

INSTALLATION AND GENERAL GAME OPERATION INSTRUCTIONS

INSTALLATION

On all games there are certain items that should be checked after shipment. These are visual inspections which may avoid time consuming service work later. Minor troubles caused by abusive handling in shipment are unavoidable. Cable plugs and sockets may be loosened, switches (especially tilt switches) may go out of adjustment. Plumb bob tilt switch should always be adjusted after game is set on location and leg levelers are adjusted.

Visual inspections before plugging in line cord:

1. Check that all cable plugs are firmly seated in proper sockets.
2. Check that cables are clear of all moving parts and relays.
3. Check for any wires that may have become disconnected.
4. Check switches for loose solder or other foreign material that may have come loose in shipment and could cause shorting of contacts.
5. Check wires on relay coils for proper soldering, especially the bare (common) wire connecting a row of relay coils. Cold solder connections may not show up in factory inspection, but vibration in shipment may break contact.
6. Check that fuses are firmly seated and making good contact.
7. Check (manually) the stepping and resetting of all step-up units. The wiper action should not be sluggish.
8. Check transformer for any foreign material shorting across wiring lugs.
9. Check wiring of transformer to correspond to location voltage. (Transformer wiring card in front cabinet.)

Before line cord is plugged in: -

Check all plugs and sockets and dress cables:

- (A) Plugs in correct sockets.
- (B) Plugs securely seated in sockets.
- (C) Dress cables away from relays.

Check adjustment of the three (normally open) tilt switches:

- (A) Panel tilt on bottom of playfield panel.
- (B) Plumb-bob tilt on left side of cabinet near front door.
- (C) Ball tilt above plumb-bob tilt.

Insert one of the (4) balls shipped with game into ball tilt assembly and adjust bracket so ball will roll over switch blade if front of cabinet is raised.

### Plug in line cord:

Check adjustment of the (normally closed) kick-off switch on mounting board, near cable plugs that de-energizes the lock relay. Check adjustment of the (normally closed) anti-slam switch on front door that de-energizes the coin lock out relay when front door is abused.

### GENERAL GAME OPERATION

Place 3 balls into playfield by out hole.

Plug in line cord.

A. No lites lit.

### Coin Game:

If coin should be rejected, move on-off master switch at bottom right front corner of cabinet to "on" position, then coin game. New coin lock-out device rejects all coins when power (master switch) is off.

1A. If coin is inserted in 1st (nickel) coin chute and game is conditioned for 1 play-5¢, it will energize the "coin relay". If game is conditioned for 1 play-10¢, the first coin inserted will advance the "2 coin unit", then second coin inserted will energize the "coin relay" thru 2 coin unit switch.

(See 1st coin chute adjustment plug on game adjustments sheet)

1B. If coin is inserted in 2nd (dime) coin chute and game is conditioned for 1 play-10¢, it will energize the coin relay. If game is conditioned for 2 plays-10¢, it will energize the "2nd coin chute relay" and 2nd coin chute relay will advance "credit unit" ( 2 steps ) thru coin credit circuit.

(See 2nd coin chute adjustment plug on game adjustments sheet)

1C If coin is inserted in 3rd (quarter) coin chute and game is conditioned for 2 - 3 - 4 - 5 - or 6 plays - 25¢, it will energize the "3rd coin chute relay" and 3rd coin chute relay will advance "credit unit" (2 - 3 - 4 - 5 - 6 steps) thru coin credit circuit.

(See 3rd coin chute adjustment plug on game adjustments sheet)

1D. When "credit unit" has been advanced from 2nd or 3rd coin chute, (as described in section 1B and 1C), The front door "credit button" switch will energize the "credit relay" and then credit relay will energize "coin relay".

