

# SERVICE MANUAL

AUDIO PROGRAM TIMER

## SANSUI AT-210

(Silver & Black Model)



### Note

AT-210 is additional model which external appearances are different from those of AT-202. This manual contains **OTHER PARTS LIST**, **PACKING LIST** and **ACCESSORY LIST** in which changed parts are printed with bold-face. For other parts list, refer to AT-202 service manual previously issued.

### •SPECIFICATIONS

Clock type.....	12-hour digital clock
Display accuracy.....	Max. $\pm 10$ sec monthly error (synchronization with AC power supply)
<b>ON/OFF preset timer</b>	
Preset.....	ON, OFF times can be preset in 1-minute units
Timer accuracy.....	Set time +0.02 sec max.
Sleep timer.....	Any setting up to 1 hr 59 min in 1-minute units
Time counter.....	Max. 1 hr 59 min 59 sec, 1-second 1-count system, switching between minutes/seconds and hours/minutes
AC outlets.....	3, total capacity of 700W
Power requirements.....	110 ~ 120, 220 ~ 240V 50/60 Hz
Power consumption.....	7W
Dimensions.....	430 mm (16-15/16") W 58 mm (2-5/16") H 143 mm (5-1/16") D
Weight.....	1.3 kg (2.9 lbs) net 1.8 kg (4.0 lbs) packed

\* Design and specifications subject to change without notice for improvements.

**Sansui**

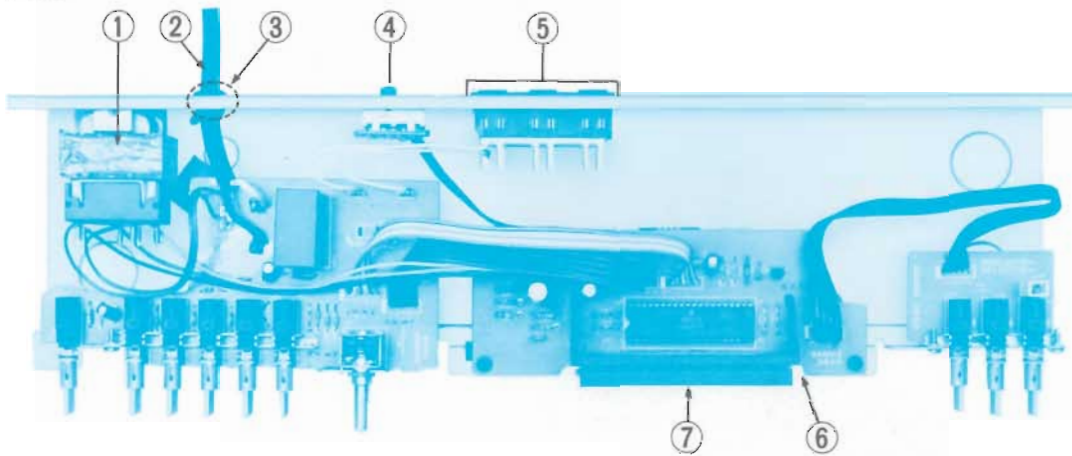
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# 1. OTHER PARTS

## 1-1. Front View



## 1-2. Top View



### Parts List <Front View>

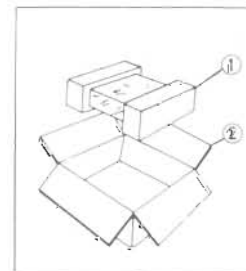
Parts No.	Stock No.	Description
1	47495000	Front Panel Ass'y (Silver Model)
	47495100	Front Panel Ass'y (Black Model)
1-1	47012200	Indicator, 'OUTLET ON'
2	46412600	Push SW., SECOND
3	47393200	Knob, Push SW.
4	46412800	Push SW., TIMER SET/ TIMER COUNTER
5	46413700	Rotary SW., function
6	47493900	Knob, rotary SW., (Silver Model)
	47400700	Knob, rotary SW., (Black Model)
7	47408800	Smoked Plate
8	07995300	Indicator Holder
9	07948900	Color Filter
10	46412700	Outlet Control SW.
11	47080900	Leg
12	07911000	Knob, Push SW.
	07911000	Knob, Push SW., (Black Model)
13	07910900	Knob, Push SW., (Silver Model)

