SHARP SERVICE GUIDE

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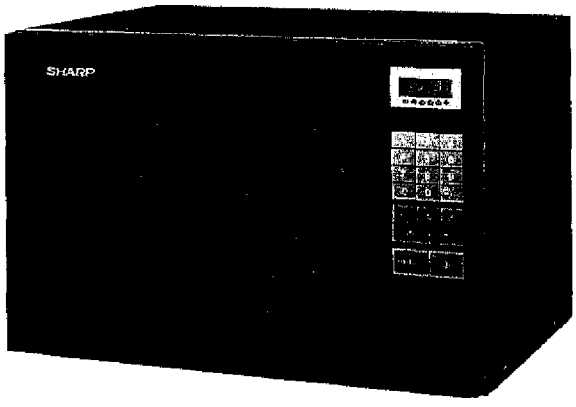

MICROWAVE OVEN

MODEL R-5960

In the interest of user safety, this equipment should be restored to its original condition and only the prescribed parts should be used.

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SHARP CORPORATION

R=5960

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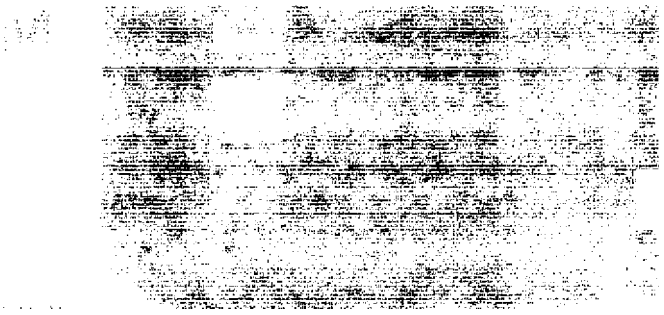


SERVICE GUIDE

SHARP

M1KR0WELLENGERAT

R-5960

FOREWORD

This manual has been prepared to provide Sharp service technicians with complete operation and maintenance information for the R-5960 microwave oven.

It is therefore recommended that customer service technicians read the entire text of this manual carefully so that they are able to provide satisfactory customer service.

VORS1CHT

MICROWAVE RADIATION

Individuals should not be exposed to microwave energy emitted from the magnetron or other microwave generators if they are used or connected improperly.
All outlet and inlet micro-terminations, waveguides, flanges and seals must be tightly sealed. Never operate the microwave oven without load.
When operating the microwave oven, never look into an open waveguide or antenna.

Note (spare part):
The " are marked at a voltage
powered by more than 250V.

SHARP CORPORATIONOSAKA, JAPAN

B **DEVICE DESCRIPTION ;**

DEVICE DESCRIPTION

EXPLANATION OF MICROWAVE COOKING

The Sharp microwave device uses microwave energy to generate heat in the food. Unlike conventional ovens, microwave energy cooks without the supply of external heat energy.

Microwaves, which are short electromagnetic waves of high-frequency (RF) energy, pass through materials such as glass, paper, porcelain and almost all plastics. Materials such as metal and aluminum foil tend to reflect microwaves; they should therefore only be used according to the recommendation in the cooking instructions.

Materials with high moisture content, such as most foods, absorb microwave energy. When microwave energy enters the food at a frequency of 2450 MHz, the molecules align with the energy. Since the microwaves change their polarity after each half-period, the food molecules also change direction after each half-period, i.e. they oscillate back and forth 4,900,000,000 times per second. This rapid oscillation causes friction between the molecules, converting microwave energy into heat.

SPECIFICATIONS

Power supply	220V . 50 Hz Single phase, 3-wire grounding
Electricity consumption	950W
Microwave Output Power	500W (2 liters of water in the cooking chamber)
Case Dimensions Wide High Depth	 450 mm 306 mm 361 mm
Cooking chamber dimensions Width High Depth Diameter of the turntable	 295 mm 185 mm 307 mm 280 mm
Controls	(<5>) Koch sensor, (© /) Stop/L6 Shock Sensor (1:00 — 12:59) Minute timer switch (0 — 99 min., 99 sec.) Adjustable cooking control Repeat episode: -i: FULL POWER Voile performance throughout the cooking time. A: COOKING Ga. 24 sec. ON, 8 sec. OFF, approx. 70% of full power. A: CONTINUE COOKING Approx. 18.0 sec ON, 14.0 sec OFF, approx. 50% of full power. -i*r: DEFROST Approx. 12 sec. ON, 20 sec. OFF, approx. 30% of full power. A: KEEP WARM Approx. 6 sec. ON, 26 sec. OFF, approx. 10% of full power.
Weight	Approx. 15.5 kg

BETR1EBSANWEISUNG

HANDLING OF THE SENSOR CONTROL UNIT

The new microwave oven with sensor control unit uses a microprocessor; this is the electronic "brain" that enables a large number of cooking programs that could not be realized with conventional operation. The Cerate is operated by touching the various sensors, which are sensibly arranged on the control unit. The illuminated digital display shows the cooking time and time of day. The indicator lights will light up to indicate the programmed setting of the adjustable cooking control or cooking function.

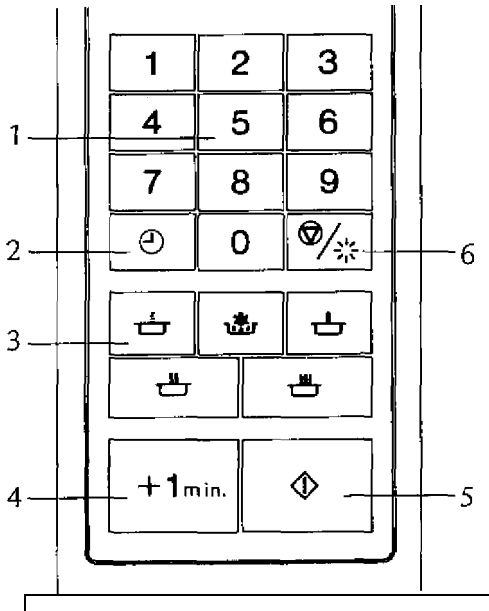
To enter a function, it is necessary to touch one of the sensors on the control unit; an input beep is heard. If this is not the case, then:

1) did not exert enough force when touching the sensor;
2) the capacity of the control unit was exceeded when entered;
3) an incorrect entry was made.

In addition to the input signal tone, an acoustic signal is sent for about 2 seconds at the end of the cooking process.

* Make sure that the device is only connected to a Schuko socket 220V mains voltage. When the Schuko plug is plugged into the Schuko socket, the display showsrgg.-8g|and flashes every second.
* The appliance cannot be programmed if the cooking chamber door is not properly closedn . .
* During the cooking process, the program cannot be changed until the -Sensor driick. All functions are locked during the cooking process to avoid unintentional changes.
* If the power supply to the device is interrupted, the indicator will periodically showigg-gSlan after renewed power. If this happens during the cooking process, the program will be yellowed. The time of day is also deleted. Simply set the clock to the correct time of day.

1. Digit sensor
2. Clock sensor



3. Sensors for adjustable cooking controller
4. "Another minute" sensor
5. Sart sensor
6. Stop sensor/lbsch sensor

SETTING THE CLOCK

I^en |^Print sensor ^ which makes CZIZZ22] appear on ^the display. After a minute, the example shows: At 12:30, touch the preceding numbers in this order.

Service	Sensor	Display
1. The clock sensor [©| (touch).	©	n ..... U
2. The right time of day by of the corresponding sensors in the correct order.	------- -------- -------- --------- 1 2 3 1 0 _____ 1^,. i 1-. L_ ____	/ L. / U 6 & iS A A <$>

3. The clock sensor |0] again (be- stir).	©	k lol
		A A A A A A <!>

The clock is now set and continuously shows the time of day.

NOTE: This is a 12-hour clock. I £g| appear on the display when an attempt is made to enter an incorrect time. Becomes the . Example tried 8:61 or 13:00 appears | gg|zyour advertisement of a mistake. In order to | ££] to lbschen, the extinguishing sensor touch. If more than 4 number sensors are accidentally touched, the last 4 numbers whose sensors have been touched will appear on the display.

MICROWAVE COOKING

Cooking at full power

Many dishes are cooked at full (100%) power §, where the best results can be achieved. The adjustable cooking control provides the possibility to select the power during microwave cooking, but the device will operate at full power § if no sensor of the adjustable cooking control is touched. For cooking at full power §, the sensor for full power § does not need to be touched. For other power levels of the adjustable cooking controller, the desired division must be entered.

Example: For 1-1/2 minute cooking at full power

Service	Sensor	Display
1. Enter the desired cooking time.	1 3 0	***i ~i*** n ¹ A A A A A 4>
2. Touch the starting sensor [^|.		Uj IC3
		A A A A A

The cooking time is counted down to zero. When the timer reaches 0, the indicator lights will turn off and a beep will be heard. The microwave energy is switched off.

* If the door is opened during the cooking process, the cooking time in the display automatically stops. The cooking time is further measured when the door is closed and the start button is pressed again.
* If you have the impression that the food is not heating properly, check the display immediately above the illuminated digital display. Make sure that the garage regulator is set correctly.

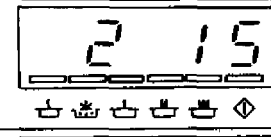
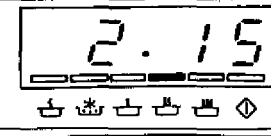
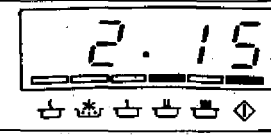
* The turntable rotates both clockwise and counterclockwise.

Cooking with adjustable power

Five pre-selection power levels are available.

For some foods, the best results can be achieved if they are cooked more slowly with low cooking power. Your cookbook lists the recommended settings for each recipe. Details on how to use the adjustable cooking controller can be found in the corresponding chapter of your Sharp microwave cookbook.

Example: To cook at g (cooking) for 2 minutes, 15 seconds.

Bedienung	Sensor	Anzeige
1. Die gewünschte Kochzeit eingeben.	2 1 5	
2. Die gewünschte Einstellung des einstellbaren Kochreglers wählen.		
3. Den Sensor für Starten ⏎ berühren.		

The cooking time is counted backwards to zero. When the timer reaches 0, the indicator lights go out and a beep is heard. The time of day will appear on the display again.

PLEASE NOTE: If the wrong sensor of the adjustable cooking control is accidentally touched, immediately touch the correct sensor. The last sensor touched determines the setting of the device. For example, if @ (cooking) is followed first and immediately afterwards @ (continued cooking), the cerate is set to |S| ' (Continue cooking).

Cooking with multiple cooking sequences

Up to 2 automatic cooking sequences can be programmed into this appliance, whereby the switch from one setting of the adjustable cooking control to the other is automatic.

Example: To program the appliance to defrost @ the meat and then cook with the cooking [3|, proceed as follows.

Service	Sensor	Display
1. Enter the desired time for the first cooking sequence. For 10 minutes of defrosting.	1 _ 0 0 0	/n ~i n 1 u u /_/ T£T it&r lir
2. Select the setting of the adjustable cooking control.		/ l~l l~l l~l l u • u u 6 A6 A* <!)
3. Enter the desired time for the second cooking sequence. For 20 minutes of cooking.	o o	□ n n ri l- U U i-l Ts- i A
4. Select the second setting of the adjustable cooking control.	A	~/ l~l /"/ l~l C l-l • U l-l A- TZEJ ■A

5. Den Sensor für Starten ⏀ berühren.	⏀	10.00 Die Messung der Garzeit beginnt. Bei Erreichen von Null ist die Anzeige wie unten gezeigt. 20.00 Die Messung der Garzeit beginnt.

When the timer reaches 0, all indicators go out and a beep is heard. The time of day will appear on the display again.
NOTE: If @ (voile power) is selected as the last cooking sequence, it is not necessary to touch the @(voile power) sensor.
If § (voile power) is not the last cooking sequence, the sensor § (voile power) must be touched.

OPERATION FOR ANOTHER MINUTE

The "One More Minute" system allows you to continue cooking for an additional minute on [*) (voile power) by simply pressing the button. Dutch repeated press of the button during a cooking program can also increase the cooking time in 1-minute multiples of the button Example 1: Cooking for one minute on § (voile power).

Service	Sensor	Display
		/ • Hl l~f / • U /-/
The sensor I +1 min. | (Another minute of sensor).	**+1 min.**	
		tir Ar i XST **A** The measurement of the cooking time begins.

When the timer reaches 0, all indicators go out and a beep is heard. The time of day will appear on the display again.
NOTE: i +i min- ,| (Plus 1 minute) can only be entered within 1 minute after cooking, closing the door, touching the STOP/CLEAR sensor or while cooking. The Function I +1 min. | (Plus 1 minute) cannot be used for cooking when one of the programs is displayed.

Example 2: You want to increase the cooking time: 1 minute at 5 minutes on @ (cooking).

Service	Sensor	Display
1. Enter the desired cooking time.	5 0 0	C /“ **-t J-l** u ■cb' A- A A <£>
2. Select the desired setting of the adjustable cooking control.	A	C /" **l~t** A A A A A A
3. Touch the starting sensor (<J>|.	○	***C ~i ~i =' ■ u*** A1 A A A A ■O' [Jie measurement of the b garze begins. **>** ***n*** /tir -db-db

4. The sensor	+i min.	(another minute of sensor).		+1 min.	~i ~I Cl 1- - C -1
					i & Ai A <t> The cooking time is increased by one minute and continuously reduced to zero.

When the timer reaches 0, all indicators go out and a beep is heard. The time of day appears on the display again.

NOTE: The cooking time can be increased in multiples of 1 minute by adding the I +i min- | (One more minute sensor) button repeatedly presses during the cooking program.

USING THE STOP/CLEAK SENSOR

1. To delete an incorrect input during programming.
2. To cancel the minute timer,
3. To temporarily turn off the stove while cooking.

DELETING A PROGRAM WHILE COOKING

To switch off the appliance during the cooking process and delete the entire cooking program, perform one of the following steps.

1. Open the device door. 2. Close the door. 3. The Lbschensor (|^4;; -|).

OR

1, Touch the |^i-I (STOP/CLEAR) sensor (twice).

OPERATION

DESCRIPTION OF THE SEQUENCE OF OPERATIONS

Below is a complete description of the component function during the operation of the microwave oven.

OFF STATE

Closing the door activates both bolt switches (upper and lower bolt switches). The monitor switch is open in this state, the stop switch on the lower bolt hook is activated by the lower bolt head.

When the microwave oven is connected to a mains socket, 220V AC power flows to the mains transformer on the unit chassis. The mains transformer then supplies the control unit with the required clamping device. However, no components in the microwave device are put into operation (see Figure 1).

Note: When the door is opened by pressing the tiir opening button, the cooking chamber lamps and cooling fan motor will turn on;

1. The display shows an 88:88 flashing every second.
   To set any program or watch, use the (STOP/DELETE) sensor button. 88:88 is deleted from the display; 1:00 appears in the display and continues to count every minute.

COOKING AT FULL POWER

-FTFFULL POWER)

Select the desired cooking program by lightly rubbing the DIGIT sensor buttons and the -r^r (FULL POWER) sensor button of the cooking control.

When the <!> (KOCH) sensor button is pressed, the following processes take place: (See Figure 2)

1. The O (KOCH) and i (FULL POWERJ) indicator lights light up. The time that appears on the display starts counting down to zero.
2. The winding of the control relay (RY1) is supplied with voltage.
   A. The relay contacts (A) close and supply the cooking chamber lamps with voltage.
   B. The relay contacts (B) close and supply the turntable motor and the Kiihl blower motor with voltage.
3. The windings of the cooking relay (RY2) and the current limiting relay (RY3) are activated.
   The relay contacts close to supply the mains transformer with voltage.
4. 220V is supplied to the primary winding of the mains transformer and converted to 3.7V output alternating voltage at the secondary winding.
5. The 3.7V output power of the secondary winding heats up the magnetron winding.
6. The alternating current of 2010V output power from the high-voltage winding of the mains transformer is fed to the voltage doubler circuit, which consists of a high-voltage capacitor and a rectifier.
   The 2010V alternating current is converted into approx. 3700V negative direct current (peak-to-peak) and fed to the magnetron.
7. The negative direct current of 3700V is fed to the cathode of the magnetron to cause it to vibrate, thereby generating a cooking frequency of 2450 MHz.
8. The RF energy generated by the magnetron tubes is directed through a waveguide into the cooking chamber feed box and then into the cooking chamber where the food to be heated is located.
9. At the end of the cooking time, the following processes take place

-''(T) The control relay (RY1) is operated by the. The power supply is disconnected, the cooking chamber lamps go out and the cooling fan motor and turntable motor switch off.
   (2) The cooking relay (RY2) and the current limiting relay (RYS) are disconnected from the power supply, open the circuit to the mains transformer and thus stop the generation of microwave energy by the magnetron.
   (3) The <$> (KOCH) and A (FULL POWER) indicator lights turn off, and the respective time of day appears again in the display.
   (4) At the end of the cooking cycle, a signal is sent and the microwave unit returns to the OFF state.

10. The monitor switch monitors the function of the upper bolt switch by electrical means and is mechanically assigned to the tiir, so that the function takes place in the operating sequence according to the following pattern:
    (1) When the Tiir is opened, the contacts of the upper and lower bolt switches open first. Then the contacts of the monitor switch closed.
    (2) When the Tiir is opened, the contacts of the monitor switch open first. Then the contacts of the upper and lower bolt switches close.

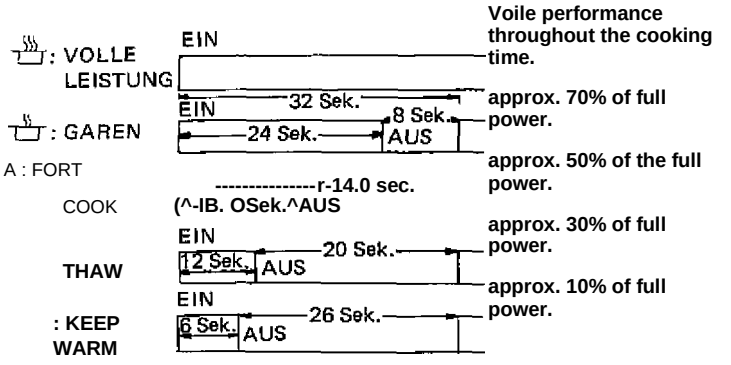
In the event of a malfunction of the upper latch switch (contacts do not open when the tiir is opened), the closing of the monitor switch contacts will cause a short circuit through the fuse and the upper bolt switch. The result is that the fuse melts through.

A (COOKING), A (COOKING AWAY), A(DEFROSTING) or T^R (KEEPING WARM)

Enter the program of the desired cooking method by rubbing the numeric sensors and the sensor buttons uJ' (COOKING), -A (CONTINUING COOKING), A (DEFROSTING) or (KEEPWARM) on the cooking control.

When the 0> (KOCH) sensor button is touched, the following processes take place:

1. The control relay (RY1), cooking relay (RY2), and current limiting relay (RY3) are activated.
2. The O (KOCH) indicator light and the indicator lights of the cooking control system light up.
3. Within a base time of 32 seconds, 220V alternating current (intermittent) is fed to the mains transformer through the contacts of the cooking relay, which are regulated by the control unit. The time span is regulated by the control unit. The following illustration shows the different operating modes with the corresponding microwave power levels:



Hint; The ON/OFF ratio does not match the percentage of microwave power, as it takes about 2 seconds to heat up the magnetron secondary winding.

DESCRIPTION AND FUNCTION OF THE COMPONENTS

COOKING CHAMBER LAMP

The cooking chamber lamp is used to illuminate the cooking chamber, so that the food can be observed through the door window without having to open the door.

