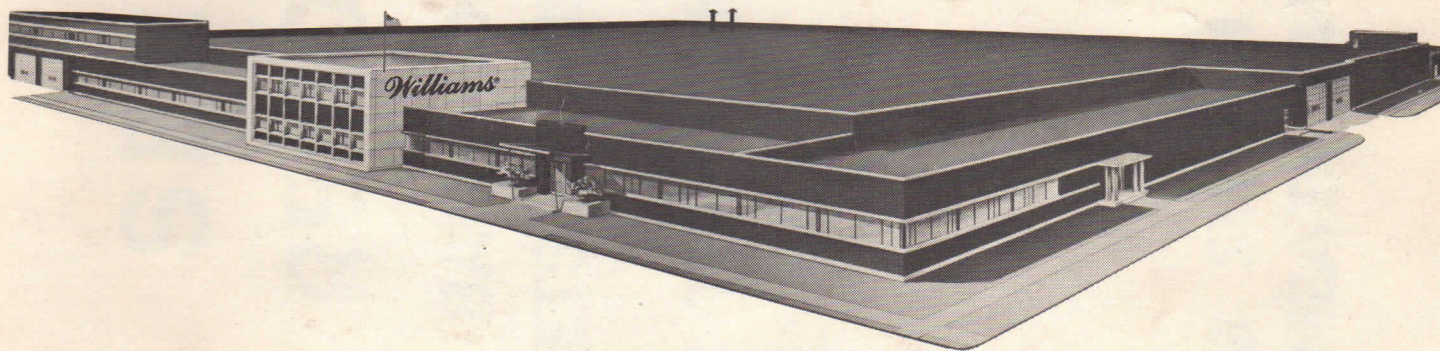


Instruction Manual

for

AQUA GUN



Williams[®] ELECTRONICS, INC.
SUBSIDIARY OF THE SEEBURG CORPORATION

3401 N. California Ave.
Phone 267-2240

Chicago, Ill. 60618, U.S.A.
Cable Address: Wilcoin

SERVICEMAN TO REMOVE BACKGLASS:

- **WITH BACK DOOR OPENED , PULL BACK ON BRACKETS AT INSIDE TOP OF LITE BOX.**
- **FROM THE FRONT OF GAME, LIFT GLASS UP AND OUT.**

MASTER SWITCH (ON-OFF) IS LOCATED UNDERNEATH FRONT PART OF CABINET.

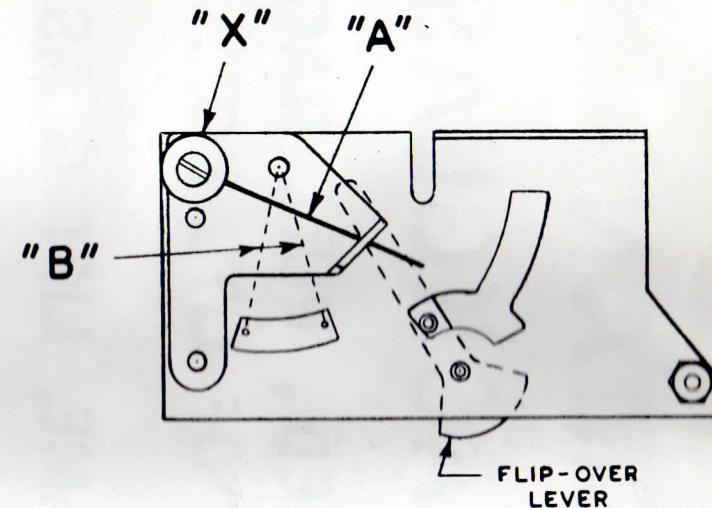
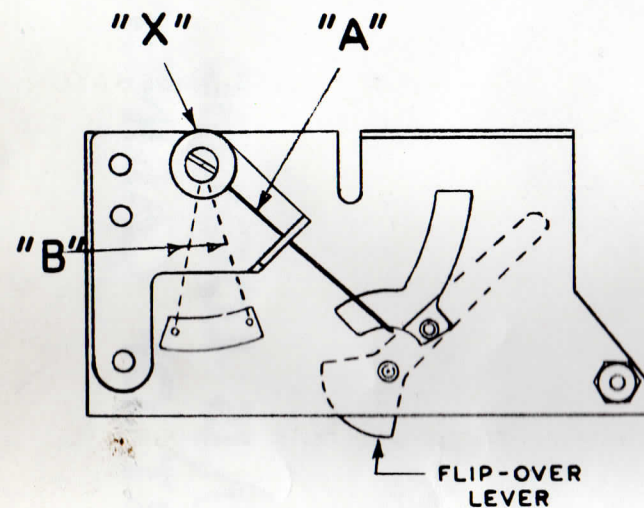
INSTRUCTIONS FOR ALTERING COIN CHUTES EQUIPPED WITH A FLIP-OVER DEVICE.

FOR 1 COIN - FOR 1 PLAY

FIGURE 1

OR 2 COINS - FOR 1 PLAY

FIGURE 2



1 COIN - FOR 1 PLAY (FIGURE 1):

Wire form "A" should be in position as shown in Figure 1. Flip-over lever should rebound from wire form "A" and return to position shown in Figure 1 everytime a coin is inserted. All coins pass over the coin trip switch wire "B".

2 COINS - FOR 1 PLAY (FIGURE 2):

Wire form "A" should be in position as shown in Figure 2 (see note). Flip-over lever should alternate from side to side. 1st coin should go to cash box without actuating coin trip switch wire "B", 2nd coin should pass the coin trip switch wire "B" and returns flip-over to position as shown in Figure 2.

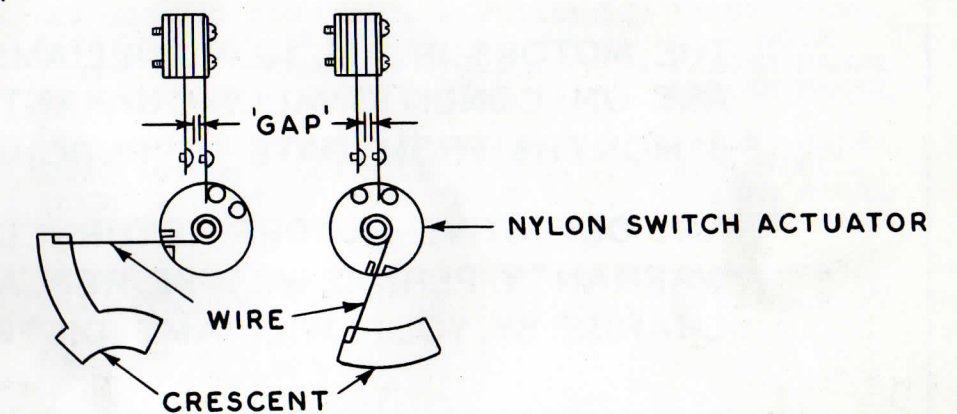
NOTE:

To change from 1 coin play to 2 coin play or vice versa - loosen screw "X" and move screw, bushing & wire form "A" to position as required - shown in Figure 1 position as required - shown in Figure 1 or Figure 2.

When using 1 coin for 1 play, wire form "A" should not under any circumstances be allowed to enter the "Banana" slot and cause binding of flip-over lever.

INSTRUCTIONS FOR COIN TRIP SWITCH ADJUSTMENT

WIRE SHOULD BE IN CONTACT WITH END OF CRESCENT OPENING WHEN BLADE ADJUSTMENT IS MADE.



Long blade should be in contact with nylon switch actuator and have a maximum overtravel of 1/32.

or

Using a gram gauge, tension of long blade should not exceed 10 grams.

SWITCH ADJUSTMENT

1. For small coins, such as dimes, adjust short blade so that the 'gap' between the silver contacts is .045 to .055.
2. For larger & heavier coins the 'gap' should be .045 to .060.
3. Do not adjust 'gap' closer than .040.

WARRANTY

THE MOTORS IN ALL NEW WILLIAMS PRODUCTS
ARE UN-CONDITIONALLY GUARANTEED FOR
6 MONTHS FROM DATE OF PURCHASE.

ANY DEFECTIVE MOTORS RETURNED DURING THE
WARRANTY PERIOD WILL BE REPLACED FREE OF
CHARGE BY YOUR WILLIAMS DISTRIBUTOR.

IMPORTANT NOTICE

WHEN ORDERING PARTS ALWAYS SPECIFY NAME OF
UNIT, GAME AND SERIAL NUMBER, IN ADDITION TO A
CLEAR DESCRIPTION OF THE PART AND PART
NUMBER IF POSSIBLE.