### Parts List <Top View>

Parts No.	Stock No.	Description
1	15009501	Power Transformer
2	38004700	Power Supply Cord
3	48526800	Strain Relief
4	07249800	Slide SW., 50 Hz/60 Hz
5	46360100	AC Outlet
6	07995400	Display Holder
7	07995100	Cover, display holder

# 2. PACKING LIST

Parts No.	Stock No.	Description
1	47013100	Styrofoam Packing
2	47408300	Carton Case (Black Model)
	47408200	Carton Case (Silver Model)



# 3. ACCESSORY LIST

Stock No.	Description
46897200	Operating Instruction
47026800	Mounting Holder Left Side
47027000	Mounting Holder Right Side
	Power Cord Clamp



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# SERVICE MANUAL

AUDIO PROGRAM TIMER

## SANSUI AT-202 (Silver & Black Model)



### ● SPECIFICATIONS

- Clock type . . . . . 12-hour digital clock
- Display accuracy . . . . . Max. ±10 sec monthly error  
(synchronization with AC power supply)
- ON/OFF preset timer
  - Preset . . . . . ON, OFF times can be preset in 1-minute units
  - Timer accuracy . . . . . Set time +0.02 sec max.
- Sleep timer . . . . . Any setting up to 1 hr 59 min. in 1-minute units
- Time counter . . . . . Max. 1 hr 59 min 59 sec, 1-second 1-count system, switching between minutes/seconds and hours/minutes
- AC outlets . . . . . 3, total capacity of 700 W
- Power requirements . . . . . 110 ~ 120, 220 ~ 240 V 50/60 Hz
- Power consumption . . . . . 7 W
- Dimensions . . . . . 430 mm (16-15/16") W  
58 mm (2-5/16") H  
143 mm (5-11/16") D
- Weight . . . . . 1.3 kg (2.9 lbs) net  
1.7 kg (3.7 lbs) packed

\* Design and specifications subject to change without notice for improvements.



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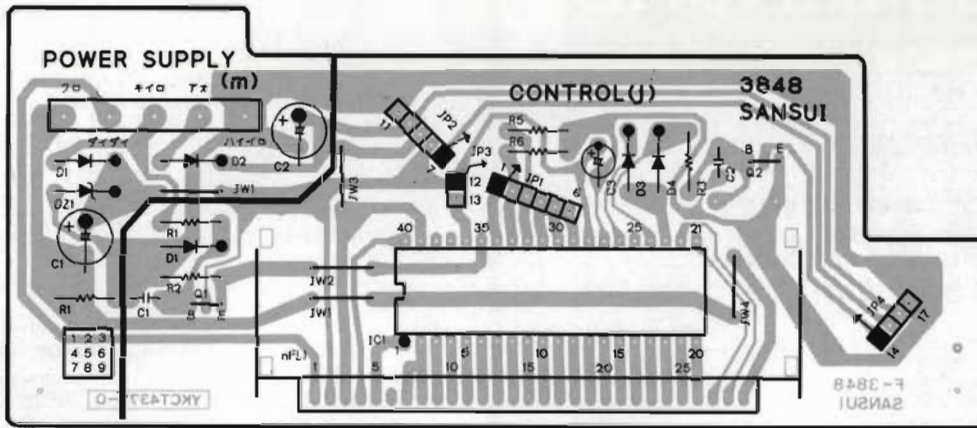


# 1. PARTS LOCATION & PARTS LIST

## 1-1. F-3848 IC & Display Tube Circuit Board

• Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors, which was appended previously to Sansui Manual

