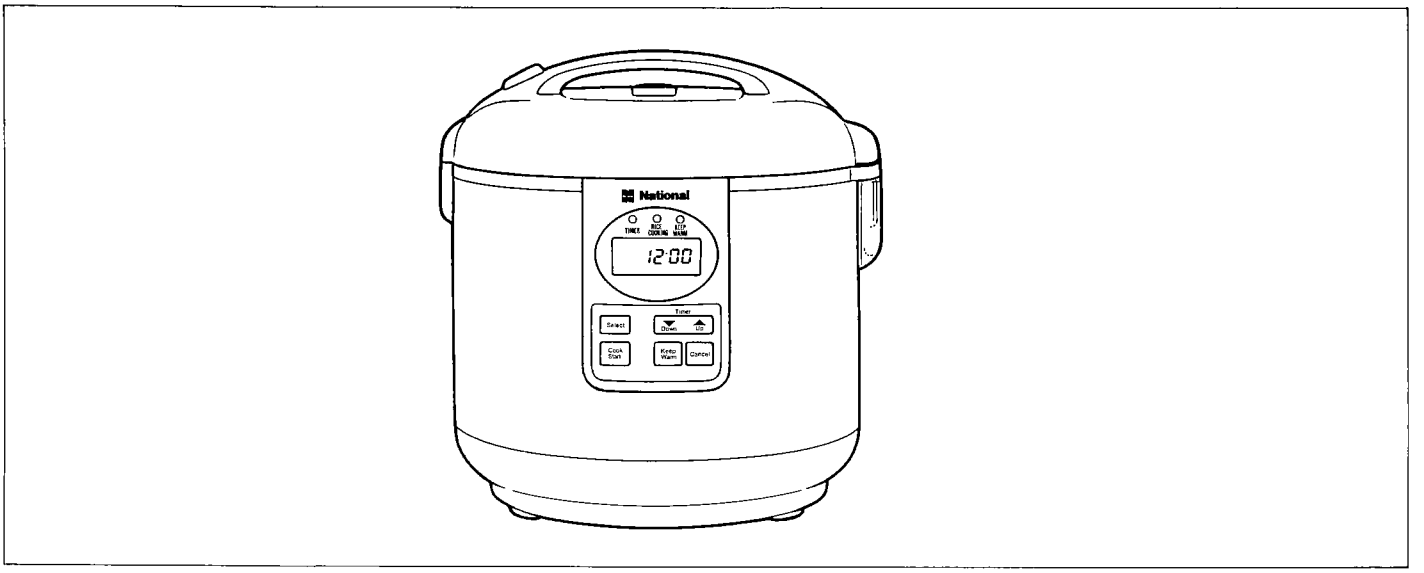
ORDER NO. KAD 8710D147C3

Service Manual

Electronic Rice Cooker / Warmer

SR-FT18N



Specifications

Power Supply :	: AC 200V–220V
Power Consumption :	: Cooking ··· 570W
	: Warming···73W
Menu Selection :	: WHITE, MIXED, SPECIAL, BROWN, CONGEE
Final Cooking Temperatures :	: WHITE···134 ℃ , MIXED···125 ℃ , SPECIAL···125 ℃ , BROWN···120 ℃ , CONGEE··· 100 ℃
Cooked Rice Warming Temperature :	: 71 ℃ +6 ℃ −2 ℃ (69 ℃ ~ 77 ℃)
Cooking Capacity :	WHITE·····0.54 ℓ ~ 1.8 ℓ (3cups ~ 10cups) MIXED·····0.54 ℓ ~ 1.08 ℓ SPECIAL·····0.54 ℓ ~ 1.08 ℓ BROWN·····0.54 ℓ ~ 1.26 ℓ CONGEE·····max 3.0 ℓ
Warming Capacity : (White Rice only)	: 0.54 ℓ ~ 1.8 ℓ (3cups ~ 10cups)
Temperature Detector :	: Pan and lid sensors (negative-characteristic thermistor)
Timer :	: Digital timer
Buzzer :	: Sounds once each time a key is pressed and 8 times at 0.5 second intervals after the standing stage when the rice is ready.
Safety Devices :	: Cut-out device to prevent operation with no pan inserted.
	: Thermal fuse 192 ℃ 10A
Cord :	: Cord reel 0.8m
Dimensions :	: 28.0cm (W) × 27.5cm (D) × 28.0cm (H)
Weight :	: Approx. 3.8kg
Accessories :	: Rice scoop, congee scoop, scoop holder, measuring cup

National

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

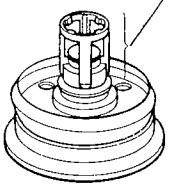
HK

1. CONTENT

2. PARTS IDENTIFICATION

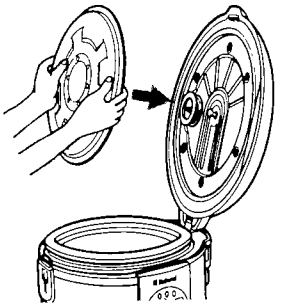
Pressure valve 調壓閥

- Attachment and removal of the pressure valve can be done easily by turning it left and right.
- 安裝或拆卸調壓閥時，一邊將閥左右旋轉一邊操作，甚爲簡單。

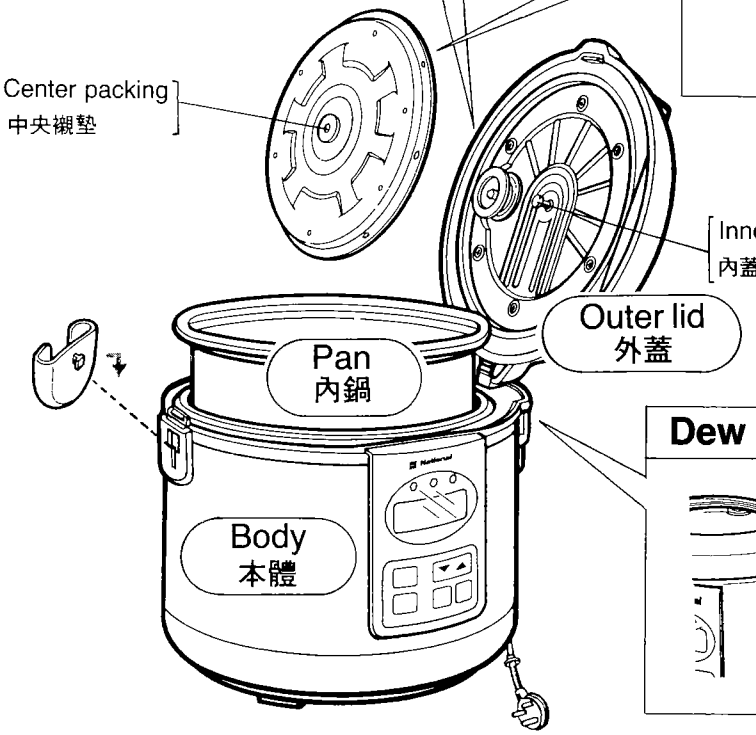


Insert this part in as far as it will go.
將此部分牢牢插到裏面。

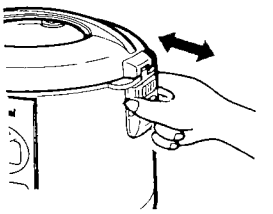
Inner lid 內蓋



- Slide inner lid onto inner lid shaft. Face large rubber lip of center packing towards outer lid. Small side of center packing should face you if outer lid is open.
- 將內蓋滑入內蓋的安裝軸釘上。將中央襯墊的大橡皮緣朝着外蓋。當外蓋打開時，中央襯墊的較小的一面應對着您。

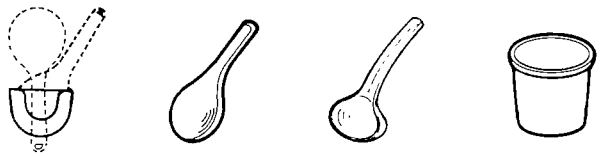


Dew collector 水滴收集器



- Hold the sides and remove/install in the direction of the arrows.
- 抓住水滴收集器的兩邊拉下／按箭頭的方向將其裝上。

Accessories 附 件



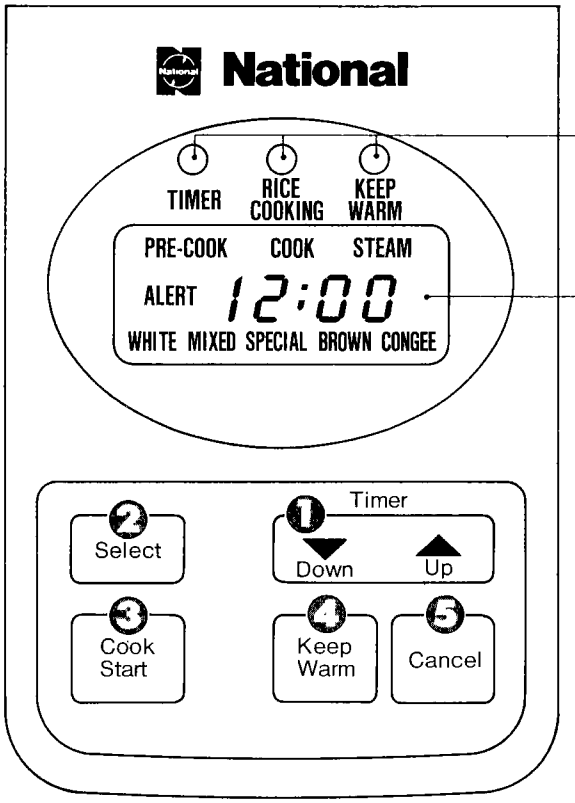
Scoop holder 飯勺筒

Rice scoop 飯勺子

Congee Scoop 粥勺子

Measuring cup (approx. 180mℓ) 量杯 (約0.18公升)

3. CONTROL PANEL INDICATORS



Make sure buzzer sounds when you press the key.
請確認在按鍵時蜂鳴器鳴叫。

- Timer indicator (green) 定時指示器(綠)
- Cook indicator (red) 煮飯指示器(紅)
- Warm indicator (orange) 保溫指示器(橘)

Display 顯示

1 Timer 定時器

Press to set the timer.
按鍵以設定定時器。

Up — Press to advance the timer in 10 min. intervals.
按此鍵使定時器以10分鐘爲間隔前進。

Down — Press to reverse the timer in 10 min. intervals.
按此鍵使定時器以10分鐘爲間隔倒退。

Press continuously for fast time advance.
持續按鍵可獲得快速時間前進。

2 Select 選 擇

Press to select WHITE, MIXED, SPECIAL, BROWN or CONGEE.
Press to sequentially advance.
按此鍵可選擇白米飯、混合米飯、特殊米飯、糙米飯或米粥等。 按此鍵可順序前進。

3 Cook Start 煮飯開始

Press to start cooking.
Press Cook Start key twice to skip precook stage.
按此鍵可開始煮飯。
若省略預煮時，則請按兩次。

4 Keep Warm 保 溫

Press to keep cooked rice warm.
按此鍵可對已煮好的米飯保溫。

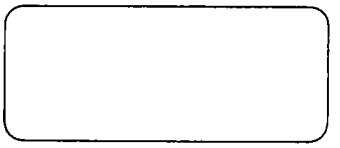
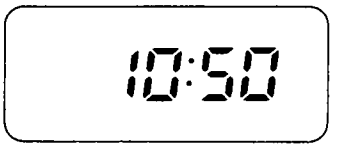
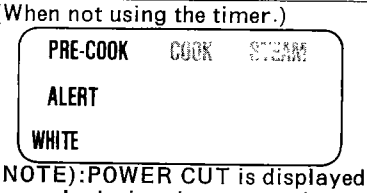
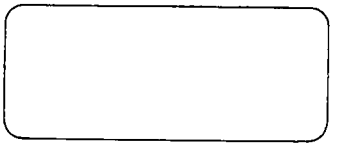
5 Cancel 取 消

Press to cancel an improper setting or Keep Warm.
按此鍵可取消不適當的設定或保溫。

Cord Reel 電源線卷

- **To Pull Out** 拉出
  Take hold of the plug and slowly pull the cord to the desired length. Do not pull the cord beyond the tape marker.
- 握住插頭，慢慢將電源線拉出至所希望的長度。請不要拉過線卷的標誌處。
- **To Rewind** 繞進
  Holding the plug in one hand tug the cord gently with the other to activate the automatic rewind mechanism.
  Continue holding the plug until the cord is safety rewound.
- 用一隻手握住插頭，用另一隻手輕拉電源線以驅動自動繞線機構。 握住插頭直至電源線安全繞進。

■ LCD Display in each Operating Mode

Operating Mode	LCD Display	
Initial		• Indicates the normal mode when the plug is plugged into the power supply.
Cancel		• No display
Select menu		• The selected menu flashes.
Timer Setting		-In the initial mode press either the Down key to display 13:00 or the Up key to display 1:00. • Then press the Down or Up key to count the display up or down in ten-minute units, respectively.
Timer		• The green timer lamp lights. The TIMER display counts down in one-minute units during timer operation.
Cooking	(When not using the timer.) 	• The red cooking lamp lights. • PRE-COOKING is displayed. • COOKING is displayed if the pre-cooking stage is skipped. • Later during the cooking process FINAL and the standing time, "13", are displayed.
	(NOTE):POWER CUT is displayed whenever there is an interruption in the power supply during timer operation or cooking of between one second and approximately one hour.	
Warming		• The orange WARMING lamp lights. • No display.

■ Times when the cooking starts

WHITE MIXED SPECIAL	With the timer set between 1 and 2 hours.	The cooking process starts with the pre-cooking stage 56 minutes before the set time.
	With the timer set to over 2 hours.	The cooking process starts with the pre-cooking stage 47 minutes before the set time.
CONGEE	With the timer set at less than 4 hour 30 minutes.	The cooking process starts with the pre-cooking stage immedlately the timer is set.
	With the timer set at over 4 hour 30 minutes.	The cooking process starts with the pre-cooking stage 4 hour 30 minutes before the set time.

(NOTE) The LCD time display counts down in one-minute units during the timer and cooking operations.
The 13 minutes between switching to the final cooking stage and completion of the standing stage is also counted down on the LCD display.

BROWN RICE	With the timer set at less than 3 hours.	The cooking process starts with the pre-cooking stage immediately the timer is set.
	With the timer set at over 3 hours.	The cooking process starts with the pre-cooking stage 3 hours before the set time.

(NOTE) The LCD time display counts down in one-minute units during the timer or cooking operations.
When cooking brown rice the LCD process display starts with cooking.
The 13 minutes between switching to the final cooking stage and completion of the standing stage is also counted down on the LCD display.

■ BUZZER to indicate that the rice is ready

- If the standing mode starts after the set time has elapsed (see ❶ in the diagram below).

  The timer setting is ignored and the buzzer sounds after the final standing of 384 seconds (6 minutes 24 seconds) is complete.