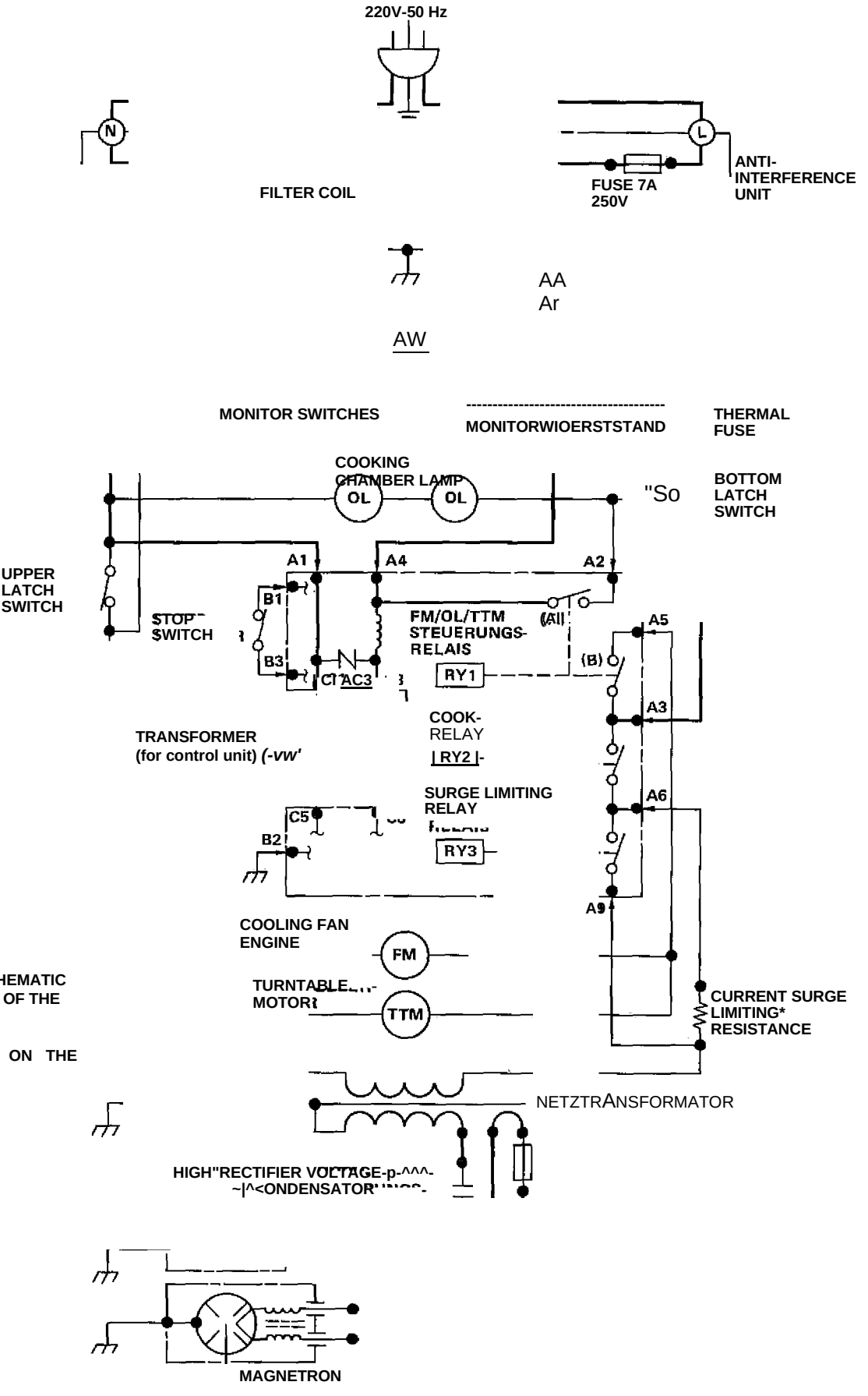
K0HLGEBLASEMOTOR

The blower motor operates a fan blade wheel which sucks in little air through the rear vents. This cooling air is blown by the wind blades against the magnetron. This air is then passed through the cooking chamber to remove the steam or vapour produced by heating the food and finally blow it out on the edge of the cooking chamber.

THERMAL FUSE

The thermal fuse is located in the cooking chamber and is used to prevent damage to the magnetron in the event of overheating of the magnetron tubes due to a failed Kiihl blower motor. This also applies to blocked air ducts, blocked air inlet, etc.

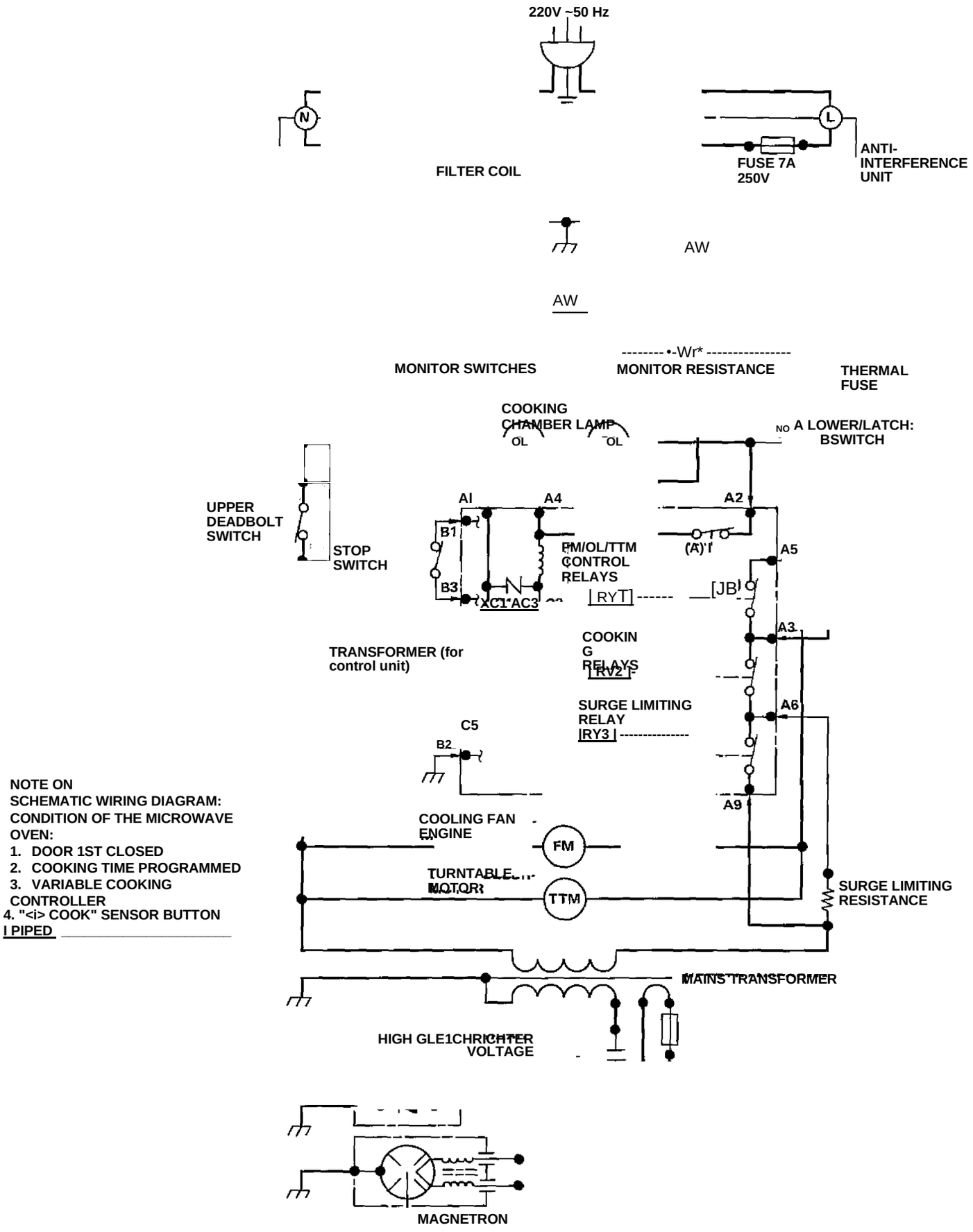
During normal operation, the thermal fuse contact remains closed. If abnormally high temperatures are reached within the magnetron, the thermal fuse contact will open, causing the entire microwave device to fail. Since it is a fuse, it does not restore to its original condition.



DESCRIPTION OF THE SCHEMATIC WIRING DIAGRAM: STATE OF THE MICROWAVE OVEN:

1. DOOR 1ST CLOSED
2. THE TIME APPEARS ON THE VISUAL DISPLAY

Figure 1. Schematic Schematic Schematic of the Microwave Device — Off State



NOTE ON
SCHEMATIC WIRING DIAGRAM:
CONDITION OF THE MICROWAVE OVEN:
1. DOOR 1ST CLOSED
2. COOKING TIME PROGRAMMED
3. VARIABLE COOKING CONTROLLER
4. "<i> COOK" SENSOR BUTTON
I PIPED

2. Schematic wiring diagram of the microwave oven — Cooking condition

T0ROFFNUNGSMECHANISMUS

The Tiir opens by pressing the door opening button on the control panel (see Figure 3). When the door opening button is pressed, the opening plate is pressed against the control lever and the bolt head connection is activated. The bolt heads are pushed upwards and snapped out of the bolt hooks. The tiir now open.

STOP SWITCH

The stop switch is attached to the lower bolt hook and is actuated by the lower bolt head. If the door opening button is pressed during the cooking cycle, the contacts of the stop switch open to interrupt the locking relays and cooking relays in the control unit. The down-counting cooking time on the digital display also comes to a standstill.

UPPER AND LOWER LATCH SWITCH

- The upper latch switch sits on the upper latch hook and the •s lower latch switch sits on the lower latch hook. You will < by the bolt heads located on the Tiir.

S When the Tiir is opened, the switches interrupt the Circuits to alien components of the microwave oven. As long as the tiir is not tightly closed, no cooking cycle can take place. (Both latch switches must be activated).

MONITOR SWITCHES

The monitor switch is located above the upper latch hook. It is activated by the upper latch head on the door as well as the monitor control lever (the contacts are opened) when the Tiir is closed. The purpose of this switch is ***to*** disable the microwave oven (by blowing the fuse) if the contacts of the upper latch switch do not open when the tiir is opened.

Functions:

1. When the tiir is opened, the contacts of the monitor switch close (power-on state).
   The upper bolt switch is now in the switch-off state (contacts are open).
2. When the Tiir is closed, the contacts of the monitor switch open first; then the upper bolt switch contacts closed. (In the case of the Tiirbffnen, these switches work in reverse order).
3. When the door is opened and the contacts of the upper latch switch do not open, the fuse will burn dutch, and the monitor switch contacts will close/- at the same time.

   CAUTION: BEFORE REPLACING A BLOWN FUSE, BE SURE TO CHECK THE UPPER BOLT SWITCHES AND THE MONITOR SWITCH FOR PROPER FUNCTIONING. (REFER TO THE PROF PROCEDURE ON PAGES 18 AND 20).

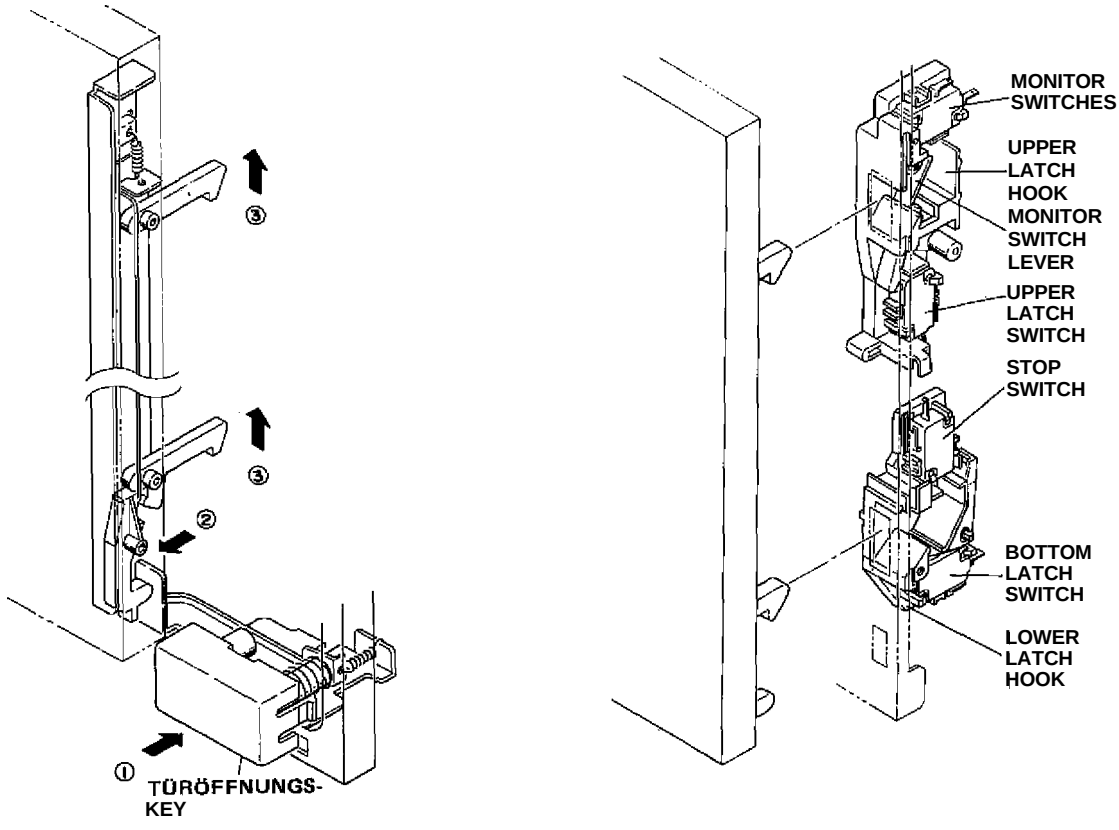


Figure 3. Opening mechanism and switch

MAINS TRANSFORMER

The mains transformer contains three windings: a primary winding, secondary winding and high-voltage winding.

During the cooking cycle, the 220V AC supplied to the primary winding of the mains transformer is reduced to 3.7V with the secondary winding. The high-voltage winding brings the 220V to approx. 2010V alternating current. The 3.7V heat the secondary winding of the magnetron. This forces the cathode to release electrons, which is important for tube transfer when the negative voltage of 3700V (DC) is applied to the cathode.

The 2010V AC voltage is fed into the voltage doubler circuit.

VOLTAGE DOUBLER CIRCUIT

The voltage doubler circuit consists of a rectifier and a capacitor, the AC voltage of 2010V from the high voltage winding of the power transformer, is fed to the voltage doubler circuit, where it is rectified and converted into a negative DC current of 3700V required for magnet power operation.

Rectifier: The rectifier is a fixed-body device that allows the power flow in one direction, but prevents it in the opposite direction. This device works as a rectifier, which converts alternating current into pulsating direct current.

High-voltage capacitor: The capacitor is able to store energy on one half of the grid cycle and release it together with the mains transformer output to generate a negative DC current of approximately 3700V, which is supplied to the magnetron.

MAGNETRONR6HRE

The magnetron tube is a cylindrical cathode within a cylindrical anode surrounded by a magnetic field. When the cathode is heated by the secondary winding of the mains transformer, electrons are released from the cathode.

These negatively charged electrons are attracted to the more positive anode of the tubes when the negative DC voltage of 3700V is fed to the cathode.

Normally, the electrons would move in a straight line from the cathode to the anode, as shown in Figure 4. However, in a magnetic field generated by the permanent magnets arranged around the anode, the electrons are forced into a path between the cathode and anode (see Figure 5). When the electrons approach the anode, they pass the small resonance cavities that are a tell of the anode. ' An interaction occurs, causing the resonance cavities to vibrate at the very high frequency of 2450 MHz. This RF energy is radiated by the magnetron antenna into the cooking chamber where the food is located.

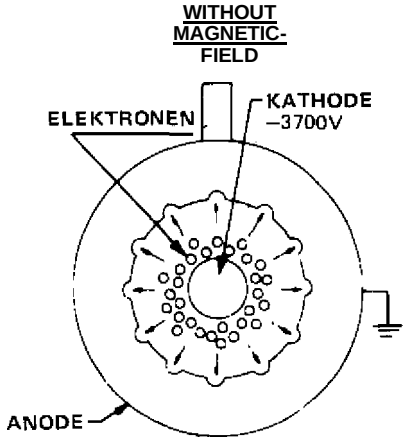


Figure 4. Magnetron without magnetic field

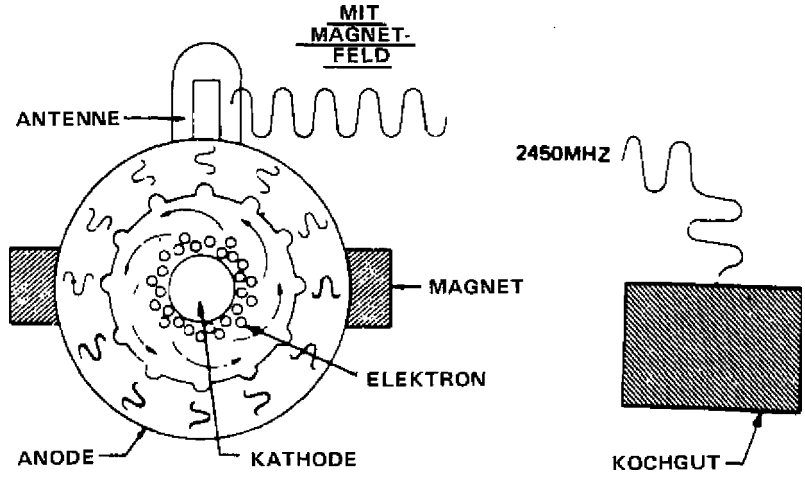


Figure 5. Magnetron with magnetic field

MAINTENANCE

TROUBLESHOOTING TABLE

When troubleshooting the microwave oven, it is recommended to carry out checks according to the sequence of operation. For many of the possible causes, a specific test must be carried out. These tests were assigned procedure letters which can be found in the "Priifverfahren" section.

WICHT1G: If the microwave oven fails due to a blown fuse in the upper latch switch circuit, first select the monitor switch and then the upper link switch before replacing the fuse.

DISRUPTION	POSSIBLE CAUSE	PROCEDURE OR REMEDY
OFF STATE		
The home fuse blows when the mains plug is connected to a wall socket.	Shorted wire in the lead cable or cabia tree	Replace cables or check wiring
The microwave oven fuse blows when the mains plug is connected to a wall socket.	Shorted wire in conductor cable or kabeibaum	Replacing the lead cable or checking and repairing the Kabeibaum
	Defective monitor switch	Procedure L . .
88:88 does not appear on the visual display when the AC plug is plugged into a wall outlet.	No voltage on the output side	Check home security
	Blown fuse	Procedure J
	Defective thermal fuse	Method 1
	Exposed wire in the supply cable, cabi tree or the wiring between the control units.	Repair or renew wiring
	Defective control unit	Procedure K
The indicator does not work properly when the © /# (STOOP/DELETE) sensor button is touched.	Defective key unit	Procedure K
	Defective stop switch	Procedure H
	Defective control unit	Procedure K
The cooking chamber lamps do not light up when the door is open.	No voltage from the wall outlet	Wall socket iiberpriifen
	Exposed wire in the feeder cable or kabeibaum	Replace or repair wiring
	Blown fuse	Procedure J.
	Defective thermal fuse	Method 1
	Defective cooking chamber lamp	Replace both cooking chamber lamps
	Shah lower deadbolt switch	Procedure G
	Exposed or loose wire connection to the above components	Check wiring
COOKING CONDITION		
The cooking chamber lamps do not light up during the cooking cycle. (They light up when the tiir is open).	Defective contacts (A) of the control relay	Procedure K
	Defective control unit	Procedure K

TROUBLESHOOTING TABLE (CONTINUED)

DISRUPTION	POSSIBLE CAUSE	PROFATIVE PROCEDURE OR INTERLOCUTORY REVISION
COOKING STATE (CONTINUED)		
The cooking chamber lamps did not shine at all.	Blown fuse	Replace both cooking chamber lamps
	Exposed wiring to the cooking chamber lamp holder	Checking and repairing wiring
The cooking indicator lights up in the display, but the turntable motor does not work.	Defective contact (B) of the control relay	Procedure K
	Defective turntable motor	Replacing the engine
	Loose or loose wire connection between control unit and motor	Checking and repairing wiring
The cooking chamber lamps are on, but the Kiihl blower motor is not working. (The turntable motor works).	Defective Kiihl blower motor	Process E
	Exposed or loose wire connection to the Kiihl blower motor	Checking and repairing wiring
The microwave does not enter the cooking cycle when the <£> (COOK) button is dribbled.	Upper and/or lower deadbolt switches defective or poorly adjusted	Procedure F, G
	Defective thermal fuse	Method 1
	Defective boiling or current limiting relay on the control unit	Procedure K
	Defective control unit	Procedure K
	Defective key unit	Procedure K
	Exposed or loose wire connection to the above components	Checking and repairing wiring
The microwave seems to work, but little or no heat is generated in the food. (Food cooked imperfectly or not at all when the cooking cycle is closed).	Defective magnetron	Procedure A
	Defective boiling or current limiting relay on the control unit	Procedure K
	Defective mains transformer	Procedure B
	Defective rectifier	Procedure C
	Defective high-voltage capacitor	Procedure D
	Defective control unit	Procedure K
	Exposed or loose wire connection to the above components	Checking and repairing wiring
The microwave switches to the cooking cycle, but the food is heated very unevenly.	The turntable motor does not work	Replacing the turntable motor
The microwave oven will not work as desired if the cooking regulator is set to (KEEP WARM), iXr (DEFROST), т^F (CONTINUE COOKING) or (COOKING), [The microwave works properly in the i (FULL POWER) position].	Defective control unit	Procedure K
	Defective key unit	Procedure K
	Exposed or loose wire connection to the above components	Checking and repairing wiring

TEST METHODS

PROCEDURAL LETTER	COMPONENT PROVOCATION
A	**INSPECTION BY MAGNETRON UNIT** THE HIGH-VOLTAGE CAPACITOR BEFORE TOUCHING 1ANY M!KRO SHAFT DEVICE COMPONENTS OR THE VE. WIRING UNLOADED. To check for an exposed heating wire, isolate the magnetron from the high-voltage circuit. In the case of a current continuity test on the heating wires of the magnetron, less than 1 ohm should be displayed. To test for a short-circuited magnetron, connect the ohmmeter supply lines between the magnetron heating wires and the housing (ground). In this principle, infinite resistance must be displayed. If there is little resistance or no resistance at all, it is a magnetron to mass. In this case, the magnetron must be replaced. This output power of the magnetron can be measured by means of a water temperature rise test. This test should only be carried out if the above tests do not indicate any interference of the magnetron and no defect can be detected in the following components or in the wiring: rectifier, high-voltage capacitor and mains transformer. **MICROWAVE OUTPUT POWER** The microwave output power of the magnetron can be measured using the substitution method, i.e. it can be determined how much energy a certain amount of water can absorb. To measure the microwave output power of the microwave device, the ratio of calories to watts is applied. Heating P (W) for t (seconds) produces approximately P-t/4.2 calories. If, on the other hand, the water temperature rises by V (ml) during this microwave warming period to AT (°C), then the caloric value of the water is V-AT. The formula is as follows: $U = \frac{P \cdot t}{v AT}$ $p = \frac{4.2 \cdot V\ AL}{t}$ (W) Our condition for the amount of water is as follows: Water..... 2000 ml Warming time .....120 seconds (2 minutes)
	| P = 70 x AT
	MeG method:- 1. Steep two containers of (2) litres of water into the middle of the cooking space. The water should be in (2) Pyrex cooking cups, each with a capacity of one (1) litre, placed side by side (right and left) in the cooking chamber. 2. Calculate the temperature of the water before heating and after two minutes of heating by means of micro measurements, then calculate the temperature rise. The temperature increase should correspond to the average of the temperature differences measured in each of the two cooking cups. 3. The output power shall be calculated as follows: If the measurement result is not satisfactory, take the measurement several times and assess the result from a synthetic point of view. The microwave power rating should be ±15% of the rated power.