2. Coin relay, when energized by any of the ways described, (in sections 1A thru 1D) will stay energized thru its own hold-in switch and (normally closed) #8 score motor switch.
3. Coin relay will energize the "lock relay" which stays energized thru its own hold-in switch and cabinet kick-off switch.
4. Coin relay will energize the "reset relay" thru game over relay switch or ball count unit switch, operate the "score motor" and then thru (normally open) #2 and #11 score motor switches, energize the " #1 and #2 score reset relays". The reset relay will continue to operate score motor, and both the reset and score reset relays will stay energized thru (normally closed) #8 score motor switch or until all "score counter units" are reset to "zero position".
5. Coin relay, thru (normally open) #3 score motor switch will advance the "total play meter", and thru reset relay will reset the "coin unit", "ball count unit" and "player up unit". Coin relay will also reset the "credit unit" (1 step) when energized by credit button. Ball count unit "zero switch", thru (normally open) #10 score motor switch will energize the "game over relay latch coil" as score motor start cycle ends.
6. Ball (or balls) entering out hole will energize the "out hole relay" thru (normally closed) #1 score motor switch and it stays energized thru its own hold-in switch and (normally closed) #10 score motor switch. Out hole relay will operate the "score motor" and then energize the "out hole kicker solenoid" thru (normally open) #3 score motor switch. Ball is kicked into ball trough and the "3rd ball relay", then the "ball release relay" will be energized thru the "1-2-3 ball through switches". They stay energized thru their own hold-in switches and (normally closed) #6 score motor switch.
7. Ball release relay will operate the "score motor" and then energize the "ball through release solenoid" thru (normally open) #4 score motor switch. "1st ball" is released to shooter alley and game is now conditioned for "1st player" to begin play.
8. To condition game for "2nd player", inserting coin(s) or use of credit button now (before 1st ball is played) will energize the "coin relay" again. This time, coin relay will not energize the "reset relay". It will operate the "score motor", advance "total play meter", subtract a credit from "credit unit", (if credit button was used) and advance the "coin unit" thru (normally open) #3 score motor switch. Game is now conditioned for "2 players". Repeating this sequence will condition game for "3 players " and "4 players".

## BALLS IN PLAY SECTION I

4.

No captive balls on playfield:

1. When a "regular ball" is played and returns to out hole, it energizes the "out hole relay" thru (normally closed) #1 score motor switch, and it stays energized thru its own hold-in switch and (normally closed) #10 score motor switch.
2. The out hole relay operates the score motor, then energizes the "out hole kicker solenoid" thru (normally open) #3 score motor switch. Ball is kicked from out hole into ball trough, closes "#3 trough switch", which energizes the "3rd ball relay" and "ball release relay". They stay energized thru their own hold - in switches and (normally closed) #6 score motor switch.
3. The ball release relay operates the score motor and thru (normally open) #4 score motor switch energizes the "ball release solenoid", which releases the next "regular ball" to shooter alley. The ball release relay in series with the 3rd ball relay, either advances the "player up unit" thru (normally open) #4 score motor switch, or advances the "ball count unit" unit thru (normally open) #3 score motor switch, which in advancing energizes the "player reset relay", allowing (normally open) #4 score motor switch to reset the "player up unit". Sequence 1 thru 3 is repeated until last "regular ball" (3 or 5) is played.
4. When the last "regular ball" played returns to out hole, the "ball count unit" energizes the "game over relay" (trip coil). The game over relay then turns off "ball in play" and "player up" lites, and turns on game over lite to complete play.

## BALLS IN PLAY SECTION II

Captive balls on playfield:

1. When a "regular ball" is played and goes into one of the (2) "captive holes" (fox or gopher) on playfield, the corresponding "hole relay" is energized, which in turn energizes the "1-2 hole relay". The 1-2 hole relay then energizes the "ball release solenoid" thru the "#1 and #2 ball trough switches" to release a "1st reserve ball" to shooter alley and same player continues shooting.
2. When (1st) reserve ball is played and goes into the other "captive hole" on playfield, the corresponding "hole relay" is energized. The "fox and gopher hole relays" in series, then energize. The "ball release solenoid" again thru the "#1 ball trough switch", to release a "2nd reserve ball" to shooter alley and same player continues shooting.
3. When more than one ball (maximum 3) is in action on playfield, the "last ball" in action determines change of "player" and/or change of "regular ball in play". If last ball in action goes into a "captive hole", sequence 1 above is repeated. If last ball in action returns to "out hole", either "player" and/or "regular ball in play" changes as per section I sequence of operation.

## # 880 - " BIG VALLEY "

## FEATURE OPERATION AND SCORING

Fox hole and gopher hole feature

## Captive ball in fox hole:

- A) Opens fox gate to "Gold canyon".
- B) Conditions "Top rollover lane" to score "3000" points.
- C) Conditions "Big pine pass" to score "3000" points.

## Captive ball in gopher hole:

- A) Opens gopher gate to "Gold canyon".
- B) Conditions "Top rollover lane" to score "3000" points.
- C) Conditions "Gold canyon" to score "2000 bonus" points.

## Captive ball in fox and gopher holes:

- A) Conditions "Top rollover lane" to score "5000" points.

Gold canyon feature

- A) Ball thru open "Gopher gate" into canyon, scores a total of "4200" points and ejects ball from gopher hole as it returns to shooter.
- B) Ball thru open "Fox gate" into canyon, when "Gopher gate" is also open, scores a total of "3100" points and ejects ball from Gopher hole as it returns to shooter.
- C) Ball thru open "Fox gate" into canyon, when "Gopher gate" is not open, scores a total of "1100" points as it returns to shooter.