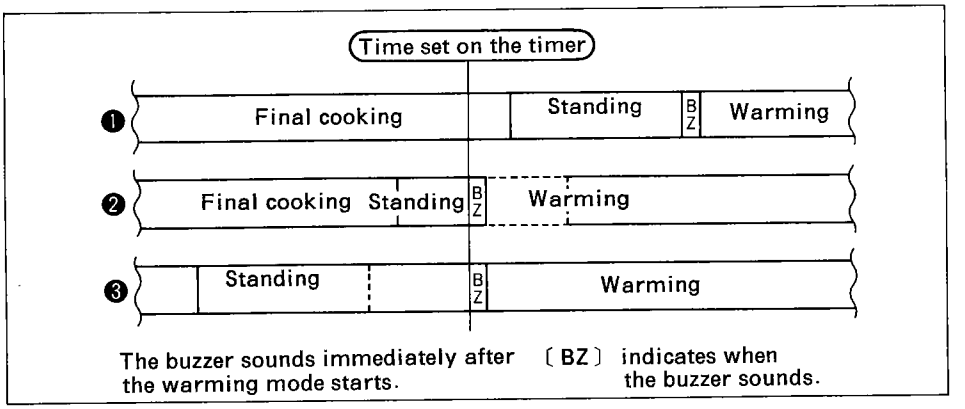
- If time set on the timer elapses during the 384 second standing time (see ❷ in the diagram below).

  The buzzer sounds when the set time has elapsed.

- If time set on the timer elapses after the 384 second final standing time is complete (see ❸ in the diagram below).

  The standing period is extended and the buzzer sounds when the set time has elapsed.
  This is the normal case when cooking with the timer.
  However, the buzzer sounds 19 minutes 12 seconds after the end of the standing time even if the set time has not elapsed.

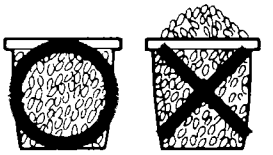
(NOTE) The buzzer always sounds when the standing period is complete when the timer is not being used.



4. HOW TO USE

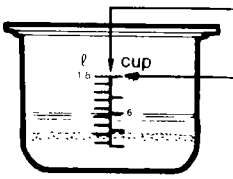
■ How to cook White Rice

1 Measure rice with provided measuring cup. Wash rice in separate bowl until water is relatively clear.
用量杯量好米。請用清水在其它的盆裏洗米，直到水比較乾淨爲止。



- Do not wash rice in rice cooker pan.
- 請不要在電鍋的內鍋，裏洗米。

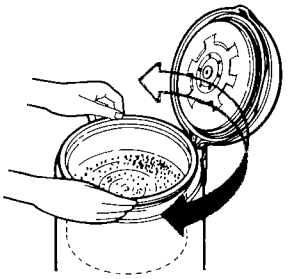
2 Put washed rice in pan.
Add water.
e.g. For 6 cups rice, add water to LEVEL INDICATOR 6.
將洗好的米倒入內鍋，並適當加水。
例如，要煮 6 杯米時，將水加至水位刻度“6”。



LEVEL INDICATOR
水位刻度
MAXIMUM LEVEL
Do not cook more than this amount.
最高水位：
煮飯量不得超過這個數量。

- Adjust water quantity to your personal taste.
- 您可根據自己的喜好，適當地調整水量。

3 Set pressure valve and inner lid onto outer lid.
Put pan in cooker.
將內蓋裝至外蓋。
將內鍋裝入電鍋。



- Wipe outside of pan before use. A wet pan may cause a cooking noise while cooking, and may damage unit.
- 如果把外側帶有水份的內鍋放入電鍋內，當蒸煮時就會發出噪音，還可能導致電鍋內部發生故障。因此，在使用前務必先將內鍋外側擦乾。
- The keys will not function if the pan is not in the cooker.
- 如內鍋不在電鍋內，則鍵鈕將不起作用。

4 Close outer lid.
Make sure lock clicks.
蓋上外蓋，並確認咔噠一響。

- If outer lid is not closed securely, cooking will be affected.
- 如果外蓋蓋得不嚴，則將影響煮飯。
- Do not open outer lid when in use.
- 使用中請勿打開外蓋。

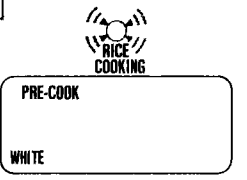
5 Plug in.
插上電源線。

6 Cook the rice.
煮飯。

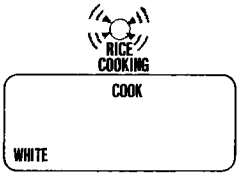
When cooking rice just after washing:
將米洗淨後馬上開始。

Press Cook Start Key once
按煮飯開始鍵一次。

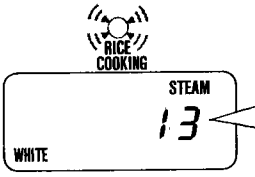
Precook
預煮



Cook
蒸煮



Steam
汽煮



- While rice steams steaming time is displayed.
- 當米飯汽煮時，汽煮時間就顯示出來。

When cooking rice soaked over 30 minutes:
事先已將米浸了30分鐘或以上。

Press Cook Start key twice to skip precook stage.
將煮飯開始鍵按兩次，則跳過預煮。

- The precook stage assures that the rice absorbs enough water even if rice is not pre-soaked.
- 預煮階段能保證米能吸收足夠的水，即使米未被浸泡過也如此。

- The precook step will be shortened if hot water is used or the cooker is warm from previous use.
- 如果使用熱水，或煮電鍋因爲用過而仍是熱的，則預煮階段將縮短。

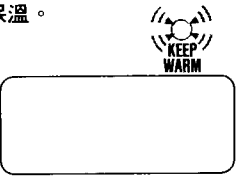
- A clicking sound may be heard while rice cooking. This is not malfunction.
- 煮飯時可能會聽到咔噠一響，這並不意味有什麼毛病。

7 Stir the rice, as soon as possible after buzzer sounds. (within 30 minutes.)
攪動米飯。
在蜂鳴器鳴叫後，請儘快攪動(30分鐘之內)。

- Buzzer will sound when rice finishes steaming.
- 當米飯結束冒汽過程時，蜂鳴器將會鳴叫。

- The rice may be sticky if it is not stirred.
- 如果不攪動，米飯可能黏在一塊並變成糊狀。

8 After cooking, the rice will automatically be kept warm unless Cancel Key pressed or the unit unplugged.
除非拔掉插頭或按取消鍵，米飯將被自動保溫。



- Do not unplug the cord while the rice is being kept warm. Be sure to plug the cord right back in if it is unplugged.
- 當米飯正被保溫時，請不要拔掉電源線。若拔掉了，則務必立即插回原處。

To stop Keep Warm function, press Cancel key and unplug.
取消保溫功能。 拔掉電源線。

- Rice can be kept warm for up to 12 hours.
- 米飯能保溫至12小時。

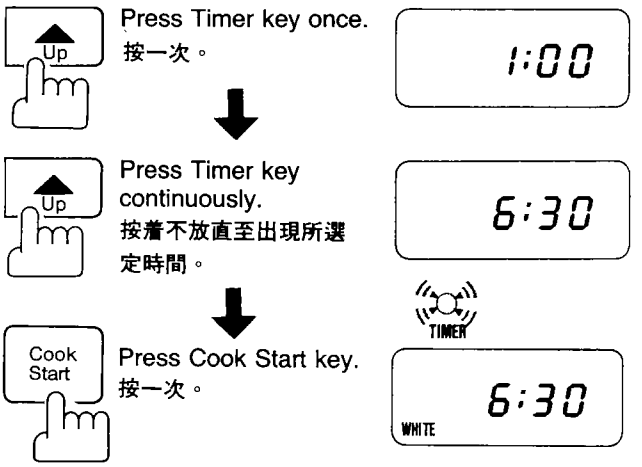
- Keep Warm function should only be used with white rice. Warming other rices may cause them to spoil.
- 保溫功能僅適用於白米飯。對其它米飯或混合米飯保溫，則可能使其味道改變。

- Remove and clean dew collector after every use.
- 每次使用完畢後，應取下水滴收集器進行清洗。

■ Timer cooking methoed

The timer indicates hours remaining until you wish to eat.
定時器指示出從現在到您用飯時的時間。

eg. It is now 1:00 p.m. and you would like to eat at 7:30 this evening. Set the timer for the difference between the current time and the eating time, i.e. 6:30 in this example.
現在是下午 1 點鐘，您希望今晚 7 點半鐘吃飯。將定時器設定爲現在時間和吃飯時間的差，即6 點30分。



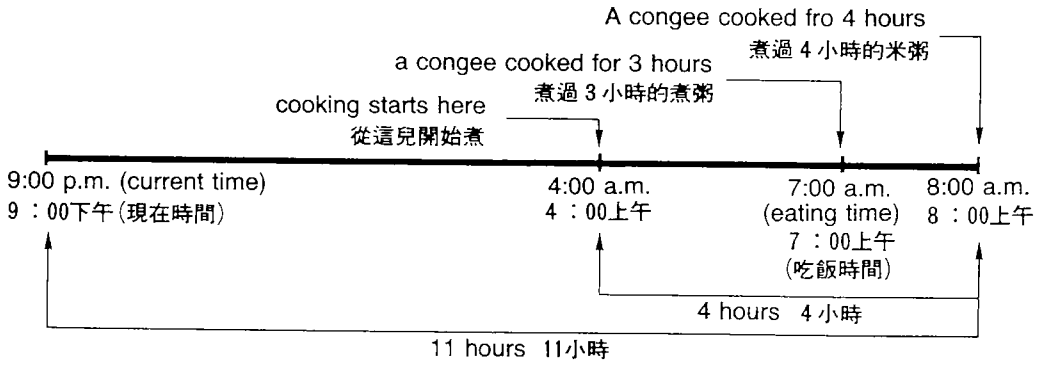
Press Cook Start to start timer.
The timer counts down the time until the rice is ready to eat.
按煮飯開始鍵以起動定時器。
定時器遞減計時直至米飯可吃爲止。

- Timer can be set in 10 min. intervals from 1 to 13 hrs.
- 定時器能以10分鐘爲間隔從1至13小時進行設定。

- Using the Down key:
  Press Down button to reverse timer.
  Press Down button continuously to reverse timer quickly.
- 使用 Down 鍵鈕：
  按 Down 鍵使定時器倒退。
  持續按 Down 鍵使定時器快速倒退。

NOTE:
If you want to eat congee cooked for less than normal cooking time (4 hours), you can press the Cansel key to stop cooking. Remember that in setting the timer, you must add the time you omitted from normal cooking time. For example, it is 9:00 p.m. and you want to east congee cooked for 3 hours at 7:00 a.m. the next morning, you must set the timer for 11 hours and press Cancel key at 7:00 a.m.

注意：
如果您希望吃以少於正常煮粥時間(4 小時)煮的米粥，您可以按取消鍵來停止煮粥。請記住：當您設定定時器時，請務必將您從正常煮粥時間中省掉的那部分時間加進去。例如，現在是晚上 9 點鐘，您想在明天上午 7 點鐘吃煮過 3 小時的米粥，則您必須將定時器設定爲11小時，並且在上午 7 點鐘按取消鍵。



■ How To Cook Congee

1 Measure rice with provided measuring cup.
Wash rice in separate bowl until water is relatively clear.

用量杯量好米。
請用清水在其它的盆裏洗米，直到水比較乾淨爲止。

- Do not wash rice in rice cooker pan.
- 請不要在電鍋的內鍋裏洗米。

2 Place the rice in the pan and measure the water with provided measuring cup.

把洗好的米放進內鍋，用量杯加水。

Servings 供給人數	6—8 persons 6—8人
Rice quantity 米的數量	1 cup* 1杯*
Water quantity 水的數量	12 cups* 12杯*

*Do not use water level indicators inside pan.
*請不要使用內鍋內側的水位刻度。

This table is for reference only. Adjust amount of water to your personal taste.
Salt and oil can be added according to your taste.
這個表僅供參考。請根據您自己的喜好調整加水量。
還可根據您的口味，加放鹽、油。

- Maximum capacity: 3.0 ℓ including all ingredients.
- 最大容量：包括所有成份共3.0公升。
- Water level should not exceed maximum level.
- 水位不超過最高線。

3 Set pressure valve and inner lid onto outer lid.
Put pan in cooker.

將調壓閥和內蓋裝至外蓋。
將內鍋放入電鍋。

- Remove any water and foreign objects from the outside of the pan.
- 將內鍋外側的水和其它雜物去掉。
- The keys will not function if the pan is not in the cooker.
- 如果內鍋不在電鍋內，則鍵鈕將不起作用。

4 Close the outer lid.
Make sure the lock clicks.

蓋上外蓋，並確認咔噠一響。

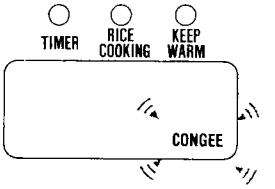
- Make sure pressure valve and inner lid are on outer lid.
- 要保証將調壓閥和內蓋置於外蓋上。

5 Plug in.
插入電源線。

6 Press Select key for CONGEE.
將選擇鍵按至CONGEE(米粥)。

- After the congee is indicated, press Cook Start key.
- 當顯示出 CONGEE(米粥) 後，按下煮飯開始鍵。

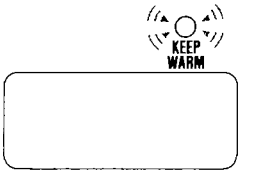
The indicator changes each time the select key is pressed.
選擇鍵每按動一次，指示器就變化一次。



- White rice is automatically selected if the select key is not pressed.
- 如果不按選擇鍵，則自動選擇白米飯。
- If congee mode is not selected, congee may overflow.
- 如果不按至米粥方式，則米粥會溢出。
- If "ALERT" is displayed while cooking, reset is CONGEE mode, or it will boil over.
- 煮粥時如果顯示出"ALERT"，則請重新設定至米粥方式，否則米粥會溢出。

7 After cooking, the congee will automatically be kept warm unless Cancel key is pressed or the unit unplugged.
除非被取消或拔下插頭，米粥將被自動保溫。

- Do not unplug the cord while the congee is being kept warm. Be sure to plug the cord right back in if it is unplugged.
當米粥正被保溫時，請不要拔掉電源線。若拔掉了，則務必立即插回原處。



- To stop Keep Warm function, press Cancel key and unplug.
取消保溫功能。 拔掉電源線。

- Press Keep Warm again if desired.
- 如果希望的話，可再按一次保溫鍵。
- The cooker automatically cooks congee 4 hrs. Press Cancel key to shorten cooking time, then press Keep Warm if desired.
- 電鍋自動煮米粥 4 小時。按取消鍵可縮短煮粥時間，如果希望，這時可按下保溫鍵。
- Keep warm temperature is approx. 70°C.
- 保溫溫度約爲70℃。