UNIT PARTS LIST FOR "AQUA GUN"

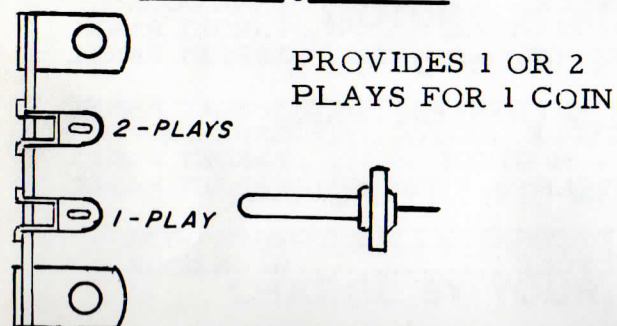
UNIT NAME	CONTACT DISC	WIPER ASSEMBLY	RATCHET GEAR ASSEMBLY	MOTORS
CREDIT	C-6417	—	—	(Sea Monster) 14A-7825 (60 cycle)
BEAT SCORE	C-6417	C-6520-4	A-6401	(Score) 14A-7829 (60 cycle)
SHOT COUNTER	C-6417	C-6520-6	A-6402-25	(Flying Fish) 14A-7840 (60 cycle)
TENS	—	—	3C-7128	(Shark) 14A-7841 (50 cycle)
HUNDREDS	B-6217	A-6294	3C-7128	(Sea Monster) 14A-7831 (50 cycle)
THOUSANDS	B-6217	A-6294	3C-7128	(Score) 14A-7835 (50 cycle)
O-9 TIMER	—	—	3C-7128	(Flying Fish) 14A-7842 (50 cycle)
O-90 TIMER	B-6217	A-6294	3C-7128	(Shark) 14A-7843 (50 cycle)

COIL LIST FOR "AQUA GUN"

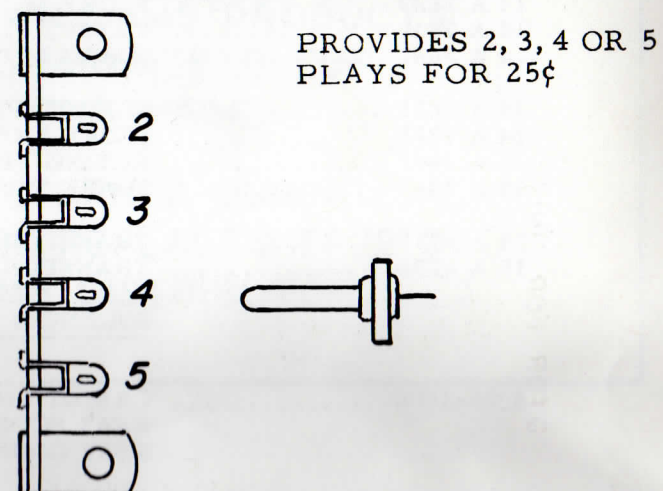
COIL NUMBER	DESCRIPTION	LOCATION
MOTORS & TRANSFORMERS		
14 A 7825	SEA MONSTER RUN MOTOR - 60 CYCLE ..	TARGET PANEL
14 A 7829	SCORE MOTOR - 60 CYCLE	BACK DOOR
14 A 7840	FLYING FISH MOTOR - 60 CYCLE	TARGET PANEL
14 A 7841	SHARK MOTOR - 60 CYCLE	TARGET PANEL
14 A 7831	SEA MONSTER MOTOR - 50 CYCLE	TARGET PANEL
14 A 7835	SCORE MOTOR - 50 CYCLE	BACK DOOR
14 A 7842	FLYING FISH MOTOR - 50 CYCLE	TARGET PANEL
14 A 7843	SHARK MOTOR - 50 CYCLE	TARGET PANEL
15 A 6775	TRANSFORMER - 60 CYCLE	BACK DOOR
15 A 6776	TRANSFORMER - 50 CYCLE	BACK DOOR
SOLENOID COILS		
A 25-1000	CREDIT UNIT STEP UP	INSERT
	BEAT SCORE STEP UP	INSERT
	SHOT COUNTER STEP UP	BACK DOOR
A2-26-1100	KNOCKER	TARGET PANEL
B 27-1100	SHOT COUNTER RESET	TARGET PANEL
	CREDIT UNIT RESET	INSERT
B 28-1450	SCORE DRUM UNITS ... (3 req'd.)	INSERT
	TIMER DRUM UNITS ... (2 req'd.)	INSERT
	DROP TARGETS "1 THRU 5" ... (5 req'd.) ..	TARGET PANEL
	ALTERNATOR UNIT	BACK DOOR
D 24-1400	RIFLE KICKER COIL (110 Volt)	CABINET
RELAY COILS		
M 31P-1500	SHARK HIT	BACK DOOR
	SCORE RESET	BACK DOOR
M 31P-1600	START RELAY	BACK DOOR
	TRIGGER RELAY	BACK DOOR
	100 POINT RELAY	BACK DOOR
	SEA MONSTER HIT RELAY	BACK DOOR
	FLYING FISH HIT RELAY	BACK DOOR
	100 SHARK HIT RELAY	BACK DOOR
	300 SHARK HIT RELAY	BACK DOOR
	500 SHARK HIT RELAY	BACK DOOR
	SHARK BONUS RELAY	BACK DOOR
	10 ¢ RELAY	CABINET
	25 ¢ RELAY	CABINET
M 34P-3000	LOCK RELAY	BACK DOOR
	CUTOFF RELAY	BACK DOOR
	SEA MONSTER RUN RELAY	BACK DOOR
	FLYING FISH TRANSFER RELAY	BACK DOOR
	PERIOD RELAY	BACK DOOR
	SHARK RUN RELAY	BACK DOOR
	GAME OVER RELAY	BACK DOOR
M1-32P-2400	COIN LOCKOUT COIL (50 Volts)	COIN CHUTE
XM 29-1100	METER COIL	CABINET
B 6486	METER (50 Volt)	CABINET

ADJUSTMENTS ON MECHANISM PANEL

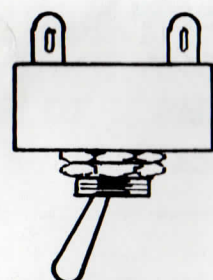
10¢ Adjustment



25¢ Adjustment



(Located under front of Cabinet)



Master On-Off Switch

CONTROLS POWER TO TRANSFORMER

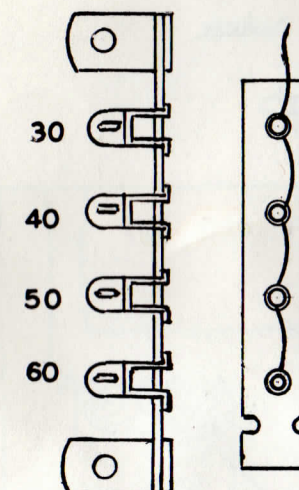
THE POWER TRANSFORMER:

LOCATED ON UPPER BACK DOOR. IF GAME IS ON LOCATION WITH EXTREMELY LOW LINE VOLTAGE, REMOVE FUSE FROM "50 VOLTS" POSITION ON FUSE BLOCK AND INSERT INTO "50 VOLTS LOW LINE" POSITION. THIS WILL INCREASE VOLTAGE APPROXIMATELY 5 VOLTS.

VOLUME CONTROL FOR THE SOUND IS LOCATED ON TOP OF CABINET AT LEFT SIDE. SOUND DEVICE CIRCUIT BOARD IS LOCATED BEHIND PANEL AT BOTTOM FRONT OF GAME. THIS PANEL IS LOCKED IN PLACE BY TWO WOOD SCREWS LOCATED TO THE LEFT AND RIGHT SIDES OF THE CASH BOX. TO REMOVE THESE SCREWS, IT MAY BE ADVISABLE TO OPEN THE TOP PANEL (ON WHICH THE RIFLE IS MOUNTED).

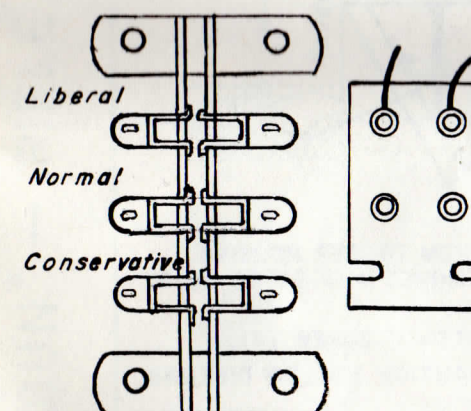
LOCATED IN "BACK BOX"

TIMER ADJUSTMENT



THIS ADJUSTMENT DETERMINES WHEN THE GAME-OVER RELAY WILL PULL IN, IF PLAYER HAS NOT COMPLETED THE 35 SHOTS. NOTE: IF LESS THAN 25 SHOTS ARE FIRED, GAME-OVER WILL NOT PULL IN UNTIL 90 ON TIMER DRUMS.

BEAT SCORE ADJUSTMENT

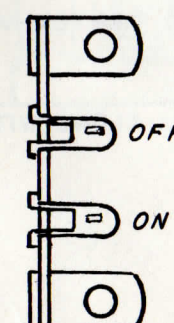


IN NORMAL (N.) POSITION, 4100 "SCORE TO BEAT" WILL LITE MORE OFTEN

DROPPING JACK ONE POSITION, TO LIBERAL (L.), 3100 "SCORE TO BEAT" WILL LITE MORE OFTEN.

IN CONSERVATIVE (C) POSITION - 5100.

