

# MACHINE MANUAL

## WMH 2 KNOB



2012

# Machine Specifications

WHAT WE CALL THIS MACHINE	STANDARD CRANE
MANUFACTURER	WU MAR HARNG
MODEL	288
BOARD TYPE	3 BANK W070514 or WO30934
IC CHIP	MA188PS
SIZE OF MACHINE	STANDARD

## Adjusting Voltages

### Method 1

Turn machine off
Hold red freeplay button in—if it has a freeplay
Turn on and when screen says pp release button
Use the joystick in the upwards direction to go to 01
Push the drop button
Move joystick in different directions to observe C1,C2,C3
To adjust VR1 pull joystick towards you and it will say C1 on screen - adjust VR1 voltage knob, watching the needle
To adjust VR2 push joystick to the right and it will say C2 on screen - adjust VR1 voltage knob, watching the needle
The third voltage C3 is the hard grab

### Method 2

Push Test button
Play machine
Make quick adjustments with VR1 and VR2 while machine is in play

NB THIS TYPE OF MACHINE HAS 2 ADJUSTABLE VOLTAGES. THE THIRD VOLTAGE IS USUALLY SET AT 50V WITH RECOMMENDED DIP-SWITCH SETTINGS. HOWEVER IF PIN 1 ON BANK 1 IS OFF THEN THE THIRD VOLTAGE WILL NOT BE 50V—IT WILL BE THE SAME AS YOUR VR1 SETTINGS . THIS CAN BE USED TO REDUCE THE OCCURENCE OF DOUBLE GRABBING OF TOYS WHERE THE 50 V IS TOO STRONG

## Frequency Settings

Turn machine off
Locate Pin 7 on SW 2 on the main PCB board and flick it across to the ON position
When you turn the machine back on it will say “Thank You” and 00 will flicker on the screen
Using the joystick in an upwards direction only go to 09—the frequency setting menu. Note that the 10’s and the 1’s are controlled by different actions of the joystick rather than numerical sequence
Push the drop button to go into the values for the frequency menu
Using the joystick adjust the value to the desired frequency
Push the drop button to save the value and revert to the flickering 00 root menu
Reposition Pin 7 on bank 2 back to the OFF position
Turn the machine off then on again so it recognizes the changes

# Dipswitch Settings

BANK 1		
OFF	ON	WHAT DOES THIS PIN DO?
	1	HARD GRAB(VR3) EITHER 50V IF ON or SAME AS VR1 IF OFF
	2	CLAW LOWERS TO RELEASE PRIZE IF ON
3		n/a
4		n/a
5		n/a
	6	A SKILL BASED WIN DELAYS UPCOMING VR3
7		n/a
8		n/a

BANK 2		
OFF	ON	WHAT DOES THIS PIN DO?
1		n/a
2		DEMO MUSIC WHILE NOT IN PLAY – LEAVE OFF
3		PRIZE SENSOR TIMING—LEAVE OFF
4		PLAY TIL YOU WIN—LEAVE OFF
5		n/a
6		n/a
7	7	ACCESS AND EDIT INTERNAL SETTINGS WHEN THIS IS ON
8		DEMO MODE– LEAVE OFF

BANK 3		
OFF	ON	WHAT DOES THIS PIN DO?
1		n/a
	2	RETAIN MEMORY OF PRIZES WON WHEN TURNED OFF
3		n/a
4		UP DOWN MOTOR 2000RPM or 3000RPM IF OFF
5		LRM 1100 RPM or 2000 RPM IF ON
	6	RECURRING HARD GRAB IF NO WIN
7		n/a
8		CLAW SNAPS SHUT IN MID AIR IF DROP BUTTON PUSHED– OFF