■ How to cook Mixed, Special or Brown Rice

Follow "HOW TO COOK WHITE RICE (P.4~5)" directions.
參照煮白米飯的方法，只是下面的指示有所不同：

- Select the proper rice dish with the Select key. Then press Cook Start key.
- 用選擇鍵選擇米飯盤。然後按下煮飯開始鍵。
- The indicator changes each time the select key is pressed.
選擇鍵每按動一次，指示器就變化一次。

- Selecting the wrong dish may cause the rice to be too soft or hard.
- 請選擇正確的米飯盤。如果選擇了錯誤的盤，則可能使米飯太軟或太硬。
- White rice is automatically selected if the Select key is not pressed.
- 如果不按選擇鍵，則自動選擇白米飯。

STANDARD WATER AMOUNT 標準水量

Mixed rice

Rice Amount 飯量		Water Amount 水量	
3 cups	3 杯	4 cups	4 杯
4	4 杯	5	5 杯
5	5 杯	6¼	6¼杯
6	6 杯	7½	7½杯

Special (glutinous) rice

Rice Amount 飯量		Water Amount 水量	
3 cups	3 杯	3 cups	3 杯
4	4 杯	4	4 杯
5	5 杯	5	5 杯
6	6 杯	5¾	5¾杯

Brown rice

Rice Amount 飯量		Water Amount 水量	
3 cups	3 杯	5¼ cups	5¼杯
4	4 杯	6¾	6¾杯
5	5 杯	8	8 杯
6	6 杯	9	9 杯
7	7 杯	10½	10½杯

* 1 cup =180 mℓ
★ 1 杯=180毫升
* Do not use water level indicators inside pan. ★請不要使用內鍋裏的水位刻度。

Note 注意

- Do not use the timer when cooking brown rice with mussels, special rice dishes, or mixed rice. Flavorings and seasonings may settle to the bottom while the rice is waiting.
- Using the timer
Set the timer for at least 3 hours when cooking brown rice, and at least 5 hours. when cooking congee. The timer will not function properly and cooking will begin immediately if the setting time is too short.
- 當將糙米和糯米飯或混合米一塊煮時，請不要使用定時器。 當米飯等待時，調味品和香料可能會沉到鍋底。
- 使用定時器
當煮糙米飯時，請將定時器至少設定 3 小時，當煮米粥時，至少設定 5 小時。
如果設定時間太短，則定時器不能正常運作，且蒸煮會立即開始。

■ Guide to cooking time

White Rice 白米飯

Rice Amount 飯 量		Cooking Time 煮飯時間
3 cups (0.54 ℓ)	3 杯 (約0.54公升)	47 min. 47分鐘
10 cups (1.8 ℓ)	10杯 (約1.8公升)	55 min. 55分鐘

Brown Rice 糙米飯

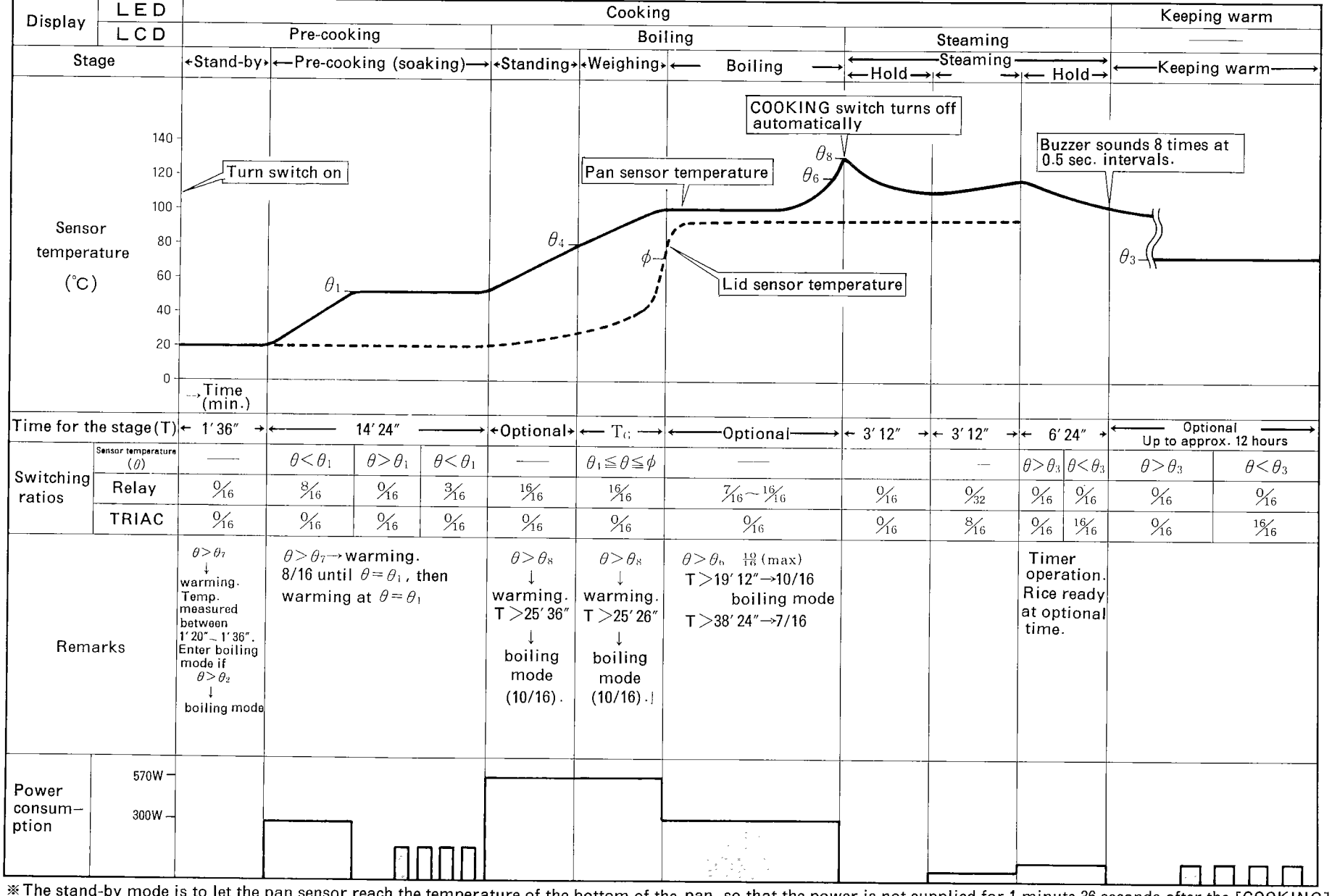
Rice Amount 飯 量		Cooking Time 煮飯時間
3 cups (0.54 ℓ)	3 杯	approx. 2 hours. 大約 2 小時
7 cups (1.26 ℓ)	7 杯	

Congee 米粥

Rice Amount 飯 量		Cooking Time 煮飯時間
1 cup (0.18 ℓ)	稀 1 杯	4 hours. 4 小時

- The precook stage can be omitted to shorten the time about 10-13 minutes.
- 預煮過程可省去，從而節約大約10~13分鐘。
- Cooking time varies slightly with fluctuations in voltage, room temperature, water volume.
- 煮飯時間隨電壓、室溫、水量的變化而有少許變化。
- Cooking time if mixed and special rice is almost same as that of white rice.
- 混合米飯和糯米飯的煮飯時間和白米飯的幾乎相同。

● Cooking White Rice θ_1…50℃、θ_2…60℃、θ_3…71.5℃、θ_4…82.9℃、θ_5…90℃、θ_6…120℃、θ_7…125℃、θ_8…134℃、ϕ…71.5℃

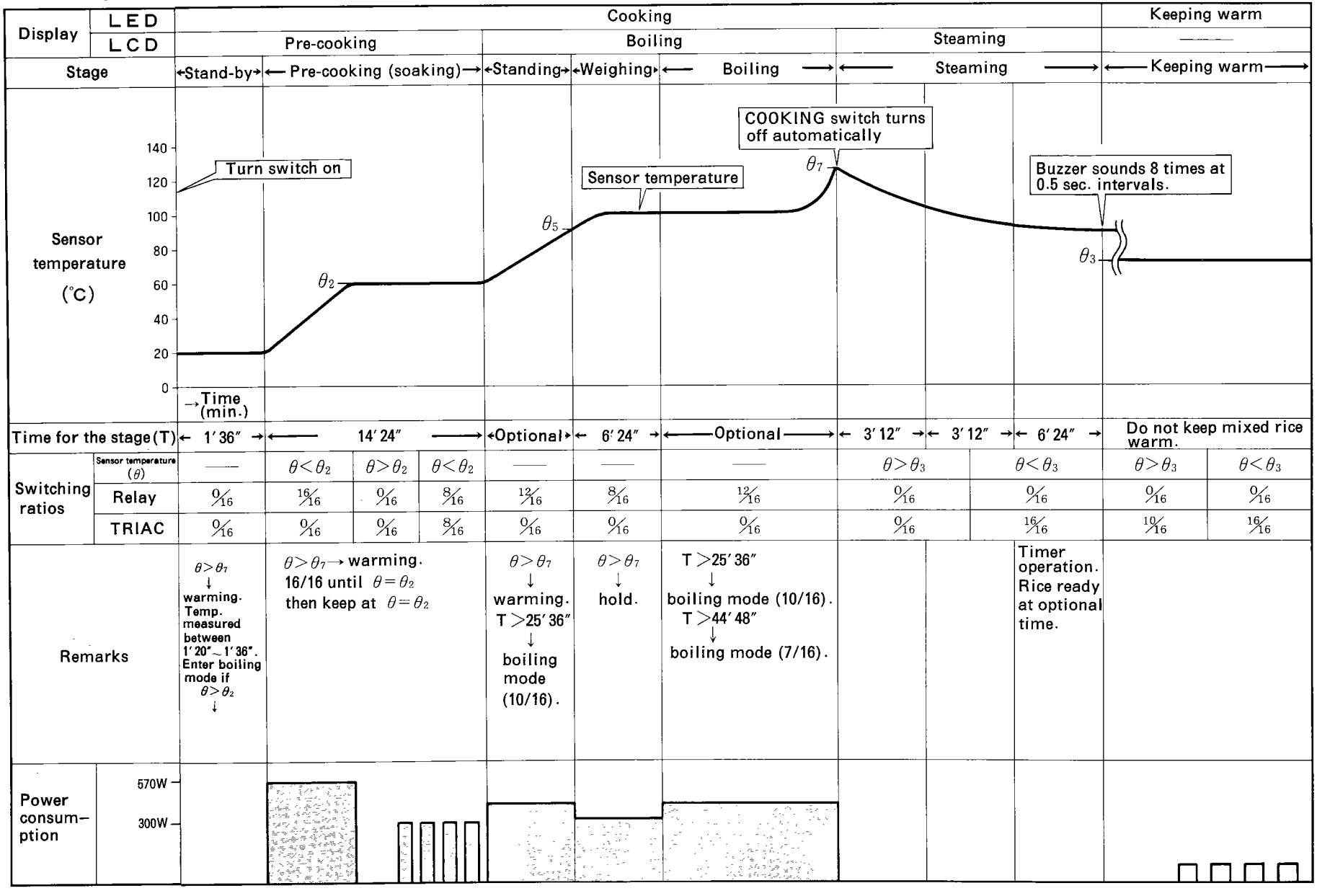


※The stand-by mode is to let the pan sensor reach the temperature of the bottom of the pan, so that the power is not supplied for 1 minute 36 seconds after the [COOKING] switch is pressed.

