OWNER’S MANUAL
BENCHMARK GAMES, INC

PLEASE READ FIRST BEFORE PLUGGING IN MACHINE

FOR SERVICE

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DEAR CUSTOMER:

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THANK YOU FOR PURCHASING A WHEEL DEAL GAME.

BECAUSE OF THE DIFFERENT NEEDS OF EVERY LOCATION, YOU MAY NEED TO FINE TUNE THE MACHINE IN THE FUTURE. WE STRONGLY SUGGEST THAT YOU LEAVE THE MACHINE AT FACTORY SETTINGS FOR AT LEAST 2 TO 3 WEEKS. IF YOU THEN FIND YOUR PAYOUT TOO LOW OR TOO HIGH, THEN MAKE THE PROPER ADJUSTMENTS. START FIRST WITH THE FACTORY DEFAULT SETTINGS.

YOU WILL FIND ENCLOSED IN THE MANUAL A SET OF INSTRUCTIONS ON HOW TO PROGRAM YOUR MACHINE.

PLEASE READ THE MANUAL BEFORE YOU CALL US FOR ANY INFORMATION. WHEN YOU CALL PLEASE HAVE THE SERIAL NUMBER FOR YOUR GAME IN HAND.

BENCHMARK GAMES, INC.
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WARNING:

DO NOT TURN GAME ON UNTIL THE FOLLOWING WARNINGS ARE READ AND UNDERSTOOD.

FAILURE TO ADHERE TO THE FOLLOWING INSTRUCTIONS WILL VOID ANY FACTORY WARRANTIES AND COULD RESULT IN DAMAGE TO THE GAME AND OR INJURY TO THE PLAYER OR TECHNICIAN.

THIS GAME SHOULD BE PLUGGED INTO A 3 WIRE GROUNDED OUTLET 115VAC 60 HZ. UNLESS OTHERWISE SPECIFIED.

FCC PART 15 RULE:
THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A COMPUTING DEVICE PURSUANT TO SUB-PART J OF PART 15 OF FCC RULES.

ELECTRICAL SPECIFICATIONS:
POWER CONSUMPTION: 1.5 AMP 180 WATT LINE VOLTAGE
100-130VAC 60HZ. LINE FUSE: 5 AMP

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GAME DESCRIPTION


GAMEPLAY


VER. 01.8
WHEEL DEAL SETUP

1. REMOVE GAME FROM BOX.
2. OPEN CENTER PLAYER WOOD DOOR AND REMOVE CASHBOX. REMOVE THE POWER PLUG AND 3 SPINNER ASSEMBLIES.
4. INSTALL THE 3 WHEELED HUB ONTO THE CENTER SHAFTS OF THE ROTATING PLATTERS, THEN INSTALL THE ALUMINUM SPINDLES ON TOP OF THE HUBS.
5. REASSEMBLE THE GLASS ON ALL 3 PLAYERS,(MAKING SURE YOU PLUG IN THE COIN MECHS WHILE INSTALLING THE GLASS).

[Diagram showing LOCKS and GLASS]
COIN MECH SETUP

WHEEL DEAL USES A COIN COMPARATOR. A SAMPLE COIN MUST BE INSERTED AND LEFT IN THE MECH AS SHOWN BELOW. WHEN THE PLAYER INSERTS A COIN FOR GAMEPLAY, THE MASS OF THE COIN IS MEASURED AGAINST THE SAMPLE COIN AND IS ACCEPTED OR REJECTED.

THE COIN MECH SWITCH ON THE SIDE MUST BE SET TO N.O.(NORMALLY OPEN), NOT N.C. (NORMALLY CLOSED).

THE PULSE TIME 3 POSITION SWITCH SHOULD BE SET AT THE SHORTEST PULSE TIME.

THERE IS A SENSITIVITY ADJUSTMENT ON THE SIDE OF THE MECH. STRICT MAKES THE MECH MORE DISCREET,(WILL REJECT MORE COINS IF THEY ARE NOT PERFECT). SLACK MAKES THE MECH NOT SO DIFFICULT ABOUT THE COINS IT WILL ACCEPT.
WHEEL DEAL PROGRAMMING

THE BUTTONS USED FOR PROGRAMMING ARE ON THE POWER DISTRIBUTION BLOCK. THEY ARE 3 SMALL BLACK PUSH BUTTONS, (UNDERNEATH THE COMPUTER ON THE SAME BOARD AS THE FUSES).

1. Press the bottom button ONCE to go into programming mode.
2. Press the top button to go to the mode you want to set. (shown on the left led's of player 1).
3. Press the bottom button to lock the mode for changing.
4. Use the middle and top buttons to adjust the value of that mode. (shown on the right led's of player 1).
5. Hit the bottom button to set the change. (the right led's flashes oH).
6. Press the top button until the leds say ehit on the left led. (short for exit).
7. Press the bottom button one more time, then either turn the game off and on, or put in a coin to play the game. The changes are now locked into memory.