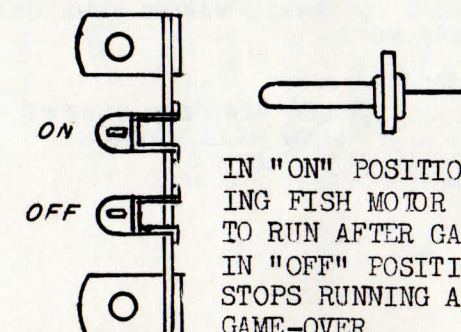
LOCATED ON BACK DOOR



INSERT PHONE TIP IN 'OFF' POSITION - CAMS CAN BE TURNED BY HAND TO CHECK

ADJUSTMENT OF SWITCHES.

SCORE MOTOR SERVICE JACK

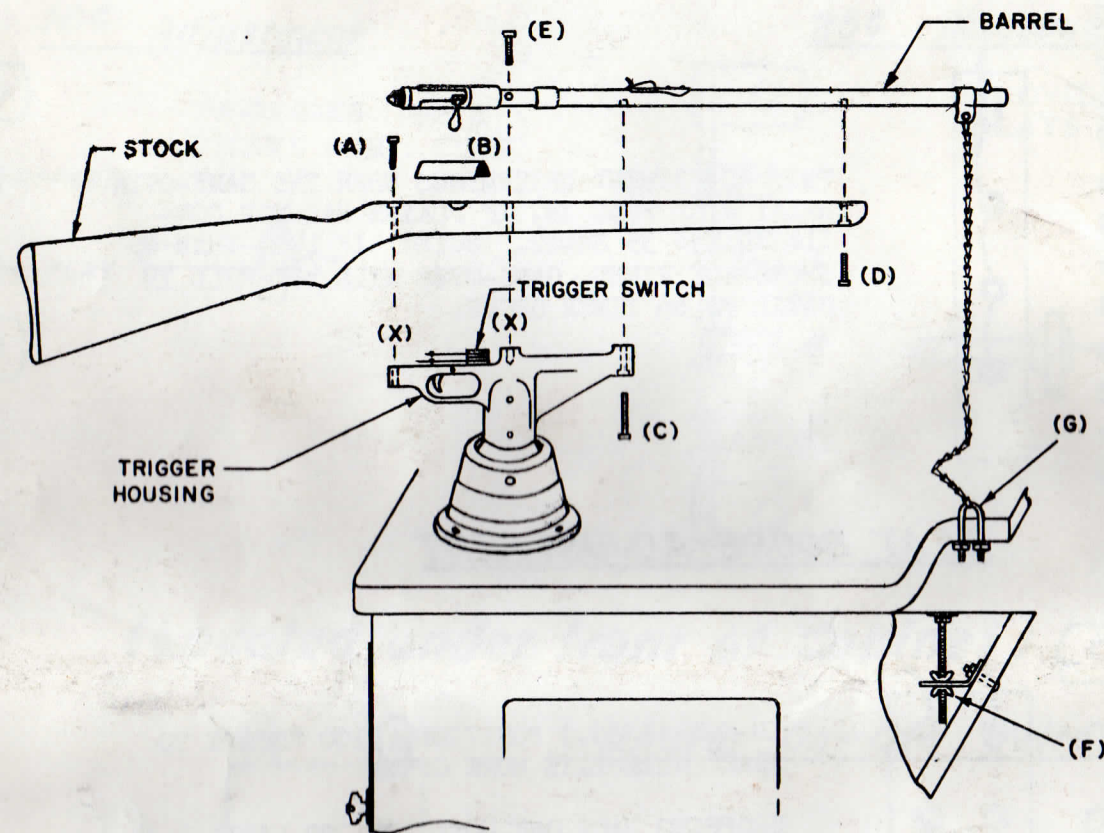


IN "ON" POSITION, FLYING FISH MOTOR CONTINUES TO RUN AFTER GAME-OVER. IN "OFF" POSITION, MOTOR STOPS RUNNING AFTER GAME-OVER.

FLYING FISH MOTOR ADJUSTMENT

AQUA GUN

RIFLE ASSEMBLY INSTRUCTIONS

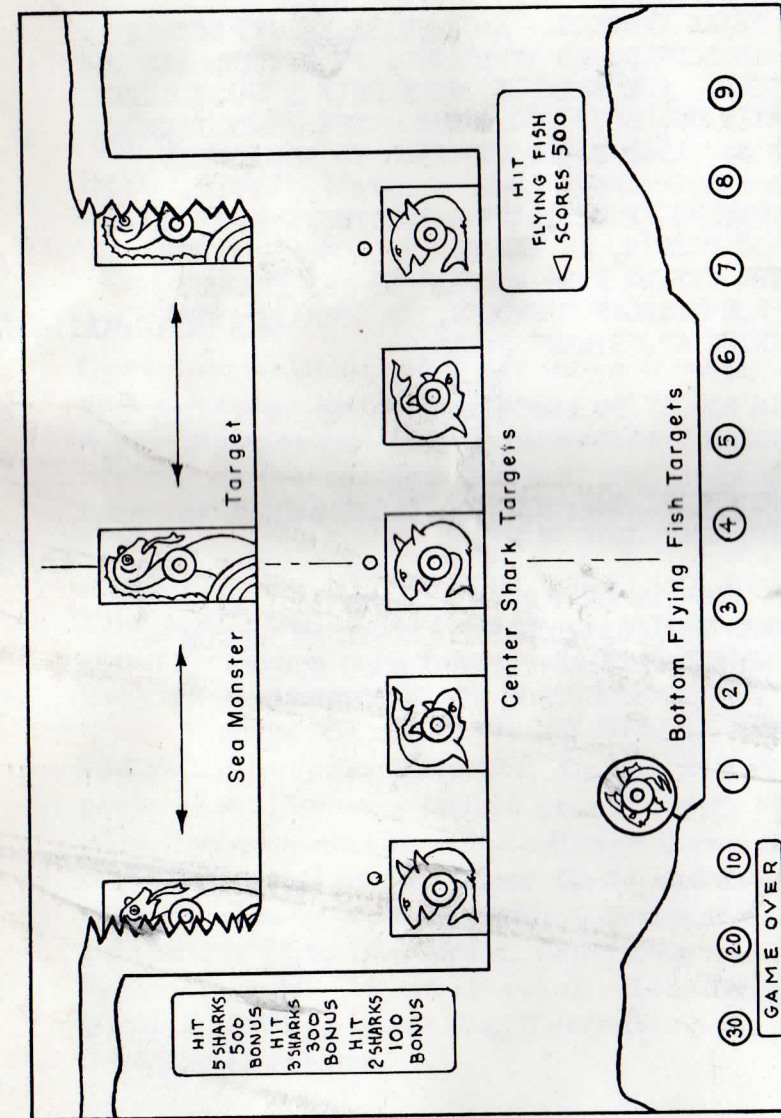


1. AFTER REMOVING RIFLE ASSEMBLY FROM CARTON, REMOVE PACKING FROM TRIGGER HOUSING. (2) CAP SCREWS ON TRIGGER HOUSING INDICATED AS (X) ARE TO BE REMOVED AND SAVED TO BE USED IN ASSEMBLY OF RIFLE AT LOCATION (A) AND (E).
2. PLACE STOCK OF RIFLE ON TRIGGER HOUSING, LINE UP HOLE AND TIGHTEN 1" SCREW (A).
3. PLACE PROTECTIVE FISHPAPER (B) OVER TRIGGER SWITCH, USING CAUTION NOT TO DISTURB SWITCH.
4. PLACE RIFLE BARREL ON STOCK AND TIGHTEN 1-1/2" SCREW (C). ALSO TIGHTEN SCREWS (D) & (E).
5. TO OPEN TOP PANEL, OPEN FRONT DOOR, REACH IN TO LOOSEN (2) BOTTOM WING NUTS (F). SLIDE CARRIAGE BOLTS FROM HOLDING BRACKETS AND RAISE TOP PANEL.
6. REMOVE (2) WASHERS AND NUTS FROM "U" BOLT (G), PLACE "U" BOLT THRU HOLES IN TOP PANEL, REPLACE WASHERS AND NUTS AND TIGHTEN.
7. CLOSE TOP PANEL MAKING SURE BRACKETS ARE BETWEEN WING NUTS AND TIGHTEN ALL WING NUTS.

NOTE:

ALLEN HEAD CAP SCREWS (C) AND (D) ARE PACKED IN CASH BOX ALONG WITH ALLEN HEAD WRENCH.