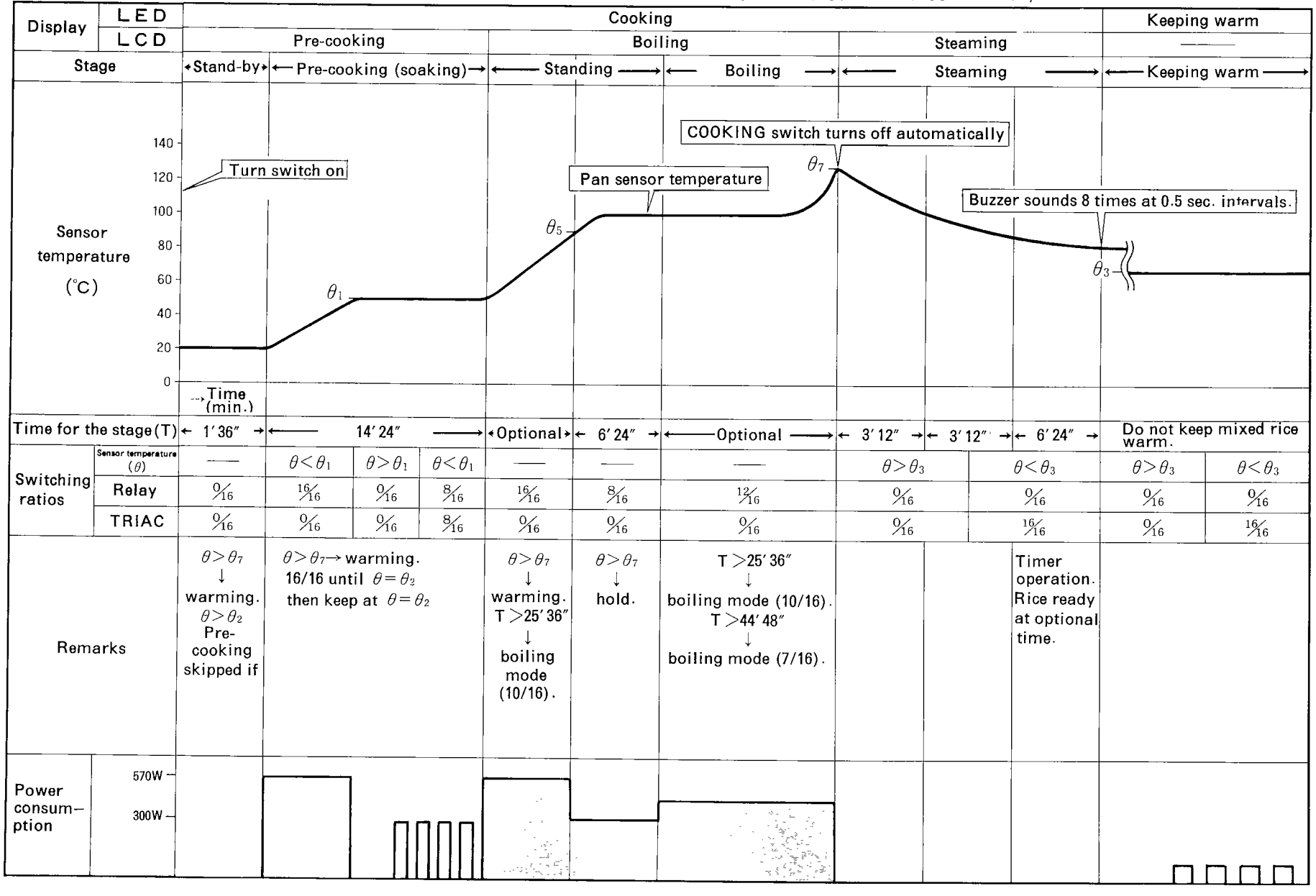
● Cooking Mixed Rice

θ_1…50℃、θ_2…60℃、θ_3…71.5℃、θ_4…82.9℃、θ_5…90℃、θ_6…120℃、θ_7…125℃、θ_8…134℃、ϕ…71.5℃

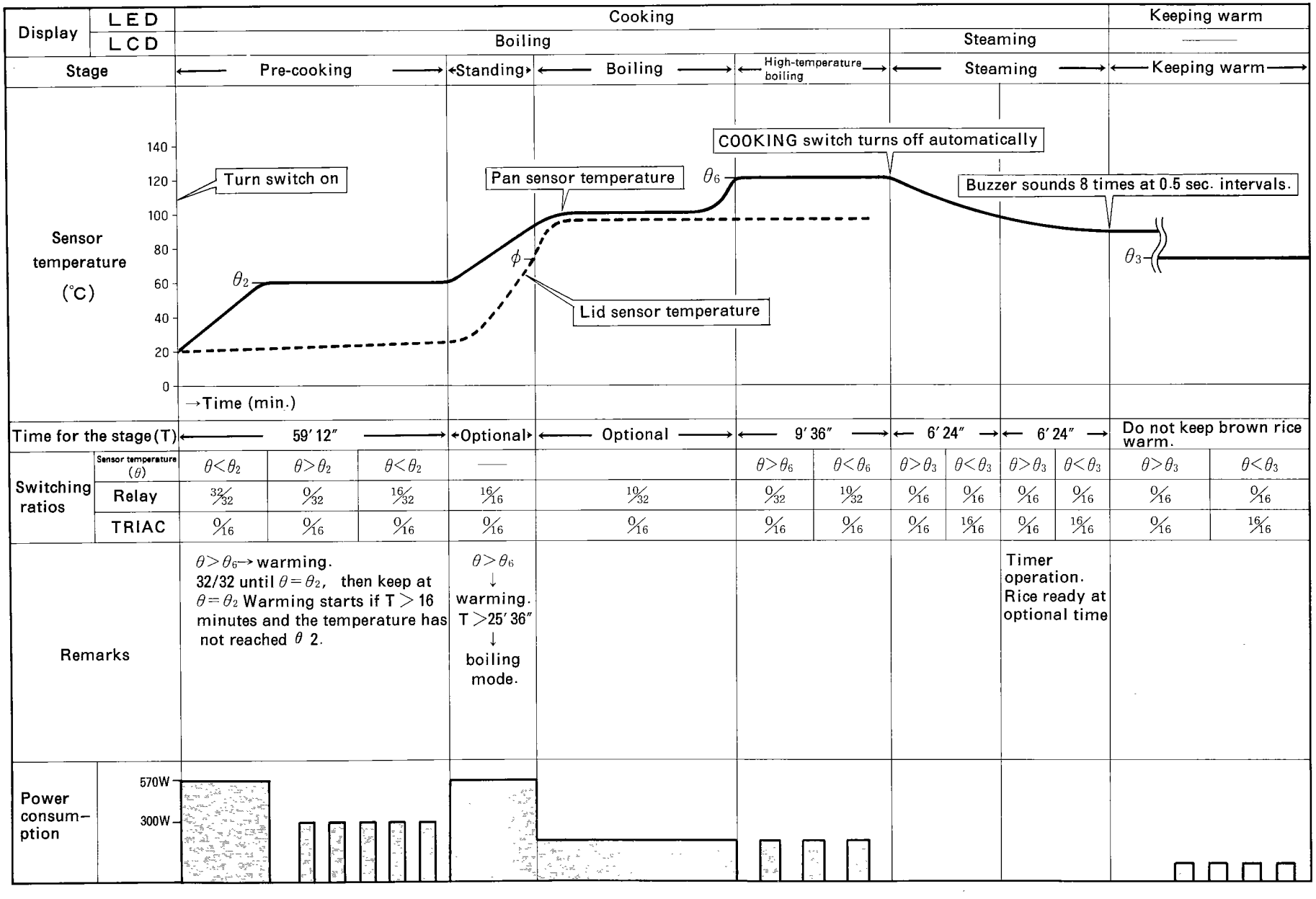
Display		Cooking										Keeping warm	
	LED												
	LCD	Pre-cooking				Boiling			Steaming			—	
Stage		←Stand-by→	← Pre-cooking (soaking) →			←Standing→	←Weighing→	← Boiling →	← Steaming →			← Keeping warm →	
Time for the stage (T)		← 1′36″ →	← 14′24″ →			←Optional→	← 6′24″ →	←Optional→	← 3′12″ →	← 3′12″ →	← 6′24″ →	Do not keep mixed rice warm.	
Switching ratios	Sensor temperature (θ)	—	$\theta<\theta_2$	$\theta>\theta_2$	$\theta<\theta_2$	—	—	—	$\theta>\theta_3$	$\theta<\theta_3$		$\theta>\theta_3$	$\theta<\theta_3$
	Relay	0/16	16/16	0/16	8/16	12/16	8/16	12/16	0/16	0/16		0/16	0/16
	TRIAC	0/16	0/16	0/16	8/16	0/16	0/16	0/16	0/16	16/16		10/16	16/16
Remarks		$\theta>\theta_7$ ↓ warming. Temp. measured between 1′20″~1′36″. Enter boiling mode if $\theta>\theta_2$ ↓	$\theta>\theta_7$ → warming. 16/16 until $\theta=\theta_2$ then keep at $\theta=\theta_2$			$\theta>\theta_7$ ↓ warming. T >25′36″ ↓ boiling mode (10/16).	$\theta>\theta_7$ ↓ hold.	T >25′36″ ↓ boiling mode (10/16). T >44′48″ ↓ boiling mode (7/16).			Timer operation. Rice ready at optional time.		



● Cooking Special Rice θ_1…50℃、θ_2…60℃、θ_3…71.5℃、θ_4…82.9℃、θ_5…90℃、θ_6…120℃、θ_7…125℃、θ_8…134℃、ϕ…71.5℃

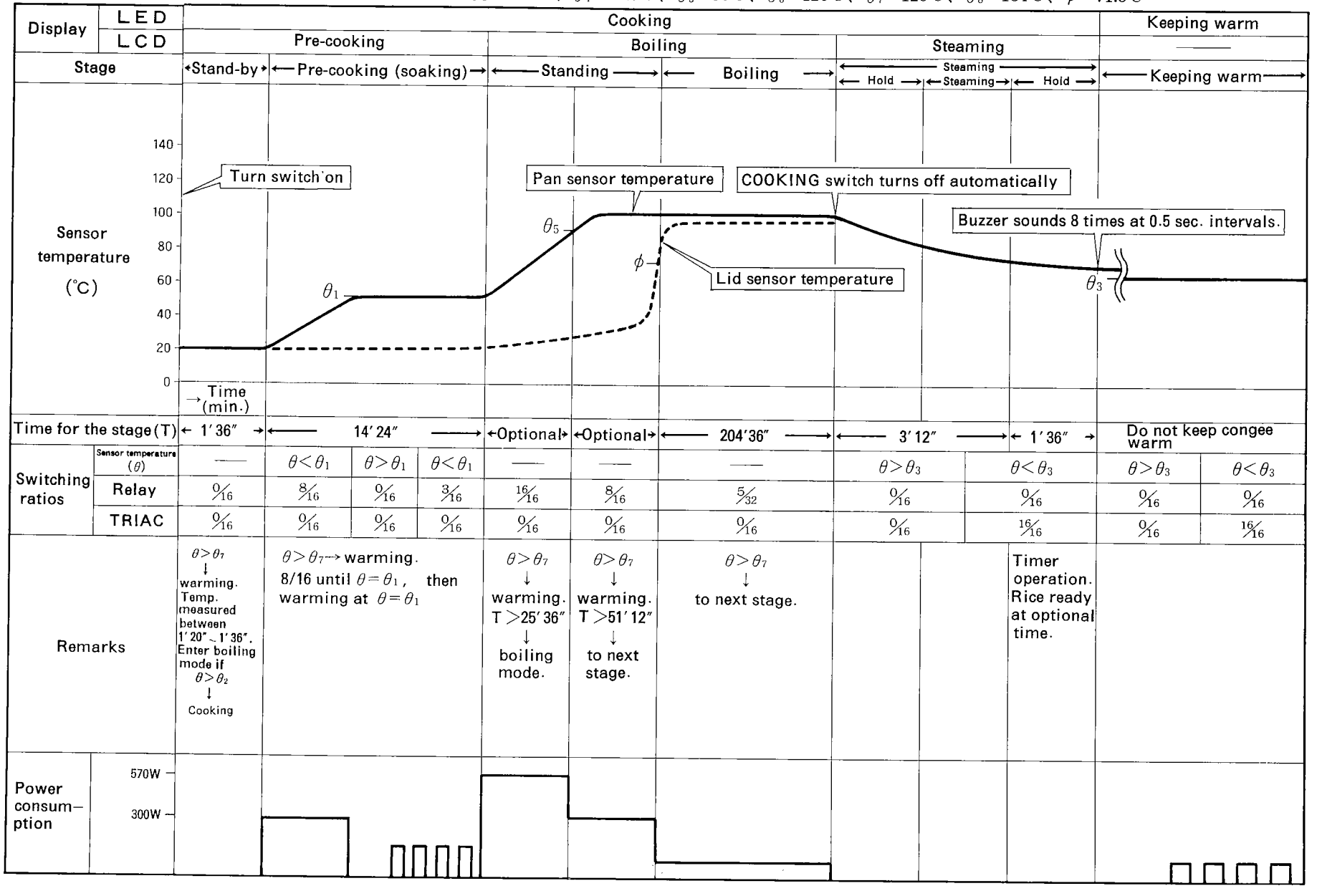


● Cooking Brown Rice θ_1…50℃、θ_2…60℃、θ_3…71.5℃、θ_4…82.9℃、θ_5…90℃、θ_6…120℃、θ_7…125℃、θ_8…134℃、ϕ…71.5℃



● Cooking Congee

θ_1…50℃、θ_2…60℃、θ_3…71.5℃、θ_4…82.9℃、θ_5…90℃、θ_6…120℃、θ_7…125℃、θ_8…134℃、ϕ…71.5℃



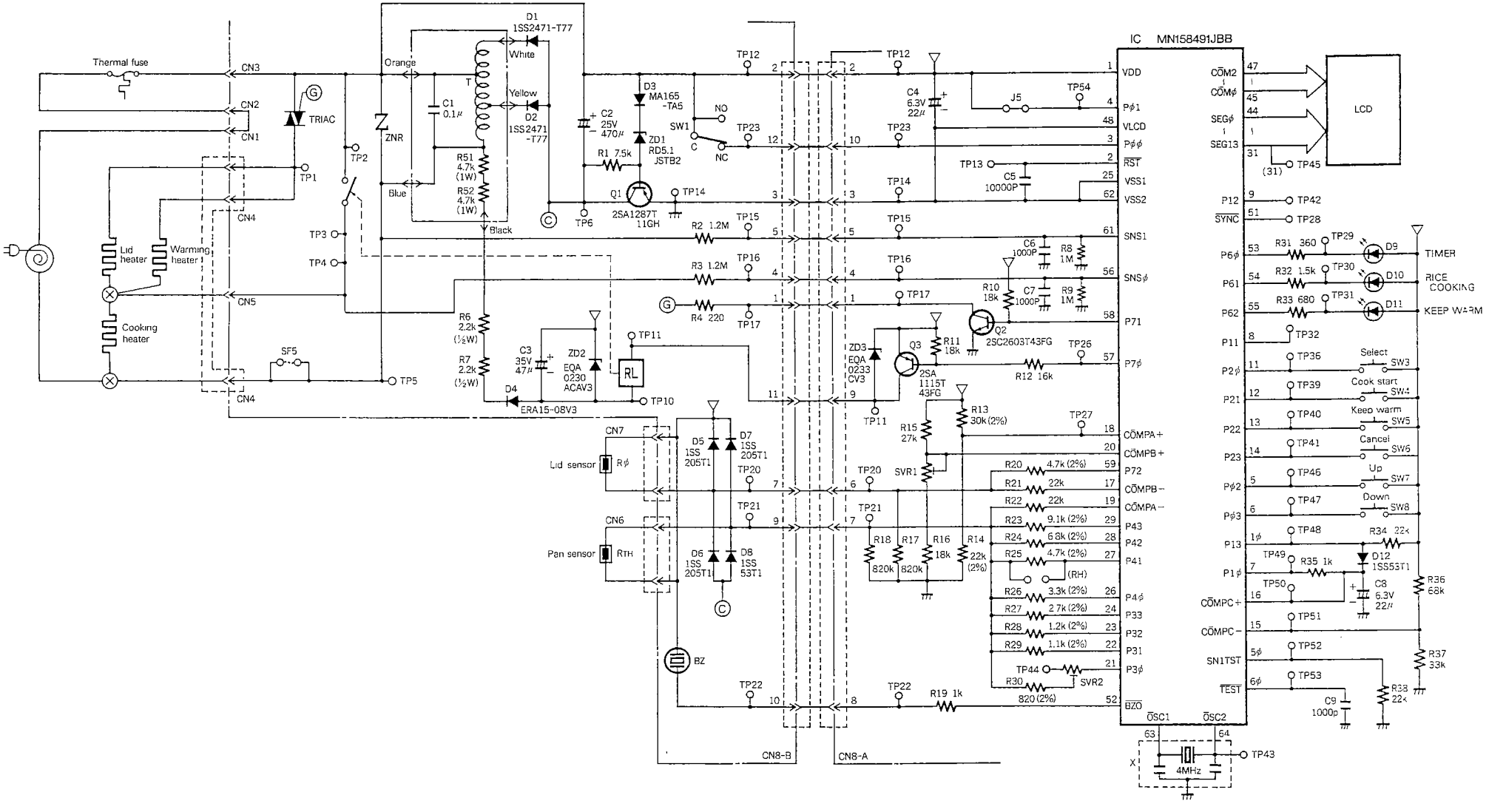
■ Cooker operation when abnormality arises

θ iniucates the temperature of the pan sensor.
θ_1=50℃, θ_2=60℃, θ_3=71.5℃, θ_4=82.9℃, θ_5=90℃, θ_6=120℃, θ_7=125℃, θ_7=134℃.