Component Side



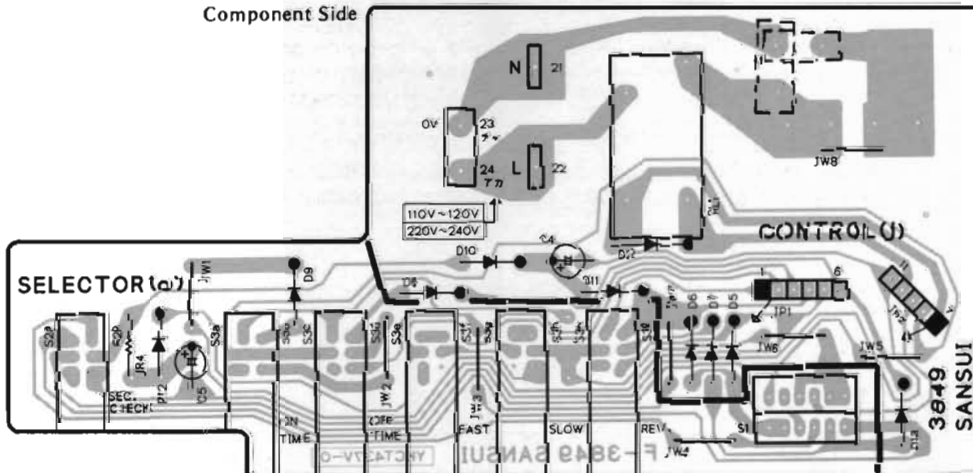
### Parts List

Parts No.	Stock No.	Description
• Transistor		
jQ1	07194801	2SC1815
jQ2	07194801	2SC1815
• IC		
jIC1	46363500	MN6076
• Diode		
jD1	07176400	1S2473HS
jD2	03117700	10E-2
jD3	07176400	1S2473HS
jD4	07176400	1S2473HS
• Relay		
jS1	46275300	Relay

Parts No.	Stock No.	Description
• Diode		
mD1	03117700	10E-2
mD2	03117700	10E-2
• Zener Diode		
mDZ1	46103600	05Z12
	46103700	05Z12
mR1	46403800	680Ω 1/2W N.I.R.
nFL1	46367700	FG512H6 Display Tube

## 1-2. F-3849 Power Supply & Push Switch Circuit Board

Component Side

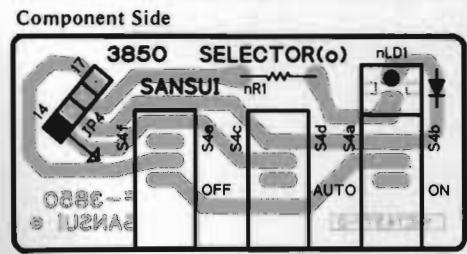


### Parts List

Parts No.	Stock No.	Description
• Diode		
jD5	07176400	1S2473HS
jD6	07176400	1S2473HS
jD7	07176400	1S2473HS
jD8	07176400	1S2473HS
jD9	07176400	1S2473HS
jD10	07176400	1S2473HS

Parts No.	Stock No.	Description
jD11	07176400	1S2473HS
jD12	07176400	1S2473HS
jD13	07176400	1S2473HS
oS1	46413700	Rotary SW., function
oS2	46412600	Push SW., NORMAL/SECOND
oS3	46412800	Push SW., NORMAL/ON TIME

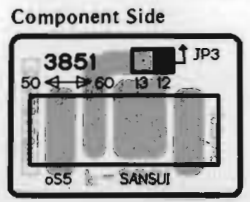
1-3. F-3850 OUTLET Control Circuit Board



Parts List

Parts No.	Stock No.	Description
nLD1	46176900	LED TLS-123
oS4	46412700	Push SW., OUTLET CONTROL

1-4 F-3851 Frequency Selector Circuit Board



Parts List

Parts No.	Stock No.	Description
oS5	07249800	Slide SW., frequency selector

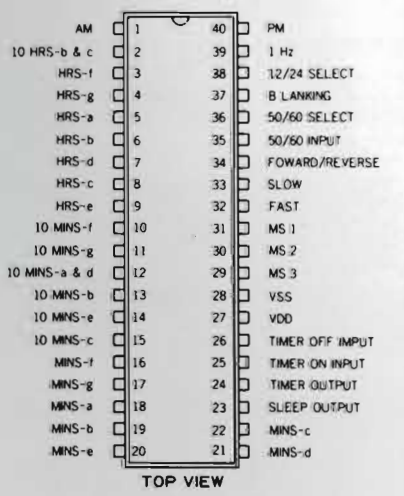
Note: The circuit boards, F-3848, F-3849, F-3850 & F-3851 are not supplied as the assembled. However, individual parts on the circuit board by orders.