"AQUA GUN" — RIFLE ALIGNMENT



VIEWED LOOKING INTO MIRROR

THE FOLLOWING STEPS SHOULD BE USED TO ALIGN RIFLE TO TARGETS:

1. NOTE THAT RIFLE CONTACT DISC CAN BE MOVED FROM LEFT TO RIGHT, ALSO FRONT TO REAR, BY LOOSENING APPROPRIATE SCREWS.
2. WITH SEA MONSTER IN EXACT CENTER OF TARGET AREA, SIGHT RIFLE ON SPOT OF SEA MONSTER. WIPER ON RIFLE ARM MUST BE ON CENTER RIVET OF TOP ROW OF RIVETS ON CONTACT PLATE.
3. WITH SEA MONSTER AT LEFT OF TARGET AREA, AS SHOWN, WIPER ON RIFLE ARM SHOULD BE ON LEFT END RIVET OF TOP ROW OF RIVETS ON CONTACT PLATE.
4. WITH SEA MONSTER AT RIGHT OF TARGET AREA, AS SHOWN, WIPER ON RIFLE ARM SHOULD BE ON RIGHT END RIVET OF TOP ROW OF RIVETS ON CONTACT PLATE.
5. A TOTAL REPEAT OF SIGHTING ON ALIGNMENT TARGETS IS SUGGESTED, AS A SLIGHT TOUCH UP OF ADJUSTMENT OF RIFLE DISC MAY BE NECESSARY.
6. TIGHTEN RIFLE DISC ADJUSTING SCREWS SECURELY, LUBRICATE RIFLE DISC AND OPERATE MACHINE ELECTRICALLY FOR ACCURACY.

"AQUA GUN"

"AQUA GUN" OPERATES AS FOLLOWS:

TOP TARGET, AS VIEWED BY PLAYER, IS CALLED THE SEA MONSTER AND ALWAYS SCORES 100 POINTS WHEN HIT. THE SEA MONSTER MOTOR OPERATES FROM START OF GAME TO THE 5th SHOT, AND AGAIN BETWEEN THE 15th AND 25th SHOTS.

THE CENTER TARGETS ARE CALLED SHARK TARGETS. EACH SHARK TARGET SCORES 100 POINTS WHEN HIT. A BONUS IS SCORED, AS INDICATED, BY HITTING ALL SHARK TARGETS THAT COME INTO VIEW. FOR EXAMPLE, WHEN ONLY 3 SHARK COME INTO VIEW AND ARE ALL HIT, PLAYER COLLECTS 300 BONUS. THE SHARK TARGET MOTOR OPERATES BETWEEN THE 5th and 15th SHOTS AND 25th TO 35th SHOTS.

THE BOTTOM TARGETS ARE CALLED FLYING FISH TARGETS. ON THE 5-10-15-20-25 AND 35th SHOTS THEY SCORE 500 POINTS, AS INDICATED. ON ALL OTHER SHOTS THEY SCORE 50 POINTS. THE FLYING FISH MOTOR OPERATES THRUOUT THE GAME AND CAN BE ADJUSTED, FOR DISPLAY PURPOSES, TO OPERATE AFTER GAME-OVER. CHECK PAGES EXPLAINING ADJUSTMENT JACKS.

PLAYER RECEIVES ONE CREDIT WHEN "SCORE TO BEAT" IS TIED OR SURPASSED. "SCORE TO BEAT" LITES ARE ADJUSTABLE TO NORMAL, LIBERAL OR CONSERVATIVE.

THE LENGTH OF TIME ALLOWED TO COMPLETE THE GAME IS CONTROLLED BY AN ADJUSTMENT JACK. REFER TO ADJUSTMENT JACK PAGES.

VOLUME CONTROL FOR THE SOUND IS LOCATED ON TOP OF CABINET AT LEFT SIDE. SOUND DEVICE CIRCUIT BOARD IS LOCATED BEHIND PANEL AT BOTTOM FRONT OF GAME. THIS PANEL IS LOCKED IN PLACE BY TWO WOOD SCREWS LOCATED TO THE LEFT AND RIGHT SIDES OF THE CASH BOX. TO REMOVE THESE SCREWS, IT MAY BE ADVISABLE TO OPEN THE TOP PANEL (ON WHICH THE RIFLE IS MOUNTED).

I GENERAL

NEVER EXPERIMENT with any of the mechanism. Locate any trouble with the aid of Wiring Diagrams or Operating & Servicing Information supplied with the machine, then check for proper adjustment of the units involved before making any changes. Improper adjustment or make-shift repair will only cause serious damage to other parts of the machine or repeated failure of the part.

NOTE: Always look for a possible loose wire, bad connection at a plug and socket, broken or unhooked springs on step-up units, relays, etc., before adjustments are made or wires reconnected.

II FUSES

IMPORTANT: Never replace fuses with any rating, other than specified on the fuse block; this fuse block is located adjacent to the transformer.

III LUBRICATION

Over-lubrication causes far more trouble in coin operated equipment than under-lubrication. Practically all cases of poor contact on switches and wiper discs are due to oil or grease, or oil vapor, which forms a film or residue on the contacts and will not allow current to pass through. Excess lubricant may also seep into clutches causing them to slip.

IMPORTANT: NEVER USE VASELINE FOR LUBRICATION OF ANY PART OF THE MACHINE. Vaseline is not a true lubricant. It leaves a dirty and gummy residue and it becomes very thick when cold. A special Coin Machine Lubricant is supplied with each machine.

STEP-UP Levers, Ratchets, Cams, Shafts and other sliding or oscillating parts should be very lightly greased with special Coin Machine Lubricant (supplied with machine) not oftener than every six months. The bakelite discs (biscuits) on the Motor Units and Step-up Units will require lubrication with the special Coin Machine Lubricant only after the grease is completely evaporated (3 to 12 months, depending on climate) or when the film of grease becomes dirty. In either event, clean the parts thoroughly with Benzol, Naptha, White Gasoline, or Carbon Tetrachloride, then apply an extremely thin coat of the special grease.

Solenoid Plungers should not have a lubricant of any kind. Should there be a sluggish tendency or if plungers are sticking, the parts should be cleaned with a solvent and flaked graphite applied on reassembly.

IV RELAY AND SWITCH ADJUSTMENT

Where relay adjustments are called for, before bending blades, in all cases, on any machine, make certain that the screws holding the switch stacks are down very tightly. This is suggested because the plastic spacers in the switch stacks have occasionally shrunk by drying out, causing a poor adjustment.

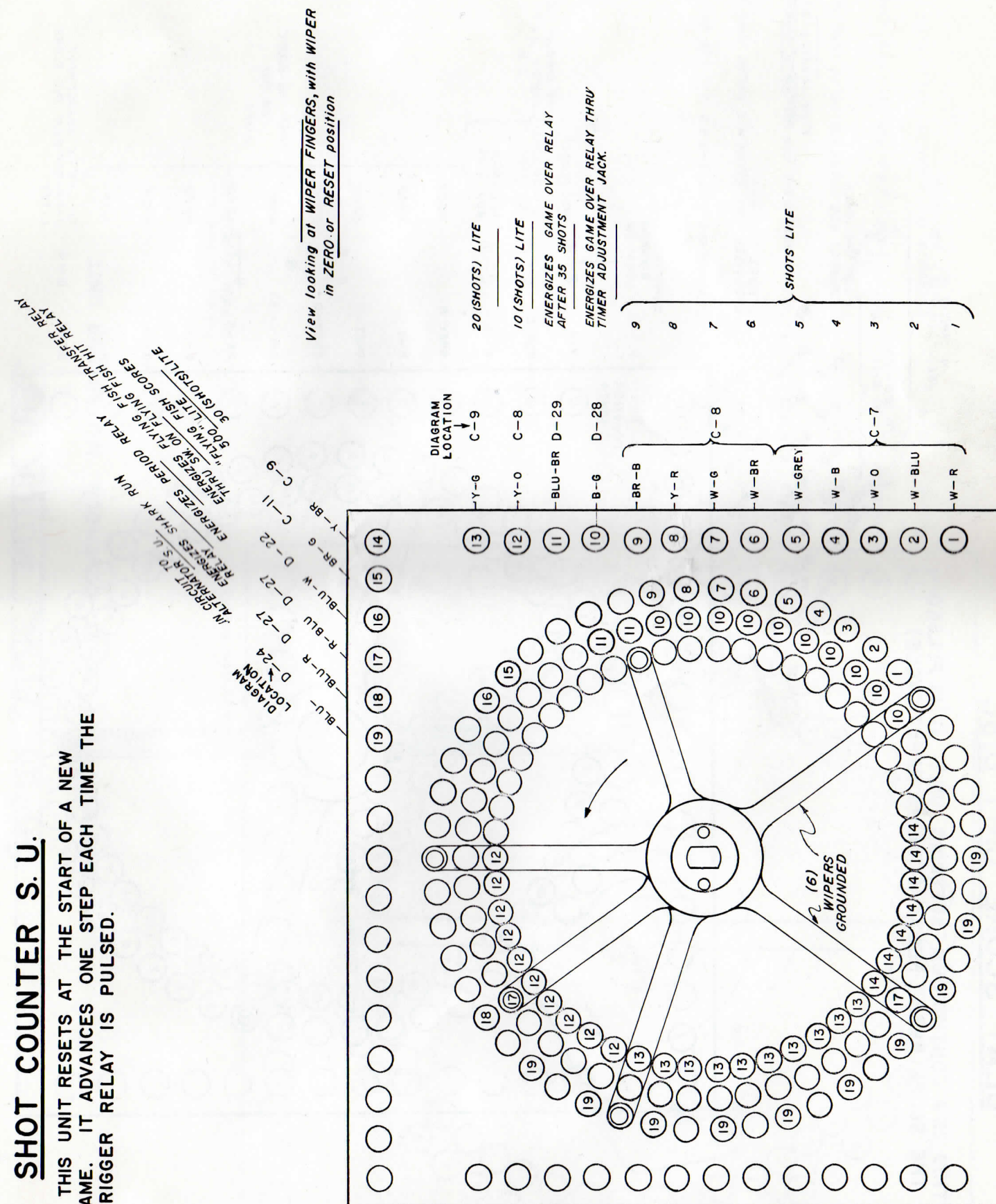
WHAT TO DO IF:

1. Lights are out, game is inoperative:
 - a. Check A.C. cord and plugs for breaks, cuts or other damage.
 - b. Check fuses, located on upper back door.
 - c. Check master switch, located under front of cabinet.
 - d. Check plugs and jacks for proper installation.
2. Lites are out, games operates:
 - a. Check 10 Amp fuse - White wire.
 - b. Check lite bulbs.
3. Shot Unit fails to step-up:
 - a. Check Trigger Relay switch - Red - Green wire.
 - b. Check Shot Unit S. U. coil.
4. Trigger Relay fails to operate:
 - a. Check Score Motor Index Cam switch - Blu-Yellow wire.
 - b. Check make-break switch on Cut-Off Relay - Blu-Red wire.
 - c. Check Trigger switch.
 - d. Check Lock Relay switch - Black wire.
5. Sea Monster Left Run and Right Run Motors fail to operate:
 - a. Check make-break switch on Alternator Unit - Blu-White, Blu, and Blu-Yellow wires.
 - b. Check switch on Sea Monster Run Relay.
6. Sea Monster Run Relay fails to energize:
 - a. Check switch on Period Relay - Green-White wire.
7. Period Relay fails to energize:
 - a. On Shot Unit disc, check wiper finger feed to Red-Blu wire at zero (reset) position and at 15th step position.

Note: The Period, when energized, holds in thru a switch on the Period Relay and a normally closed switch on the Shark Run Relay.

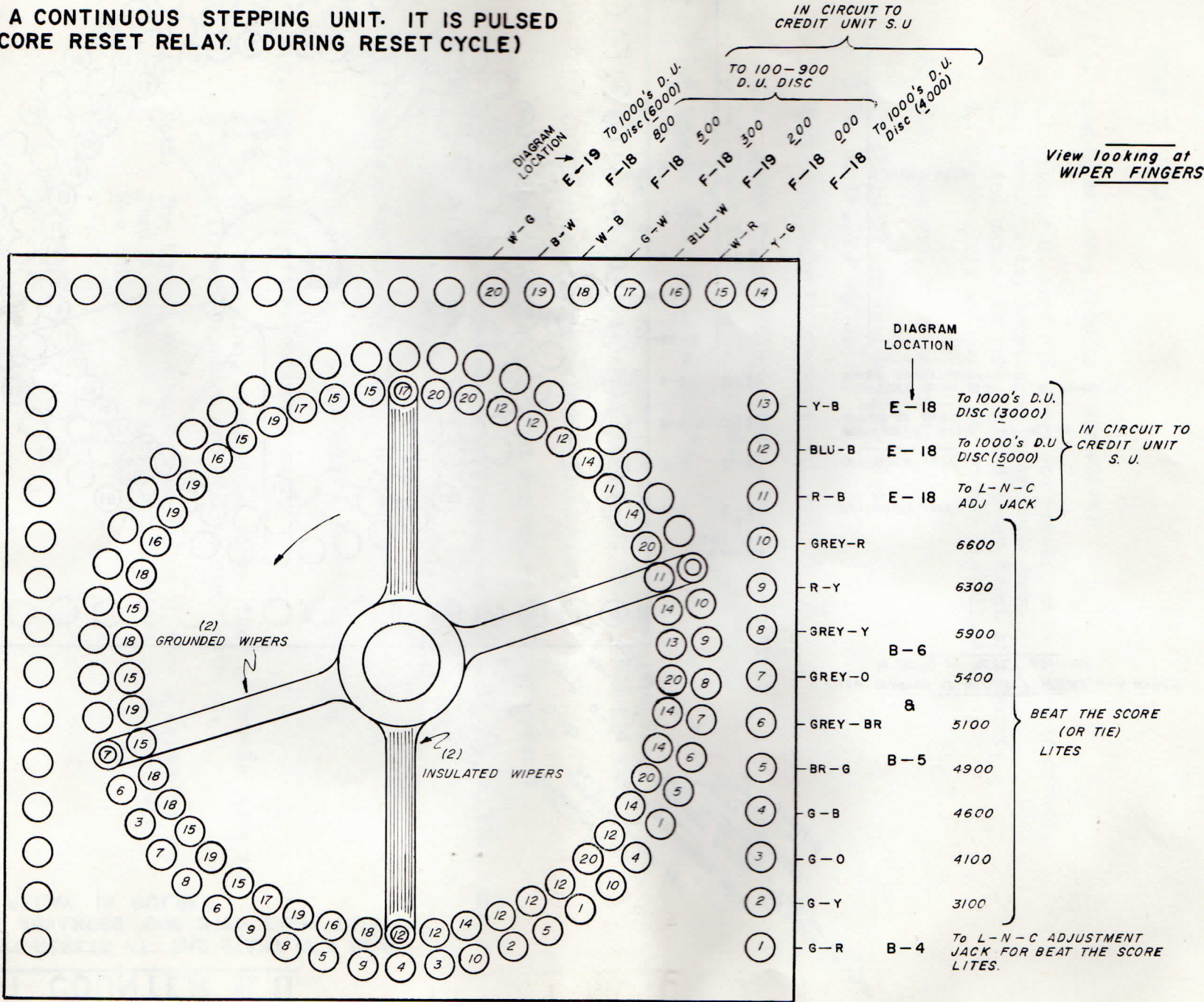
SHOT COUNTER S. U.

THIS UNIT RESETS AT THE START OF A NEW GAME. IT ADVANCES ONE STEP EACH TIME THE TRIGGER RELAY IS PULSED.



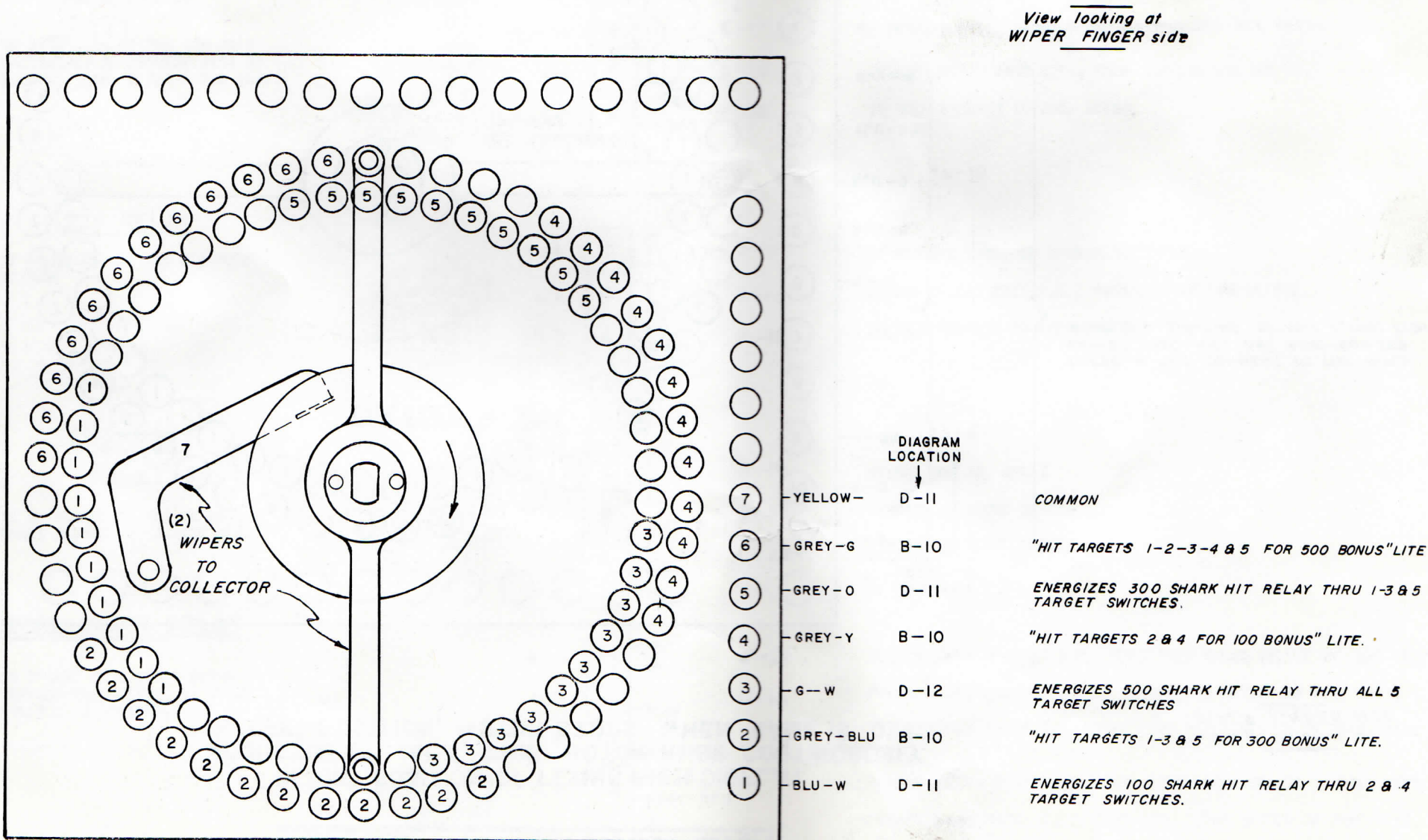
BEAT SCORE UNIT DISC

THIS IS A CONTINUOUS STEPPING UNIT. IT IS PULSED BY THE SCORE RESET RELAY. (DURING RESET CYCLE)



