dispense options, either at the end of each hit or for the highest score at end of game. The basic Schemes are as defined below. The first scheme number is for tickets after each hit and the second is for tickets at the end of game for high score.

TICKET PAYOFF OPTIONS
SCHEME# Payoff Description
0 NO tickets dispensed

1,12 Score from 1-99 = 1 ticket for every 10 points of score
Winning score of 100 or above = 1 ticket for every point of score over 99
plus, an additional 20 tickets
2,13 Score from 1-99 = 0 tickets for every 10 points of score
Winning score of 100 or above = 1 ticket for every point of score over 99
3,14 Score from 1-99 = 1 ticket for every 10 points of score
Winning score of 100 or above = .5 ticket for every point of score over 99
plus, an additional 20 tickets
4,15 Score from 1-99 = 0 tickets
Winning score of 100 or above = .5 ticket for every point of score over 99
5,16 Score from 1-99 = 0 tickets
Winning score of 100 or above = 1 ticket for every 5 points over 99
6,17 Score from 1-99 = 0 tickets
Winning score of 100 or above = 2 tickets for every 5 points over 99
7,18 Score from 1-99 = 0 tickets
Winning score of 100 or above = 3 tickets for every 5 points over 99
8,19 Score from 1-99 = 0 tickets
Winning score from 100-124 = 10 tickets
Winning score from 125-149 = 20 tickets
Winning score of 150 = 30 tickets
9,20 Score from 1-99 = 1 ticket for every 10 points of score
Winning score of 100 or above = 15 tickets
10,21 Score from 1-99 = 1 ticket for every 10 points of score
Winning score of 100 or above = 20 tickets
11,22 Score from 1-99 = 1 ticket for every 10 points of score
Winning score of 100 or above = 30 tickets
Schemes 12 through 22 are the same as above except that tickets are dispensed at the end of game for the highest score achieved in the game.

11. F9, MANUAL/AUTO HANIDCAP

This selection is either ON or OFF. If this is set OFF, then the pressure of the hit is factored by the handicaps set in Functions 1 to 3. The higher those numbers the harder it is to achieve a win or high score. These values can be determined by assessing the players and the scores being achieved, and if there are too many winners the number can be increased, or conversely, it can be decreased if there are not enough winners. If this Function is set of AUTO, then a mathematical formula is use to "characterize the player population".

This formula calculates the MEAN and STANDARD DEVAITION of the accumulation of the best

hit, of each game, for the past 32 games. Then it calculates the handicap number that will place the win line (100 score) at ONE STANDARD DEVIATION above the MEAN. In effect, this assures that the top 16% (one standard deviation) of skilled or strong players will be winners provided they can translate that strength into a "hit".

The AUTO setting is the best to use in order to assure a consistent win population among the payers. And again to emphasize, that the best hitters in all of players will win.

For more information on how this is accomplished, see the end of this chapter for a discussion of the MEAN and STANDARD DEVIATION relative to characterizing a distribution of samples.

12. F10, GRAVITY

This selection allows you to select the type of gravity equation that is used for the display of the strobe light and LED action representing the ball traveling up and down that represents the player's hit. It is either ON or OFF. If OFF, the standard Earth Gravity constants are used. In the ON setting, the gravity relationship is compressed toward the top of the scoring. This setting does not affect the AUTO handicap calculations.

13. F11, AUTO PLAY/GAME HITS

This Function Allows you to set the number of hits per game or to allow for free play where any hit is accepted and displayed as a game. The setting range from 1 to 7 hits per game, or AUTO which mean that the game will play whenever hit.

14. F12, EDIT MESSAGE

This function allows you to select and edit 4 different messages that are played during the attract mode. This can only be done with the keyboard. When this function is selected, the display asks you to choose message 1, 2, 3, or 4. Enter this number, by pressing a number key <1>, <2>, <3>, or <4> and then press <ENTER>. The message is displayed on the matrix display. If nothing has been programmed into the display then the "This message is programmable ……………..", will be displayed. To edit this or any other message, use the <BACK SPACE> key to delete the letters one by one until at the beginning of the message. Then type in the message that you would like to play during one of the four attract sequences. You can have four different messages or all the same if you wish. When you are finished typing in the message, use the <END> key to set this message. If you simply want to review what you have typed to a point, use the <ENTER> key to have the message scroll on the matrix display. If you do not want to save the message, simply exit the function with the <ESC> key.

15. STROBE TEST

After selecting this function with the RED button, the tower will display a 0, pressing the YELLOW button will sequentially flash the Strobe lights from the base to the top. This test is useful for determining if any and which number Strobe lights are inoperative, the number of the strobe being fired is indicated on the Sign face. The RED button is used to advance to the next function.

16. DISPLAY TEST

Use this Function to test the LED face display. A pattern of ON and OFF pixels will be shifted up the tower face so that any malfunctioning LED PCBs can be found.

17. SOUND TEST

Use this test to adjust the volume of the AUX sound board as well as the stereo balance. It can be also used to set the overall volume of the game. During the test the tone will pan between left and right channels so that the balance can be adjusted.

18. EXIT

Selecting this FUNCTION with the YELLOW button will exit the Hi'Striker from the programming mode, it will then enter the Play mode ready for use...

American Hi-Striker

Some observations on the use of the Auto Handicap feature

With the past generation of Hi-Striker it was noted that variation in temperature, air pressure, altitude, and hammer temperature all affected the ability to represent an accurate and constant game of skill. So with the introduction of the Hi-Striker X-TREME, there is a new more consistent Auto Handicap algorithm that uses a well know and extensively used method of characterizing population samples.

This is the calculation of the MEAN and STANDARD DEVIATION of a group of samples, or in this case, game hits. It has been demonstrated that in any group of samples, that there is a MEAN or average, and then a distribution about that average. How the other samples are distributed about that average is represented by the DEVIATION.

It has been shown that a graph of samples of persons heights of weights, or for that matter strengths in our case, can be represented a bell curve with an average (MEAN) and a distribution of differences about this average (DEVIATION). In simple terms, we are not all the same, but some are taller and some are shorter, although there is an average, like a 34" waist. Clothing manufacturers use this to plot and estimate the numbers of each size of clothing they should make in a production run, as well as the number of estimated scrape or fall out pieces. Seems like every thing in life follows these rules. Hair color, air temperature, rain fall, sunny days from year to year, early or late arrivals of flights, etc. etc. all follow this pattern, including the strengths of people in a given populous.

So what the new Auto Handicap does is to track the playing sample and compute the MEAN or average hit and the DEVIATIONS about this average and then figure at what point the handicap setting will yield winners in 16% of the playing population. And again, that is the strongest 16% or 1 STANDARD DEVIATION above the average. This mean that the game will self regulate regardless of temperature changes, air pressure changes, or any other variable that can affect the true representation of players ability to hit the game and win.

To accomplish this, the calculations begin with the first three games and are computed with each new game, until a total of 32 games are on record. Then the oldest sample is replaced with the newest. This assures consistency in a changing environment. Also, it has been shown that number of samples has little affect on the MEAN and STANDARD DEVIATION of a sample of a population. The same results are obtained whether 10 or 10,000 samples.

Each Handicap, Men's, Women's and Children's are calculated separately and tracked. The only caveat is, that when a player selects a hammer, RED (men's), YELLOW (Women's) or BACK (Children's), that handicap must be selected by the operator. For example, if a woman selects the RED Hammer, she must be selected into the Men's Handicap, as it is the power put into the hammer that is the basis for these calculations.