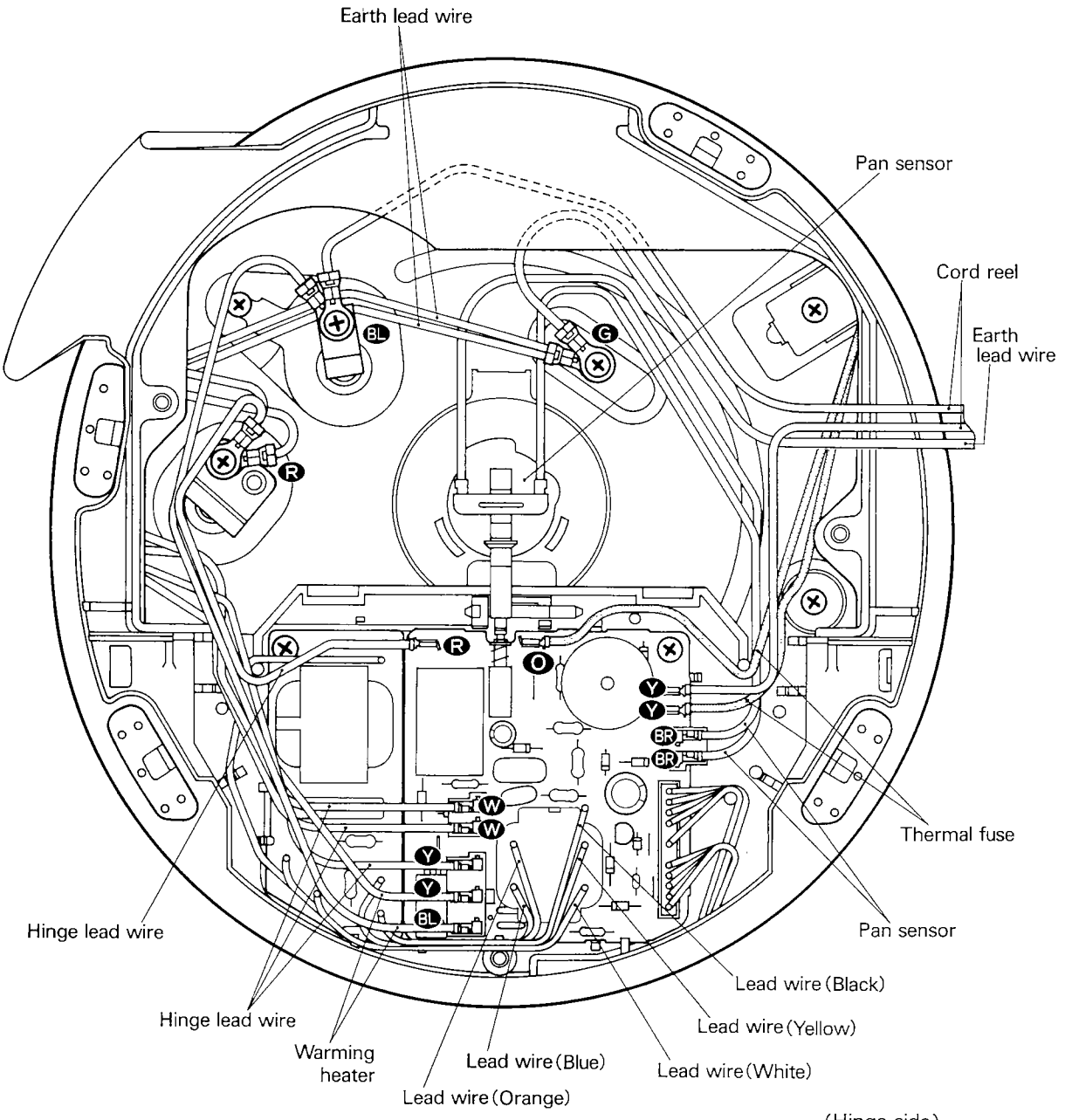
Problem	Stage	Description of problem	Corresponding action			
			LCD display	Switching ratio		
				Relay	TRIAC	
High initial temperature	Stand-by	$\theta > \theta_2$ (60℃)	COOKING is displayed	10/16	0	Cooking is carried out at a fixed switching raiio of 10/16 after the stand-by stage is complete. The pre-cooking stage is skipped (if the initial temperature is high). The cooker operates normally after the boiling (ie. cooking) stage is complete. [wait – final cooking – wait–buzzer (8 times) – warming]
Boiling mode	Stand-up	If this stage is not completed in 1536 seconds.	COOKING is displayed	10/16	0	θ reaches θ_4 and the cooker operates normally after the cooking stage is complete. [wait – final cooking – wait – buzzer (8 times) – warming] In the boiling stage cooking of white rice is not complete in 2304 seconds the relay switching ratio changes to 7/16 (2688 seconds for mixed or special rice.)
	Weighing					
	Keep up boiling	If white rice cooking is not completed in 1152 seconds. (1536 seconds for mixed or special rice.)				
Pan sensor not connected	All	The resistance of the pan sensor exceeds 320KΩ ~ 1.1MΩ due to a broken or faulty connection.	No display	0	0	The cooker enters the CANCEL mode and the keys do not function. The cooker stays in this mode until it is reset.
Power cut (between is and approx. 1hr)	Stand-by pre-cooking Cooking	The power supply is cut off.	All operation of the cooker stops at the moment the power is cut off. POWER CUT is displayed when the power is reconnected and if $\theta > \theta_2$ (60℃) ··· boiling mode $\theta > \theta_2$ (60℃) ··· begins cooking mode from pre-cooking mode. In each case, the menu reverts to WHITE.			
	Final cooking Standning		All operation of the cooker stops at the moment the power is cut off. When the power is reconnected, if $\theta > \theta_2$ (60℃) ··· enters warming mode $\theta > \theta_2$ (60℃) ··· enters initial mode			
	During timer operation.		The timer operation stops at the moment the power is cut off. When the power is reconnected POWER CUT is displayed and if $\theta > \theta_2$ (60℃) ···boiling mode $\theta > \theta_2$ (60℃)...begins cooking mode from pre-cooking mode. In each case, the menu reverts to WHITE.			
	Warming		All operation of the cooker stops at the moment the power is cut off. When the power is reconnected, if $\theta > \theta_2$ (60℃) ··· enters warming mode $\theta > \theta_2$ (60℃) ··· enters initial mode			
Power cut (over approx. 1hr)	All					

(NOTE) the rice cooker status does not change if the power is disconnected for less than one second due to the plug being pulled out or a power failure. The keys are inoperative during a power cut and for approximately one second after power is reconnected.

5. CIRCUIT DIAGRAM

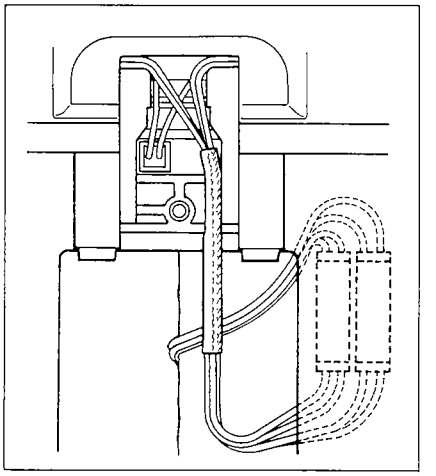


6. SCHEMATIC DIAGRAM

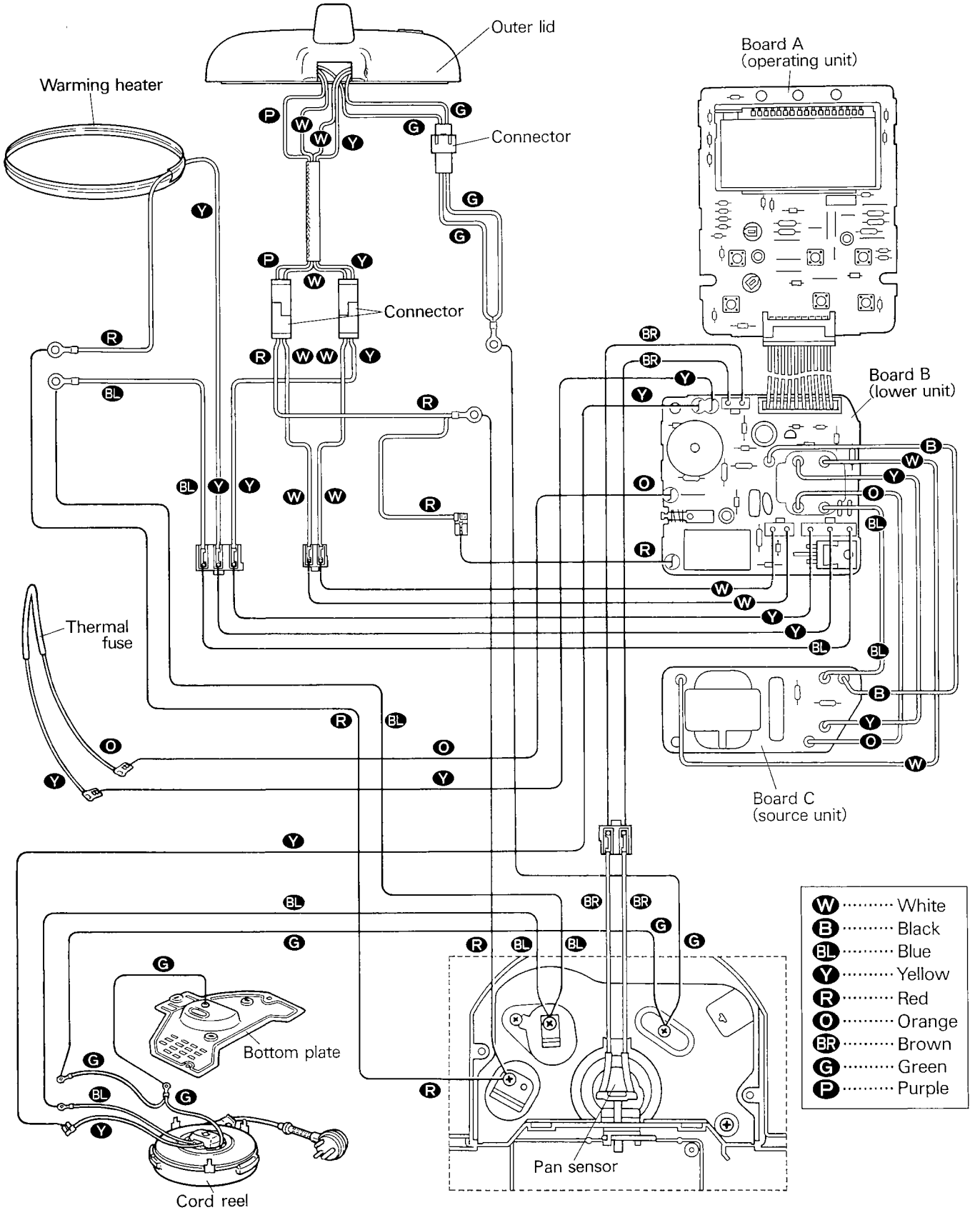


W ..... White
BL ..... Blue
Y ..... Yellow
R ..... Red
O ..... Orange
BR ..... Brown
G ..... Green

(Hinge side)



7. WIRING DIAGRAM



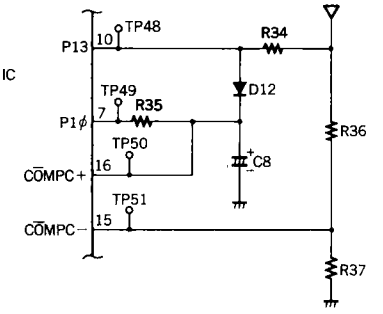
8. CIRCUIT DESCRIPTION

Process	Operation	Circuits
Plugging in the power supply	The power supply circuit operates to supply AC and DC voltages to other the circuits.	• Low-voltage TRIAC • power supply circuit
	→ The oscillator (X) connected to the IC terminals (63) and (64) oscillates at 4 MHz (for use by the microprocessor).	• Oscillator circuit
Key input	→ Inputs are made to the IC switch input terminals (5), (6), (11)-(14) when a key is pressed.	Operating unit (switch circuits)
Safety switch signal inputs	→ When the pan is inserted the safety switch turns on and applies an approximately 5V DC voltage to the IC terminal (3) (safety switch input). H level (approx. 5V) ..... pan inserted L level (approx. 0V) ..... no pan inserted	
LCD display	→ Outputs from the IC segment terminals (31)-(44) are applied to the LCD and display the segments matching the signals output from the IC common terminals (45)-(47).	Display circuit
Relay operation	→ The signal output from the IC relay signal terminal (57) passes through Q3 and operates the relay (RL). H level (approx. 5V) ..... relay (RL) OFF L level (approx. 0V) ..... relay (RL) ON	Relay drive circuit
Buzzer signal	When a key is pressed etc. the signal output from the IC buzzer signal terminal (52) passes through R19 and operates the buzzer.	Buzzer circuit
TRIAC operation	→ The signal output from the IC TRIAC signal terminal (58) passes through Q2 and R4 and is applied to the TRIAC gate. H level (approx. 5V) ..... TRIAC ON L level (approx. 0V) ..... TRIAC OFF	TRIAC drive circuit

Process	Operation	Circuits
Power cut off		Cooking status memory circuit

IC termial	During power cut	During timer operation or cooking	During warming or other mode
(10)	———	H level	L level
(7)	As before power cut	H level	L level
(16)	As berore power out	H level	L level

The signals during a power cut are shown in the table above.
When the power supply is reconnected, the microprocessor compares the voltages at terminals (15) and (16). Cooking is immediately recommenced if the voltage at terminal (16) is determined to be higher than that at terminal (15).
The cooking status can only be stored for up to approximately one hour by the C8 terminal voltage between the time the power is cut off and reconnected.



9. TROUBLESHOOTING

■ Before carrying out the troubleshooting procedures

1) Read this section before starting the troubleshooting procedures. Press the keys of the rice cooker to set the required conditions for troubleshooting. Then check the LCD and LED displays and the power consumption and diagnose the problem from the columns in the Troubleshooting Table.

2) Carry out Steps 1 to 7 in order, correcting any problems at each step before proceeding to the next step.

3) Carry out the tests listed after the Troubleshooting Table if no problems are uncovered in Steps 1 to 7.

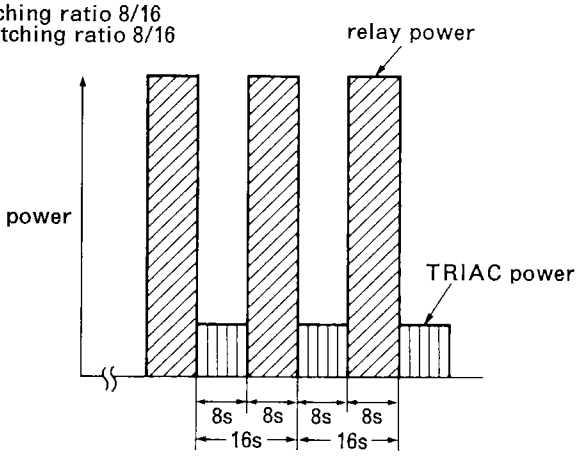
■ Relay and TRIAC power

The relay and TRIAC power values listed in the Troubleshooting Table refer to the power consumption of the relay or TRIAC when it turns on.
The relay power and TRIAC power during warming and cooking are shown in the table below.