MODES:

0000 DEFAULT,(WILL SET GAME BACK TO FACTORY DEFAULT PROGRAMMING). TO USE: CHANGE VALUE OF MODE TO 2, PRESS BOTTOM BUTTON AND EXIT PROGRAMMING NORMALLY.
0001 WHEEL RPM. THIS WILL SPEED UP OR SLOW DOWN ALL 3 WHEELS, (FASTER IS HARDER). RANGE IS 70-80. NOTE: SPEED WILL NOT CHANGE UNTIL AFTER YOU EXIT AND RESTART THE GAME.
0002 NOT USED
0003 MINIMUM JACKPOT FOR PLAYER 1,(RIGHT CABINET), THIS IS HOW MUCH THE JACKPOT STARTS AT AFTER THE JACKPOT HAS BEEN WON. IT IS IN MULTIPLES OF 2. EG: SETTING IT TO 50 WILL START THE JACKPOT AT 100 SETTING IT TO 100 WILL START THE JACKPOT AT 200. FACTORY SETTING IS 75 SO IT STARTS AT 150.
0004 MINIMUM JACKPOT FOR PLAYER 2,(MIDDLE CABINET), THIS IS HOW MUCH THE JACKPOT STARTS AT AFTER THE JACKPOT HAS BEEN WON. IT IS IN MULTIPLES OF 2. EG: SETTING IT TO 50 WILL START THE JACKPOT AT 100 SETTING IT TO 100 WILL START THE JACKPOT AT 200. FACTORY SETTING IS 75 SO IT STARTS AT 150.
0005 MINIMUM JACKPOT FOR PLAYER 3,(RIGHT CABINET), THIS IS HOW MUCH THE JACKPOT STARTS AT AFTER THE JACKPOT HAS BEEN WON. IT IS IN MULTIPLES OF 2. EG: SETTING IT TO 50 WILL START THE JACKPOT AT 100 SETTING IT TO 100 WILL START THE JACKPOT AT 200. FACTORY SETTING IS 75 SO IT STARTS AT 150.
0006 JACKPOT INCREMENTER FOR PLAYER 1,(RIGHT CABINET). THIS IS HOW MUCH THE JACKPOT INCREMENTS EVERY TIME YOU PUT A COIN IN THE RIGHT CABINET. RANGE IS 1-10.
0007 JACKPOT INCREMENTER FOR PLAYER 2,(MIDDLE CABINET). THIS IS HOW MUCH THE JACKPOT INCREMENTS EVERY TIME YOU PUT A COIN IN THE CENTER CABINET. RANGE IS 1-10
0008 JACKPOT INCREMENTER FOR PLAYER 3,(LEFT CABINET). THIS IS HOW MUCH THE JACKPOT INCREMENTS EVERY TIME YOU PUT A COIN IN THE LEFT CABINET. RANGE IS 1-10
0009 THIS IS THE MAXIMUM VALUE THE JACKPOT FOR PLAYER 1 CAN GET TO IN MULTIPLES OF 250. EG: A VALUE OF 4 IN THIS MODE WILL SET THE MAX JACKPOT TO 1000 TICKETS.
0010 THIS IS THE MAXIMUM VALUE THE JACKPOT FOR PLAYER 2 CAN GET TO IN MULTIPLES OF 250. EG: A VALUE OF 4 IN THIS MODE WILL SET THE MAX JACKPOT TO 1000 TICKETS.
0011 THIS IS THE MAXIMUM VALUE THE JACKPOT FOR PLAYER 3 CAN GET TO.
0012 INITIIZE NON-VOLATILE RAM,(CLEAR'S TICKETS OWED). SET THE SAME WAY AS MODE 0000,(SET VALUE TO 2, THEN EXIT).
0013-0029 NOT USED
0030 EXIT MODE. (YOU MUST EXIT CORRECTLY IN ORDER FOR YOUR CHANGES TO BE LOCKED INTO MEMORY).
0031 NOT USED.

DIP SWITCH #7 IS FOR A MERCY TICKET. EG: IS A PERSON PLAYS A COIN BUT DOES NOT WIN ANY TICKETS, IT WILL PAY OUT 1 TICKET.
NOTE: THE GAME MUST BE TURNED OFF WHEN YOU TURN THE DIP ON.
PLAYFIELD ASSEMBLY AND ADJUSTMENTS

ADJUSTING THE COIN POINTER: IF YOUR COINS ARE GOING UNDERNEATH THE COIN POINTER BEFORE THEY GET TO THE END OF THE POINTER, OR IF YOUR ROTATING PLAYFIELD IS GETTING SCRATCHED IN A CIRCULAR PATTERN, YOU MAY NEED TO ADJUST THE COIN POINTER HEIGHT.