PROF PROCEDURE (CONTINUED)

PROCEDURAL LETTER	COMPONENT PROVOCATION
A (cont'd)	Calculation of output power: Microwave output power . . . . P (W) = 70 x AT (°C) Z_{JI} " $\frac{(ATL + ATR)}{2}$: average temperature rise. ATL = (TL2 - TL,) AT_R = (TR2 -TR,) TL2 : Water temperature after heating in the left cooking cup. TLi : Water temperature before heating in the left cooking cup. TRz: Water temperature after heating in the right cooking cup. TRi: Water temperature before heating in the right cooking cup. MeB conditions: Since the microwave output power is affected by various conditions, the measurement should be carried out in accordance with the following points. 1. The initial temperature of the salt water should be 20±1°C. (The salt water solution soli contain 1% table salt). Stir the water well and quickly, and measure the temperature immediately after heating. 2. The thermometer scale must have at least 0.1°C divisions. An accurate mercury thermometer is recommended, 3. A Pyrex glass cooking cup with a capacity of one (1) litre and a diameter of approximately 12 cm is to be used. 4. The room temperature must be approx. 20°C. 5. The mains voltage should be 220V.
B	**TEST OF THE MAINS TRANSFORMER** DISCHARGE THE HIGH VOLTAGE CAPACITOR BEFORE PIPING ANY MICROWAVE DEVICE COMPONENTS OR WIRING. Disconnect the primary input terminals and measure the resistance using an ohmmeter. Use the ohmmeter to check the current passage of the windings. On the RX-1 scale, the resistance of the primary winding should be approximately 2.25 ohms, and for the high-voltage winding, it should be 86 ohms. The resistance of the secondary winding should be less than (1) ohms. (THE HIGH VOLTAGE TERMINAL IS UNDER HIGH VOLTAGE. TRY TO MEASURE THE SECONDARY WINDING AND THE HIGH VOLTAGE).
C	**RECTIFIER TESTING** DISCHARGE THE HIGH VOLTAGE CAPACITOR BEFORE PIPING ANY MICROWAVE DEVICE COMPONENTS OR WIRING. Isolate the rectifier from the circuit. Using the highest ohm scale of the ohmmeter, read and observe the resistance via the terminals, then reverse the supply lines to the rectifier terminals and observe the meter display. If a short loop is displayed in both directions, or if infinite resistance is read in both directions, the rectifier is probably defective and must be replaced.

PROF PROCEDURE (CONTINUED)

PROCEDURAL LETTER	COMPONENT TESTING
D	**PRO OF HIGH VOLTAGE CAPACITOR** DISCHARGE THE HIGH VOLTAGE CAPACITOR BEFORE PIPING ANY MICROWAVE APPLIANCE COMPONENTS OR WIRING. When the capacitor is open, no high voltage is supplied to the magnetron. Disconnect the input lines and use the ohmmeter to check for short-circuit or open circuit between the terminals. If the high-voltage capacitor is normal on a high ohm scale during the upper test, the MeBgerät will show current continuity for a short time; after charging the capacitor, it should indicate an open circuit. If this is not the case, check the capacitor with the help of the ohmmeter for short circuit between the terminals. In case of short closure, replace the capacitor.
E	**PROFUNG OF CARBON BLOWER MOTOR** Check whether there is a voltage of 220V between the engine connections. If voltage is measured but the motor is not working, the blower motor should be replaced. Check for loose or broken wire connections.
F	**PROFUNG OF THE UPPER DEADBOLT SWITCH** Insulate the latch connector and then connect the ohmmeter supply lines to the common (COM) and normally open (NO) terminal. When the tiir is open, the ohmmeter should indicate an open circuit. When the door is closed, the circuit must be closed. If faulty operation is detected, make the necessary switch adjustment or replace the defective circuit.
G	**LOWER LATCH SWITCH DESIGN** The latch can be checked with the help of an ohmmeter. Insulate the conductor and then connect the ohmmeter supply lines to the common (COM) and normally open (NO) terminal. When the tiir is open, the ohmmeter should indicate an open circuit. When the door is closed, the circuit must be closed. The ohmmeter soil, with the supply lines to the common (COM) and normally closed (NC) terminal of the switch, indicates a closed circuit when the tiir is open and an open circuit when the tiir is closed. If faulty operation is detected, make a necessary switch adjustment or replace the defective slider. The setting procedure is described on page 38,
H	**CHECKING THE STOP SWITCH** Insulate the conductor and then connect the ohmmeter supply lines to the common (COM) and normally open (NO) terminal. When the tiir is open, the ohmmeter should indicate an open circuit. When the tiir is closed, the circuit must be closed. If the switch fails, it must be replaced.
1	**PROFUNG MAGNETRON THERMAL FUSE** An inspection of the current flow of the entire thermal fuse terminal block must indicate a closed circuit, unless the thermal fuse reaches a temperature of approx. 115°C. An open thermal fuse indicates that the magnetron is overheating. When the thermal fuse is open, replace the fuse and check for obstructed airflow through the housing openings to the magnetron, especially the cooling duct.

PROCEDURE BOOK

COMPONENT PROVOCATION
BLOWN FUSE

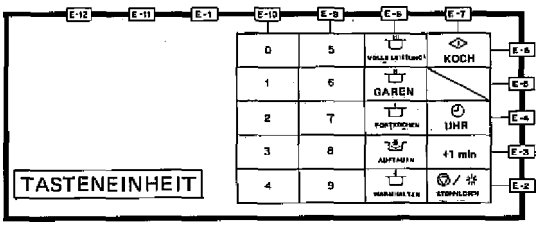
If the monitor/upper latch switch circuit fuse blows when the door is opened, first check the top latch switch and monitor switch before renewing the fuse. (Refer to test methods F and L).
If the fuse blows due to an incorrect switch function, replace the switch and the fuse at the same time. If the switches are working normally, only the fuse needs to be replaced.

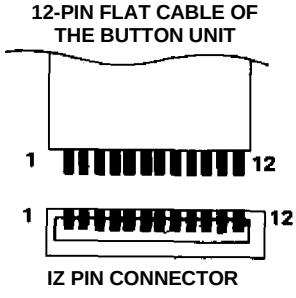
CAUTION: THE BLOWN FUSE MUST BE REPLACED BY A 7 AMP FUSE; PART NO. QFS C0027WREO.

PROPOSITION OF THE SENSQR BUTTON CONTROL UNIT

PROFORMATION OF THE BUTTON UNIT

If the display does not respond to the control of the sensor button, use the following matrix circuit and attach an overhead wire between the correct pin connections with the E (12-pin) connector disconnected from the control unit.
If the display responds and the microwave device goes into operation, the button unit is damaged. If nothing happens, replace the button unit if necessary.





PROFUNG OF THE RELAY

Remove the outer housing and use a voltmeter to pass between the Al and A4 stiffs of the 9-pin wire connector (A) of the button unit. If the voltmeter shows 220V, it means that the components of the micromellen device are damaged.

Testing of the shutdown relay

Select a cooking program and touch the sensor button.

1. The cooking chamber lamps, the Kiihl blower motor and the turntable motor do not work.
   Use a voltmeter to pass between the lines Al and A2 or A5.
   220V are displayed..... .... Defective components of the microwave oven
   220V are not displayed..... Defective Shutdown Relay (RY1)
   (Shutdown relay (RY1) does not work) . . . (Check the shutdown relay or other parts of the control unit).
2. The microwave unit does not switch to the cooking cycle.
   On the passage between the Stiffen Al and A6 or A9 with a voltmeter.
   220V are displayed..... Defective components of the microwave oven
   220V are not displayed..... Defective Shutdown Relay (RY2) or (RYS)
   (Shutdown Relay (RY2) or (RYS)..... (The shutdown relay or other parts of the control system doesn't work) Einheit iiberpriifen).

Shutdown Relay Inspection

Measure the voltage on the relay winding with a voltmeter (direct current) during cooking operation.

18 volts indicated..... Defective shutdown relay
18 volts are not displayed..... The diode iiberpriifen, which is connected to the relay winding, . If the diode is fine, check if other parts of the control unit are defective.

The sensor button control unit consists of circuits with semiconductors such as LSI, ICs, etc. In contrast to conventional micro devices, proper maintenance is completely excluded with only one voltmeter and one ohmmeter. Refer to the "SENSOR BUTTON CONTROL UNIT" for this purpose.

PROFESSIONAL PROCEDURE (TRANSLATION)

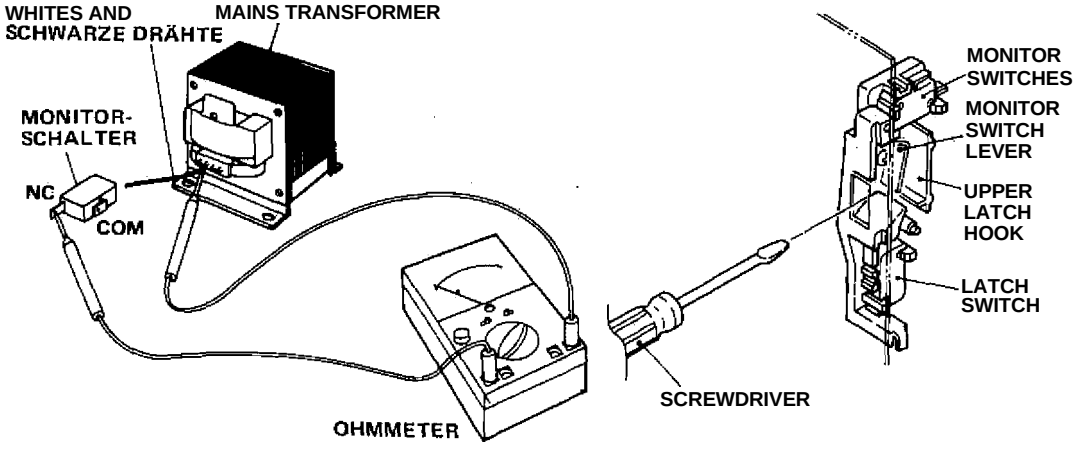
PROCEDURE BOOK **COMPONENT PROVOCATION** .

MONITOR SWITCH TESTING

Before performing this test, it is necessary to check whether the upper latch switch is working properly. Now one supply line of the ohmmeter is connected to the monitor switch connection (NC) and the other to the power transformer connection, on which the white and black wires of the wiring harness hang. When the device is open, it must indicate a closed circuit.

Then the Tiircam is pressed in with a screwdriver with the door open. The piston of the monitor switch is pressed into it and the ohmmeter muB indicates a closed circuit.

In the event of a malfunction, the monitor switch must be replaced.



SENSOR CONTROL

1. DESCRIPTION OF THE SENSOR CONTROL

The sensor control part consists mainly of the following components (units), which are shown in the block diagram.

(1) Mains circuit
(2) Controller
(3) Relay unit

The exchange of signats between the individual components is indicated by arrows in the block diagram. The main functions of these components and the data exchange between these components are described in the following paragraphs.

1-1. Mains circuit

This circuit generates the required voltage for the control and display circuit from the mains voltage.

1-2. Button Unit

The button unit consists of a matrix circuit. The signals generated by the LSI are routed to the key unit via OS1 — OS4 and R4.

When a sensor button is pressed, a signal is generated that is fed to the LSI by AI — K4 to perform the desired function.

1-3. Control Unit

The signals emitted by the clock, the display, the button unit and the selector switch of the microwave unit are processed by a microcomputer (IX2344YA).

1) Display circuit
This circuit consists of an 18-segment display, and 2 common electrodes with a liquid crystal display.

2) ACL Circuit
This circuit generates signals that return the LSIs to their initial position when operating voltage is switched on.

3) Stop switch
This switch "tells" the LSI about the opening and closing of the tiir.

4) Warning buzzer
The warning buzzer reacts to signals coming from the LSI to give a perceptive warning tone (button actuation tone as well as boiling time/end tone).

5) Relay
To activate the magnetron, turntable motor, cooling fan motor and cooking chamber lamp.

2. BLOCKSCHALTBILD

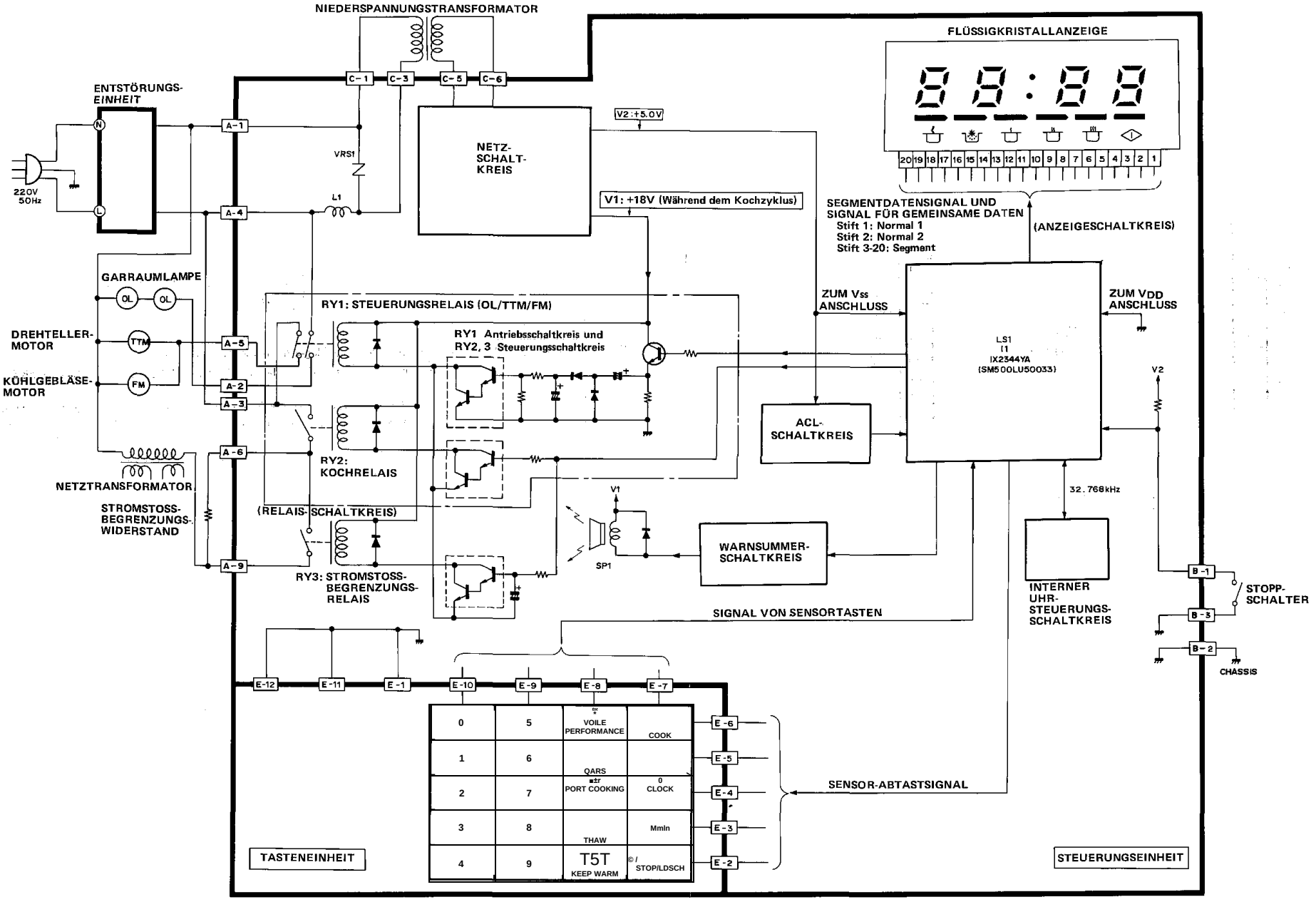
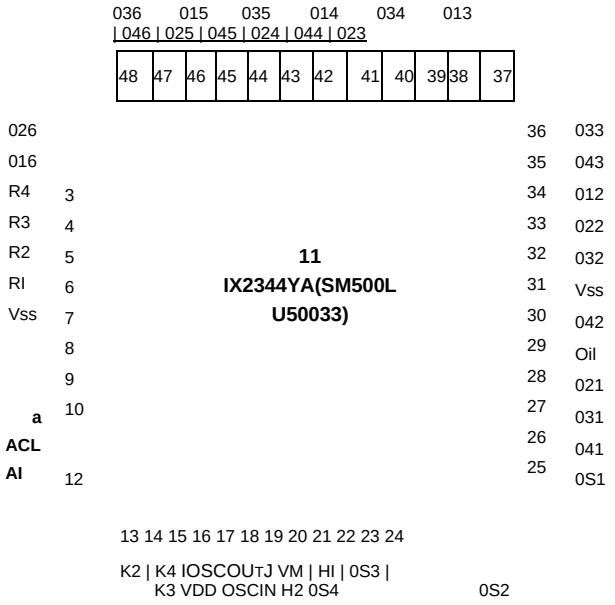


Abbildung 6. Blockschaltbild

3. PRESENTATION OF THE LSIs

• ..... ,
LSI (1-1: IX2344YA) "

The I/O (input/output) signals of the LSI (IX2344YA) are listed in the table below.



