ICE CREAM MACHINE MANUAL

1. Structure

Connecting shaft

Machine bracket

Cover

Hopper

Top panel

Tact Switch

Thimble

Gear box

Led display

Back panel

Column

Cylinder

Screw

Motor

valve

Compressor

Handle

Left and right panel

Discharger

Nut

Fan

Front panel

Condenser

Base

Leg
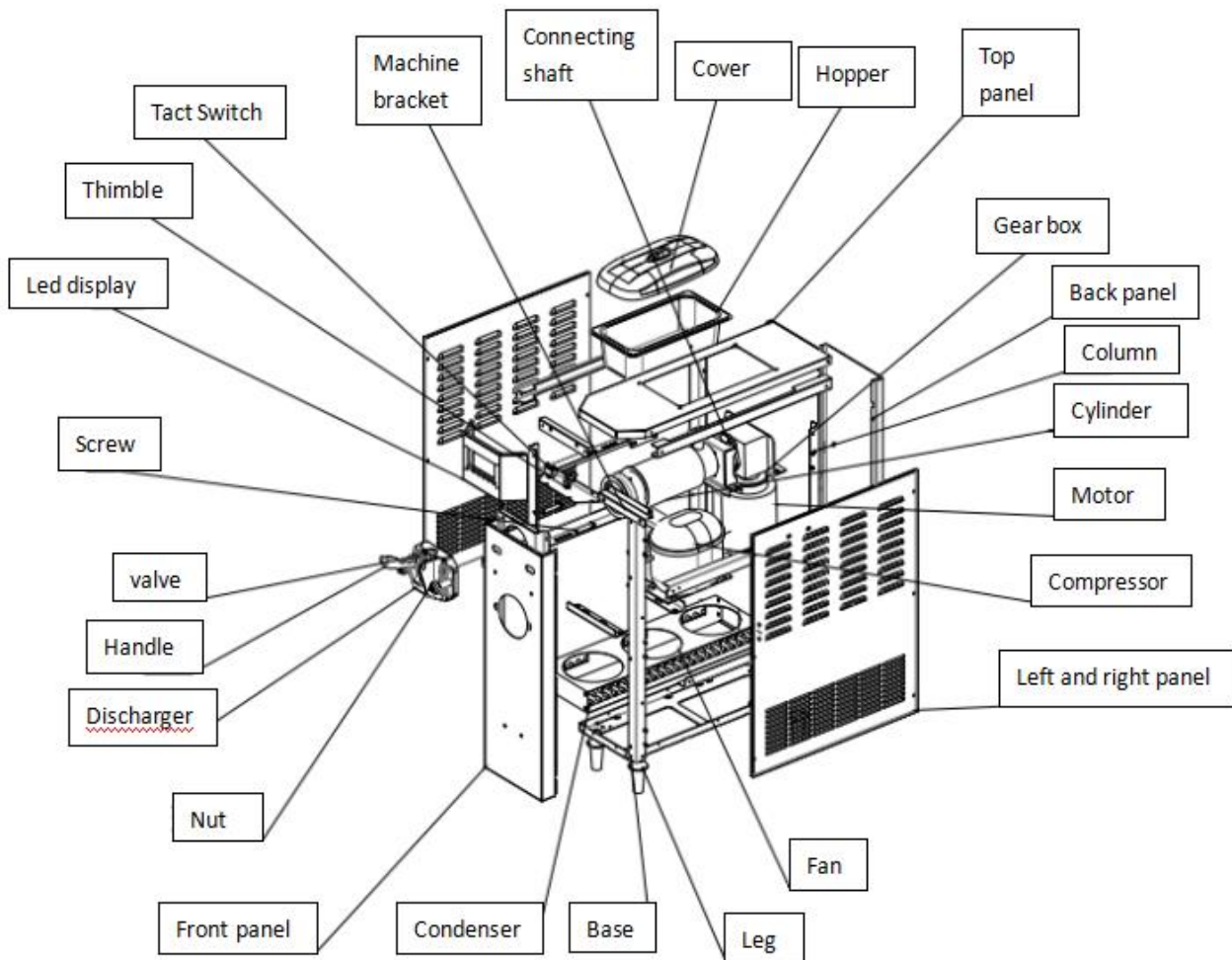
2. Conditions

Our ice cream machine can work under below conditions:

Ambient temperature: 5~40°C   mixture temperature: 2~35°C

Power: 110V/60Hz

* The above conditions can directly affect the machine's performance and capacity.

3. Installation & Cautions:

Please strictly follow the instruction on the yellow sticker.

※ Do not directly connect the machine to electricity generator.