TO ADJUST:

1. OPEN THE WOOD FRONT DOOR AND LOCATE THE 6-32 BOLT AND FIBER NUT HOLDING THE RED PLASTIC COIN POINTER TO THE METAL BRACKET.
2. LOOSEN THE NUT AND PLACE A .012 FEELER GAUGE IN BETWEEN THE COIN POINTER AND THE ROTATING PLAYFIELD AND TIGHTEN THE NUT.
3. CHECK THE CLEARANCE AT DIFFERENT POINT ALONG THE COIN POINTER TO MAKE SURE IT HAS EVEN CLEARANCE. RECLEARANCE AS NECESSARY.

NOTE: PLEASE CALL THE FACTORY BEFORE ATTEMPTING THESE ADJUSTMENTS.

ADJUSTING THE OPTO SENSORS:

THE HOME SENSOR UNDERNEATH THE ROTATING PLAYFIELD IS SET AT FACTORY AND WILL NEVER NEED ADJUSTMENT. THERE IS A ROLL PIN PRESSED INTO THE ROTATING PLAYFIELD THAT BREAKS THE OPTO BEAM ONCE EVERY ROTATION.

THE COIN OPTO SENSOR IS ALSO SET AT THE FACTORY. IN THE EVENT YOU NEED TO ADJUST THIS SENSOR, THE BLACK METAL OPTO MOUNT HAS SLOTS IN IT SO IT CAN BE LOOSENED AND SLID FORWARDS OR BACKWARDS.
FLOURESCENT LIGHTS

TO REPLACE THE FLOURESCENT LIGHTS IN A WHEEL DEAL:

1. REMOVE THE 2 6-32 NUTS HOLDING THE TOP OF THE GAME.
2. REMOVE THE TOP COVER
3. REMOVE THE 2 6-32 NUTS HOLDING ON THE FRONT MARQEE GLASS
4. REINSTALL NEW BULBS. 110VOLT, 100WATT SPIRAL FLOURESCENT.
5. REASSEMBLE

NOTE: THE PLAYFIELD BULB IS 110 VOLT, 60 WATT FLOOD LAMP.
TROUBLESHOOTING GUIDE

THE 4 DIGIT LED'S DO NOT COME ON.

IS ONE OF THE FUSES ON THE POWER DISTRIBUTION BLOCK BLOWN, (LED ON).

IF NO LIGHTS OR MOTORS COME ON, CHECK MAIN FUSE IN SWITCH ASSEMBLY, IS MAIN FUSE BLOWN?

YES

FUSE IS BLOWN, REPLACE FUSE

NO

CHECK FOR LOOSE YELLOW, RED OR BLACK WIRES.

FUSE IS BLOWN, CHECK POWER SUPPLY FAN.

IS FAN ON?

YES

NO

REPLACE POWER SUPPLY

NO SOUND ON CENTER OR OUTER PLAYERS

ARE VOLUME KNOBS ON COMPUTER TURNED UP?

YES

NO

TURN UP BOTH VOLUME KNOBS SLIGHTLY AND ADJUST

REPLACE FUSE

ALL ROTATING PLAYFIELDS DON'T TURN

CHECK STEPPER CONTROLLER CONNECTIONS, CHECK 12VDC, GROUND AND 5VDC AT STEPPER CONTROLLER.

ONE ROTATING PLAYFIELD DOES NOT TURN

CHECK CONNECTORS AT MOTOR.

SOUND IS GARBLED

CHECK CONNECTORS ON SPEAKERS. CHECK AMPLIFIER HEATSINK ON COMPUTER BOARD, IS THERE STILL A PROBLEM?

REPLACE SOUND ROMS AND GAME ROMS

LEDS SAY "OPTO OPEN" ON ONE PLAYER

CHECK BOTH OPTOS ON THAT PLAYER FOR OPERATION.