Abbreviations

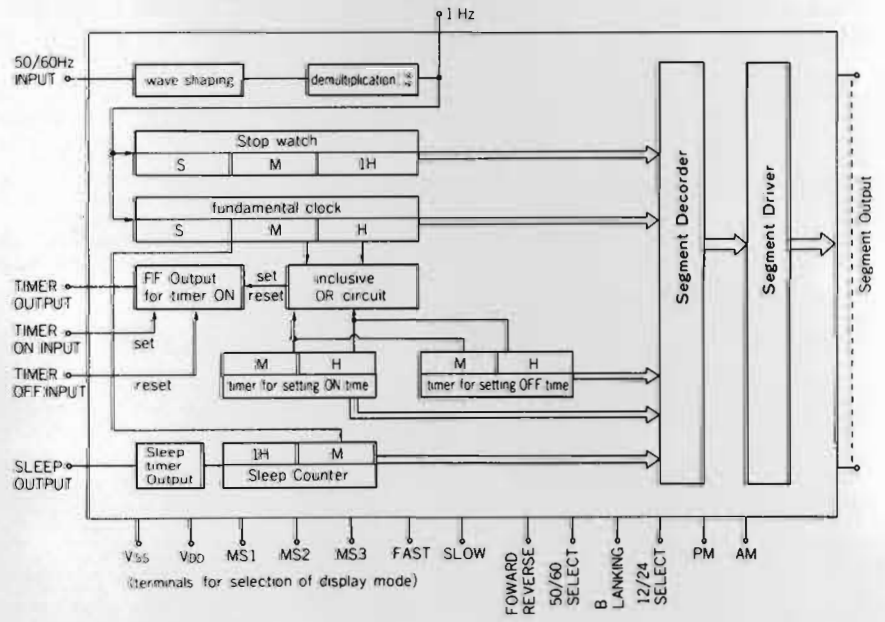
C.R. : Carbon Resistor	E.B. : Bi-Polar Electrolytic Capacitor
S.R. : Solid Resistor	E.BL. : Low Leak Bi-Polar Electrolytic Capacitor
Ce.R. : Cement Resistor	Ta.C. : Tantalum Capacitor
M.R. : Metal Film Resistor	F.C. : Film Capacitor
F.R. : Fusing Resistor	M.P. : Metalized Paper Capacitor
N.I.R. : Non-Inflammable Resistor	P.C. : Polystyrene Capacitor
C.C. : Ceramic Capacitor	G.C. : Gimmic Capacitor
C.T. : Ceramic Capacitor, Temperature Compensation	V.R. : Variable Resistor
E.C. : Electrolytic Capacitor	S.V.R. : Semi Variable Resistor
E.L. : Low Leak Electrolytic Capacitor	SW. : Switch