SHARK TARGET MOTOR DISC

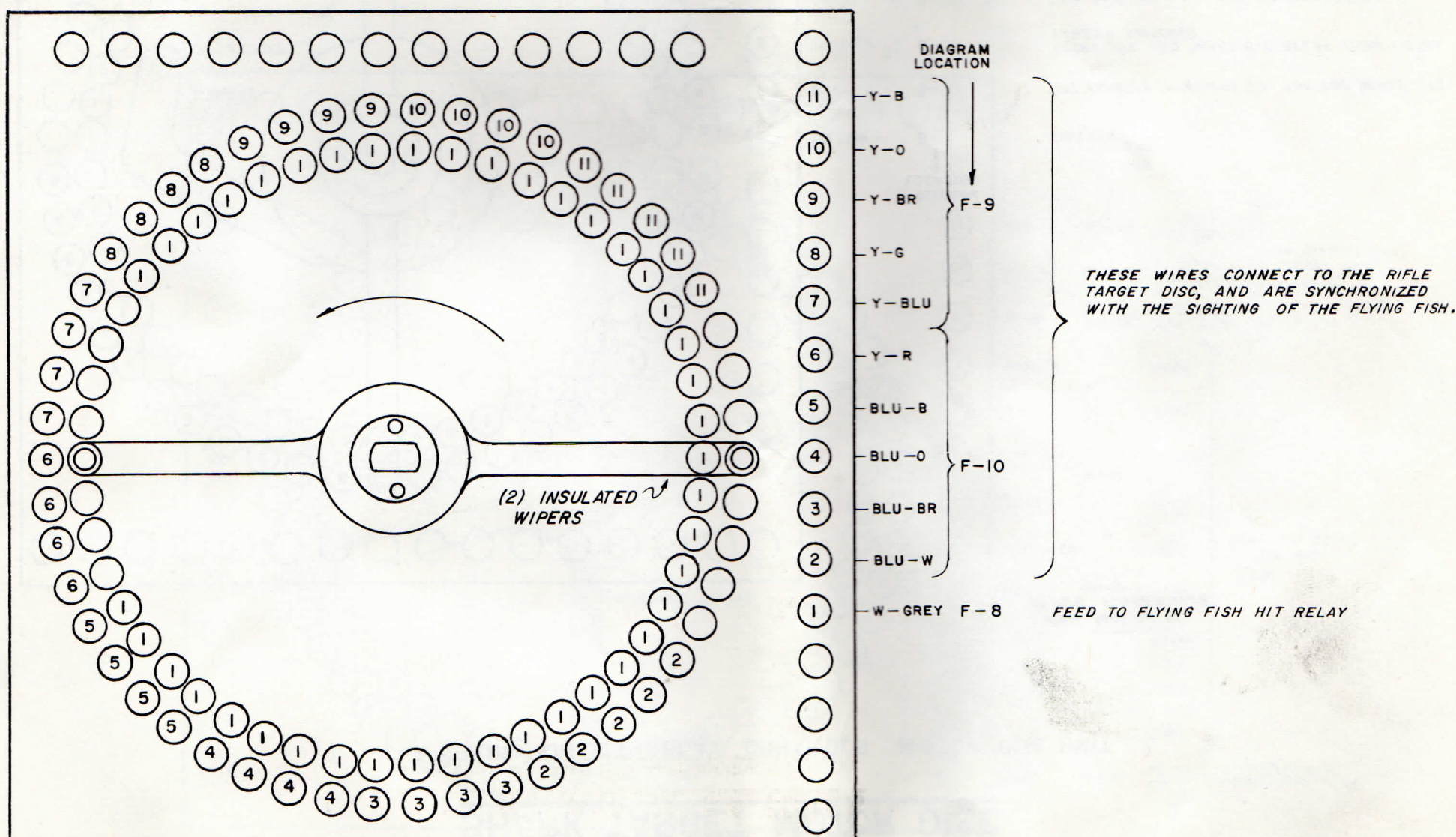
SHARK TARGET RELAY CONTROLS MOTOR FOR UNIT



FLYING FISH MOTOR DISC

IN "ON" POSITION OF FLYING FISH DISPLAY
ADJUSTMENT JACK, THIS MOTOR RUNS CONTINUOUSLY.
IN "OFF" POSITION, MOTOR STOPS WHEN GAME IS OVER.

View looking at
WIPER FINGER side

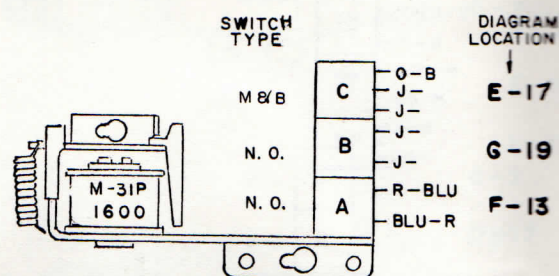


A. C. RELAYS & SWITCHES

(Located in Cash Box Compartment)

10¢ RELAY

IS ENERGIZED BY THE 10¢ coin switch, IF ADJUSTMENT JACK IS PLUGGED INTO "2 PLAYS FOR 10¢".

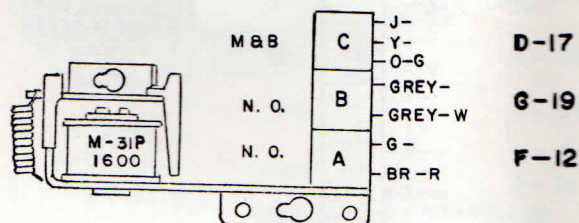


OPERATION

TO KNOCKER COIL, OR RUNS SCORE MOTOR
PULSES CREDIT UNIT S.U., FROM IMPULSE CAM SWITCH.
IN HOLD CIRCUIT TO THIS RELAY.

25¢ RELAY

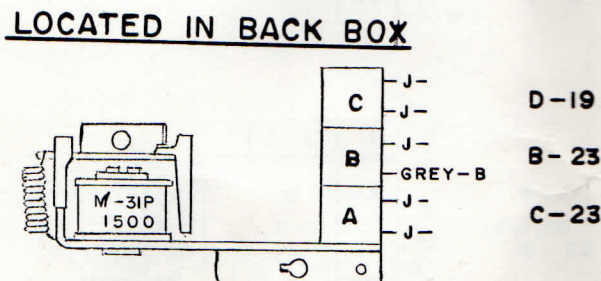
IS ENERGIZED BY THE 25¢ COIN SWITCH.



TO KNOCKER COIL, OR RUNS SCORE MOTOR.
PULSES CREDIT UNIT S.U., FROM IMPULSE CAM SWITCH.
IN HOLD CIRCUIT TO THIS RELAY.

SHARK HIT RELAY

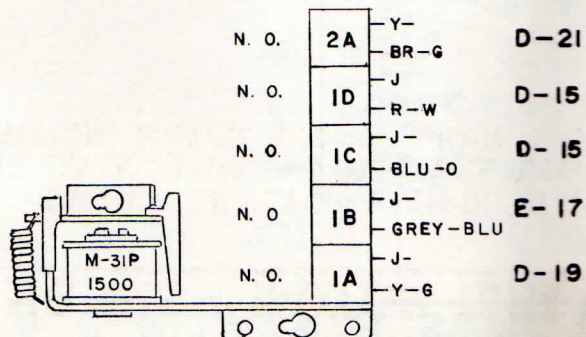
IS ENERGIZED BY ANY OF (5) SHARK TARGET DRIVE MAKE SWS.



PULSES 100 PT. RELAY
CIRCUIT IN SOUND SYSTEM
CIRCUIT IN SOUND SYSTEM

SCORE RESET RELAY

IS PULSED BY A SCORE MOTOR IMPULSE CAM SWITCH, IF START RELAY IS ENERGIZED.