GAMEPLAY AND SOUNDS PLAY SLOW

MAKE SURE JUMPER ON COMPUTER IS SET TO 33MHZ.
TROUBLESHOOTING GUIDE CONT’ D

4 DIGIT DISPLAY DOES NOT INCREMENT BY 5 AFTER INSERTING COIN

ONE DOESN'T WORK  ALL 3 DON'T WORK

DOES GAME MAKE COIN ENTRY SOUND  CHECK DATA WIRES AT COMPUTER

NO  YES

CHECK COIN MECH FUNCTION  CHECK DATA WIRES TO DISPLAY

TICKETS DON'T PAY OUT

10-12 TICKETS COME OUT EVERY PLAY

CLEAN OPTO SENSOR IN TICKET DISPENSER

PROBLEM STILL EXISTS

CHECK THE OPTO INPUT WIRE FROM THE TICKET DISPENSER TO THE COMPUTER

NO  YES

CHECK TICKET ENABLE WIRE FOR CONTINUITY AND OPERATION  REPLACE TICKET DISPENSER

NO TICKETS COME OUT

SWAP TICKET DISPENSER WITH OTHER SIDE, DOES PROBLEM FOLLOW DISPENSER
NOTE: THERE HAVE BEEN 5 REVISIONS OF THE BENCHMARK CONTROLLER, ONLY REV 5 WILL WORK IN WHEEL DEAL COMPANY. THE JUMPER ON THE MHZ MUST BE SET AT 33 MHZ AS SHOWN ON THE PICTURE ABOVE. BE CAREFUL WITH THE CONNECTORS NOT TO PUT THEM ONE PIN OFF OR BEND ANY OF THE PINS.
EXPANSION BOARD

NOTE: DASH LINES DENOTE CONNECTOR. EG:

ROTATING PLAYFIELD MOTOR PLAYER 1
STEPPER CONTROLLER

ROTATING PLAYFIELD MOTOR PLAYER 2
STEPPER CONTROLLER

ROTATING PLAYFIELD MOTOR PLAYER 3
STEPPER CONTROLLER
Schematic:

4 DIGIT JACKPOT DISPLAY PLAYER 1

4 DIGIT TICKETS OWNED DISPLAY PLAYER 1
4 DIGIT JACKPOT DISPLAY PLAYER 2

Schematic:

4 DIGIT TICKETS OWNED DISPLAY PLAYER 2

4 DIGITAL JACKPOT DISPLAY PLAYER 3
4 DIGIT TICKETS OWNED DISPLAY PLAYER 3

Schematic:

PLAYER 1 HOME OPTO SENSORS

PLAYER 1 COIN OPTO SENSORS

PLAYER 2 HOME OPTO SENSORS
PLAYER 2 COIN OPTO SENSORS

Schematic:

PLAYER 3 HOME OPTO SENSORS

PLAYER 3 COIN OPTO SENSORS
**Schematic:**

**STEPPER CONTROLLER**

**POWER DIST. BLOCK**

1. **pin 1** - YELLOW +12VDC 18 GA.
2. **pin 2** - BLACK 18GA.
3. **pin 3** - RED/BLACK
4. **pin 4** - YELLOW/BLACK
5. **pin 5** - RED/WHITE
6. **pin 6** - BLACK 18GA.
7. **pin 7** - NOT USED
8. **pin 8** - RED +5VDC
9. **pin 9** - WHITE/YELLOW
10. **pin 10** - YELLOW/RED
11. **pin 11** - GREY/WHITE
12. **X pin 12** - NOT USED

**NOTE:** DASH LINES DENOTE CONNECTOR. EG: 3
NOTE: REPLACE FLOURESCENT BULBS WITH 100 WATT SPIRAL FLOURESCENT BULBS ONLY. REPLACE INCANDESCENT BULBS WITH 60 WATT FLOOD BULBS.

Schematic:

SPIRAL FLOURESCENT AND INCANDESCENT LIGHTS PLAYER 1

POWER DIST BLOCK

YELLOW +12VDC

BLACK

SPIRAL FLOURESCENT BULBS,(2 per station).

INCADESCENT BULB BULB,(1 per station).

SPIRAL FLOURESCENT AND INCANDESCENT LIGHTS PLAYER 2

POWER DIST BLOCK

YELLOW +12VDC

BLACK

SPIRAL FLOURESCENT BULBS,(2 per station).

INCADESCENT BULB BULB,(1 per station).

SPIRAL FLOURESCENT AND INCANDESCENT LIGHTS PLAYER 3

POWER DIST BLOCK

YELLOW +12VDC

BLACK

SPIRAL FLOURESCENT BULBS,(2 per station).

INCADESCENT BULB BULB,(1 per station).
Schematic:

PLAYER 1 TICKET DISPENSER

PLAYER 2 TICKET DISPENSER

PLAYER 3 TICKET DISPENSER

LOW TICKET LIGHTS
NOTE: ALL 3 PLAYERS ARE WIRED THE SAME

POWER DIST. BLOCK

YELLOW +12VDC

LOW TICKET SWITCH

CONNECTOR

Schematic:

PLAYER 1 COIN MECH

POWER DIST. BLOCK

YELLOW +12VDC

BLACK

BLUE/WHITE

J201

PLAYER 2 COIN MECH

POWER DIST. BLOCK

YELLOW +12VDC

BLACK

YELLOW/BLUE

J201

PLAYER 3 COIN MECH

POWER DIST. BLOCK

YELLOW +12VDC

BLACK

GREY

J201