2. PIN CONNECTIONS & BLOCK DIAGRAM

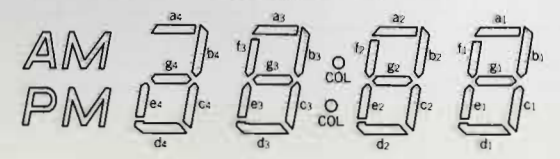
Nos and Functions of IC MN6076



Internal Block Diagram of IC MN6076



FG512H6 (Display Tube) Display Pattern & Pin Connection



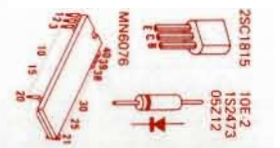
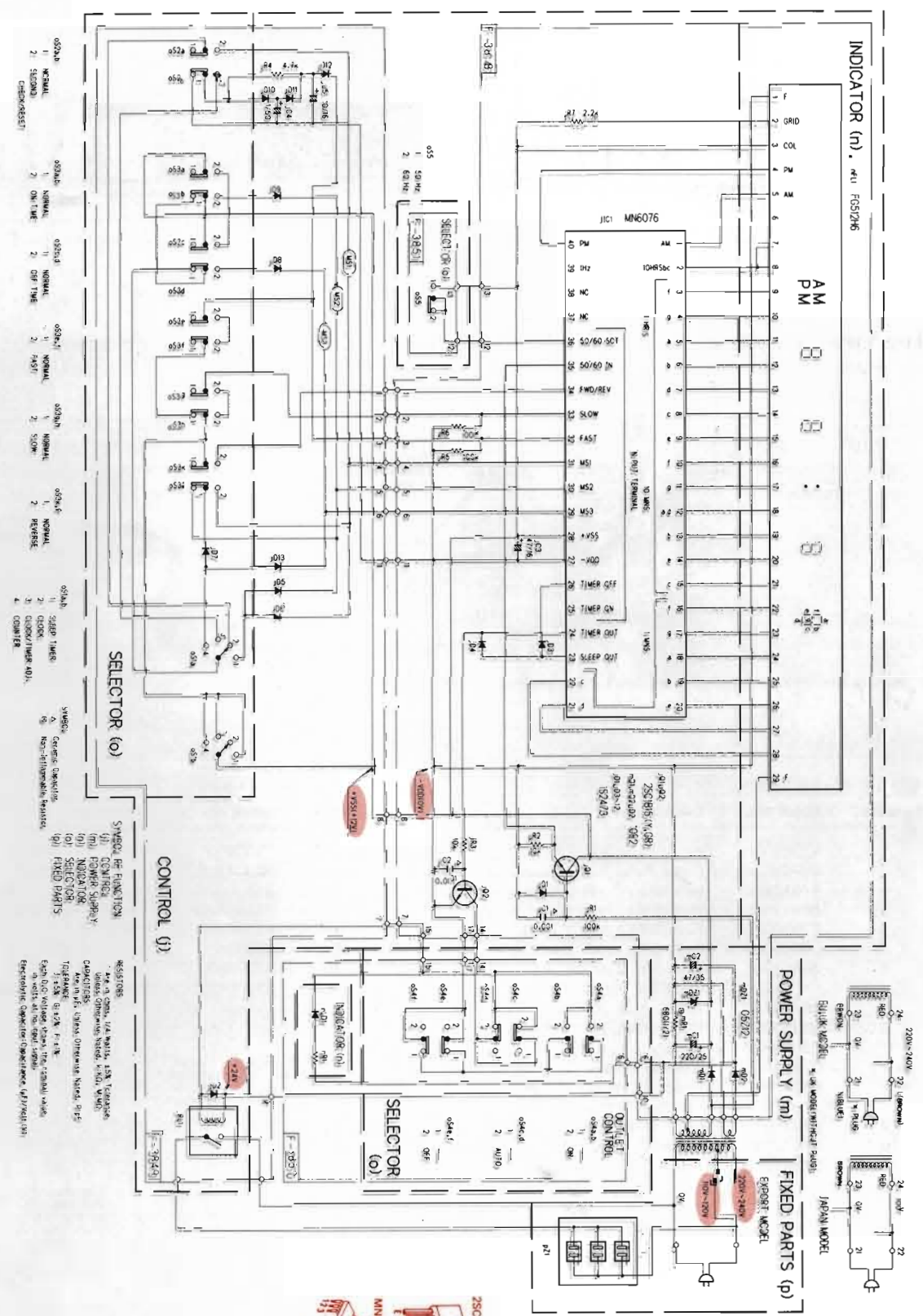
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Connection	V <sub>DD</sub>	GRID	COL	PM	AM	a <sub>4</sub> , d <sub>4</sub> e <sub>4</sub> , g <sub>4</sub>	b <sub>4</sub>	c <sub>4</sub>	f <sub>4</sub>	g <sub>4</sub>	a <sub>1</sub>	b <sub>1</sub>	c <sub>1</sub>	d <sub>1</sub>	e <sub>1</sub>