Big pine pass feature

- A) With captive ball in "Fox hole", ball in pass scores "3000" points and ejects ball from fox hole as it returns to top of playfield.

Top rollover lane feature

- A) With captive ball in either "Fox hole" or "Gopher hole", ball thru lane scores "3000" points.
- B) With captive ball in ~~both~~ "Fox hole" and "Gopher hole", ball thru lane scores "5000" points.

Thumper - Bumper lites feature

Balls hitting "Lit red" or "Lit green" thumper - bumper scores "100 points" instead of 10 points.

"Red thumper - bumpers" (2) are lit when balls in play hit "Top left rollover button".

"Green thumper - bumpers" (2) are lit when balls in play hit "Top right rollover button".

When lit, thumper - bumpers remain lit until next ball is released to shooter, game is tilted, or game ends.

Play - more post feature

" Post goes up" when balls in play hit " Top center rollover button ".  
Post goes down when balls in play hit bottom left or right rollover button, next ball is released to shooter, game is tilted, or new game is started.

GAMES ADJUSTMENTS

**PLAYFIELD PANEL POST ADJUSTMENTS:**

Their are (2) posts under slingshot kicker plastic shields that can be moved to make game ~~playing~~ time and scoring more "conservative" or "liberal".

(See "panel sketch FO-301" for post positions.)

**BELL ADJUSTMENT PLUG:**

Located on back box lite insert. This plug provides positions to ring bell for "100" point scores, "1000" point scores, or both "100 & 1000" point scores.

**HI-SCORE ADJUSTMENT PLUG:**

Located on back box lite insert. This plug provides a wide range of coverage at which "Hi-score credits" can be scored.

(See "Score adjustments card" in back box for plug positions)

**1ST COIN CHUTE ADJUSTMENT PLUG:**

Located on the 2 coin unit, on front cabinet mounting board. This plug provides positions to give "1 play for 1 coin" or "1 play for 2 coins" thru the 1st (nickel) coin chute.

**2ND COIN CHUTE ADJUSTMENT PLUG:**

Located on front cabinet mounting board. This plug provides positions to give "1 play for 1 coin" or "2 plays for 1 coin" thru the 2nd (dime) coin chute.

**2ND and 3RD CHUTE ADJUSTMENT PLUG:**

Located on front cabinet mounting board. This plug provides positions to give "2 to 6 plays for 1 coin" thru the 3rd (quarter) coin chute (orange-white plug wire) or thru the 2nd (dime) coin' chute (brown-white plug wire).

**MATCH FEATURE ADJUSTMENT PLUG:**

Located on front cabinet mounting board. This plug provides positions to turn match feature "on" or "off".

**BALLS PER GAME ADJUSTMENT PLUG:**

Located on front cabinet mounting board. This plug provides positions to operate game on "5 ball" or "3 ball" play.



#880 BIG VALLEY

## RUBBER RINGS

- A R-243 5/16 (4)  
B R-243-2 5/16 (2)  
C R-135 1' (1)  
D R-295-5 3' (1)  
E R-141 1-1/2 (4)  
F R-284-5 2-1/2 (1)  
G R-196 2' (3)  
H R-296-5 3-1/2 (2)  
I R-406-3 YELLOW (2)

### PANEL TOP PARTS

- 1 TOP ARCH P-5839-54
- 2 BOTTOM ARCH P-5871-38
- 3 SHOOTER GAUGE P-6359-10
- 4 SIDE RAIL (LEFT) CA-1208
- 5 SIDE RAIL (RIGHT) AS-2590
- 6 BALL GATE & SWITCH AS-1315-6
- 7 BALL GATE COVER P-2996-3
- 8 BALL GATE A-1475-1a
- 9 BALL GATE COVER P-2996-1
- 10 LIGHT SHIELDS A-2890-60
- 11 BUMPER CAP (RED) C-719-12
- 12 BUMPER CAP (GREEN) C-719-13
- 13 BALL GATE & WIRE AS-2250-23
- 14 BALL GATE & WIRE AS-2250-4
- 15 BALL GATE & WIRE AS-2250-22
- 16 FLIPPER (WHITE) C-611-5
- 17 BUMPER C-810
- 18 WIRE ROLL OVER M-1336-9a
- 19 WIRE ROLL OVER M-1336-10a
- 20 WIRE ROLL OVER M-1336-11a
- 21 BALL GUIDE P-6495-64
- 22 BALL GUIDE P-6495-65
- 23 BALL GUIDE P-6495-66
- 24 BALL GUIDE WIRE M-121-28
- 25 BALL GUIDE WIRE M-121-18
- 26 BALL GUIDE WIRE M-121-24