※ Do not directly connect the machine to battery.

※ Put the machine still for 24 hours after transportation before using it.

※ Power wire should not exceed 10m.

※ The hopper must have mixture when using.

※ Ice cream mixture should be in accordance with appropriate formula.

※ Always use the machine in stable voltage.

※ In the case of wire broken, please hire a technician to fix or replace it.

※ DO NOT put any explosive substance in the machines.

※ this machine is similar to a home electrical appliance, can be used in the kitchen of shops, offices, farms, motels, hotels or restaurants catering events to provide instant soft serve ice cream.

3.1 Placement

a. Place the machine on an even plain ground.

b. Make sure the machine is in good ventilation, avoid heat sources or sunlight. Air outlets of the machine should be at least 1m away from walls or any other barriers, other sides should be at least 0.3m away from any barrier.

c. Avoid dust.

3.2 Wiring

a. Make sure the socket is connected to the ground

b. Make sure the power supply has a circuit-breaker or any other device for protection against electric shock.

c. The section area of power code copper core(a) MUST BE:

   18l machine, 25l machine: a≥2.5mm²   36l machine: a≥4mm²

d. Under-size power code can result in low voltage and overload, which affect machine performance or causing damage.

3.3 Installation

a. Please check package and inform the forwarder or our company if any damage, our company will not take any responsibility if the bill is signed.

b. Open the carton box, you will find a parts box in the hopper. In the parts box you will find handles and consumable parts, keep the spare parts for the future replacement.

c. Please check the nameplate on the right panel, confirm this is the correct model(voltage, frequency and power) you order.

d. Install the discharger properly, tighten it to the machine with 2 bolts, screw the 2 bolts in diagonal at the same time, make sure no gap between the discharger and the machine, otherwise, water or mixture can leak from it during washing or making ice cream.

e. Install the handles to the valve stems, in the mean time, slowly push the steel pin through the discharger and the handles. (Refer to below photo for the correct direction of the handles)

f. Install the drain holder to the 2 nuts on machine, to catch the dripping. DO NOT put heavy object like buckets or basins on it, as it is not design for holding heavy object.

# 4. How to Make Ice Cream

4.1 Wash

Connect it to 16A socket, switch on the power with the stick on the left down part of control panel. Pour water from the hoppers to fulfill the cylinders, press "WASH", allow it to run for 2 minutes, then press the handle to directly drain the water in the "WASH"mode.repeat this 2-3 times, until the water that comes out is all clean.

4.2 Make mixture

Currently in the market, there are ready-made mixture of ice cream, or the powder that needs to mix with water.Please follow the instructions and formula on powder package(generally speaking: 1kg powder to 2.5-3kg water), stir them even, let them completely dissolve and mix together, avoid lumps forming, leave it still for 30 minutes. These are very important factors for the texture and amount of the ice cream later produced.

4.3 Make ice cream

a. Make sure water is completely drained, then pour the mixture into the hopper.

b. Press "Wash" (beater will start to rotate, to beat it even),after 2 minutes, press "STOP", then press "Freeze" to start freezing (Notice: Make sure the mixture level in the cylinder should be lower than the inlet of discharger, or else can result in loud noise or damage.**when you hear scratch sounds between the beater and the cylinder, that means the mixture inside is not enough.**)

c. In "Freeze"mode, the screen will show the progress of ice cream making, generally speaking, when it reach 80%, the ice cream is ready for dispensing. When it reach 100%, the machine will stop automatically and back to "Standby" mode.
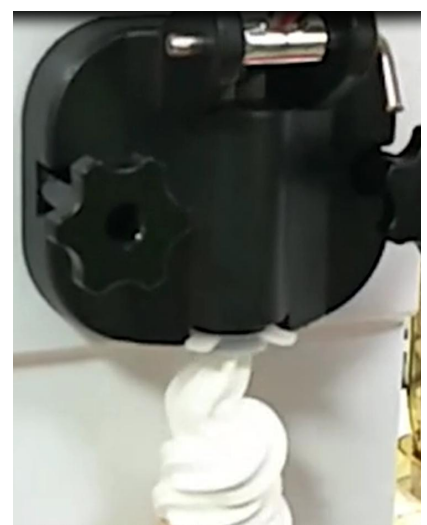
5. How to Operate