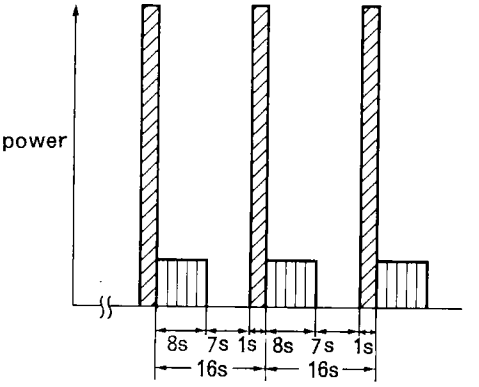
During cooking		During warming	
Relay power	TRIAC power	Relay power	TRIAC power
570W	73W	———	73W

- The TRIAC power only turns on during the pre-cooking and final cooking stages.
  The relay and TRIAC powers are controlled by their respective switching ratios, as shown in the diagram below.
- The relay does not turn on during the warming stage.

eg. relay switching ratio 8/16
TRIAC switching ratio 8/16



eg. relay switching ratio 1/16
TRIAC switching ratio 8/16



■ Cautions when handling the microprocessor or control circuits

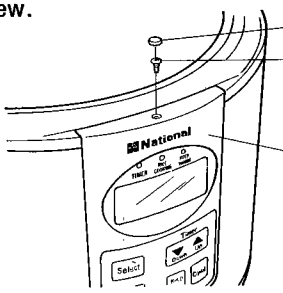
The microprocessor used in this rice cooker employs MOS-type FET basic elements and is known as a C-MOS digital IC. Take due care when handling this type of IC as the insulation is easily damaged by static electricity from clothing or a human body or by leak currents from soldering irons etc.

- Personnel should be earthed through a resistance of several M Ω .
- Earth soldering irons so that they cannot damage the IC insulation. Use a soldering iron designed for use with electrical equipment if possible.
- Do not directly touch the pins when handling the IC. Never place an IC on a charged, conductive surface.
- Do not insert an IC from the wrong side of the printed circuit board.
- Do not set the circuit tester to the high-resistance range (X10000) when making conduction checks as this may apply a voltage outside the rated range of the IC.
- Carry out soldering rapidly (in a few seconds).
- Unplug the power supply before replacing a component.
- The circuits include a transformer (T) but AC 200-220V is applied to the control circuit. Beware of electric shocks when touching the control circuit with the power connected.

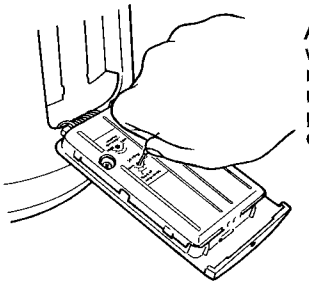
■ Disassembly procedure

Disassemble the rice cooker as much as necessary to permit troubleshooting.

(a) Open the lid, remove the cap with a needle and take out the operating panel fastening screw.

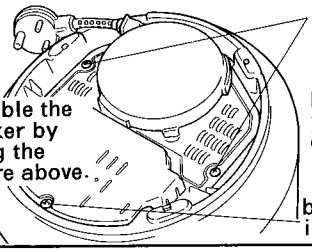


(b) Pull the operating panel forwards.



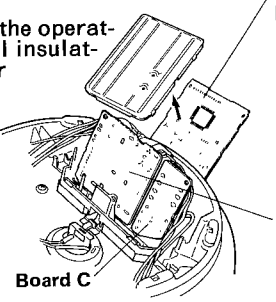
Adjustment of the warming temperature to prevent rice sticking to the pan can be carried out at this stage.

(c) Turn the rice cooker upside-down. Remove the two screws holding the base plate and the single screw holding the printed circuit board cover.



Reassemble the rice cooker by reversing the procedure above.

(d) Remove the board fastening screw and turn over the board.



Board A printed circuit board A (operating unit)

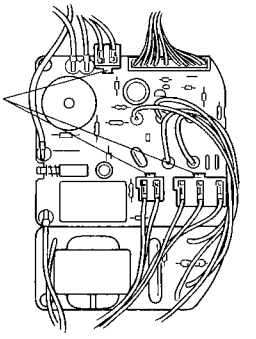
Turn over the board B (lower unit) to expose the test points (TP), as shown in the diagram.

Board B printed circuit board B (lower unit)

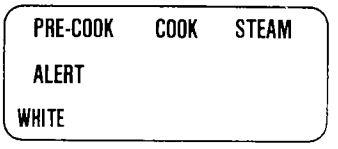
■ Cautions when connecting or disconnecting the board B (lower unit) leads.

Turn over board B (lower unit), as shown in (d) above.
Press out the clips from the rear of board B and disconnect the connectors.
Take care not to damage any of the other parts when disconnecting the connectors.
Do not apply undue force to board B.

Press these clips from the rear of board B and remove the connectors.



■ The following problems are not faults with the equipment

Apparent problem	Reason
• Nothing happens when I press other keys in the initial or cancel mode, so that I can't select cooking, warming or timer operation.	• Have you forgotten to put the pan in the rice cooker?
• The rice cooker makes a clicking sound during cooking.	• This noise is caused by the power control relay turning on and off under microprocessor control.
• The cooking heating element does not heat up when I press the [COOKING] key to start the cooking mode (except in the brown rice mode).	• The rice cooker has a stand-by mode to let the pan sensor reach the temperature of the bottom of the pan, so that the power is not supplied for 1 minute 36 seconds after the [COOKING] switch is pressed. See the diagrams on pages 13~17 of basic rice cooker functions.
• When I try to use the timer with BROWN or CONGEE selected on the menu, the TIMER lamp does not light but the COOKING lamp lights immediately.	• If the time set on the timer when cooking brown rice is less than three hours, or the time for congee less than 4 hour 30 minutes, the cooking process starts immediately and the rice will not be ready by the time set on the timer.
• POWER CUT is displayed on the LCD  Power cuts can be due to a failure of the power supply, electrical works in the neighborhood or a fuse blowing in the user's home.	• If a power failure of between one second and approximately one hour occurs when the timer is operating. → Cooking starts as soon as the power is reconnected. • If a power failure of between one second and approximately one hour occurs during cooking. → Cooking restarts when the power is reconnected. (NOTE) When the power is reconnected once more after a power cut WHITE is always selected on the menu, regardless of the selection before the power was cut off. Reset the menu as the cooker may boil over if the menu selection is wrong.
• The LCD display reads 0:00 	• This display indicates the initial mode after the cooker was plugged in. This display also occurs when the warming mode has been cancelled because the temperature of the bottom of the pan was less than approximately 60°C when the power was reconnected after a long failure during the warming stage.

■ A simple way to test the printed circuit boards using the LCD display.

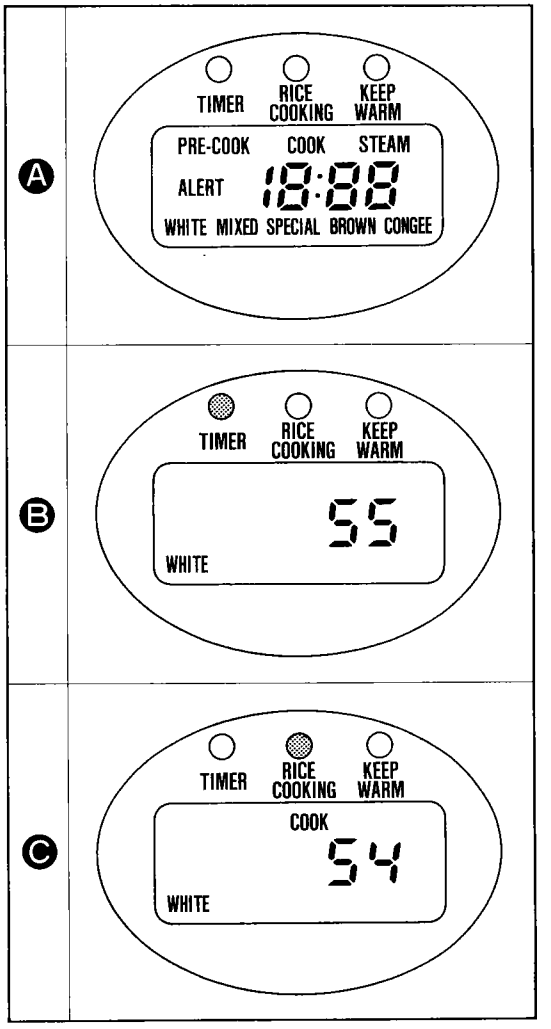
Test the printed circuit boards as described below to determine if the boards are functioning correctly or not before carrying out the troubleshooting procedures.

The printed circuit boards are normal if no abnormalities are discovered and all key operations are normal during this procedure.
(This procedure does not test the cooking and warming temperature characterisitics.)

1) Pull out the power plug and insert it again while holding down the [Select], [Keep Warm] and [Cancel] keys simultaneously.

2) The LCD display should then appear as shown in figure A to the right, with all segments lit. (This display clears when all three keys are released.)

3) When all three keys are released, the TIMER lamp lights and the display appears as shown in figure B to the right.
The buzzer then sounds and after two seconds the display changes to the display shown in figure C and cooking starts.



(Notes)

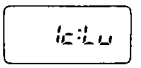
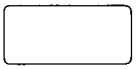
- The demonstration display

1) Pull out the power plug and inset it again while holding down the MENU, WARMING and CANCEL keys simultaneously.

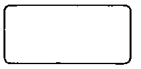
2) The demonstration display can only be cleared by pulling out the plug once more.

■ Troubleshooting Table

	Operation	Relay power	TRIAC power	LCD display		Diagnostic method	Action
STEP 1	Insert the power plug into the socket	None	None	0:00		→ Normal (Proceed to Step 2.)	
		Present (continuous)	None			Is the relay shorted across C–NC? (Is there connection across TP(2)–(3)?) YES → • Replace the relay NO ↓ What is the voltage across TP(14) and (26)? 0V → • Replace board A (operating unft) approx. 5V → • Replace board B (lower unit)	
		None	Present (continuous)			Is the TRIAC shorted across T1–T2? (Is there connection across TP(1)–(12)?) YES → • Replace the TRIAC NO ↓ Remove R4. Is there any TRIAC power? YES → • Replace board A (operating unit). NO → • Replace board B (lower unit).	
		None	None	No display		Is there approx. AC 220V across TP(5)–(12)? Yes ↓ NO Is there connection across the cord reel? NO → • Replace the cord reel. YES ↓ Is there connection across the thermal fuse? NO → • The thermal fuse has blown and should be replaced. (Refer to pages 32.) Has a film fuse on a board blown? Yes → • Replace with a spare fuse. (Refer to page 35.) Check ZNR and replace it if it damaged. YES ↓ Is there connection across the pan sensor? NO → • Replace the pan sensor. YES ↓ Is there connection across the lid sensor? NO → • Replace the lid sensor. YES → • Replace borad B (lower unit) Is there connection (approx. 1.14kΩ) across the transformer (T) primary coil (terminal 2 side)? NO → • Replace the transformer (T). YES ↓ Is there connection approx. AC30V across the transformer (T) secondary coil (terminal 3 side)? NO → • Replace the transformer (T). YES ↓ Is there a 125kHz signal across TP(14)–(28)? NO → • Replace the piezo oscillator(X). YES → • Replace board A (operating unit)	

	Operation	Relay power	TRIAC power	LCD display		Diagnostic method	Action
STEP 1					Part of the display missing.	Are all segments normal when the LED test is carried out? NO →	• Replace the LCD.
						YES →	• Replace board A (operating unit)
		Other combinations.				→	• Replace both boards.
STEP 2	Press the [Keep Warm] key. (The sensor is below human body temperature. (?))	None	Present (continuous)	 No display. The orange WARMING LED lights.		→ Normal. (Press the CANCEL key once to leave the warming mode and proceed to Step 4.)	
					The orange [Keep Warm] LED does not light.	Is the resistance across TP (12)−(40) 0 Ω when the [Keep Warm] key is pressed? NO →	• Replace SW5.
						YES ↓	
						Does the LED light if a 200Ω resistance is connected in series across TP(12)−(31) and DC 3V applied? (TP(12) is + polarity.) NO →	• Replace the WARMING LED (D11).
						YES →	• Replace board A (operating unit)
		None	None			Is the resistance across TP (12)−(40) 0 Ω when the WARMING key is pressed? NO →	• Replace SW5.
						YES ↓	
						Is there any TRIAC power when Q2 (C-E) is shorted? NO →	• Replace the TRIAC if R4 is normal.
						YES →	• Replace board A (operating unit).
		Other combinations.				→	• Replace both boards.
STEP 3	Press the [Cook Start] key once. (Status within 96 seconds of pressing the key.)	None	None	 The red COOKING LED lights.		→ Normal. (Press the [Cancel] key once to leave the cooking mode and proceed to Step 5.)	
				 The red COOKING LED does not light.		Is the resistance across TP (12)−(39) 0 Ω when the [Cook Start] key is preseed? NO →	• Replace SW4.
						YES ↓	
						Does the LED light if a 200Ω resistance is connected in series across TP(12)−(30) and DC 3V applied? (TP(12) is + polarity.) NO →	• Replace the COOKING LED (D10).
						YES →	• Replace board A (operating unit)
		Other combinations.				→	• Replace both boards.

	Operation	Relay power	TRIAC power	LCD display		Diagnostic method	Action
STEP 4	Press the [Cook Start] key twice. (Status after 96 seconds of pressing the key.)	Present	None	COOK WHITE		→ Normal. (Press the [Cancel] key once to leave the cooking mode and proceed to Step 6.)	
						→ Is there DC 28V in the relay power circuit across TP(12)−(14). NO	• Replace board B (lower unit)
						YES → Is there any relay power when Q3 (C-E) is shorted? NO	• Replace the relay.
						YES	• Replace board A (operating unit).
		Other combinations.				→	• Replace both boards.
STEP 5	Set the timer. (Refer to page 9.)	None	None	6:30		→ Normal. (Press the [Cancel] key once to leave the cooking mode and proceed to Step 6.)	
				6:30 is displayed (if the timer is set for 6 hours 30 minites).			
				0:00	The time display does not change when the [Down] key is pressed.	→ Is the resistance across TP (12)−(47) 0Ω when the [Down] key is pressed? NO	• Replace SW8.
						YES	• Replace board A (operating unit)
					The time display does not change when the [UP] key is pressed.	→ Is the resistance across TP (12)−(46) 0Ω when the [UP] key is pressed? NO	• Replace SW7.
						YES	• Replace board A (operating unit)
	Set the time and press the [Cook Start] key.			5:30 TIMER LED does not light.		→ Does the LED light if a 200Ω resistance is connected in series across TP(12)−(31) and DC 3V applied? (TP(12) is + polarity.) NO	• Replace theee TIMER LED (D8).
						YES	• Replace board A (operating unit).
		Other combinations.				→	• Replace both boards.