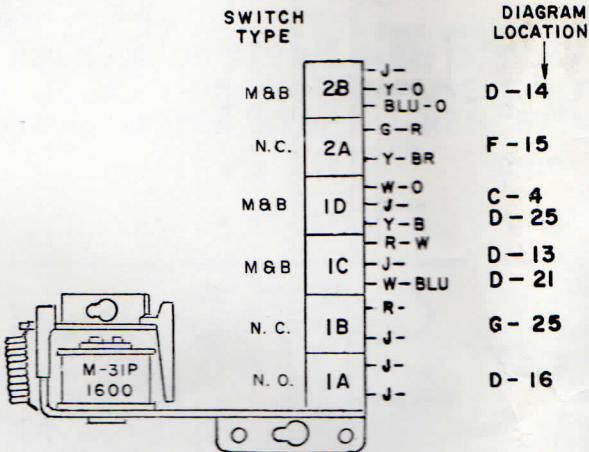


PULSES 100-900 SCORE D.U., THRU ZERO BREAK SWITCH ON THAT UNIT.
PULSES 0-9 TIMER D.U., THRU ZERO BREAK SWITCH ON THAT UNIT.
PULSES 10-90 TIMER D.U., THRU ZERO BREAK SWITCH ON THAT UNIT.
PULSES 1000's SCORE D.U., THRU ZERO BREAK SWITCH ON THAT UNIT.
PULSES 10-90 SCORE D.U., THRU ZERO BREAK SWITCH ON THAT UNIT.

A. C. RELAYS & SWITCHES

START RELAY

IS ENERGIZED BY THE CREDIT BUTTON SWITCH (WHEN CREDITS ARE INDICATED ON THE CREDIT UNIT) OR, BY THE COIN SWITCH.



OPERATION

ENERGIZES SHOT UNIT AND CREDIT UNIT RESET COILS, THRU SCORE MOTOR 1st CAM SW. BREAKS TRANSFER CIRCUIT TO 10-90 TIMER D. U. COIL.

ENERGIZES LOCK RELAY, THRU SCORE MOTOR 4th CAM SWITCH. BREAKS CIRCUIT TO "BEAT SCORE" LITES.

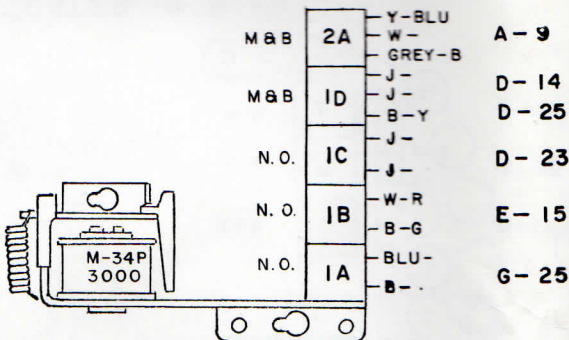
IN HOLD CIRCUIT TO THIS RELAY. ALSO PULSES SCORE RESET RELAY, THRU IMPULSE CAM SW.

IN SERIES WITH SWITCH 1A ON LOCK RELAY.

RUNS SCORE MOTOR

LOCK RELAY

IS ENERGIZED BY A SWITCH ON SCORE MOTOR CAM 4, IF START RELAY IS ENERGIZED.



BREAKS 6 VOLT CIRCUIT TO "SHARK BONUS" LITES. MAKES TO GAME OVER LITES.

IN CIRCUIT TO START RELAY COIL, THRU REPLAY BUTTON. ALSO IN HOLD CIRCUIT TO THIS RE.

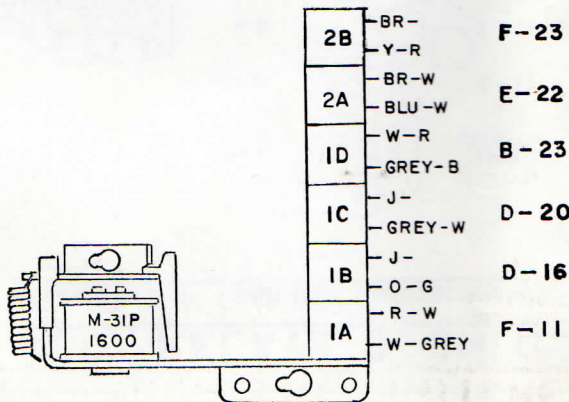
RUNS FLYING FISH MOTOR.

IN CIRCUIT TO 0-9 & 10-90 TIMER D. U. COILS, THRU FLYING FISH MOTOR CAM. SW.

BREAKS POWER TO TRIGGER RELAY AND GAME OVER RELAY.

FLYING FISH HIT RELAY

IS ENERGIZED BY SWITCH "B" ON TRIGGER RELAY, THRU RIVETS ON RIFLE DISC AND FLYING FISH MOTOR DISC.



BREAKS CIRCUIT TO FLYING FISH MOTOR.

ENERGIZES FLYING FISH TRANSFER RELAY, THRU SHOT UNIT DISC.

CIRCUIT IN SOUND SYSTEM

IN SERIES WITH SWITCH B OF FLYING FISH TRANSFER RELAY.

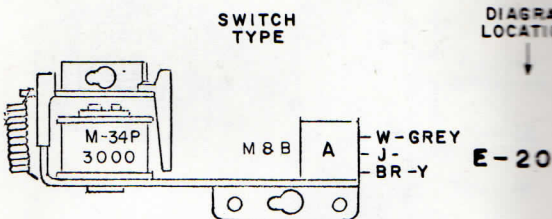
RUNS SCORE MOTOR

HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR CAM SWITCH 5.

A. C. RELAYS & SWITCHES

FLYING FISH TRANSFER RELAY

IS ENERGIZED BY A SWITCH ON THE FLYING FISH HIT RELAY, WHEN THE SHOT UNIT IS IN THE FOLLOWING POSITIONS 5-10-15-20-25-35.

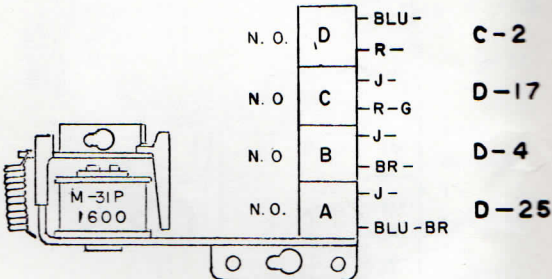


OPERATION

IN CIRCUIT TO PULSE 10-90 SCORE D. U. OR 100 PT. RELAY.

TRIGGER RELAY

IS ENERGIZED BY THE TRIGGER SWITCH, THRU THE CUT-OFF RELAY.



ENERGIZES GUN RECOIL SOLENOID (110V)

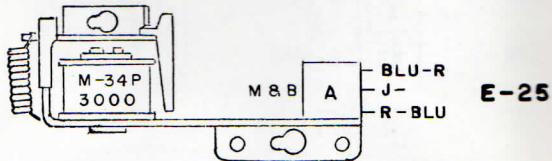
ENERGIZES SHOT UNIT S. U. COIL.

FEED TO STYLUS ON RIFLE DISC.

HOLD CIRCUIT TO THIS RELAY, THRU SWITCH ON CUT-OFF RELAY.

CUTOFF RELAY

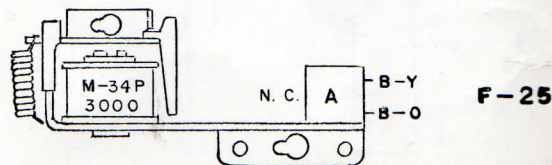
IS ENERGIZED BY THE END-OF-STROKE SWITCH ON SHOT UNIT. CUT-OFF RELAY REMAINS ENERGIZED UNTIL THE PLAYER RELEASES THE TRIGGER, OPENING THE TRIGGER SWITCH.



BREAKS CIRCUIT TO TRIGGER RELAY: ALSO IN HOLD CIRCUIT TO CUT-OFF RELAY.

GAME OVER RELAY

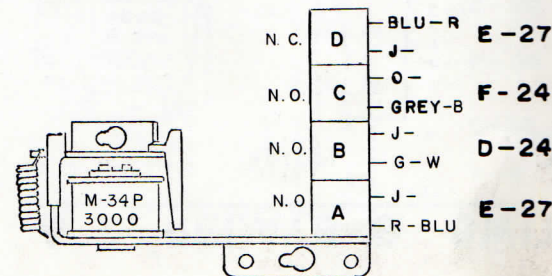
IS ENERGIZED BY THE TILT SWITCH OR WHEN THE SHOT UNIT REACHES THE 35th POSITION. IT ALSO CAN BE ENERGIZED THRU THE 10-90 TIMER D.U. DISC BETWEEN THE 25th and 34th SHOT.



BREAKS CIRCUIT TO LOCK RELAY.

PERIOD RELAY

IS ENERGIZED AT ZERO AND 15th POSITIONS OF SHOT UNIT DISC. IT REMAINS ENERGIZED UNTIL THE SHARK RUN RELAY IS PULSED.



IN HOLD CIRCUIT TO SHARK RUN RELAY, THRU SWITCH 'B' ON SHARK RUN RELAY.

IN CIRCUIT TO ALTERNATOR S. U. COIL, IN ODD POSITIONS OF SHOT UNIT DISC.

ENERGIZES SEA-MONSTER RUN RELAY.