For different stickers on the display, "SOFT & HARD" sometimes are shown as "+ & -".
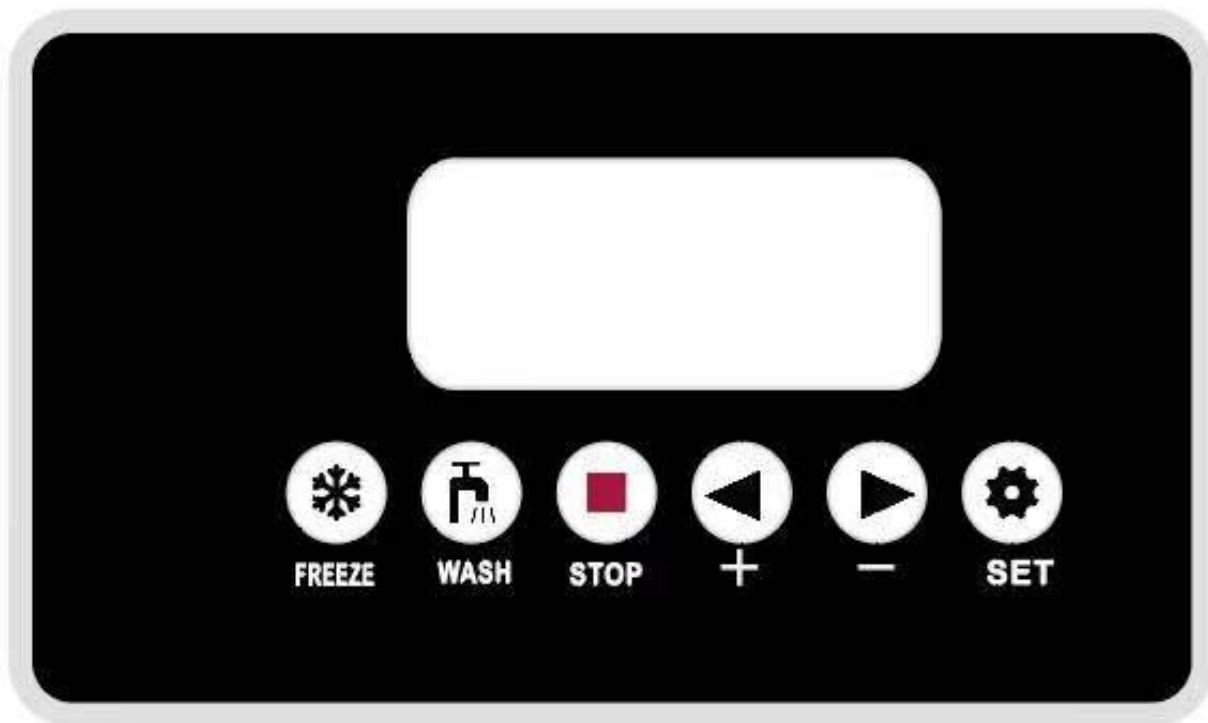
Instruction on the screen

a. Standby Mode

The machine is in this mode after switch on, when no button is pressed.

b. Wash Mode

Press"WASH", "WASH" sign will be on, so do the motor, the beaters start to rotate, but compressor is off. Machine is now in Wash Mode. To stop and shift back to Standby Mode, press "STOP".

c. Freeze Mode

Press "FREEZE", the "FREEZE" sign is on, motor start to work immediately, after 5 seconds, compressor will be on,(or else it will start after the return valve shuts.)As the freezing proceeds, ice cream hardness will reach a certain set value, the screen will show 100%, then the compressor will stop, after 15 seconds, motor stops too, now a complete ice cream making procedure is over. After a certain set length of time (interval time can be adjusted from 5-30 minutes, please refer to the table at the latter page), the system will automatically repeat the above mentioned procedure, Or if the dispense sensor is triggered, the "FREEZE"Mode will also start all over again. Press "STOP" to turn back to "Standby" mode.

Cylinder chilling is controlled by timing. Users can set a time interval (30-120 minutes) between the chilling processes. The chilling process runs for 10 minutes at most each time, it will also stop if the ice cream hardness inside has reached a set value, and will then starts the countdown for the next cycle.