	Operation	Relay power	TRIAC power	LCD display		Diagnostic method	Action
STEP 6	Press the [Select] key once.	None	None		Each time the [Select] key is pressed the flashing menu item moves along one item.	→ Normal. (Press the [Cancel] key once to leave the timer mode.)	
				 No display	No menu display	→ Is the resistance across TP (12)−(36) 0Ω when the [Select] key is pressed? NO →	• Replace SW3.
						YES →	• Replace board A (operating unit)
		Other combinations.				→	• Replace both boards.

Symptom	Diagnostic method	Action
Mode is not cancelled when the [Cancel] key is pressed.	→ Is the resistance across TP(12)−(41)0 Ω when the [Cancel] key is pressed? NO →	• Replace SW6.
	YES →	• Replace board A (operating unit).
Has the thermal fuse blown? (ie is it blackened?)	→ Is the relay shorted across C-NO? (Is there connection across TP(2)−(3)?) YES →	• Replace the relay.
	NO ↓	
	Is the TRIAC shorted across T1−T2? (Is there connection across TP(1)−(12)?) YES →	• Replace the TRIAC
	NO →	Replace both boards.

<table>
<tr><th>Symptom</th><th>Diagnostic method</th><th>Action</th></tr>
<tr><td>Poor cooking
• Too hard
• Hard center
• Half-boiled
• Too soft</td><td>Is the rice cooker being used correctly?
• Too much or little rice being cooked.
• Water quantity not correct.
• Water quantity not adjusted according to the menu selection. (Level lines are marked in the pan for white, special and brown rice. The level for mixed rice is the same as for white fice.)
• The bottom of the pan is uneven.
• Dirt or foreign matter is stuck to the outside of the pan, the hot plate or pan sensor.
• The lid was open during the standing stage.
• The rice was not stirred after cooking.
• The cooking was interrupted because the plug was pulled out or the [Cancel] key pressed.
→ Instruct the user on the correct cooking method.
NO
Carry out the troubleshooting procedures as described in the Troubleshooting Table. If the problem is not uncovered, carry out the bubbling and evaporation tests described below.</td><td></td></tr>
<tr><td>Rice sticks to pan</td><td>Carry out the bubbling test to check the contact between the pan and the heating element.
→ Replace the pan or heating element.
YES
The sticking is due to incorrect use of the cooker.
• Old rice remains stuck to the bottom of the pan.
• Rice not washed sufficiently before cooking.
• Rice soaked for too long.
• Too much water.
• Power supply voltage too low.
• Rice cooked was no white rice.
YES → Instruct the user on the correct cooking method.
NO
Adjust to reduce the sticking.
→ Adjust the temperature, referring to Adjusting the Sticking on page 34.</td><td></td></tr>
<tr><td>If, the warming temperature is measured and found to be low, high or otherwise requiring adjustment.</td><td></td><td>Adjust the temperature, referring to Adjusting the Warming Temperature on page 34.</td></tr>
</table>

■ How to check the safety switch

The pan sensor is pushed down when the pan is inserted and rises up when the pan is removed. This motion is transmitted through the safety lever to operate the safety switch.

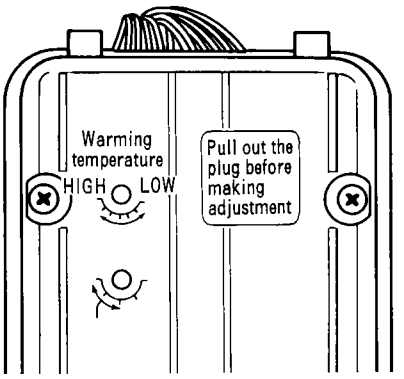
- Check the items in the table below.

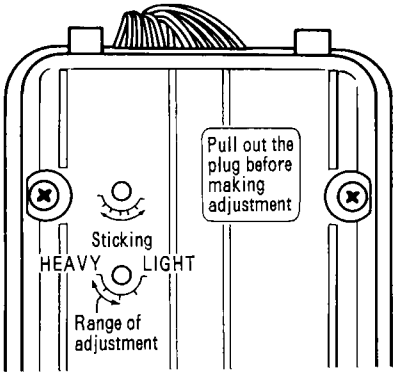
	WARMING LED
During warming with the pan inserted.	LED lights
When the pan is removed during warming.	The buzzer sounds once after 5 seconds and the LED goes out.

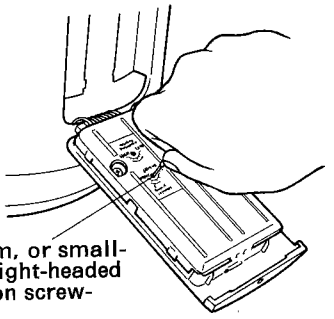
(NOTE) Make sure that the lid is always closed when the pan is inserted.

Check that the safety lever is operating correctly if the LED does not light as described in the table above. Replace the safety switch if the lever is OK.

■ How to adjust the warming temperature and stciking.





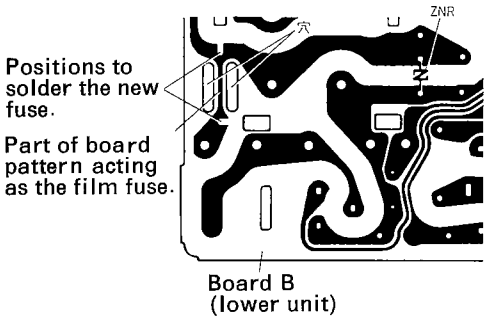


(WARNING)
Be sure to pull out the plug before adjusting the warming temperature.

The warming temperature is adjusted by turning SVR1 on board A (operating unit).
Disassemble the rice cooker to stage (b) in the disassembly procedures shown on page ??.
Adjust the warming temperature with a ø 1.2mm, or smaller, straight-headed precision screwdriver through the insulating cover, as shown in the diagram to the left. It is not necessary to remove the cover.
Rotating the screw 10° changes the temperature by 1℃.
Do not adjust the warming temperature by more than 3 ℃ as all the processes temperatures (θ 1~ θ 8) change when the warming temperature is adjusted.

The temperature on completion of the cooking stage is adjusted by turning SVR2 on board A (operating unit), as shown in the diagram to the left.
Disassemble the rice cooker to stage (b) in the disassembly procedures shown on page 26.
Adjust the temperature with a ø 1.2mm, or smaller, straight headed precision screwdriver through the insulating cover, as shown in the diagram to the left.
It it not necessary to remove the cover.
Do not adjust the temperature by more than 2 scale units.
Bear in mind that the rice may also stick due to the amount of water used, the time the rice is soaked and the voltage of the power supply.

■ How to repair a blown film fuse



As a safety measure part of the board is designed to melt like a fuse when ZNR is shorted. All functions of the cooker are disabled when the film fuse blows.
A blown film fuse can be repaired by soldering a spare 5A fuse onto the board at the position shown in the diagram. When repairing this fuse, replace ZNR if it is burned or shorted, as shorting often causes burning and a disconnection in the ZNR.

■ Testing Methods

- Before starting these tests

  Insert the pan in the cooker and plug the plug into the power supply.

- Bubbling test

  1) Turn the pan gently clockwise and counterclockwise in the rice cooker to ensure that it is making good contact with the heating element.

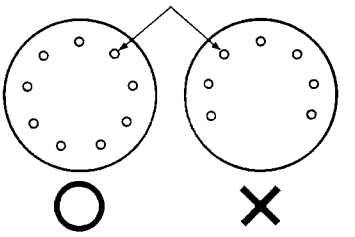
  2) Pour in enough water to just cover the center of the pan base and fully close the lid.

  3) Press the COOKING key twice to skip the pre-cooking stage.

  4) Wait for the water to boil and when steam blows from the cooker open the lid and push down on the pan flange to press the pan against the heating element. Look at the bubbles emerging from the bottom of the pan and compare them to the diagram to the right.

  Normally bubbles should be visible uniformly around the whole circumference of the pan, and the cooker is considered to be defective if no bubbles are visible around 1/4 of the circumference, or more.

  Lack of bubbles indicates poor contact between the base of the pan and the heating element. In this case, remove anything stuck on the base of the pan or surface of the heating element or replace the parts.

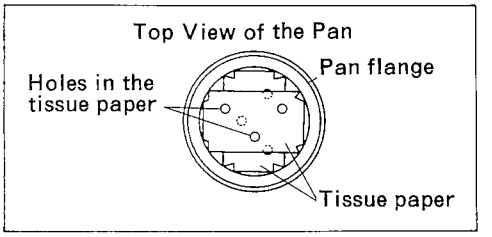


- Evaporation test (to determine if the pan sensor is defective)

  1) If the bubbling test proves satisfactory, open the lid and cover the bottom of the pan with 2 or 3 sheets of tissue paper or gauze and turn on the cooker.

  WARNING

① Fully open the lid to prevent steam distorting plastic parts.
② Punch holes in the tissue paper before putting it into the pan to prevent it being lifted up by the bubbles.



  2) The test is satisfactory if it takes less than one minute for the LCD display to change from COOKING to FINAL (with the red LED lit) after all the water has evaporated and no more steam is given off.
  If the test is failed, check the contact between the bottom of the pan and heating element and inspect the pan sensor once more. Repair or replace the appropriate parts.

● Testing the Warming temperature

1) Put approximately 1.0 ℓ of water and a commercially-available 100 ℃ thermometer about 20 cm long into the pan.

2) Press the COOKING key twice to skip the pre-cooking stage.
Leave the lid open and wait until the water temperature reaches approximately 70 ℃.

3) At the 70 ℃ point close the lid and leave the cooker in the warming mode for at least one hour. Open the lid and read the temperature within 5 seconds. The temperature should be in the 69~77 ℃ range.
If the temperature lies outside this range, make sure that no dirt or foreign matter is stuck on the pan sensor or on the bottom of the pan. If nothing is found, adjust the warming temperature as described in Adjusting the Warming Temperature on page 34.

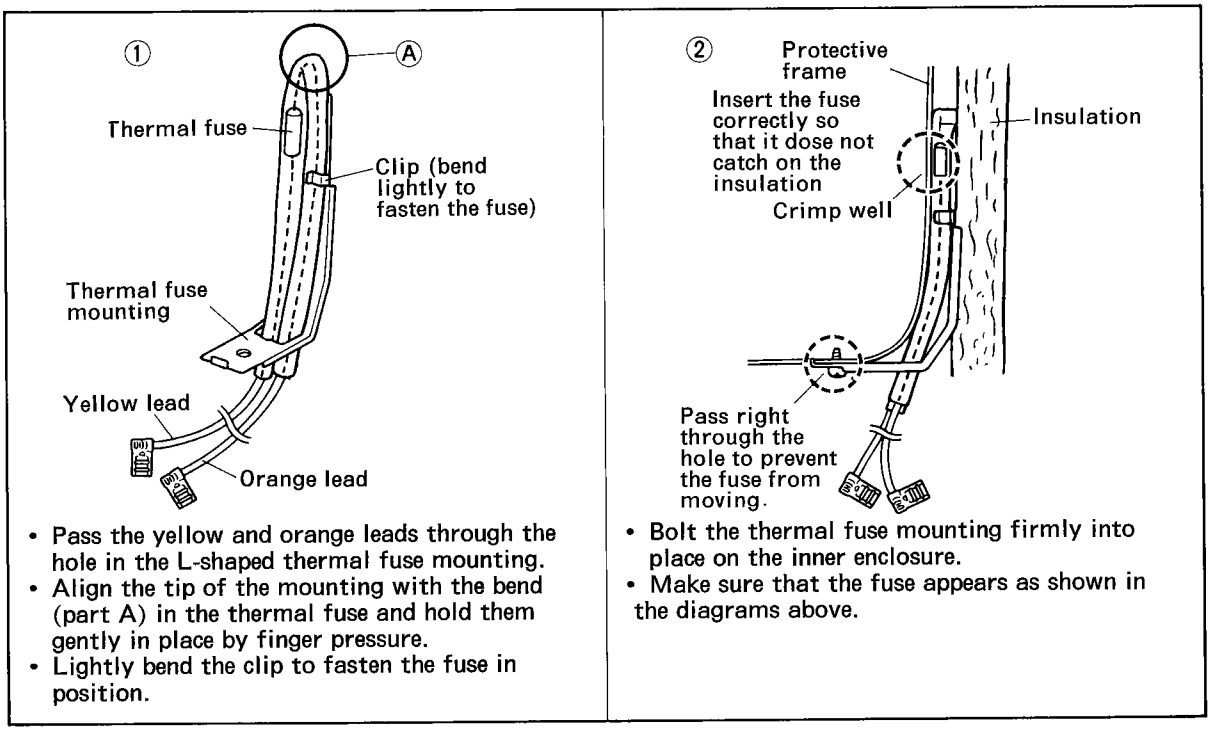
● Buzzer Test

Make sure that the buzzer sounds once each time the COOKING or WARMING key is pressed.

10. CAUTIONS WHEN MAKING REPAIRS

■ Replacing the thermal fuse

● Installing the fuse



- Pass the yellow and orange leads through the hole in the L-shaped thermal fuse mounting.
- Align the tip of the mounting with the bend (part A) in the thermal fuse and hold them gently in place by finger pressure.
- Lightly bend the clip to fasten the fuse in position.

- Bolt the thermal fuse mounting firmly into place on the inner enclosure.
- Make sure that the fuse appears as shown in the diagrams above.

WARNINGS

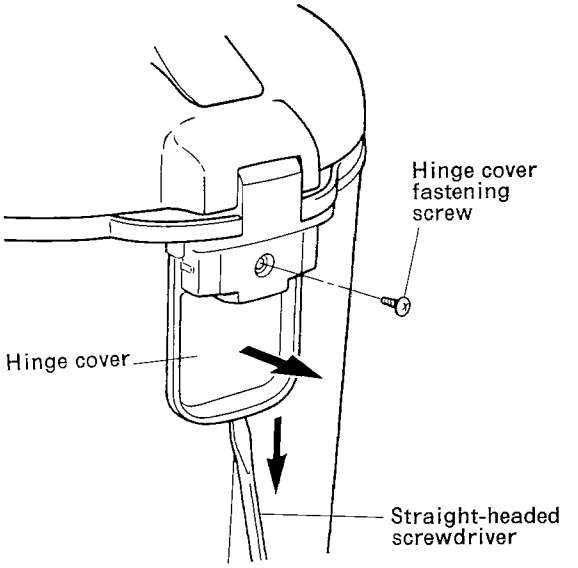
- Do not apply undue force to the sealed part of the thermal fuse.
- Make sure that the fuse appears as shown in the diagrams after mounting.
- Take care not to damage the protective tube at the bend in the thermal fuse or at the point where it is held by the clip.

■ Removing the hinge cover

1) Remove the condensation collector.

2) Take out the screw holding the hinge cover in position.

3) Insert a straight-headed screwdriver from the bottom as shown in the diagram and lift up the hinge cover.
Pull the hinge cover downwards to remove it.