Illustration?. Ratio between air pin numbers and signals (LSI: 1X2344YA)

Attachment No.	Signal	I/O	Description
	026	FROM	Segment Data Signal Connected to the LCD (pin No. 18) LCD: Liquid crystal display
2	016	FROM	Segment Data Signal Connected to the LCD (pin no. 19)
3	R4	FROM	Sensor Scanning Signal This signal is the sensor button enteil. It a puis signal is generated, while the Sensor Buttons | 0 |, | 5 |, A FULL PERFORMANCE <!> or KOCH.
4	R3	FROM	Cooking chamber lamp, cooling bias motor and turntable motor activation signal Switching on and cutting of the cooking process and the "L' Itung -Posi of the Ab: tion wah chaltr rend d of the alais (F Still er Y-1 < stan . The puis signal exists during the iphase. ---- --- H —L
5	R2	FROM	Magnetron High Voltage Circuit Activation Signal To turn on and off the cooking relay (RY-2) and the current limiting relay (RY-3). At FULL POWER, the signal is in the "H" position during the cooking process and in the "L" position when not cooking. If the microwave oven is in other cooking modes (COOKING (M. HIGH), COOKING (MEDIUM), DEFROSTING (M. LOW), KEEPING WARM (LOW)), the signal will switch back and forth between the "H" position and the "L" position depending on the microwave intensity. ONE i FULL POWER (HIGH) ONE i COOKING (MED HIGH) 24 sec cooldown 8 sec cooldown FROM ONE -i CONTINUE COOKING (MEDIUM) 18 sec cooldown 14 sec cooldown FROM ONE T*R DEFROSTING (MED LOW) 12 sec cooldown 20 sec cooldown FROM KEEP WARM (LOW) 6 sec cooldown 26 sec cooldown 32 sec cooldown --------- ------H — L

Anschluli No.	Signal	I/O	Description

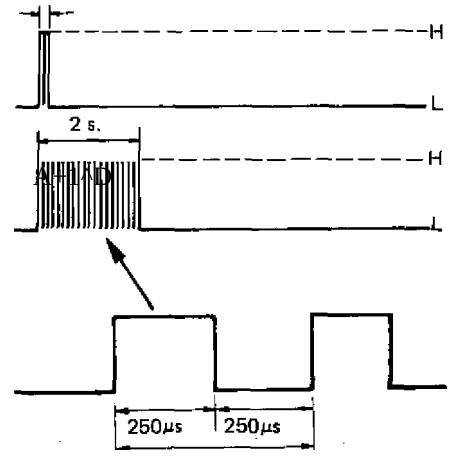
FRO M

Warn buzzer signal

This signal is 2kHz (continuous signal) to control two different warning buzzer tones.

A: Sensor button touch signal
B: Cooking time end signal

0:



A:

$$f = \frac{1}{500 \times 10^{-6}} = 2\ kHz$$

7	Vss	ONE	Voltage: +5r0V . V2 voltage is added
8	T	ONE	Connection not proven.
9	13	ONE	Input of a signal that passes on the ***"otien/zu" information to*** the LSI. Door closed: "H"-Signai (0V) Tiir opened: "L"-SignaL(+5V)
10	***a***	NC	Connection not proven.
11	ACL	A'	Automatic extinguishing connection Signal input to zero the LSI to the initial position when mains power is applied. Temporarily set to "L", at the moment of the voltage application. During this time, the LSI is set to zero. Then adjustment to "H".
12	AI	ONE	Signal from the sensor button If one of the | D |, | 1 |, | 2 |, | 3 | or | 4 | sensor buttons, a corresponding signal is generated at R4, OS1 — 0S4 and forwarded to AI. If no button is touched, the signal is kept at "L".
13	K2	ONE	Comparable to AI If one of the | 5 |, | 6 1, | 7 | , | 8 | or | 9 | A corresponding signal is isor keys, so forwarded to K2.
14	K3	ONE	Comparable to AI If one of the FULL PERFORMANCE - COOKING -PROGRESS i*r , OUTSIDE ° DE KEEP WARM, a corresponding signal is forwarded to K3.
15	K4	ONE	Comparable to AI If one of the t——;—I . | K0CH|> HRS |+1 min.| or , a corresponding signal will be sent © / * STOP/DELETE to K4 Sensor buttons itet.
16	VDD	ONE	Connected to ground.

Attachment No.	Signal	I/O	Description
17	OSCOUT	FROM	**Setting output of internal clock oscillation frequency** Output to control the input vibration frequency of OSCIN.
18	OSCIN	ONE	**Setting input of internal clock oscillation frequency** The internal clock oscillation frequency is adjusted by inserting a ceramic filter oscillation circuit, taking into account the OSCOUT connector.
19	VM	ONE	**Voltage input connection for LCD: +2.5V (VM = Vz/2)**
20	H2	FROM	**Common Data Signal: Com 1** Connected to the LCD (pin No. 1)
21	HI	FROM	**Common data signal: Com 2** Connected to the LCD (pin no. 2)
22	OS4	FROM	**Sensor Scanning Signal** This signal is assigned to the sensor button part. A pulse signal is generated while the sensor buttons | 1 |,| 6 | or |GAREN| .
23	OS	FROM	**Sensor sampling sign** This signal will be A pulse signal, while the sensor buttons | 2 , | 7 |, CONTINUE COOKING or CLOCK .
24	OS2	FROM	**Sensor Scanning Signal** This signal is assigned to the sensor button part. A pulse signal is generated while the sensor buttons | 3 |, | 8 |, AUFTAUENI or KOCH can be touched.
25	OS1	FROM	**Senso r-A btactile signal** This signal is assigned to the sensor button part. A pulse signal is generated while the sensor buttons I 4 |, | 9 [, KEEP WARM OR |ST0PP/L0SCH| be touched.
26	041	ONE	**Connection not proven. Connection for manufacturer test.** Usually connected to ground (OV) by the "pull down" resistor of the internal LSI.
27	031	ONE	**Connection to change the different model functions.** A signal is generated with the model in operation to activate the corresponding function. Signal Input Level 031 L 021 H Oil H "H" = Connected to V2 (+5V) "L" = Connected to ground (OV) by the "pull down" resistor of the internal LSI.
28	Q21	ONE	
29	Oil	ONE	
30	042	ONE	**Connection not proven. Connection for manufacturer test.** Usually connected to ground (OV) by the "pull down" resistor of the internal LSI.
31	Vss	ONE	**Voltage:+5.0V** V2 voltage is added.
32	032	NC	Connection not proven.

Attachment No.	Signal	I/O	Description
33	022	FROM	Segment Signal Data Connected to the LCD. The ratio between signals and LCDs is as follows: Signal (Pin No.) LCD (Pin No.) H2 (20) ..... 1 HI (21) ..... 2 043 (35) ..... 3 033 (36) ..... 4 023 (37) ..... 5 013 (38) ..... 6 044 (39) ..... 7 034 (40) ..... 8 024 (41) ..... 9 014 (42) ..... 10 022 (33) ..... 11 045 (43) ..... 12 034 (44) ..... 13 025 (45) . . .. 14 015 (46) ..... 15 046 (47) ..... ' ..... 16 . 036 (48) . . . . 17 026 (1) ..... 18 016 (2) ..... 19 012 (34) ..... 20 **LCD: Liquid crystal display** **Pen No.** **Segmental Electronics** 234 5 6 7 8 9 10 11 12 13 14 1 16 17 IB 19 20 **Pen -*■ No.** 2 _____ **Common electrodes**
34	012	FROM	
35	043	FROM	
36	033	FROM	
37	023	FROM	
38	013	FROM	
39	044	FROM	
40	034	FROM	
41	024	FROM	
42	014	FROM	
43	045	FROM	
44	035	FROM	
45	025	FROM	
46	015	FROM	
47	046	FROM	
48	036	FROM	

4. MAINS POWER CIRCUIT

220V alternating current flows through the filter circuit (LI) and is transmitted to the primary winding of the low-voltage mains transformer. The output voltage of the secondary winding of the low-voltage mains transformer is now fully rectified by the diode brick (DI — D4) and equalized by the electrolytic capacitor (C2) to finally produce a DC voltage VI of +18V.

This voltage VI is then passed on to the Konstap.t voltage circuit, which beste.ht to the ZD1 diode, which converts the voltage into V2 (+5V). V_{DD} jst a voltage that is passed on to the LSI.

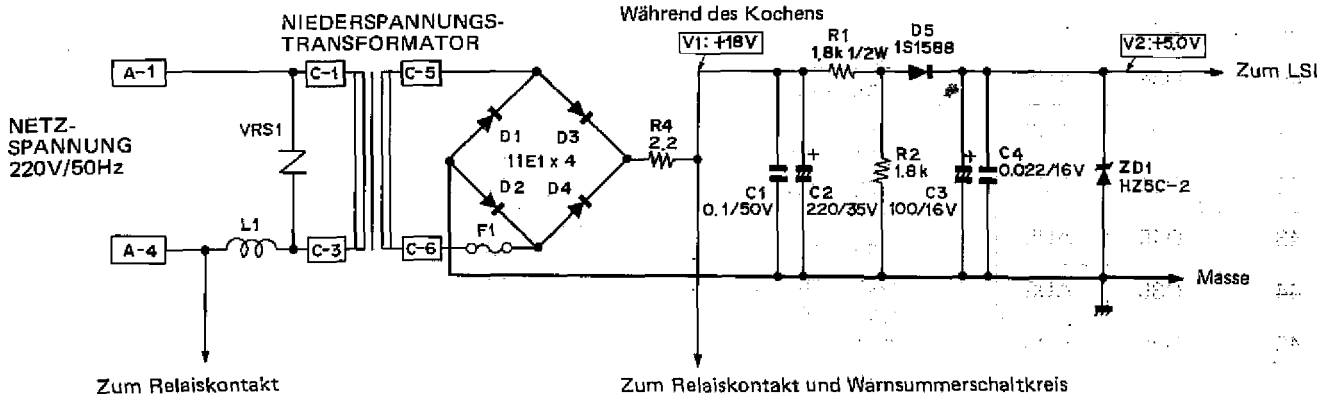


Figure 8. Mains Power Circuit

5. ACL CIRCUIT

When the device switch is turned on, this circuit returns the LSI to its initial state.

When the device is switched on, the voltage begins to build up and two more voltages (V2 and VRES) are generated by this voltage. Fig. 9 shows the relationship between these two voltages.

If V2 is high enough to keep the LSI working, if a voltage higher than V_{IH} is placed on the ACL connector of the LSI, the LSI is restored to its initial state.

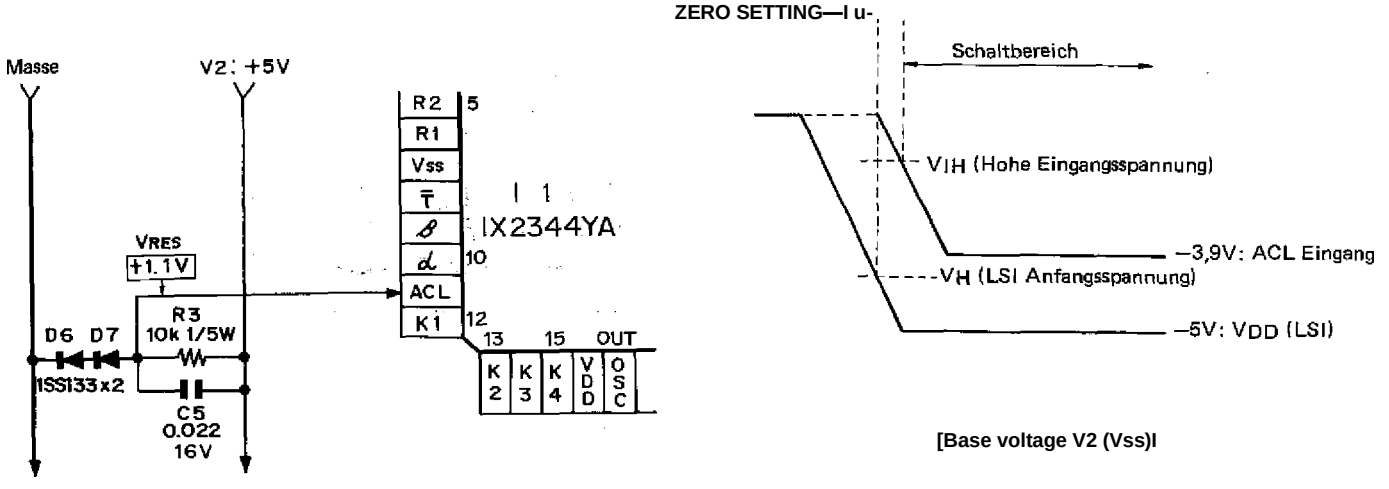


Figure 9. ACL Circuit

6. WARNING BUZZER CIRCUIT

The square waveform created at the connection of the LSI RI connector is fed to the base of Q4 to turn Q4 on and off. The square waveform voltage (2kHz) is transmitted to SP1 to produce the warning buzzer tone.

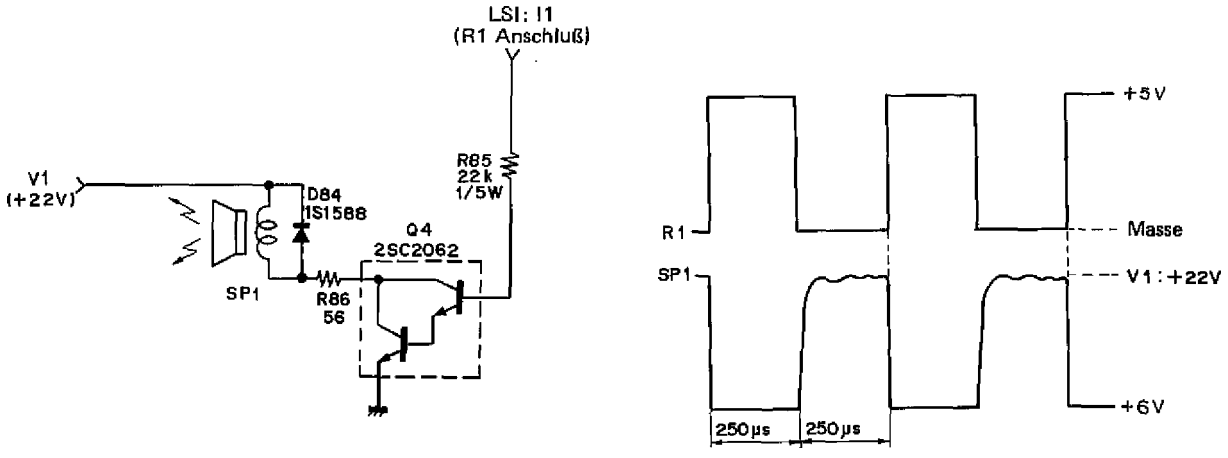


Figure 10. Warning buzzer circuit

7. RELAY CIRCUIT

The output voltage, which prevails on the secondary side of the mains transformer, is rectified by the diode bridge (DI — D4) and generates the voltage VI. This voltage is used to activate the relay circuit. The pulse signal leaves the R3 pin of the II and is then rectified by D80 and D81 to be ready for charging the C81 condenser. After the capacitor C81 is charged, the voltage at the base of the Q2 rises to a high level, so that B switches on Q2 and thus drives RY1. Q2 and Q3 are connected to each other in series. The RY2 and RYS relays can only turn on if both transistors are activated at the same time. The current-stoB limiting relay (RYS) is designed in such a way that it switches on 15 msec later than the cooking relay (RY2). This deceleration is determined by the time constant specified in the deceleration circuit (R87 and C83). The current is thus diverted to the current shock limiting resistor for 15 msec in order to reduce the current that flows in.

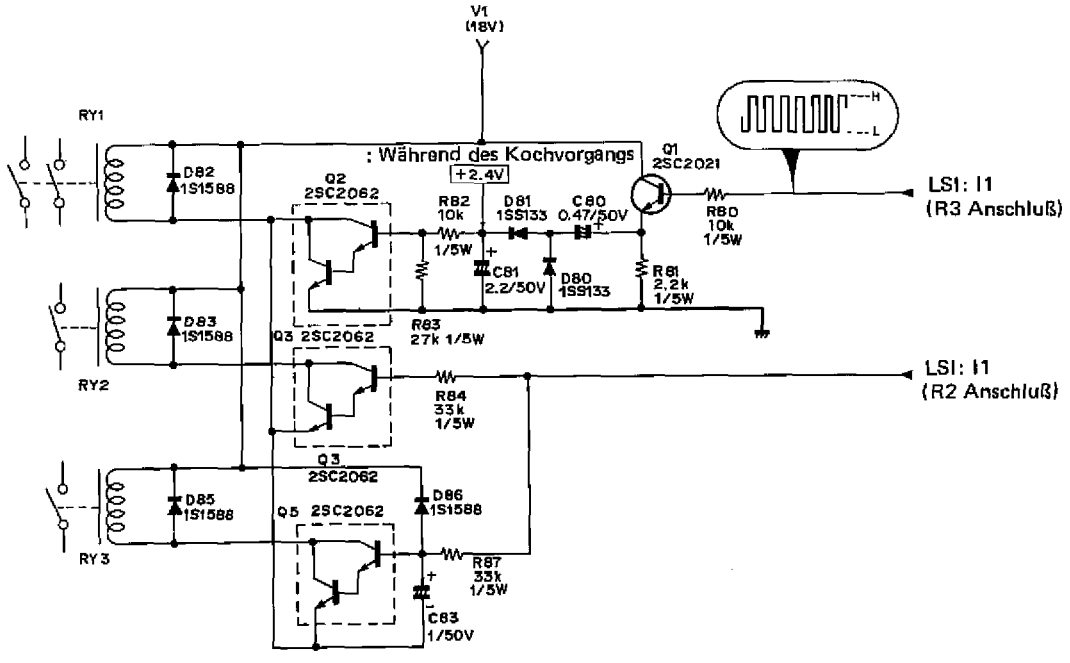


Abbildung 11. Relais-Schaltkreis

8. DISPLAY CIRCUIT

per Anzeig^c.haltkreis is based on guf gjnqan. FliissigkristaUanzeigeT System. The liquid crystals are located between two polarizing plates.

The voltage supply between the common electrodes and the segment electrodes of the FJussig crystal takes place alternately, so that the molecules of the liquid crystals are forced to react at the polarization plates. This results in an interruption of the incoming light during one time period and: allows it to pass through the polarizing plates during another time period. The common electrodes and the segment electrodes are pulse-activated. If the potential between the two electrodes rises above the limit, black signs (black level) appear on the display. If the potential drops below the limit value, the characters (white level) disappear.

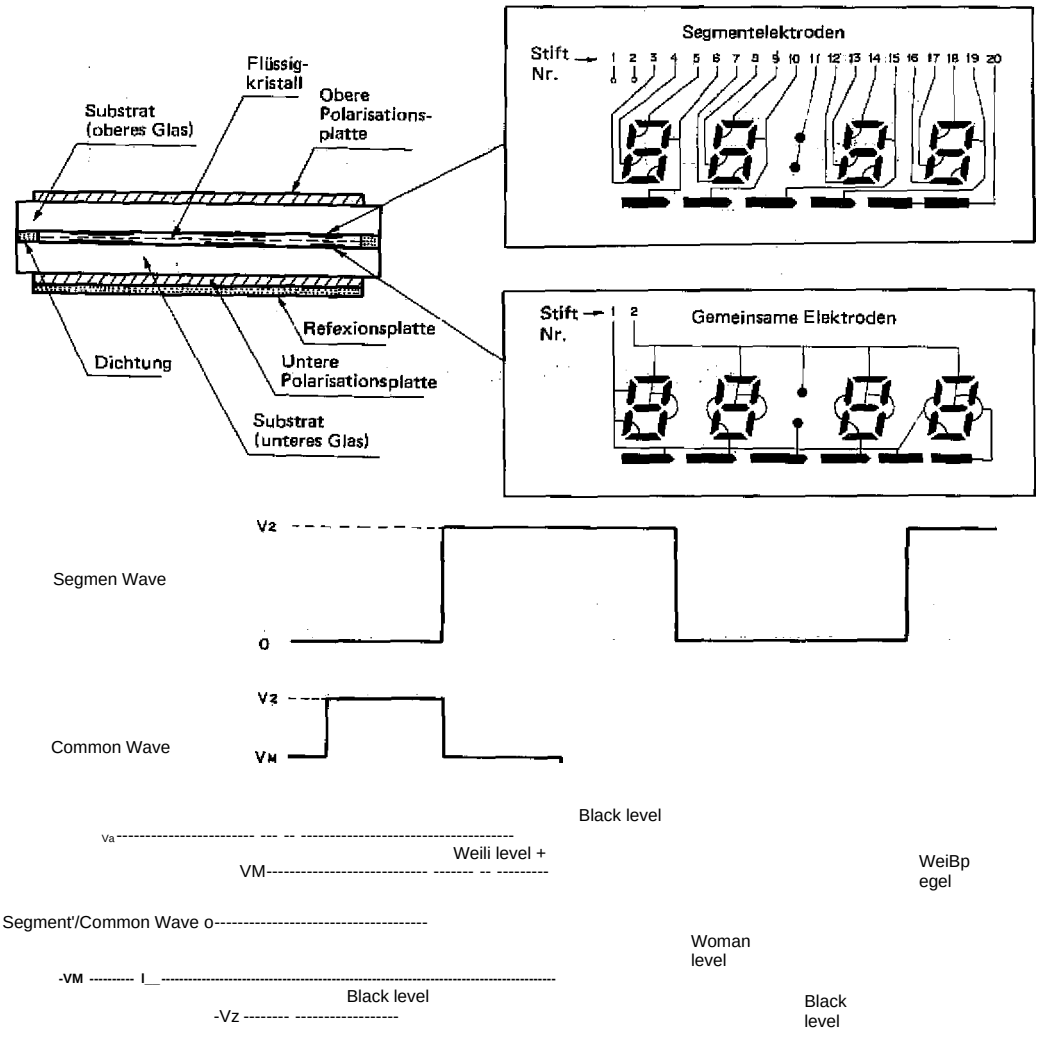


Figure 12. Display Circuit

9. MAINTENANCE

1. Precautions in the handling of electronic components

This model uses PMOS LSIs in the internal part of the circuit. The following precautions must be strictly adhered to when handling these components. PMOS LSIs have an extremely high impedance at their input and output connections. For this reason, they are easily affected by the surrounding high voltage, static electricity from clothing lines, etc., and sometimes they are not completely protected from it by the built-in protective circuit.