6. Maintenance

6.1. Wash Cylinder

Please wash the cylinder once a day to improve the serve life of the machine and also to ensure food safety for customers.

a. Press "WASH", to beat out all the mixture from the cylinder, then press "STOP" (you can also unload the discharger and take out the beater, so to remove the ice cream that stick on the beater.)

b. **(if you take out the beater and discharger, make sure you install them back properly before pouring water in it)** Dissolve proper amount of disinfectant in warm water, pour it inside the hopper.

c. Press "WASH" to beat for 5 minutes, then drain it.

d. Pour in clear water, to wash 3-5 times, then stop the machine.

e. Turn off the machine, and disassemble all other components (take out valves and O rings from the discharger, and the big silicone O ring from the discharger)

• Please disassemble and wash the components according the following steps if the machine has stopped serving for a long time.

a. Unscrew all 2 bolts from the discharger, unload the discharger, then disassemble all components from the discharger

b. Take off the pin, handles, valve stems and silicone O-ring

c. Take our the beater, disassemble the silicone seal from the beater end

d. Wash the components thoroughly and replace the broken ones.

e. Assemble back all the components. (apply some lubricant to the valve stem for easier assembling the O rings and the valve stem back to discharger)

6.2 Wash the screen

Please use a wet cloth to wipe the screen only, avoid pouring water directly on control board or the inside, or else can result in malfunction.

7. Error & Solution

When errors occur, the system will shut down all outputs and display error code, meanwhile the alarm will keep beeping. Please refer to the below table for code information.

code	problem	cause	solution	remark
01	Voltage too low	voltage too low	install a voltage stabilizer.	
02	Voltage too high	voltage too high	install a voltage stabilizer.	
03	Speed sensor abnormal	1.Sensor not well installed 2. Magnet misplaced 3. Sensor broken	1. Install the sensor well 2. Adjust the position of magnet. 3. Replace with a new sensor.	
05	Weak refrigeration	refrigeration system error	Check the system	Some models don't have temperature checking function
06	Cylinder frozen	1.Mixture contains too much water. 2.No mixture inside.	1.Please make mixture according to the right proportion. 2.DO NOT turn to freeze mode when no mixture inside.	Some model is without temperature checking function.
07	Cylinder temperature too high.	1.Ice cream mixture too hot. 2.Ambient temperature too high.	1.Chill down the mixture before pouring it in. 2.Chill down ambient temperature.	
10	Running overtime	1.Hardness set too high. 2.The overtime value is set too short. 3.System malfunction.	1.Adjust to the appropriate gear. 2.Adjust the overtime scope. 3.Check cooling system	
11	High pressure protection	Compressor pressure too high	Check refrigeration system	
Screen problem	No display while machine turned on.	1.Out of power, socket not well plugged. 2.Stabilizer not well connected, or display not well connected to the motherboard. 3.Fuse broken 4.PCB broken	1.Check if power supply is normal. 2.Reconnect wires. 3.Solve the abnormality and replace with the same specification of fuse. 4.Check PCB	Must be performed by technician.
	Display not clearly	1.Display and motherboard not well connected. 2.Motherboard malfunction	1.Reconnect display to the motherboard well. 2.Check motherboard.	

8. Parameters

CODE	INDICATION	REMARK
P00	time interval of auto freeze restarting	Interval can be set between 5-30 minutes.
P01	Precool temperature	Range from 0-10 ℃，if no precooling function, this code will not show
P02	Fresh function in cylinder interval	Range from 30 to 120 minutes, If no precooling function, this code will not show.
P03	reset cone record	Long press "+"or "-"to reset cone record
THE BELOW ARE MERELY FOR THE MANUFACTURER'S SETTING		
F00	set over time value	Range between 30-60 minutes
F01	Factor of hardness correction	Range from 1-16, the higher the harder. Factory default is 1. In appropriate setting can result in belt slipping or no auto stop.
F02	Value of low voltage protection	Range：110V—120V
F04	Rotation speed detection	1 screen will show the speed if detected, if not, it shows "---", to delete the existing value, long press "+"or "-" for 5 seconds until it shows "---" If motor or any other speed relevant components are replaced, please run a speed detection: enter F04 menu, delete the existing value, then run wash mode for 10 seconds, the detection will be automatically completed. Notice:Please run the rotation speed detection in WASH mode,DO NOT run it with ice cream mixture or water inside the cylinder.

8.1 How to set parameters

Parameter can be divided as factory parameters (marked "F") and user parameters (marked "P").

a. **For user parameter,** long press the "+"or "-" to enter the setting window. In the setting window, press "SET" to shift between different groups of user parameters, and press   "+"   & "-" to change the value.

b. **For factory parameters,** long press both the "SET"& "STOP"at the same time to enter. When get into the setting window, press "SET"to shift between different groups of parameters. The first several groups are still user parameter, after the last user parameter, you will see the factory parameter. The setting is the same as user parameters.

Hardness setting

In "Standby","Wash" or "Freeze" mode, You can change the hardness set value. Simply long press the "+"or "-" until the hardness value blinks, then release the button, and click "+"or "-"to adjust the value.