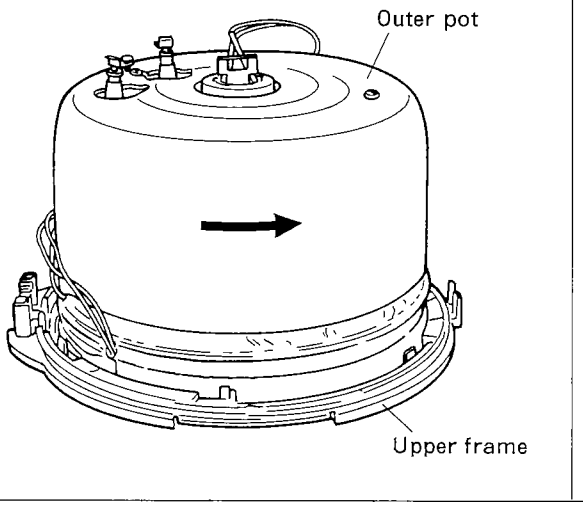
■ Separating the outer pot and upper frame

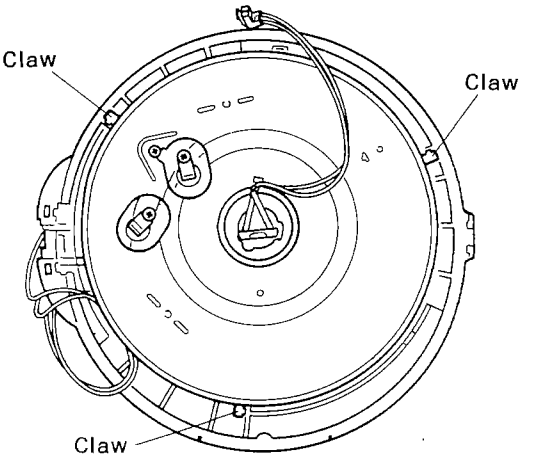
1) Remove the condensation collector, hinge cover and outer lid.

2) Remove the wiring and cooking heating element and disconnect all the wiring to the printed circuit boards.

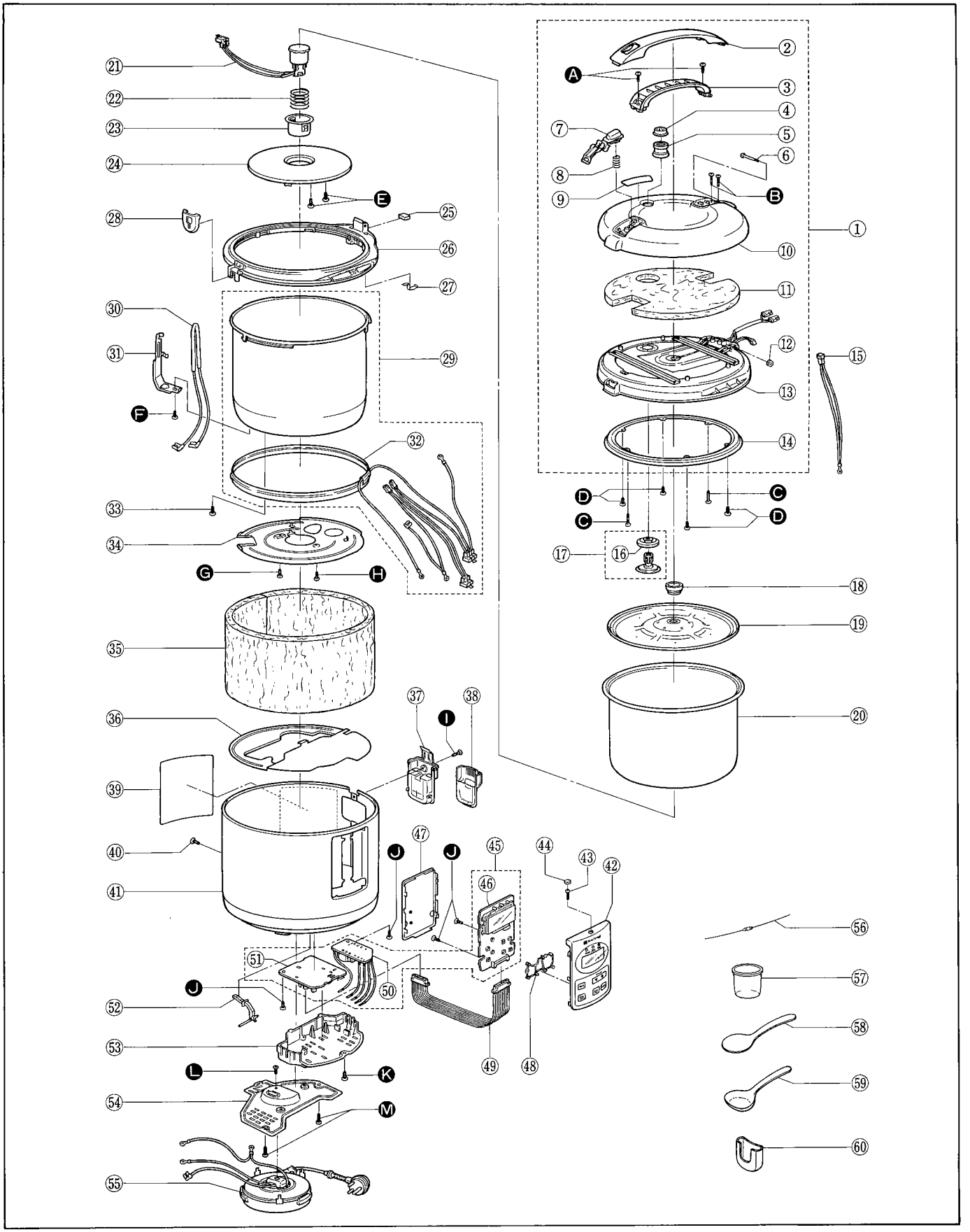
3) Insert a straight-headed screwdriver from the hinge side and separate the upper frame (still attached to the outer pot) from the body.
Release the clips at the three points shown in the diagram and then remove the outer pot from the upper frame by holding the frame still and turning the pot in the direction shown by the arrow.

(NOTE) During reassembly ensure that the outer pot is aligned with the upper frame as shown in the diagrams.





11. EXPLODED VIEW



12. REPLACEMENT PARTS LIST

Ref. No.		Part No.	Part Co.	Part Name & Description	Pcs / Set	Remarks
1		ASR12UH935	020 801 0579 3	Outer lid (comp.)	1	SILVER MIST
1		ASR12PH935	020 801 0580 0	Outer lid (comp.)	1	PANSY GARDEN
2		ASR14U-958-K	020 845 0151 3	Handle cover	1	SILVER MIST
2		ASR14P-958-K	020 845 0152 2	Handle cover	1	PANSY GARDEN
3		ASR82U-958-K	020 705 0035 7	Handle	1	SILVER MIST
3		ASR82P-958-K	020 705 0036 6	Handle	1	PANSY GARDEN
4		ASR126-958-W	020 650 0153 4	Plate for steam cylinder	1	
5		ASR88U-958-K	007 590 3967 7	Steam cylinder seal	1	
6		ASR173-492-W	020 824 0015 7	Hinge shaft	1	
7		ASR87U-958	020 718 0119 3	Hook lever (comp.)	1	SILVER MIST
7		ASR87P-958	020 718 0120 0	Hook lever (comp.)	1	PANSY GARDEN
8		ASR186-983-H	020 726 0013 6	Spring for hook lever	1	
9	⚠	ASR148H915-X	020 861 0361 3	Caution label	1	
10		ASR12U-958-K	020 801 0511 3	Outer lid	1	SILVER MIST
10		ASR12P-958-K	020 801 0512 2	Outer lid	1	PANSY GARDEN
11		ASR127-958-K	020 611 0104 2	Heat insulator (lid)	1	
12		ASR174-492-W	005 507 0886 4	Nut	1	
13		ASR190H935	020 640 0300 7	Radiator plate (comp.)	1	W/Lid heater
14		ASR171-958-K	007 590 3966 8	Pan packing	1	
15	⚠	ASR299H935	003 496 4558 5	Earth lead wire	1	
16		ASR196-958-K	007 590 4113 1	Packing	1	
17		ASR194-958	020 641 0033 2	Valve	1	W/No.16
18		ASR129-958-K	020 653 0041 6	Inner lid seal	1	
19		ASR125H935-A	020 877 0062 5	Inner lid	1	
20		ASR111-915-F	020 871 0133 7	Pan	1	
21	⚠	ASR331-958	001 191 0892 2	Pan sencor	1	
22		ASR312-244-H	020 726 0007 4	Outer spring	1	
23		ASR310-607-W	020 640 0062 2	Thermostat case	1	
24	⚠	ASR405-915	002 363 1216 4	Heater	1	
25		ASR143-958-K	020 643 0019 0	Sponge	1	
26		ASR92EH935	020 631 0329 5	Upper frame (comp.)	1	SILVER MIST
26		ASR92QH935	020 631 0330 2	Upper frame (comp.)	1	PANSY GARDEN
27	⚠	ASR168H935-H	003 410 8573 8	Plate	1	
28		ASR15U-958-K	020 845 0153 1	Hook cover	1	SILVER MIST
28		ASR15P-958-K	020 845 0154 0	Hook cover	1	PANSY GARDEN
29		ASR132H935	020 631 0331 1	Inner enclosure	1	
30	⚠	ASR377-958	002 381 0551 4	Thermal fuse (ass'y)	1	150℃
31		ASR269-958-W	020 650 0154 3	Fuse bracket	1	
32	⚠	ASR450H935	002 360 1842 9	Warming heater	1	
33		ASR139-976-N	005 501 2046 8	Screw	1	

Ref. No.		Part No.	Part Co.	Part Name & Description	Pcs / Set	Remarks
34		ASR697-958-K	020 611 0107 9	Heat shield plate B	1	
35		ASR193-958-K	020 611 0105 1	Heat insulator (body)	1	
36		ASR691-958-K	020 611 0106 0	Heat shield plate A	1	
37		ASR17UH935-K	020 845 0177 3	Hinge cover	1	SILVER MIST
37		ASR17PH935-K	020 845 0178 2	Hinge cover	1	PANSY GARDEN
38		ASR16FH935-K	020 870 0080 8	Dew collector	1	
39	⚠	ASR623H935-X	020 861 0378 4	Name plate	1	
40		ASR118-972-W	005 501 2064 6	Screw	1	SILVER MIST
41		ASR10UH935-L	020 800 0886 0	Body	1	PANSY GARDEN
41		ASR10PH935-F	020 800 0887 9	Body	1	
42		ASR22UH935	020 862 0326 1	Switch cover (comp.)	1	SILVER MIST
42		ASR22PH935	020 862 0327 0	Switch cover (comp.)	1	PANSY GARDEN
43		ASR139-983-W	005 501 1436 2	Screw	1	
44		ASR27U-958-K	020 847 0032 6	Cap	2	
45	⚠	ASR870H935	003 464 1365 2	P.C.B. (comp.)	1	
46	⚠	ASR873H935	003 464 1368 9	Board A (Operation)	2	
47		ASR229-957-K	020 640 0264 4	Circuit cover	1	
48		ASR274-957-K	020 702 0071 8	Key top	1	
49	⚠	EMCMBC17D01R	003 496 1393 0	Cable	1	
50	⚠	ASR871H935	003 464 1366 1	Board B (Source)	1	
51	⚠	ASR872H935	003 464 1367 0	Board C (Bottom)	1	
52		ASR399-958-K	020 718 0118 4	Lever	1	
53		ASR184H935-K	020 640 0301 6	Cover	1	
54		ASR690-958-K	020 802 0498 8	Bottom plate (comp.)	1	
55	⚠	ASR57HH935	003 491 0332 2	Cord reel	1	B-3
56	⚠	SP5-5A	002 380 1221 0	Current fuse	—	
57		ASR792-419-K	020 901 0006 8	Measuring cup	1	180mℓ
58		ASR796-440	020 900 0012 5	Rice scoop	1	
59		ASR796-958-K	020 900 0034 9	Congee scoop	1	
60		ASR900-281-K	020 870 0032 6	Scoop holder	1	

Ref. No.		Part No.	Part Co.	Part Name & Description	Pcs / Set	Remarks
Board A (Operation)						
LCD	⚠	EDD063C74A3P	001 080 0423 8	LCD	1	
		ASR264-989-K	020 630 0101 8	LCD holder	1	
D9	⚠	LN38GPX-TA3	001 035 0212 9	LED (Green)	1	
D10	⚠	LN28RPX-TA3	001 035 0211 0	LED (Red)	1	
D11	⚠	LN880PXS-TA3	001 035 0215 6	LED (Orange)	1	
X	⚠	FARC4SA4M01U	001 250 1365 8	Oscillator	1	4MHz
CN8A	⚠	EMCS1095ML	020 652 0104 3	Connecter	1	
SW3~ SW8	⚠	EVQQKC05B	003 437 0706 8	Tact switch	6	
Board B (Source)						
T	⚠	ETP-26Y17AY	001 200 5946 1	Transformer	1	
Board C (Bottom)						
ZNR	⚠	ERZTC5AK431	001 192 1165 1	ZNR	1	
BZ	⚠	PKM24-4A14	002 340 0155 1	Buzzer	1	
RL	⚠	MR321A-24M	003 450 2684 2	Relay	1	
TRIAC	⚠	AC05FGMYR	001 034 1158 3	Triac	1	
CN8B	⚠	EMCS1296M	020 652 0105 2	Connecter	1	
SW1	⚠	ESB60123	003 435 5849 4	Push switch	1	

SMALL STANDARDIZED METAL PARTS

Ref. No.		Part No.	Part Co.	Part Name & Description	Pcs / Set	Remarks
A		XTL4+16BFU		Screw	2	
B		XTL4+8BFU		Screw	2	
C		XTL4+16RVW		Screw	2	
D		XTL4+10RVW		Screw	4	
E		XYN4+C7FNS		Screw	2	
F		XTN4+6BFU		Screw	1	
G		XTN4+6BFU		Screw	1	
H		XTN4+6FFNS		Screw	1	
I	Ⓢ	XTN4+12BVW		Screw	1	
J		XTN4+8GFU		Screw	4	
K		XTL4+16AFU		Screw	1	
L		XTN4+6FFNS		Screw	1	
M	Ⓢ	XTN4+12B		Screw	2	

PACKING SPECIFICATIONS

Ref. No.		Part No.	Part Co.	Part Name & Description	Pcs / Set	Remarks	Price
		ASR935HKMSMF	020 971 0478 8	Outer carton	1	SILVER MIST	
		ASR935HKMPGF	020 971 0479 7	Outer carton	1	PANSY GARDEN	
		ASR750-958	020 977 0286 4	Bottom filler	1		
		ASR754-998	020 977 0305 8	Top filler	1		
		ASR770H935	020 983 0260 8	Operating instructions	1		
		ASR758-344	020 979 0007 5	Anti rust paper	1		
		ASR762-958-K	020 978 0070 3	Plastic bag	1		
		ASR781H935-X	020 984 0019 0	Caution sheet	1		
		ASR761H915-K	020 977 0319 2	Cord protecter	1		

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