To schiitze the PMOS LSIs, 1st note the following:

1) For storage or transport, the components must be completely wrapped in aluminium foil. Likewise, wrap the circuit boards in aluminum foil.
2) When yellowing, a person performing the lotar work must be grounded according to the following instructions. The Ldt piston and the work table must also be grounded.

about IMG

2. Former) of electronic components

Transistor
2SC2021

Transistor
2SC2062

J. Sensor Control Console Maintenance

Here the sensor control console of the microwave unit is described and attention is drawn to the precautions that must be observed in connection with maintenance.

In order to carry out the maintenance work, the voltage can be taken from the live cable of the microwave oven or from an external voltage source.

(1) In case of maintenance work on the sensor control console by power supply from the microwave device:

CAUTION:

THE MICROWAVE MACHINE'S HIGH VOLTAGE TRANSFORMER ALWAYS STENT NOON UNDER RESIDUAL VOLTAGE. WHEN CARRYING OUT MAINTENANCE WORK, SPECIAL ATTENTION MUST BE PAID TO THIS RISK.

[When the operation of the sensor control control is tested, the outer housing must be placed on the microwave oven to protect you from accidental interference with the high-voltage transformer. Another way to avoid this is to disconnect the primary connection (plug) of the high-voltage transformer. The end of such a connection must then be wrapped with insulating tape. Ensure that all supply lines are reattached to their original connection points after the maintenance work].

A. On some models, the^ power supply cable between the sensor control console and the microwave unit is so short that it cannot be separated from each other. In this case (for these models), the inspection and maintenance of all controls (including the sensor-related ones) of the sensor control console must therefore be carried out with the microwave oven.

B. In other models, on the other hand, the power supply cable between the sensor control console and the microwave oven is so long that it can simply be separated from each other. During inspection and maintenance on these *models, it is* therefore permissible to keep the sensor control console away from the microwave oven. In this case, a short circuit of both ends of the stop switch (on the printed circuit board) of the control console with a switch wire is required. This creates a state that is equivalent to the original state of the microwave oven.

However, with the sensor control console, which is now in no contact with the microwave oven, it is not possible to check the sensor-related controls of the sensor control console.

(2) In the case of maintenance work on the sensor control console powered by an external power source:

Completely disconnect the sensor control console from the microwave oven, and short-circuit both ends of the stop switch (on the circuit board) of the sensor control console with a wire or similar. This creates *a state that is equivalent to the original state* of the microwave device when the door is closed. Now the external power source is connected to the input port of the sensor control console. After that, the inspection and repair of the controls on the sensor control console canbe carried out; however, in the faile of (1) — B above, it is impossible to test the sensor-related controls of the sensor control console.

4. Tools and instruments for maintenance

The following tools and instruments are required for the maintenance of the sensor control console:

1) Lbtkolben: SOW
(To avoid leakage, the use of a fling piston with a ground connection is recommended).
2) Oscilloscope: Single-beam oscilloscope, frequency range: 10 MHz DC type or newer model
3) Other: Other tools commonly used in the maintenance of electronic components.

5. Other precautionary measures

1) When the power source of the control unit is switched on, remove the aluminum foil that has been applied to protect against static electricity.
2) Connect the connecting wires of the display and sensor unit connectors to the control unit. Care must be taken to ensure that the supply wires are not twisted.
3) After the aluminium foil has been removed, special care should be taken to ensure that no voltage is transferred to the input or output circuits due to electrostatic charging of the garments, etc.
4) Connect all connections, electrolytic capacitors, etc., to the circuit board and make sure that all connection points are well attached.
5) Use only prescribed components when high precision is required.

REPLACING AND ADJUSTING THE COMPONENTS

WARNING: Avoiding exposure to radiation:

A. Before using the microwave oven:

1. Make sure that when the tiir slows down, a click tone is heard, which actuation of the monitor switch and the deadbolt switch. Micro Unlocking through the
2. Visually check whether the seal is bent or damaged.

B. If one of the following conditions exists, the microwave oven must not be put into operation until after the repair.

1. The Tiir does not close with the front of the device.
2. A door hinge or support has broken off.
3. The door is bent or warped.
4. There are some other defects in the microwave unit.

C. Never operate the microwave oven:

1. Without high-frequency seal.
2. If the door is not closed.

REMOVING THE EXTERIOR HOUSING

To remove the outer housing, refer to Figure 7 and proceed as follows:

1. Unplug the power cord plug of the microwave oven from the mains socket.
2. Unscrew the screws from the side edges of the back panel of the housing.
3. Slide the housing around 3 cm to remove it from the retaining clip on the front panel of the cooking chamber.
4. Lift the case.

CAUTION: DISCHARGE THE HIGH-VOLTAGE CAPACITOR BEFORE TOUCHING ANY COMPONENTS OR WIRES.

REMOVAL OF HIGH-VOLTAGE COMPONENTS (High Voltage Capacitor and rectifiers)

To remove the components, proceed as follows:

Unplug the power cord of the microwave oven from the mains socket and remove the external housing.

2. Discharge the high-voltage capacitor.
3. Remove the magnetron and refer to the chapter on magnetron expansion on page 17.
4. The wire supply lines and the connection terminals of the rectifier of the high-voltage capacitor Idsen.
5. Unscrew the screw (1) that attaches the capacitor holder to the chassis; then remove the capacitor holder.

The high-voltage capacitor can now be removed.

6.

CAUTION: WHEN THE RECTIFIER IS REPLACED, THE GROUND CONNECTION MUST BE TIGHTENED WELL WITH A SCREW.

REMOVING THE MAINS TRANSFORMER

1. Unplug the power cord of the microwave oven from the mains socket and remove the external housing.
2. Discharge the high-voltage capacitor.
3. The wire feeds from the Idsen power transformer.
4. Disconnect the supply lines of the secondary windings of the magnetron and the high-voltage capacitor.
5. Unscrew the two (2) screws that hold the mains transformer to the chassis.
6. The mains transformer can now be removed.

REMOVAL OF THE TURNTABLE MOTOR

Unscrew the screw (1) that holds the turntable motor cover to the base plate of the chassis.

Disconnect the wire supply lines from the turntable motor.

1. Unplug the power cord of the microwave oven from the mains socket and lift off the external housing.

2^ Discharge the high-voltage capacitor.

2. Remove the magnetron and refer to the magnetron expansion.

Disconnect the wire feeders from the Kiihl blower motor.

3. 4. Unscrew the two (2) screws that hold the turntable motor to the bottom of the cooking chamber.

The turntable motor can now be removed.

5. Unscrew the two (2) screws that hold the cooling fan motor to the chassis unit.
6. Pull the fan blade off the motor shaft by pulling on the retention valve.

The Kiihl blower motor can now be removed.

REMOVAL OF THE COOLING FAN MOTOR

3.
4.

EXPANSION OF THE MAGNETRON

These models use two different magnetrons (Part No. RV-MZ0165WRE0 and RV-MZ0166WRE0).
Note: If the magnetron is replaced, the air duct and the air duct must be replaced together. On: refer to the maintenance information on pages 59 and 60.

1. Remove the power cord plug of the microwave oven from the mains socket and lift off the outer housing.
2. Discharge the high-voltage capacitor.
3. Disconnect the wire leads from the magnetron.
4. Carefully unscrew the four (4) screws that hold the magnetron to the waveguide flange.
5. Lower the entire magnetron unit until the rdhre is completely freed from the wave.

Installation

1. The magnetron set which is included with the magnetron (Part No. RV-MZ0166WRE0), the air duct and the air duct should be used.
2. Attach the air duct and air duct to the magnetron with three (3) screws.
3. Attach the magnetron unit to the waveguide flange using the four (4) screws.
4. Attach the wire feeds back to the magnetron.

CAUTION: WHEN REPLACING THE MAGNETRON, MAKE SURE THAT THE HIGH-FREQUENCY SEAL IS INSERTED CORRECTLY AND THAT THE RETAINING SCREWS ARE TIGHTENED.

REMOVAL OF COOKING CHAMBER LAMPS

Pull the power cord plug of the microwave oven out of the mains socket and lift off the outdoor housing.

2. Discharge the high-voltage capacitor.
3. Disconnect the wire supply lines from the cooking chamber lamp.
4. Twist the cooking chamber lamp for half a turn and then remove it.

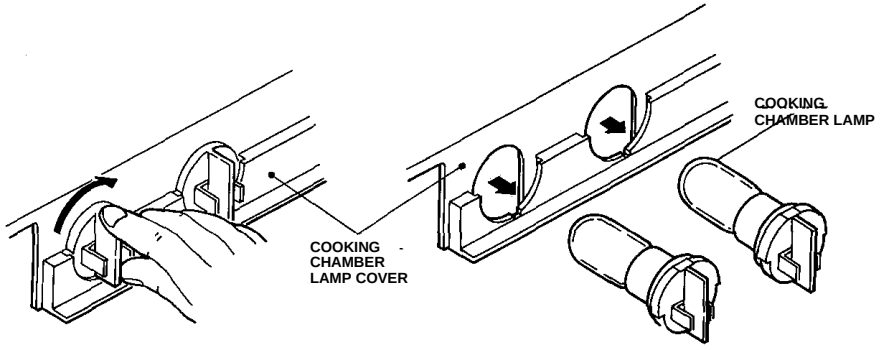


Figure 13. Removal of the cooking chamber lamps

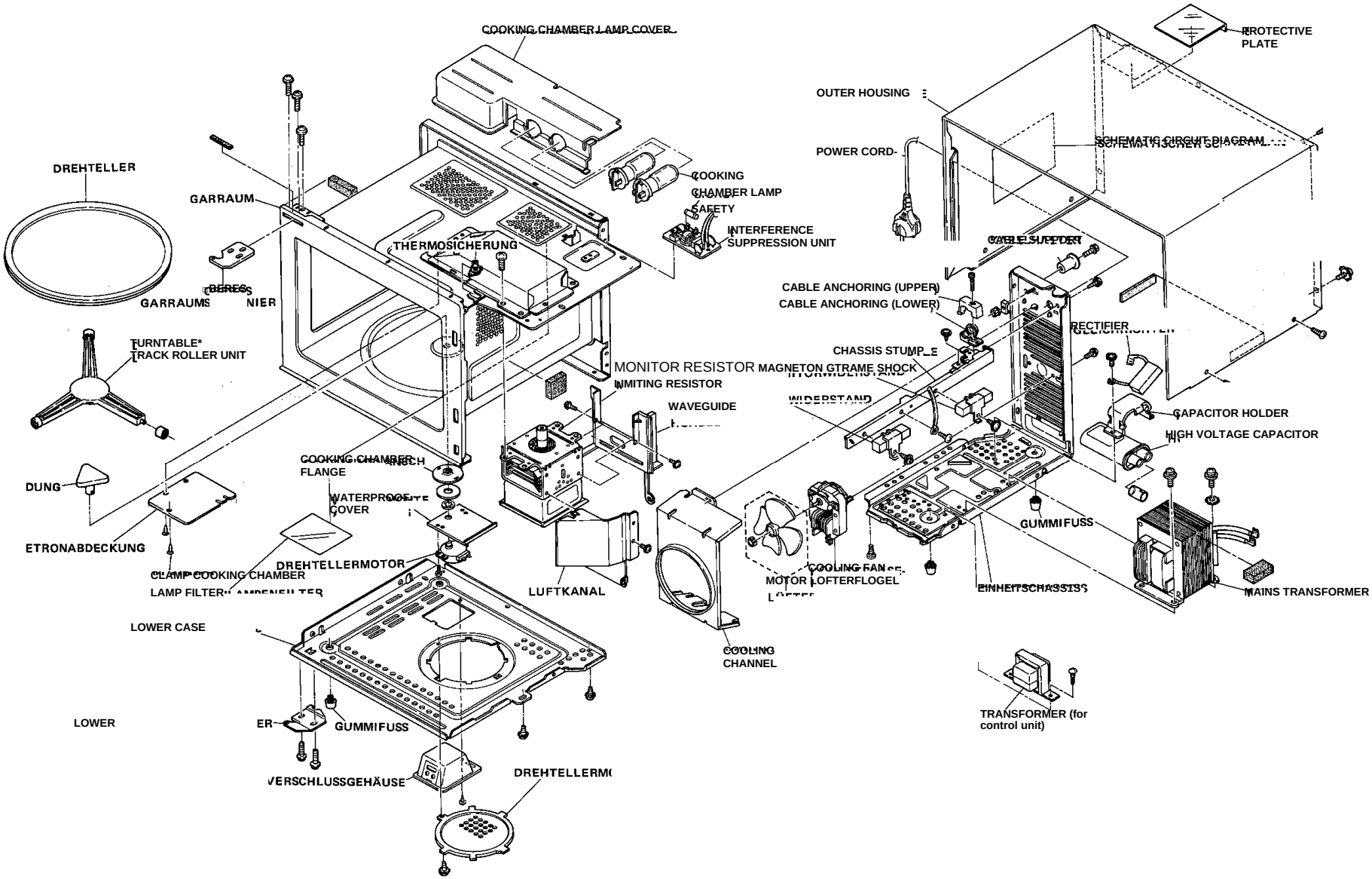


Figure 14. Housing, unit chassis and cooking chamber components

REMOVING THE UNO CONTROL PANEL FROM YOUR COMPONENTS

The control panel unit must be removed from the microwave unit when a component needs to be replaced. To remove the control panel, refer to Figure 15 and proceed as follows:

1. Pull the power cord plug of the microwave oven out of the mains socket and remove the external housing.
2. Discharge the high-voltage condensate.
3. Disconnect the three (3) stackers of the main wiring harness from the connections (A), (B) and (C) of the control unit,
4. Unscrew the three (3) screws that hold the rear panel of the control panel to the cooking chamber, chassis support and chassis unit.
5. Lift the control panel and pull it forward. The replacement of individual components is as follows:

CONTROL UNIT AND/OR CONTROL PANEL FRAME

1. Unscrew the two (2) screws that hold the tiir opening device to the console frame.
2. Lift the control panel frame to snap the frame hooks out of the bottom openings of the rear wall.
3. Pull the control panel forward. (The control panel and the riick wall are now separated).
4. Drice the holder of the 12-pin stacker (E) inwards and then tighten it.
5. Disconnect the flat cable of the button from the 12-pin connector (E).
6. Unscrew the three (3) screws and hold the control unit to the control panel frame.

REMOVAL OF THE UPPER BOLT SWITCH AND THE MONITOR SWITCH (ES)

1. Unscrew the screw (1) which holds the upper latch hook unit to the flange of the control panel panel, j
2. Remove the upper latch hook assembly from the flange l by pushing it up.
3. To remove the single switch from the upper latch hook. Distant The two (2)Locking hooks that fix the sounder, to the outside.

Installation

1. Every IndividualSwitch again at the Provided : Install jobs.
   The monitor switch is at the top and the top i latch switch is underneath.
2. Put the wire wires back on. Attach each individual switch. The pictorial representation on page 42 and 43.
3. Attach the latch hook (with one (1) retaining screw) to the flange (, the control panel panel.
4. Ensure that the monitor switch is working properly. On | refer to the Priif procedure L on page 20 and to the recruitment procedure I on page 38.

REMOVAL OF THE LOWER BOLT SWITCH/AND STOP SWITCH (ES)

1. Unscrew the screw (1) that holds the lower latch hook unit to the flange of the control panel panel. The switch lever is now exposed. Be careful not to get lost.
2. Remove the lower latch hook unit from the flange of the control panel.
3. To remove the single switch from the lower latch hook, | push out the two (2) locking hooks that hold the switch in this position.

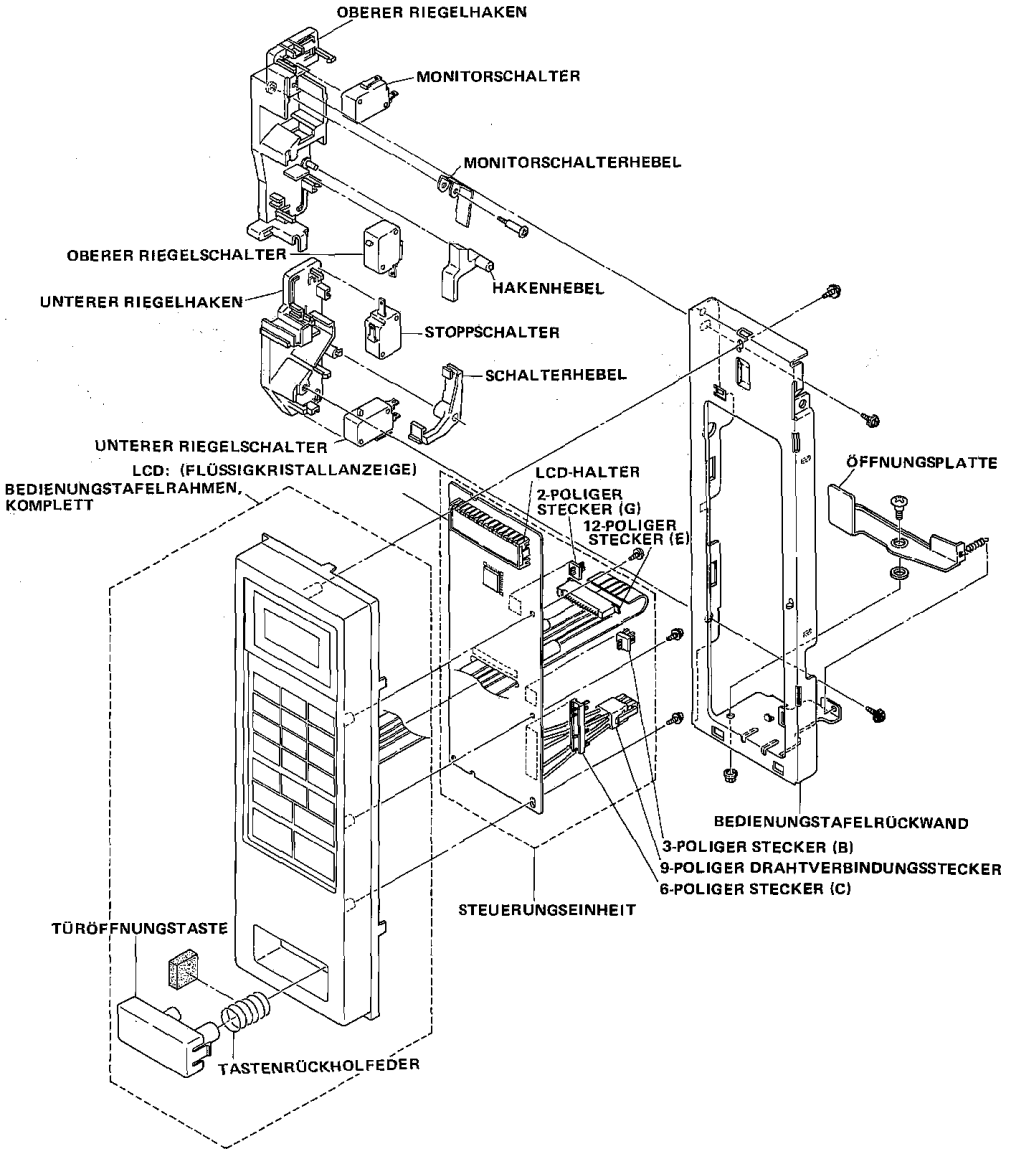


Illustration 15. Control panel and its components

ADJUSTMENT OF THE UPPER AND LOWER LATCH SWITCH SOW1EDES MONITOR SWITCH

If the upper and lower latch switches do not function properly due to incorrect adjustment, the following adjustment must be made:

1. Loosen the screw (1) that holds the upper latch hook to the flange of the control panel wall and the screw (1) that fixes the lower latch hook to the same flange.
2. Adjust the lower latch hook with the tiir closed by moving forward and forward. Then adjust the upper latch hook in the same way or by moving it up or down. The internal and external clearance should be less than 0.5 mm in the locked position. The vertical position of the upper bolt hook must be at the position where the upper bolt switch was activated when the tiir was shot. The vertical position of the lower bolt hook cannot be adjusted,
3. Tighten all screws tightly with washers.
4. Make sure that the latch switch is working. If the latch switch is not activated when the tiir is closed, loosen the screw (1) that holds the upper bolt hook to the control panel panel wall and then readjust the upper bolt hook.