9. Repair

1. Please disconnect power before installing or wiring, always follow the circuit diagram, and make sure the power supply is in accordance with that on the nameplate.
2. Please hire a professional electrical technician for wiring.
3. Make sure all terminals are firmly connected to connectors.
4. Keep hands,fluid or any foreign objects off the PCB, and at least 6mm away from the panels, or else may result in short-circuit and fire.
5. In the case of fuse blew, please check and remove the faults first, then replace it with one of the same specification
6. In the case of replacing speed sensor, please make sure the parameter of which is DC12V NPN, Hall Proximity Switch sensor.
7. After replacing motor or any speed relevant components, please run a rotation speed detection.

The above mentioned are common malfunctions. If a more complex problem occurs, please hire a professional technician.
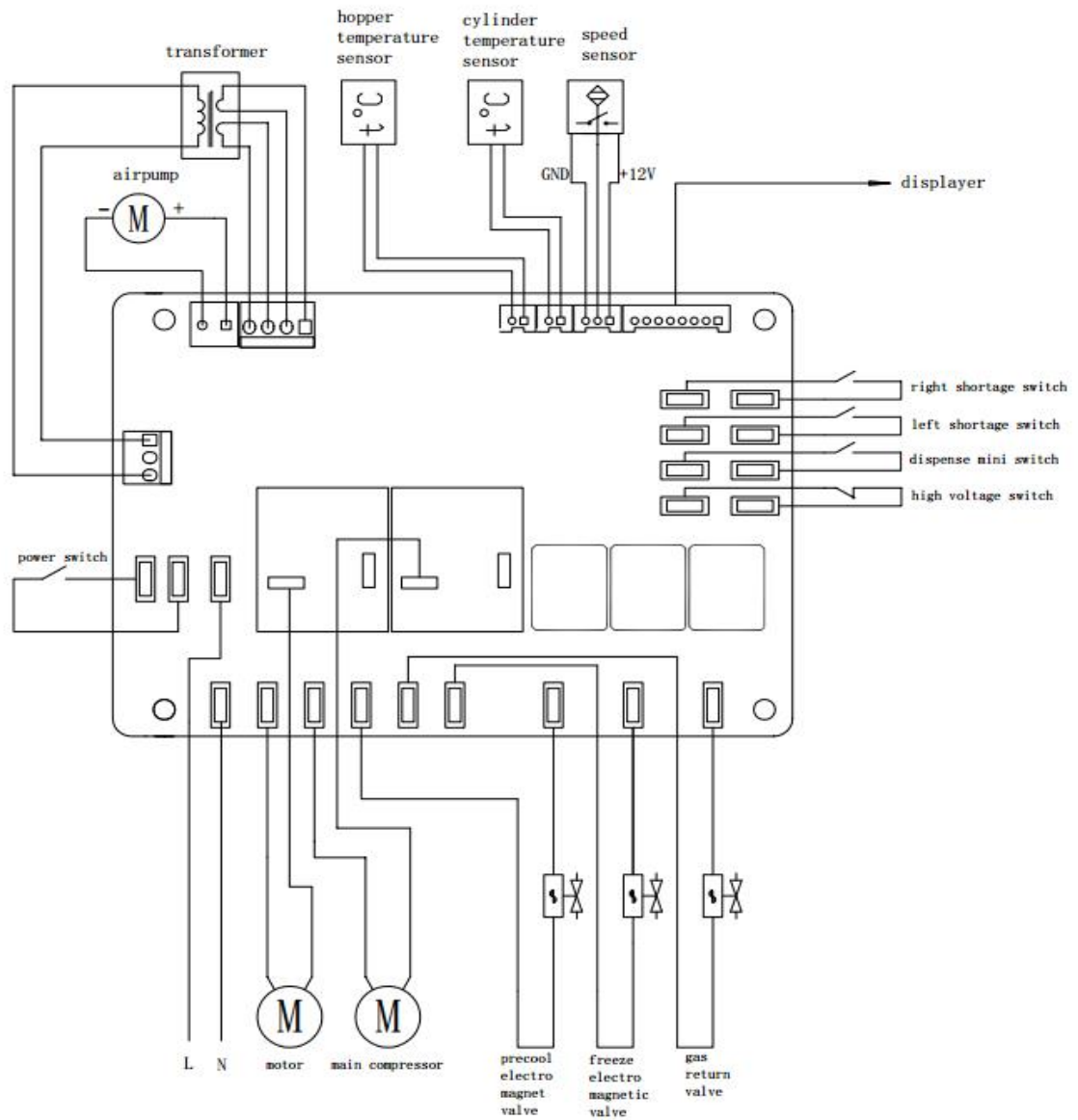
Single compressor precooling system