# How to set Cost per Play

Turn machine off
Locate Pin 7 on SW 2 on the main PCB board and flick it across to the ON position
When you turn the machine back on it will say “Thank You” and 00 will flicker on the screen
Using the joystick in an upwards direction only go to 03
Push the drop button to go into the values for that number
Using the joystick adjust the value to the desired frequency
Push the drop button to save the value and revert to the flickering 00 root menu
Repeat the above 4 steps for values 04,05,06 as detailed below in Internal Settings
Reposition Pin 7 on bank 2 back to the OFF position
Turn the machine off then on again so it recognizes the changes and test it with currency

## Comparator Coin Mechs

**\$2**  
**\$1**

INTER- NAL MENU #	\$1PE R PLAY	\$2 PER PLAY	WHAT DO THESE NUMBERS MEAN?
03	1	1	HOW MANY COINS GO IN THE RIGHT HAND (\$2) MECHANISM TO GIVE A CREDIT PULSE.
04	2	1	NO OF GAMES THAT ONE CREDIT PULSE ON THE RIGHT HAND SIDE GIVES.
05	1	2	HOW MANY COINS GO IN THE LEFT HAND (\$1) MECHANISM TO GIVE A CREDIT PULSE.
06	1	1	NO OF GAMES THAT ONE CREDIT PULSE ON THE LEFT HAND SIDE GIVES.

## Electronic only or with Note Readers

**COIN**  
**NOTE**

INTER- NAL MENU #	\$1PER PLAY	\$2 PER PLAY	WHAT DO THESE NUMBERS MEAN?
03	1	2	HOW MANY \$1 UNITS GO IN THE LEFT HAND MECHANISM TO GIVE A CREDIT PULSE. THE 1 IS A \$1 COIN OR ENOUGH COINS TO ADD TO \$1, AND THE 2 IS A \$2 COIN OR ENOUGH COINS TO ADD TO \$2.
04	1	1	NO OF GAMES THAT ONE CREDIT PULSE ON THE LEFT HAND SIDE GIVES. ONCE THE VALUE IN 03 IS REACHED IT WILL GIVE 1 PLAY.
05	5	5	HOW MANY \$1 UNITS GO IN THE RIGHT HAND MECHANISM TO GIVE A CREDIT PULSE. THE 5 IS A \$5 NOTE. UNLIKE COINS THE MINIMUM NOTE YOU CAN PUT IN IS A \$5 SO WE START AT 5
06	6	3	NO OF GAMES THAT ONE CREDIT PULSE ON THE RIGHT HAND SIDE GIVES. ONCE \$5 IS PUT IN IT WILL EITHER GIVE 6 OR 3 TURNS. EVERY \$5 WORTH OF NOTES GIVES THE PLAYER A BONUS OF \$1 WORTH OF FREE GAMES—FOR USING A NOTE

# PCB Board Connector Pins

J1	JOYSTICK AND DROP BUTTON
J2	CREDIT DISPLAY
J7	COIN AND PRIZE METERS
J8	COIN MECHS AND NOTE READERS
J10	PRIZE SENSOR– THE LITTLE PLUG IN THE CORNER (SIREN IF DISONNECTED)
J6	VOLUME AND MUSIC
J5	VOLTAGE ADJUSTMENTS
JP1 SOLID WHITE	POWER INTO PCB FROM POWER SUPPLY
J4 BIG METAL	GANTRY CONNECTER—TO ALL OVERHEAD MOTORS, SWITCHES AND CLAW

# Error Codes

ERROR CODE	WHAT DOES IT MEAN?
E1	STOP UP SWITCH IS NOT BEING ACTIVATED (FOR VARIOUS REASONS RELATED TO MOTORS/FUSES/STRING TANGLES ETC)
E3	STRING STUCK LOWERING– NOT COMMON CHECK FIOR TANGLES
E9 & SIREN	IT”S A BACKWARDS 9– SOMETHING IS BLOCKING THE PRIZE SENSOR OR IT IS DISCONNECTED OR FAULTY
E9	THE COIN METER IS FAULTY OR DISONNECTED. CHECK THE BACK OF COIN METERS OR PLUG J7



# PCB Diagram