After hiring, the following points must be considered:

1. The inner and eye clearance must be less than 0.5 mm when locked. First, check the position of the upper latch hook by pulling (and dribbling) the top part against the cooking chamber front plate. Then bring the lower bolt hook to the cooking chamber front plate by pulling and dribbling. Both results (clearance) are said to have values below 0.5 mm.
2. The upper and lower deadbolt switches interrupt the circuit before the Tiir can be opened.
3. The monitor switch closes when the door is opened.
4. Reattach the outer housing and check the microwave scattered radiation around the door with the help of a jass microwave measuring device. (See section "Microwave measurement").

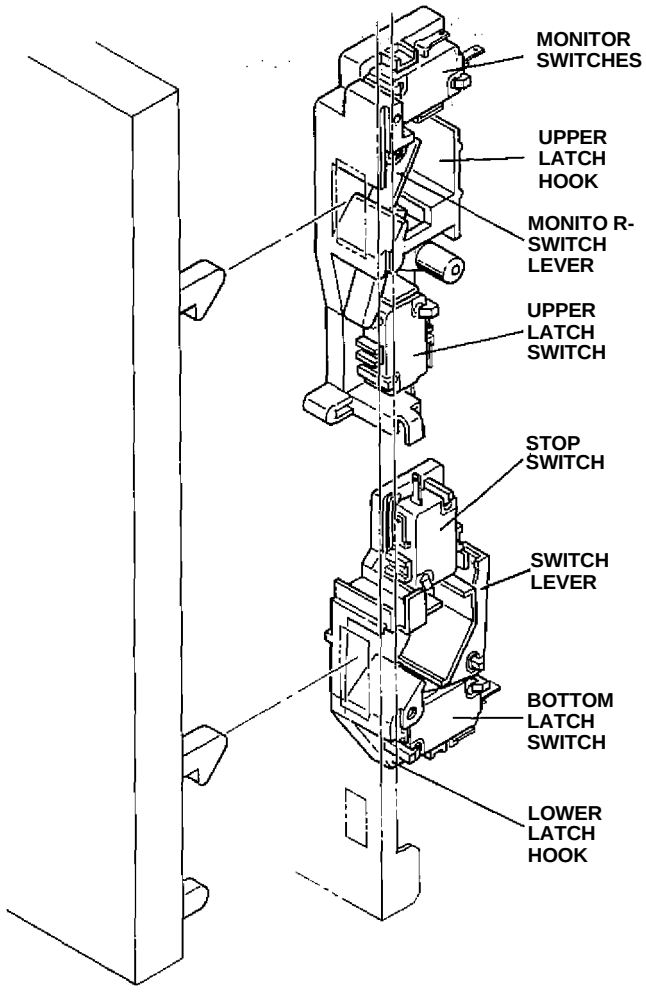


Figure 16. Adjustment of the upper and lower latch plates and the monitor switch

SUBSTITUTION AND ADJUSTMENT OF THE GOAL;

SUBSTITUTION OF THE GATE

1. The Power cord connector auS def mains socket and ;; ifd,as''AuSdngehatise!abnehmeh;
2. ;D en HochspanhuTigskond^nsator.
3p Diesfiinf '(STSschraubenTosdre^ which the lower and upper >Scfiarhier anTGarrSurff hold on. The bottom hinge is ; Nurifrei.
4. Now pull the door forward with the upper hinge.
5. Remove the top hinge in front of the door. The Tiir can be ■ - ■ttd'ri'abribmm
6. Mounting the upper hinge to the new door.
7. When the new Tijr is installed, screw five (5) screws firmly into the Garfaum,
   It is safest that the Tiir[1] is parallel to the lower edge of the Garfaum end plate and that the latch head passes exactly through the bolt openings.

Note: After carrying out any maintenance work on the door, an approved microwave sensor with an appropriate radiation level should be used. (See the "Microwave Measurement" section).

SETTING THE GATE

To Ehtfefrieii and/ddersen des ScHarhiers^beisp'ielsweisfe beim WecHselri der Tiir, Sh must follow Kfite'fien. The door is set in such a way that the following three conditions are met,[1] at/or 'the SchafnlefichraiJbeh.

1. The Turriegdlkopf must be set in such a way that the Bolt hooks can be passed flawlessly through bolt protection. Refer to the latch switch setting.
2. The deviation of the fiiraxiality from the Horizohtal line def77'Gar,radrh-Frdhtplat'te'7 m'G6"wen^er' as ' 1',0 mm batragen.
3. Oberpfijfeh, daB die Tiir in geschlbSsehem Zustand fund- herurff gegen die GarVaUmfroh^
4. Put the AU housing back on and check for microwave radiation leakage with a microwave device. (Read the 'Microwave Measurement' section).

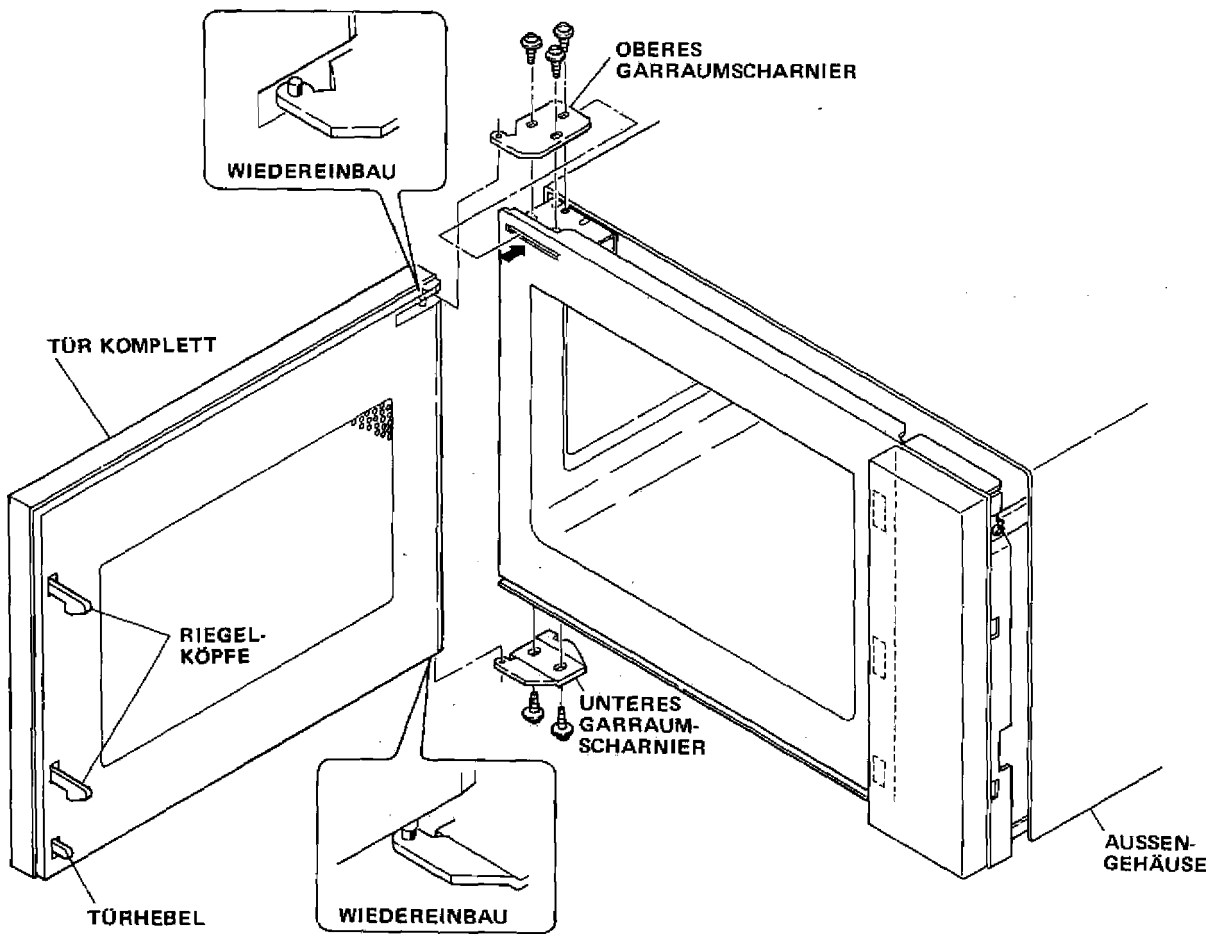


Figure 17. Replacement and adjustment of the tiir

MICROWAVE MEASUREMENT

After adjusting the door lock switches and the door, either single or together, the following leak inspection must be carried out using an approved measuring device to ensure that the results meet the requirements of the performance standard for microwave ovens.

REQUEST

The safety switch must prevent microwave radiation emission above 5mW/cm2 at any point 5 cm or further from the surface of the microwave oven,

PREPARATION OF THE PROFUNG

Before the actual leak, proceed as follows:

1. Make sure that the tester is working properly as stated in its owner's manual, Important:
   For the purpose of testing, equipment must be used which meets the instrumentation requirements of the performance standard for microwave ovens.

Recommended Derate:
   NARDA 8100
   NARDA 8200
   HOLADAY HI 1500
   SIMPSON 380M

2. Insert the turntable into the cooking space.
3. Place a container with 275±15 ml of water at an initial temperature of 20±5°C in the middle of the cooking chamber. The water glass should be a low 600 ml cooking cup with an inner diameter of 8.5 cm made of an electrically non-conductive material such as glass or plastic. It is important to place this standard load in the cooking chamber in order not only to chill the micro appliance, but also to ensure an accurate measurement of possible leakage radiation.
4. Close the tiir and set the micro appliance to several minutes by turning the timer knob (and switch it on). If the water begins to boil before the end of the treatment, replace it with 275 ml of cold water.
5. Move the probe slowly (no faster than 2.5 cm/s) away from the gap.
6. The microwave radiation emission should be measured at a point 5 cm or more from the outside of the microwave oven.

WIRE COLOR CODE and SYMBOL

RED:RED	WHT: WHITE
BRN: BROWN	BLU : BLUE
ORG: ORANGE	PPL : PURPLE
PNK:ROSA	BLK : BLACK
GRY: GREY	GRN: GREEN

G-Y : GRONE UNO G.EL8E STREJFEN HV : HIGH VOLTAGE WIRE /IFF : CUTTING SURFACE OF 0.75 mm 2 MIN. : NO DISPLAY 0.3 mm2 MIN.

O ;. ^OME^TKLEMME ..

: •-y'LOT^GtX'ENW CLAMP CONNECTION

□ : CONNECTION'