Pin No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Connection	f <sub>2</sub>	g <sub>2</sub>	e <sub>2</sub> , d <sub>2</sub>	b <sub>2</sub>	e <sub>2</sub>	c <sub>2</sub>	f <sub>1</sub>	g <sub>1</sub>	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	d <sub>1</sub>	c <sub>1</sub>	V <sub>DD</sub> (3V)

3. SCHEMATIC DIAGRAM

\* Design and specifications subject to change without notice for improvement.  
 \* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
 \* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



1  
2  
3  
4  
5

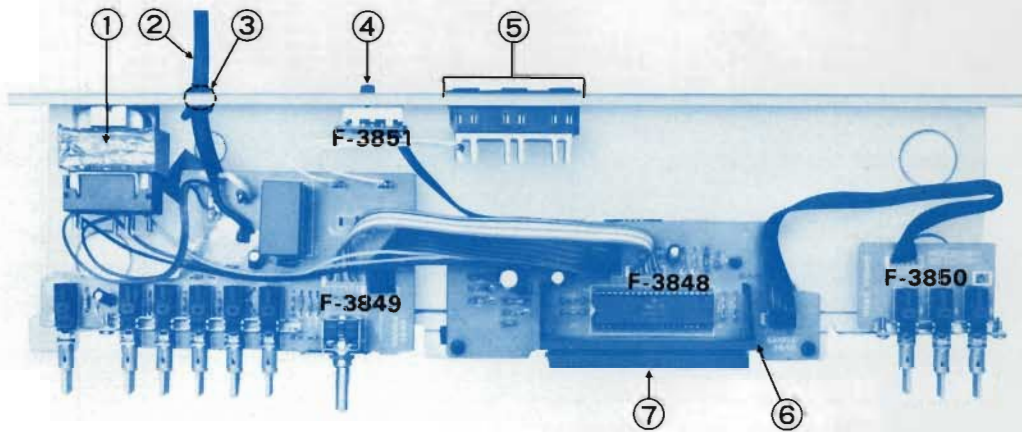


# 4. OTHER PARTS

## 4-1. Front View



## 4-2. Top View



Parts List <Front View>

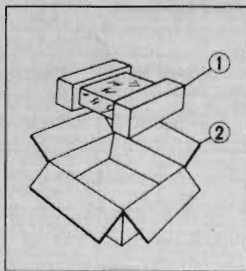
Parts No.	Stock No.	Description
1	47008900	Front Panel Ass'y (Silver)
	07995500	Front Panel Ass'y (Black)
1-1	47012200	Indicator, OUTLET ON
2	46412600	Push SW., SECOND
3	07910900	Push SW., Knob (Silver)
	07911000	Push SW., Knob (Black)
4	46412800	Push SW., TIMER SET/ TIMER COUNTER
5	46413700	Rotary SW., function
6	07932400	Rotary SW., Knob (Silver)
	47033300	Rotary SW., Knob (Black)
7	07995200	Smoked Cover
8	47027800	Indicator Holder (Silver)
	07995300	Indicator Holder (Black)
9	07948900	Color Filter (Purple)
10	46412700	Outlet Control SW.
11	07847500	Leg

Parts List <Top View>

Parts No.	Stock No.	Description
1	15009501	Power Transformer
2	38004700	Power Supply Cord
3	39106000	Strain Relief
4	07249800	Slide SW., 50 Hz/60 Hz
5	46360100	AC Outlet
6	07995400	Display Holder
7	47026600	Cover, display holder (Silver)
	07995100	Cover, display holder (Black)

## 5. PACKING LIST

Parts No.	Stock No.	Description
1	47013100	Styrofoam Packing
2	47013400	Carton Case (Black)
	47027200	Carton Case (Silver)



## 6. ACCESSORY LIST

Stock No.	Description
46357600	Operating Instruction
47026900	Mounting Holder Left Side (Silver)
47026800	Mounting Holder Left Side (Black)
47027100	Mounting Holder Right Side (Silver)
47027000	Mounting Holder Right Side (Black)
—	Power Cord Clamp

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