HOLD CIRCUIT TO THIS RELAY, THRU SWITCH 'B' ON SHARK RUN RELAY.

A. C. RELAYS & SWITCHES

SHARK RUN RELAY

IS ENERGIZED AT THE 5th AND 25th POSITIONS OF THE SHOT UNIT DISC. IT REMAINS ENERGIZED UNTIL THE PERIOD RELAY IS PULSED OR GAME IS OVER.

100 POINT RELAY

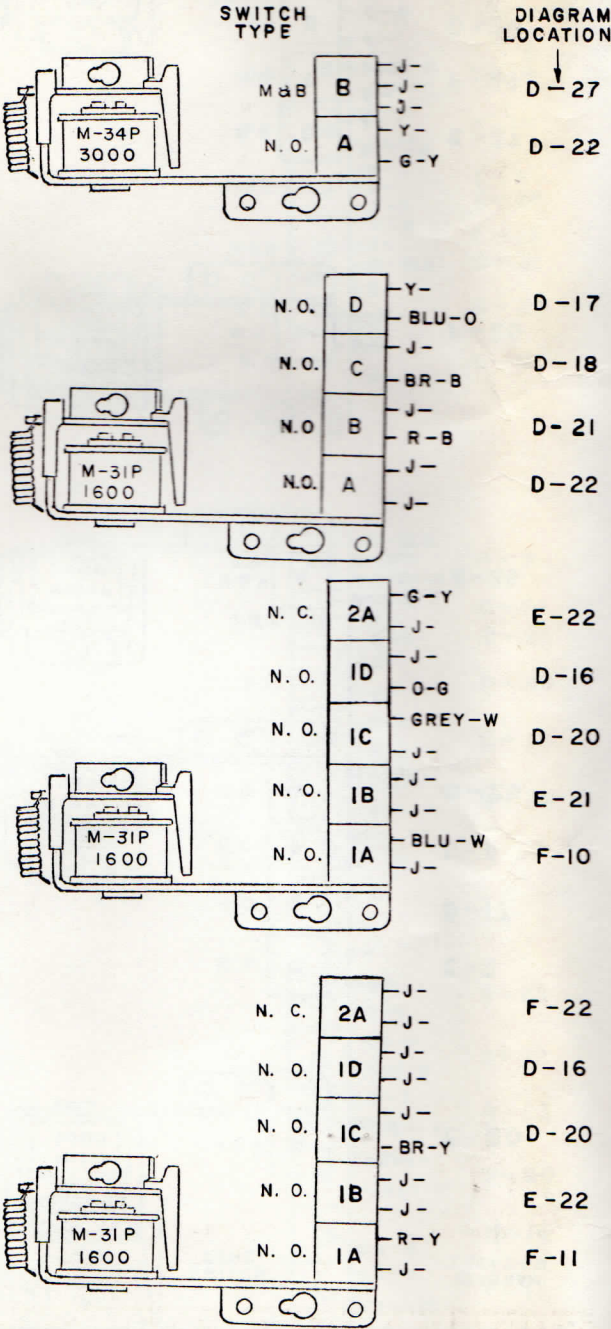
IS ENERGIZED BY (5) SHARK TARGET DRIVE MAKE SWITCHES OR BY THE SEA MONSTER HIT RELAY. ALSO BY A SCORE MOTOR IMPULSE CAM SWITCH, THRU 100,300 or 500 SHARK HIT RELAYS OR FLYING FISH HIT RELAY.

100 SHARK HIT RELAY

IS ENERGIZED BY #2 AND #4 TARGET SWITCHES.

300 SHARK HIT RELAY

IS ENERGIZED BY #1, #3 AND #5 TARGET SWITCHES.



OPERATION

IN SERIES WITH SWITCHES 'A' & 'D' OF PERIOD RELAY.

RUNS SHARK TARGET MOTOR, THRU SWITCHES ON 100, 300 and 500 SHARK HIT RELAYS.

PULSES 1000 SCORE D. U., THRU 9th POSITION SWITCH OF 100-900 SCORE D. U.

PULSES CREDIT UNIT S. U., THRU "BEAT SCORE " CIRCUIT.

PULSES 100-900 SCORE D. U.

ENERGIZES SHARK BONUS RELAY, THRU SWITCH ON 100-300 or 500 SHARK RELAY.

BREAKS CIRCUIT TO SHARK TARGET MOTOR.

RUNS SCORE MOTOR.

IN CIRCUIT TO PULSE 100 POINT RELAY.

IN SERIES WITH SWITCH "1A" ON 100 POINT RELAY.

HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR CAM 1 SWITCH.

IN SERIES WITH SWITCH 2A ON 100 SHARK HIT RELAY.

RUNS SCORE MOTOR.

IN CIRCUIT TO PULSE 100 POINT RELAY.

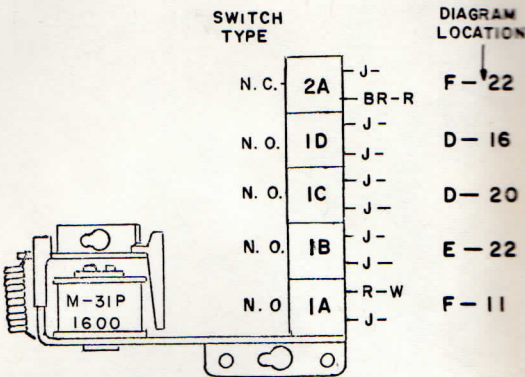
IN SERIES WITH SWITCH "1A" ON 100 POINT RELAY.

HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR CAM 3 SWITCH.

A. C. RELAYS & SWITCHES

500 SHARK HIT RELAY

IS ENERGIZED BY #1, #2, #3, #4 AND #5 TARGET SWITCHES.



OPERATION

IN SERIES WITH SWITCH "2A" ON 300 SHARK HIT RELAY.

RUNS SCORE MOTOR.

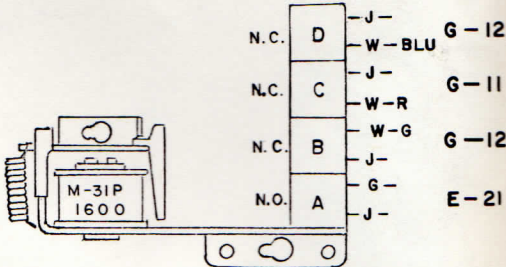
IN CIRCUIT TO PULSE 100 POINT RELAY.

IN SERIES WITH SWITCH "1A" ON 100 POINT RELAY.

HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR CAM 5 SWITCH.

SHARK BONUS RELAY

IS ENERGIZED BY THE 100 POINT RELAY, THRU A SWITCH ON 100, 300 or 500 SHARK HIT RELAYS.



IN CIRCUIT TO 100 SHARK HIT RELAY, WHEN #2 AND #4 SHARKS ARE HIT.

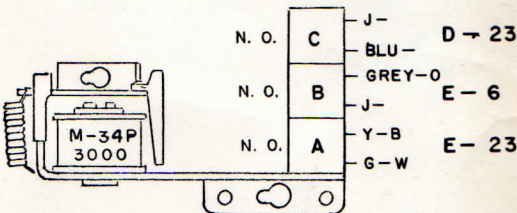
IN CIRCUIT TO 300 SHARK HIT RELAY, WHEN #1, 3 & 5 SHARKS ARE HIT.

IN CIRCUIT TO 500 SHARK HIT RELAY, WHEN ALL 5 SHARKS ARE HIT.

HOLD CIRCUIT TO THIS RELAY, THRU SHARK TARGET MOTOR INDEX CAM.

SEA MONSTER RUN RELAY

IS ENERGIZED BY A SWITCH ON THE PERIOD RELAY.



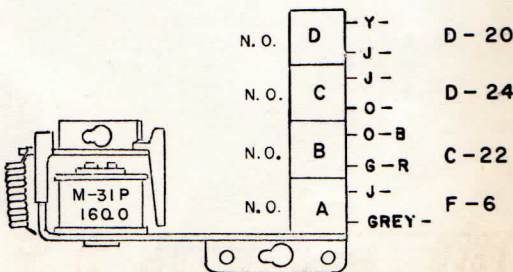
RUNS SEA MONSTER LEFT OR RIGHT MOTOR, THRU SWITCH ON ALTERNATOR UNIT.

IN SERIES WITH SWITCH "A" ON SEA MONSTER HIT RELAY.

HOLD CIRCUIT TO THIS RELAY, THRU SEA MONSTER CENTER DRIVE SWITCH.

SEA MONSTER HIT RELAY

IS ENERGIZED BY SWITCH "B" ON TRIGGER RELAY, THRU RIVETS ON RIFLE DISC AND SEA MONSTER MOVING TARGET DISC.



PULSE TO 100 POINT RELAY

ENERGIZES ALTERNATOR UNIT S. U. COIL.

AUDIO O-B

G-R

IN HOLD CIRCUIT TO THIS RELAY, THRU SWITCH "B" ON SEA MONSTER RUN RELAY AND E.O.S. SWITCH ON ALTERNATOR UNIT.