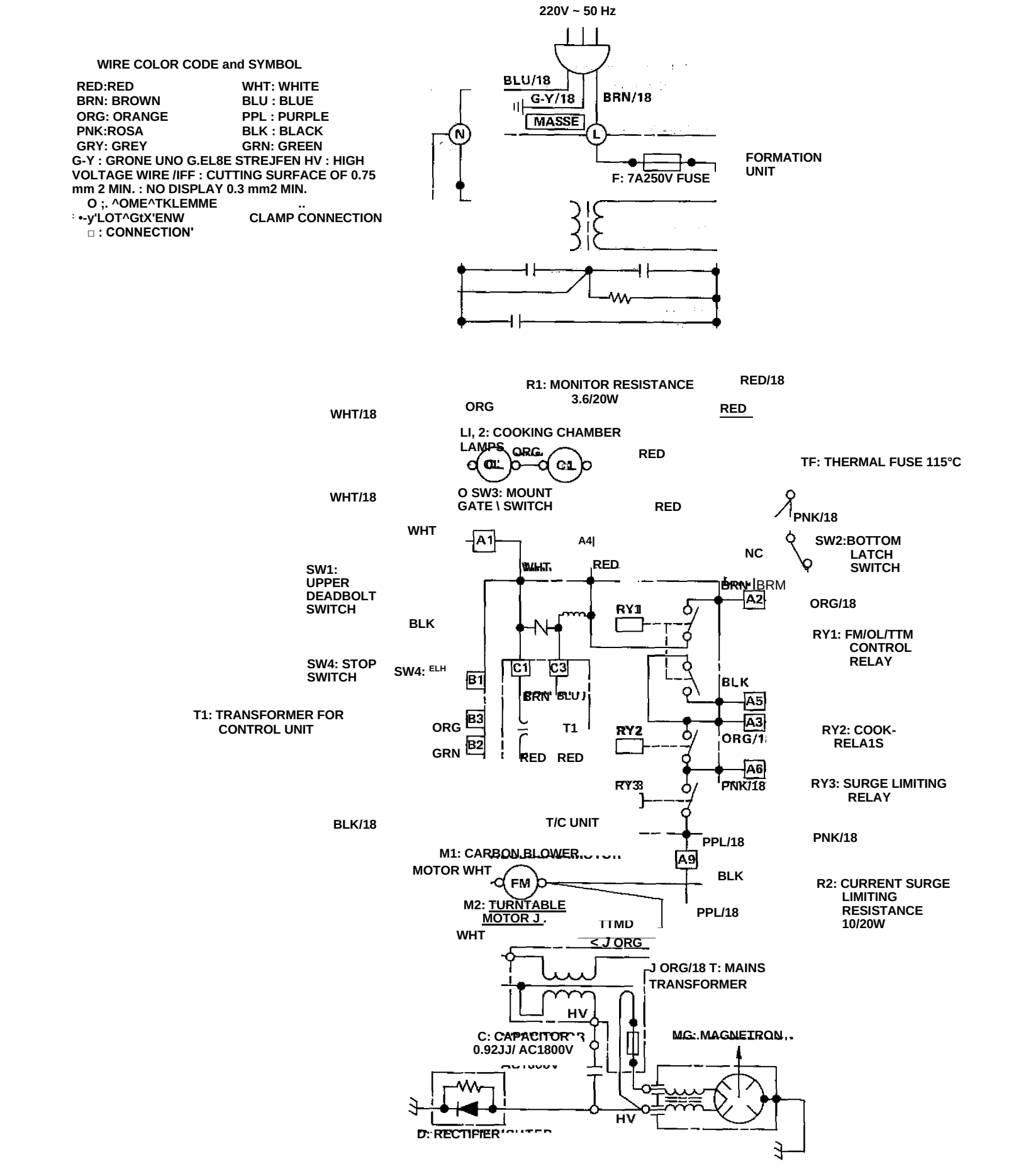


Figure 18. Schematic Schematic Schematic

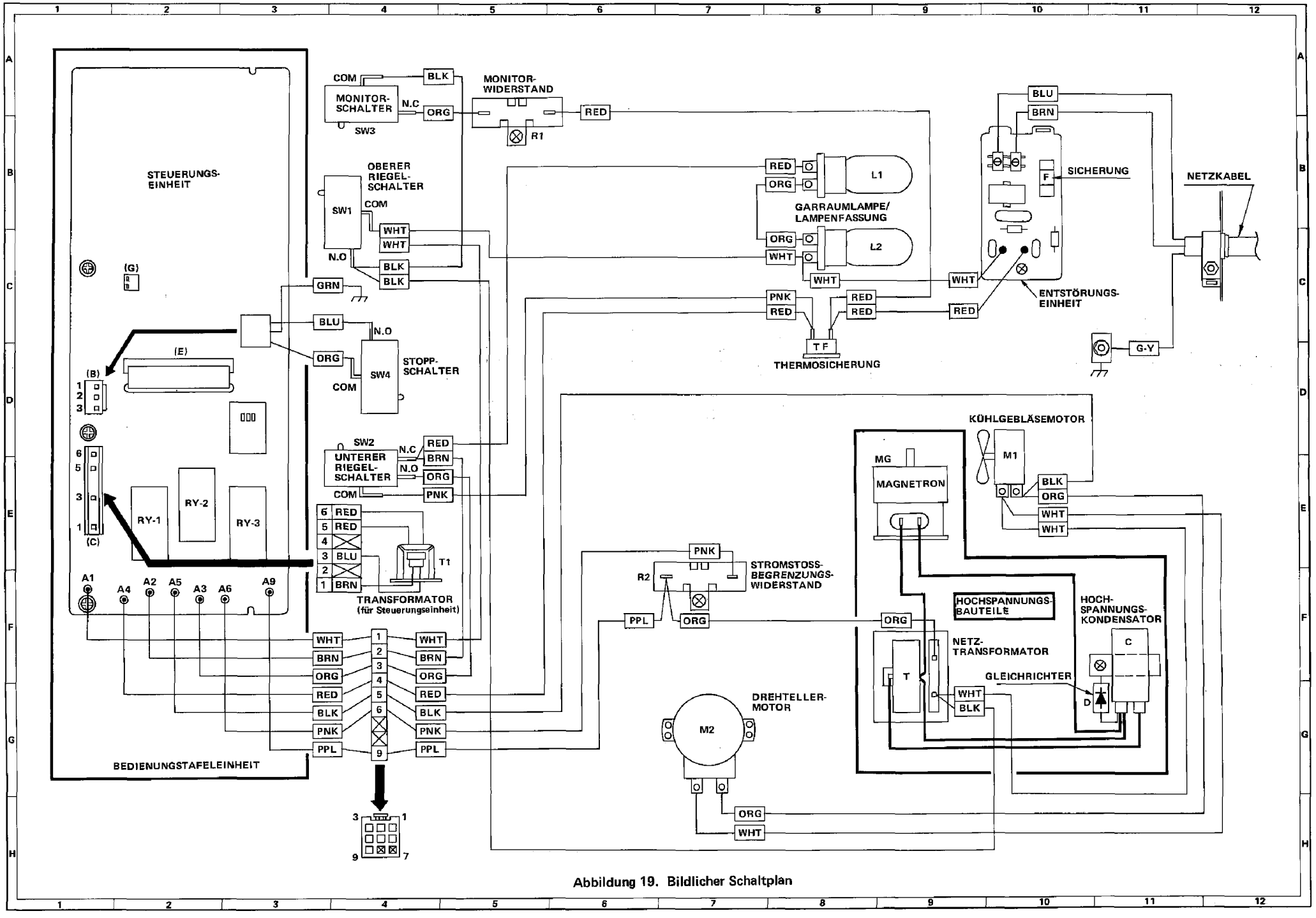


Abbildung 19. Bildlicher Schaltplan

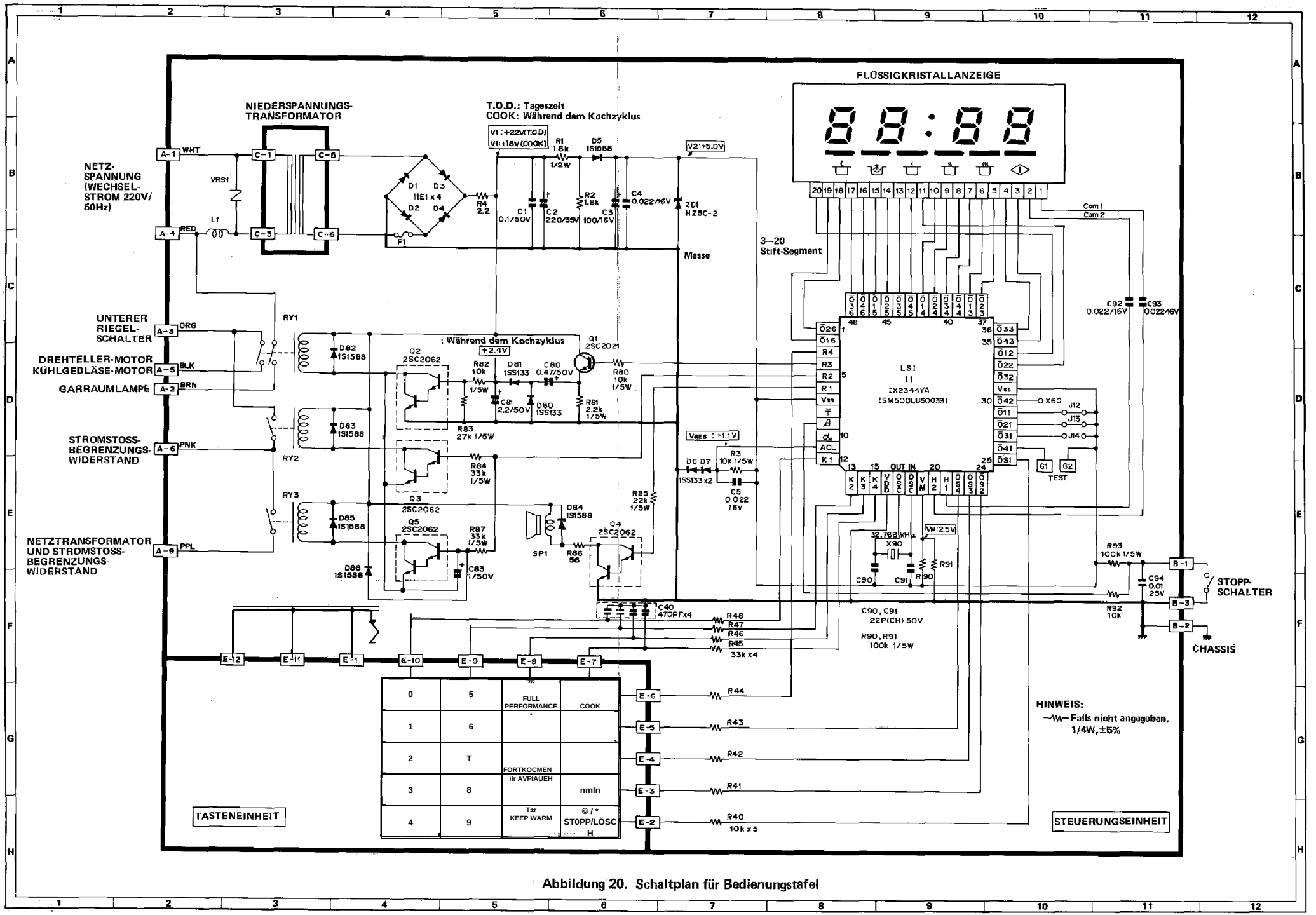


Abbildung 20. Schaltplan für Bedienungstafel

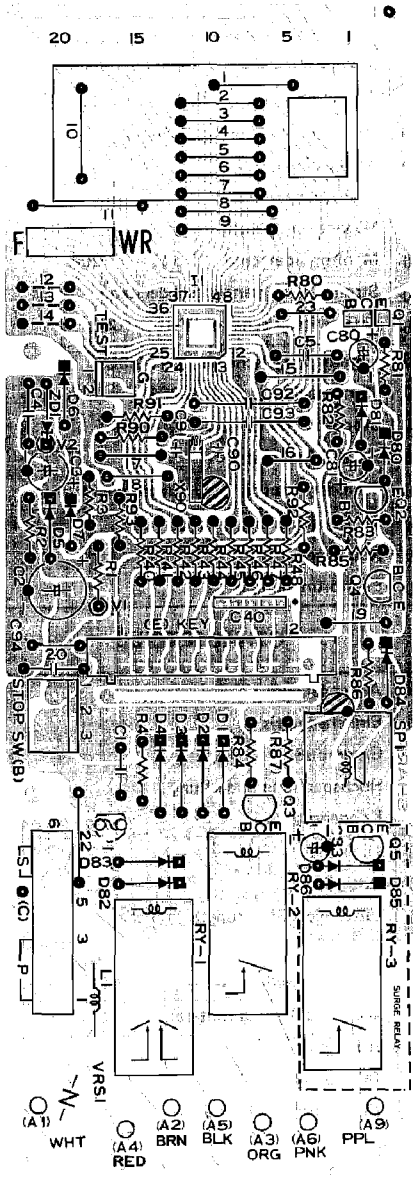
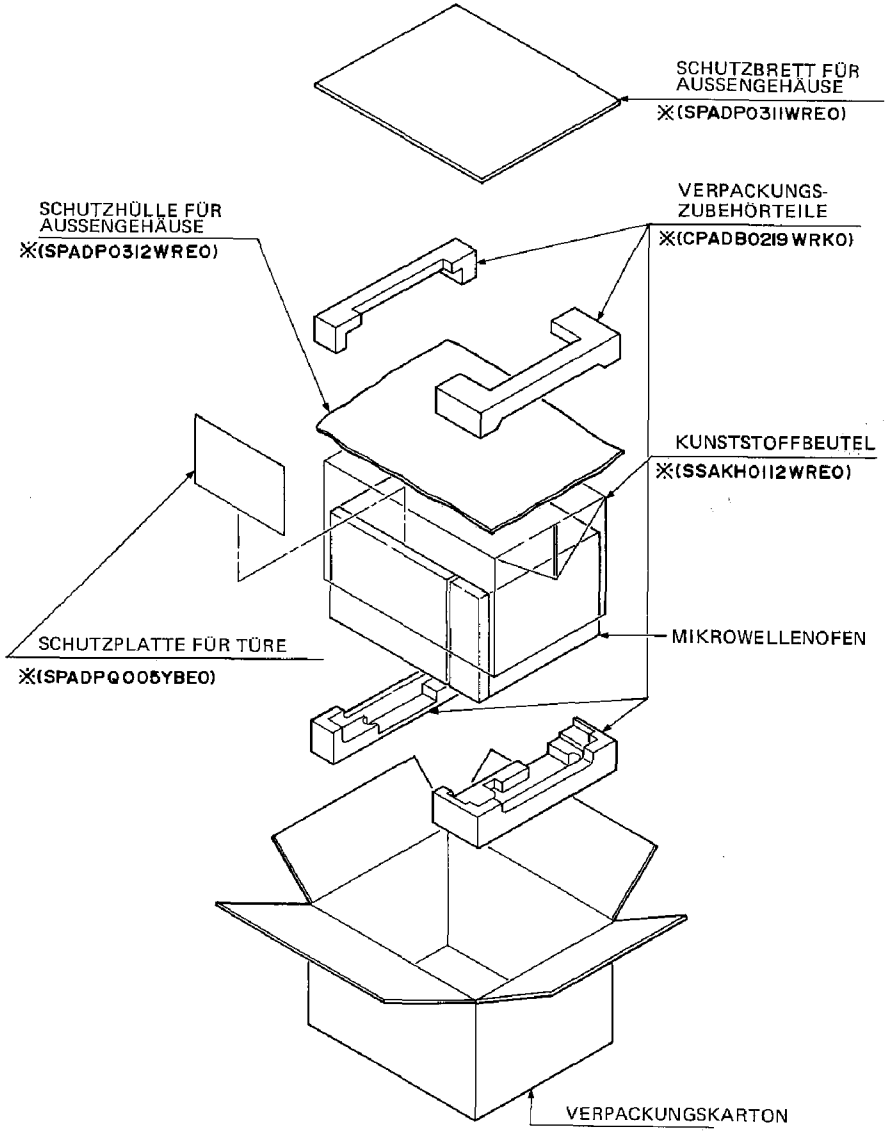
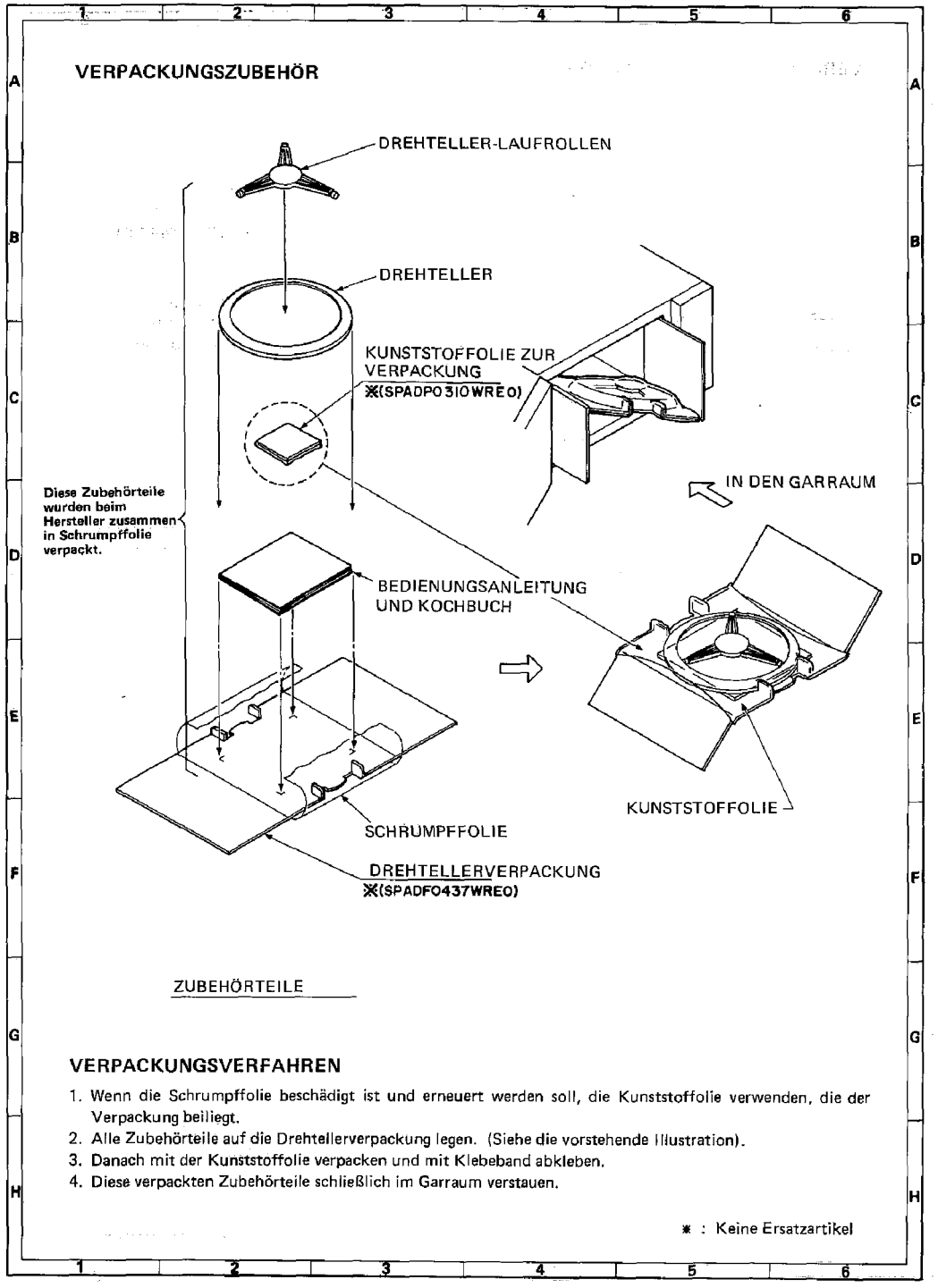


Abbildung 21. Leiterplatte

VERPACKUNG UND ZUBEHÖRTEILE



※ : Keine Ersatzartikel



ZUBEHÖRTEILE

VERPACKUNGSVERFAHREN

1. Wenn die Schrumpffolie beschädigt ist und erneuert werden soll, die Kunststoffolie verwenden, die der Verpackung beiliegt.
2. Alle Zubehörteile auf die Drehtellerverpackung legen. (Siehe die vorstehende Illustration).
3. Danach mit der Kunststoffolie verpacken und mit Klebeband abkleben.
4. Diese verpackten Zubehörteile schließlich im Garraum verstauen.

※ : Keine Ersatzartikel

SPARE PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	NUMBER	CODE
ELECTRICAL PARTS				
※C	RC—QZO122WRE0	High voltage condensation	1	AX
※D	RH-DZOO 6 8WRE0	Rectifier	1	AQ
F	QFS-CO 0 2 7WRE0	Fuse 7A 250V	1	A D
LI, L2	RLMPT0036WRE0	Cooking chamber lampZ-lamp holder	2	A K
Ml	RMOTDO18 5WRE0	Kiihl blower motor	1	AW
M2	RM0TDOO81WRE0	Turntable motor	1	A T
★※MG	FV-MZAO Q4WRK0	Magnetron kit	1	B M
RI	RR—WZ0027WRE0	Monitor stand 3.6^ 20W	1	AH
R2	RR-WZO026WRE0	Current surge limiting resistance 10 ft 20W	1	A H
SW1	QSW MO170WRE0	Top Latch Switch (V-16G-1C5}	1	A G
SW2	QSW-MO L68WRE0	Lower Latch Switch (V-16G-3C5I	1	A G
SW3	QSW-MO16 9WRE0	Monitor Switch (V-16G-2C5)	1	A G
SW4	QSW MO165WRE0	Stop Switch (V-533ORK)	1	A K
※T	RTRN-031OWREO	Power transformer	1	B P
11	RTRN-0 3 0 7WRE0	Transformer for control unit	1	A U
TF	QFS—T0026WRE0	Thermal fuse (115°C)	1	AG
1- 1	QACCV0023WRE0	Power cord	1	A S
1- 2	FPWBFO 217WRK0	Interference suppression unit	1	A U
HOUSING PARTS				
2- 1	GCABUO 2 3 2WRP0	AuRengegehäusee	1	AX
2- 2	FANGR0069WRY0	Standard chassis	1	A P
2“ 3	GLEGP0021WRE0	Rubber Feet	2	A B
2- 4	POOVP0344WRP0	High Voltage Coverage	1	A B
2- 5	LBNDK0077WRWO	Capacitor Holder	1	AC
2- 6	PDUC-0 4 7 2WRW0	Cooling channel	1	A F
2- 7	FFANJ 0 0 2 7WRK0	Fan Wings	1	A F
2- 7A	MSPRP0038YBE0	Fan foil safety clamp	1	A B
2- 8	LANGF0335WRW0	Chassis support	1	A F
2- 9	LSTPPO065WRF0	Cable anchoring (upper)	1	A B
2-10	LSTPP0066WRFO	Cable anchoring (lower)	1	A B
2-11	LANGQO382WRM0	Grounding angle	1	A A
2-12	LHLDKOO O5YBF0	Cable support	1	A B
2-13	PSPAGQ002YBEO	Vibration-free upholstery A	1	A A
2-14	PSHEPAO19WRP0	Protective plate	1	A A
2-15	PCUSGA025WRP0	Vibration-free upholstery C	1	A B
2-16	TMAPC 0 6 8 OWRRO	Schematic Schematic	1	A B

Note: The parts marked with "SS" are operated at a voltage of more than 250V.

*: See page 59 and 60: MAINTENANCE INFORMATION

REF. NO.	PART NO. |	DESCRIPTION	NUMBER	CODE

CONTROL PANEL PARTS

3- 1	CPWBF130SWRK0	Controller	1	B R
3- 1A	QCNCM2 3 2 2YAZZ	9-pin wire connector (A)	1	AG
3- IB	QPLGJ2255YAZZ	3-pole stacker (B)	1	A B
3- IC	QPLGJ 2 3 3 5 YAZZ	6-pin connector (C)	1	AC
3- ID	QPLGJ2332YAZZ	12-pin connector (E)	1	A F
3- IU	QPLGJ 2 2 9 9YAZZ	2-pin connector (G)	1	A A
3- IF	RV- L Z 2 0 0 2 YAZZ	LCD: (liquid crystal display)	1	AQ
3- 1G	LHLD-2 0 0 7 YAZZ	LCD Holder	2	A B
Cl	VCQYCU1HM104K	Capacitor 0.1/zF 50V	1	A B
C2	VCEAAA1VW2 2 7M	Capacitor 220/zF 35V	1	AC
C3	VCEAAU1CW107M	Capacitor lOO^F 16V	1	A B
C4,C5 C92,C93	VCKYAT1CX 2 2 3 N	Capacitor 0.022/^F 16V	4	A A
C40'	RMPTE2003YAZZ	Capacitor Block (470pF x 4)	1	A D
C80	VCEAAU1HW474M	Capacitor 0.47^ F 50V	1	A A
C81	VCEAAU1HW2 2 5M	Capacitor 2.2/zF 50V	1	A A
C83	VCEAAU1HW10 5M	Capacitor f 50V	1	A A
C90,C91	VCCCPR1H3220J	Capacitor 22pF 50V	2	A A
C94	VCKYAT 1EX 1 03N	Capacitor 0.01/zF 25V	1	A A
Dl—4	VHD1IE 1////-1	Diode: 11E1	4	A B
D5 D82-86	RH-DX7 5 0 2YAZZ	Diode: 1S1588	6	A A
D6,D7 D80. D81	VHD1SS13 3//-1	Diode; 1SS133	4	A A
Fl	QFS A2D1OYAZZ	Fuse	1	A F
11	RH—i X23 4 4 YAZZ	LSI	1	A S
LI	RCi LF 2 0 0 3 YAZZ	Filter coil	1	AC
QL	VS2SC2 0 2 1—R—1	Transistor: 2SC2021R,S,E	1	A B
Q2~5	VS2SC2 0 6 2//-1	Transistor: 2SC2062	4	AC
RI	VRD ST2HA182 J	Resistor l,8k£l 1/2W	1	A A
R2	VRD-ST2EF1'8 2 J	Resistor l,8kll 1/4W	1	A A
R3,R80 R82	VRD ST2DF103 J	Resistance lOkfl 1/5W	3	A A
R4	VRD ST2EF2R2J	Resistance 2.2£1 1/4W	1	A A
R40—44 R92	VRD ST2EF103 J	Resistance lOkll 1/4W	6	A A
R45~48	VRD ST2EF333J	Resistor 33kfl 1/4W	4	A A
R81	VRD ST2DF222J	Resistor 2.2kfl 1/5W	1	A A

REF. NO.	PART NO. J	DESCRIPTION	NUMBER	CODE
R83	VRD—ST2DF 2 7 3 J	Resistor 27kfl 1/5W	1	A A
R84,R87	VRD-ST2DF3 3 3 J	Resistance 33kn 1/5W	2	A A
R85	VRD-ST2DF 2 2 3 J	Resistance 22k£l 1/5W	1	A A
R86	VRD—ST2EF 5 6 0 J	Resistance 560'1/4W	1	A A
R90,R91 R93	VRD ST2DF104 J	Resistance lOOkQ 1/5W	3	A A
RY1	RRLYU2093YAZZ	Control Relays ,	1	AQ
RY2,RY3	RRLY-210 3YAZZ	Cooking Relays and Current Static Limiting Relays	2	AT
SP1	RALMB2 015YAZZ	Warning buzzer	1	AG
VRS1	RH-VX2 019YAZZ	Varistor	1	A F
X90	RCRS-2032YAZZ	Crystal Oscillator	1	A F
ZD1	VHEHZ5C-2//-1	Zener diode: HZ5C-2	1	A B
3- 2	DPNLCO 6 4 5WRK0	Control panel frame, complete	1	B B
3- 2A	JBTN-0343WRF0	Tiir opening button	1	AC
3- 2B	MSPRCO 0 6 6WRE0	T astenriickhol spring	1	A A
3- 2C	PCUS-AO 35WRP0	Upholstery (T5 x 22 x 22)	1	A B
3- 3	LANGT0409WRW0	Control panel back panel	1	AG
3- 4	LANGKO 3 3 3WRW0	Opening plate	1	A C
3- 5	MSPRTO10 OWREO	Opening plate spring	1	A A
3- 6	PHOK-O 0 41WRF0	Upper latch hook	1	A D
3- 7	PHOK—0044WRF0	Bottom latch hook	1	AC
3- 8	ML EVF0124WRE0	Monitor Switch Lever	1	A C
3~9	MLEVPAO 01WRF 0	Hook lever	1	OFF
3-10	MLEVPO10 4WRF0	Switch lever	1	AC

COOKING CHAMBER PARTS

4- 1	DOVN-0 2 3 7WRT0	Cooking	1	W H
4- 2	GDAi-A 0 0 2WRW0	Lower case part	1	A N
4- 3	GLEGPO021WRE0	Rubber Feet	2	A B
4- 4	MHNG-0179WRM0	Lower cooking chamber hinge	1	AD
4- 5	MHNG—018 OWRMO	Top cooking chamber hinge	1	AC
4- 6	NTNT-0O65WRE0	Turntable	1	A R
4- 7	FROLPO023WRK0	Turntable Roller Unit	1	ARE
4- 7A	NROLPO03OWREO	Turntable rollers	3	A D
4- 8	NCPL—0032WRF0	Turntable connection	1	A E
4- 9	PF i LW0 0 4 4WRP0	Cooking chamber lamp filter	1	A B
4-10	PCOVP0 3 4 0WRE0	Magnetron cover	1	AE
4-11	PCL i CO 0 2 6WRE0	Clamp	3	A A
4-12	PCOVP0343WRF0	Cooking chamber lamp cover	1	A E

REF, NO.	PART NO.	BESCHRE1BUNG	NUMBER	CODE
4-13	FDUC—A 0 0 7WRK0	Air duct kit	1	A L
4-14	FSKR—AO01WRK0	Hohllelter kit	1	AH
4-15	PSLDMA 0 0 7WRW0	Cooking chamber flange	1	AC
4-16	PCOVPAO 01WRP0	Waterproof cover	1	A B
4-17	PCOVP0 3 4 1WRW0	Turntable motor cover	1	A A
4-18	PCUSUO15 2YBP0	Shading pads	1	A A
4-19	PCUSGAO02WRP0	Vibration-free upholstery B	1	A A
4-20	PCAS-AO 01WRF0	Enclosure housings	1	A D
4-21	PS PAGA 0 0 4WRP0	Spacer (T1.5 x 8 x 40)	1	A A

GATE PARTS

5	CDORFO12 6WRK0	Separation, complete	1	B F
5- 1	HPNL-0 0 6 8WRR0	Door screen	1	AW
5- 2.	PSHEK 0 0 0 3WRE0	Tiirblech	1	A E i
5- 3	DD0RFO4 6 2WRKD	Tiirtafel	1	B B ;
5- 4	FLEVF0139WRW0	Latch plate	1	A F :
5- 5	MSPRTO12 4WRE0	Bolt spring	1	A B
5- 6	MLEVF0292WRW0	Connection lever	1	OFF;
5- 7	LSTPPOO 57WRF0	Upper bolt head	1	OFF
5- 8	LSTPPO058WRF0	Lower latch head	1	A B
5- 9	MLEVP0094WRF0	Levers	1	OFF

MISCELLANEOUS PARTS

6- 1	QW-HZO063WRE0	High Voltage Wire A	1	AC
6- 2	QW-QZO 0 7 5WRE0	High Voltage Wire B	1	A E
6- 3	QW-VZ0800WRE0	Cooking chamber lamp supply line	1	A B
6- 4	FW VZO856WRE0	Main wiring harness	1	OUCH
6- 5	LBNDKO 012YBE0	Wire mount (WH-1, "L")	1	A A
6- 6	TCADC0 3 3 2WRR0	Cookbook	1	AW
6- 7	T i NS-0 0 7 7WRR0	Operating instructions	1	A L
6- 8	TCAUHO118WRR0	Warning label	1	A D
6- 9	TSPCN1021WRR0	Nameplate	1	A B

SCREWS, NUTS, WASHERS UNO R1NGE

7- 1	LX-BZO141WRE0	Screw, mounting for monitor switch lever	1	A A
7- 2	LX-BZO18 6WRE0	Screw, mounting for interference suppression unit, monitor resistor, current shock limiting resistor, chassis unit, air duct chassis unit, control panel panel, turntable motor cover and capacitor holder	9	A A

Note: The parts marked with "g?" are operated at a voltage of more than 250V.

* : See page 59 and 60: MAINTENANCE INFORMATION

REF. NO. J	PART NO.	DESCRIPTION	NUMBER	CODE
7- 3	LX—BZ019 4WRE0	Screw, fastening for opening plate	1	OFF
7- 4	LX—CZ0 0 3 7WRE0	Screw, fastening for external housing	7	A A
7- 5	LX-CZ0047WREO	Screw, fastening for lower case and chassis unit	7	A A
7- 6	LX—CZ 0 0 5 2WRE0	Screw, attachment for upper and lower latch hooks	2	A A
7- 7	LX—EZO 0 4 7WRE0	Screw, fastening for external housing	2	A B
7- 8	XBPSD40P10KS0	Screw, fastening for cooling laser notor	2	A A
7- 9	XBPSD5 0P10KS0	Screw, fastening for mains transformer	2	A A
7-10	XCPSD5 OP 16X0 0	screw, fastening for upper and lower cooking chamber hinges-	5	A A
7-11	XCTSD4OPO600O	Screw, fastening for wire holder	2	A A
7-12	XCTSD40P 1 2 0 0 0	Screw, fastening for chassis seat and chassis unit	5	A A
7-13	XCTSD40P16000	Screw, fastening for cable holder	1	A A
7-14	XFPSD40P06000	screw, fastening for the turntable motor and the Transformer for the control unit	4	-POOP
7-15	XFPSD40P 2 0 0 0 0 0	Screw, fastening for cable anchoring	1	A A
7-16	XFPSD50P12000	Screw, fastening for magnetron	4	A A
7-17	XHPSD30P12XSO	Screw, fixing for control unit	3	A A
7-18	XFTSD4OP12O00	Screw, fastening for connector housing	1	A A
7-19	LX-NZO 0 7 0WRE0	Nut, fastener for opening plate and ground cable	2	A A
7-20	XWHSD40—08160	Washer, fastening for opening plate	1	A A
7-21	XWVSD5 0-0 6 0 0 0	Washer, mounting for power transformer	1	A A
7-22	XRSSP12-04000	Ring, fastening for turntable connection	1	A A
7-23	XWHEZ12—05300	Ring, fastening for turntable connection	1	A A

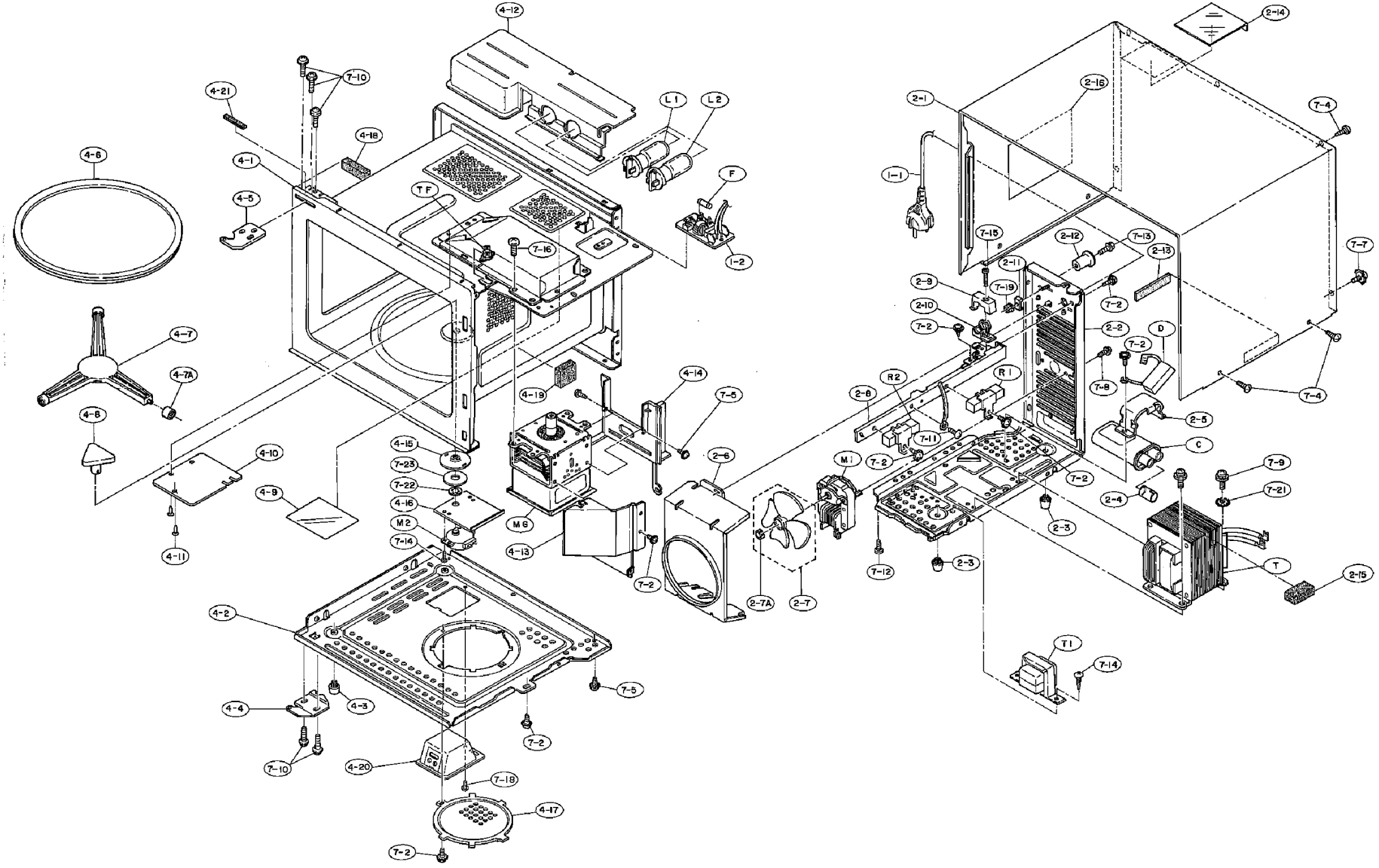
ORDERING SPARE PARTS

In order to be able to place your order quickly and correctly, we ask for the following information.

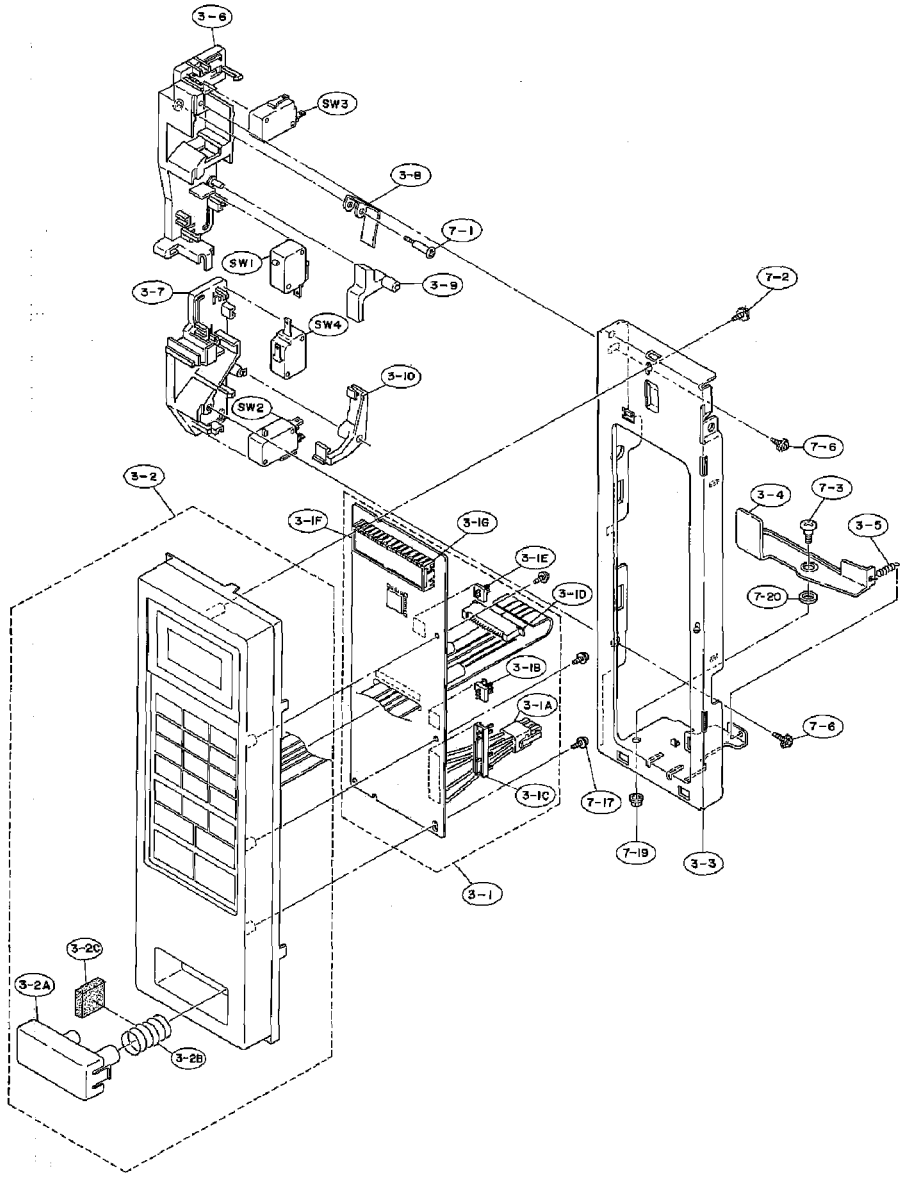
; **H-5960**

1. MODEL NUMBER
2. REF. NO.
3. TE1L NR,
4. DESCRIPTION

GEHÄUSE, CHASSISEINHEIT UND GARRAUMTEILE



BEDIENUNGSTAFELTEILE



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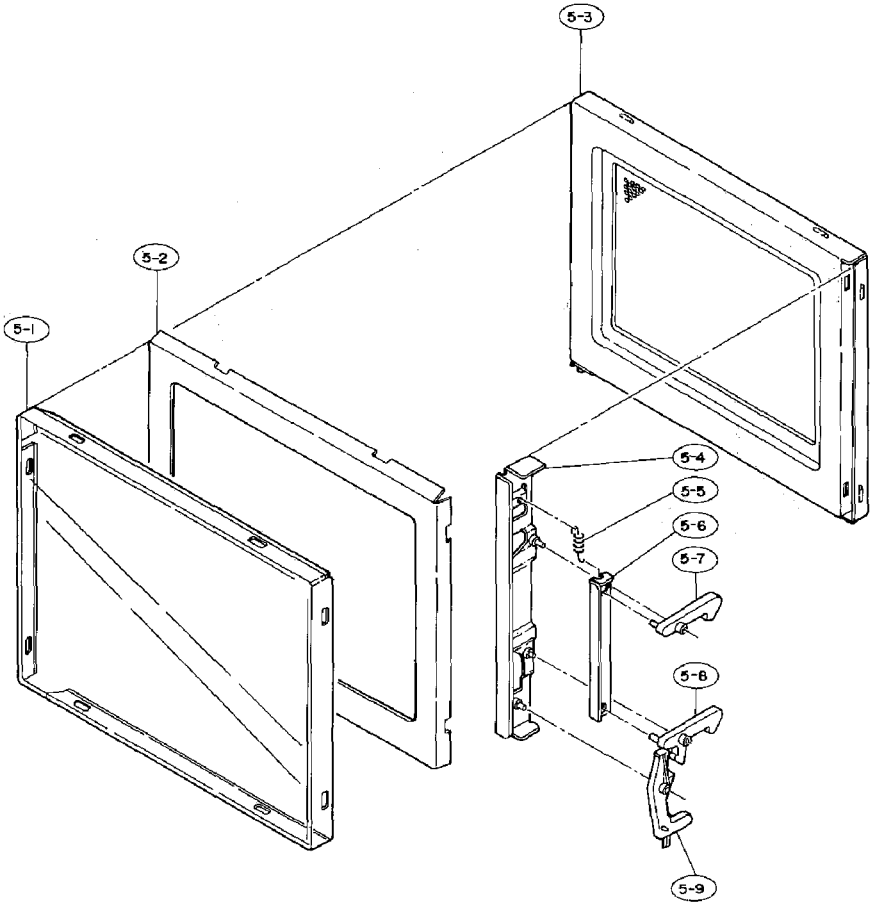
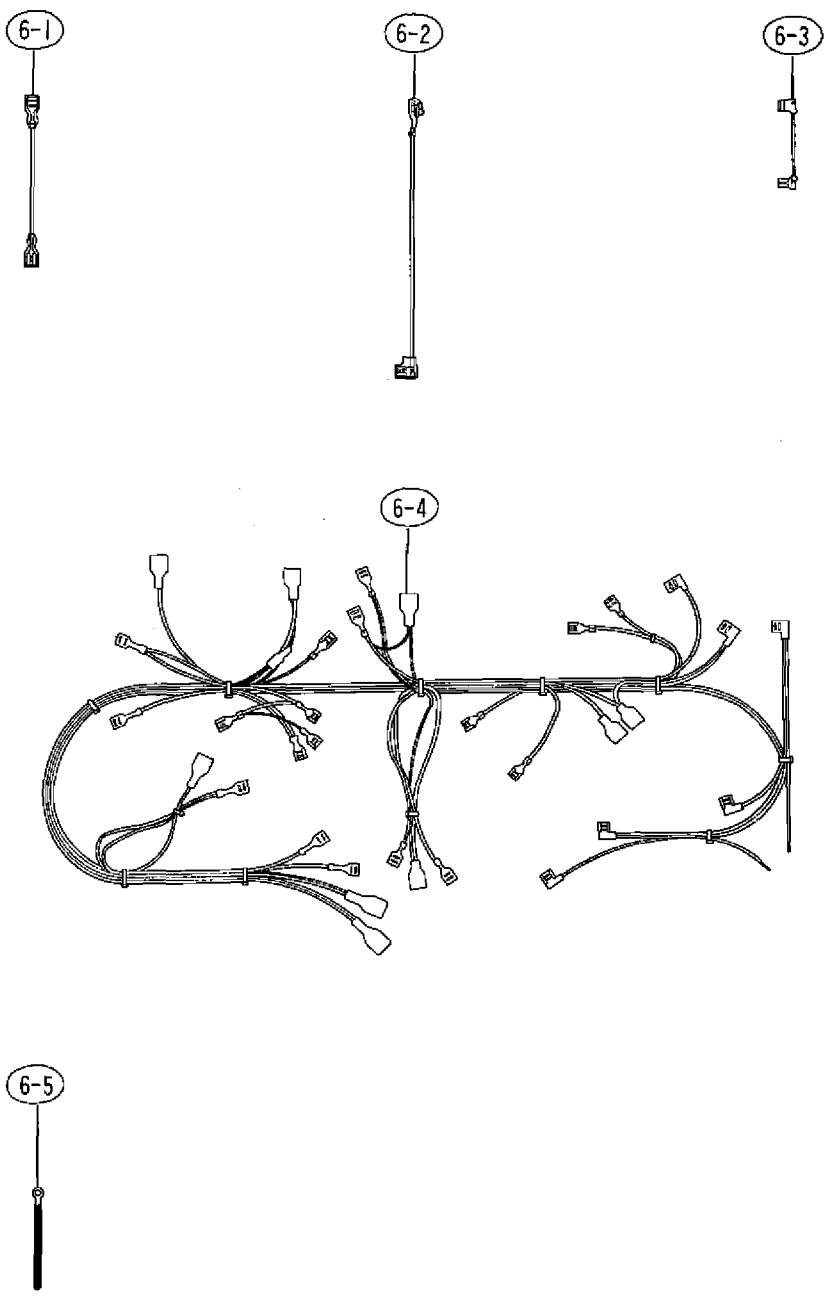


VERSCHIEDENE TEILE



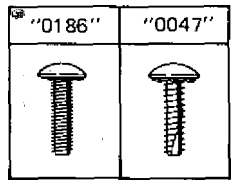
MAINTENANCE INFORMATION FOR MAGNETRON,AIR DUCT AND WAVEGUIDE

These modes are equipped with different magnetrons (Part No. RV-MZ0165WER0 and **RV-MZ0166WRE0).**

1. MAGNETRON KIT, PART NO. FV-MZA004WRE0.

1-1. This kit includes:

1-magnetron,	#	RV MZ0166WRE0
1-air duct, 1-	#	PDUC-0503WRW0
waveguide, 3-	#	PSKR-0088WRF0
bolts	#	LX-BZ0186WRE0 (1 piece) for attaching the air duct
	#	LX-CZ0047WRE0 (2 pieces) for attaching the waveguide



1-2. Maintenance

If the magnetron (part no. RV-MZ0165WRE0 or RV-MZ0166WRE0) is replaced, this magnetron kit can be used. Tighten the air duct and the waveguide well with the fastening cables. After assembling the magnetron, install it in the microwave device and refer to page 33.

2. AIR DUCT KIT, PART NO. FDUC A007WRK0

2-1. This kit includes:

2 air ducts #PDUC-0523WRW0 (1pc) for RV MZ0165WRE0
#PDUC-0503WRW0 (1 piece) for RV MZ0166WRE0

2-2. Maintenance

When replacing the air duct, check the magnetron part number and use the appropriate air duct from this kit. The use of the air duct is described on page 60.

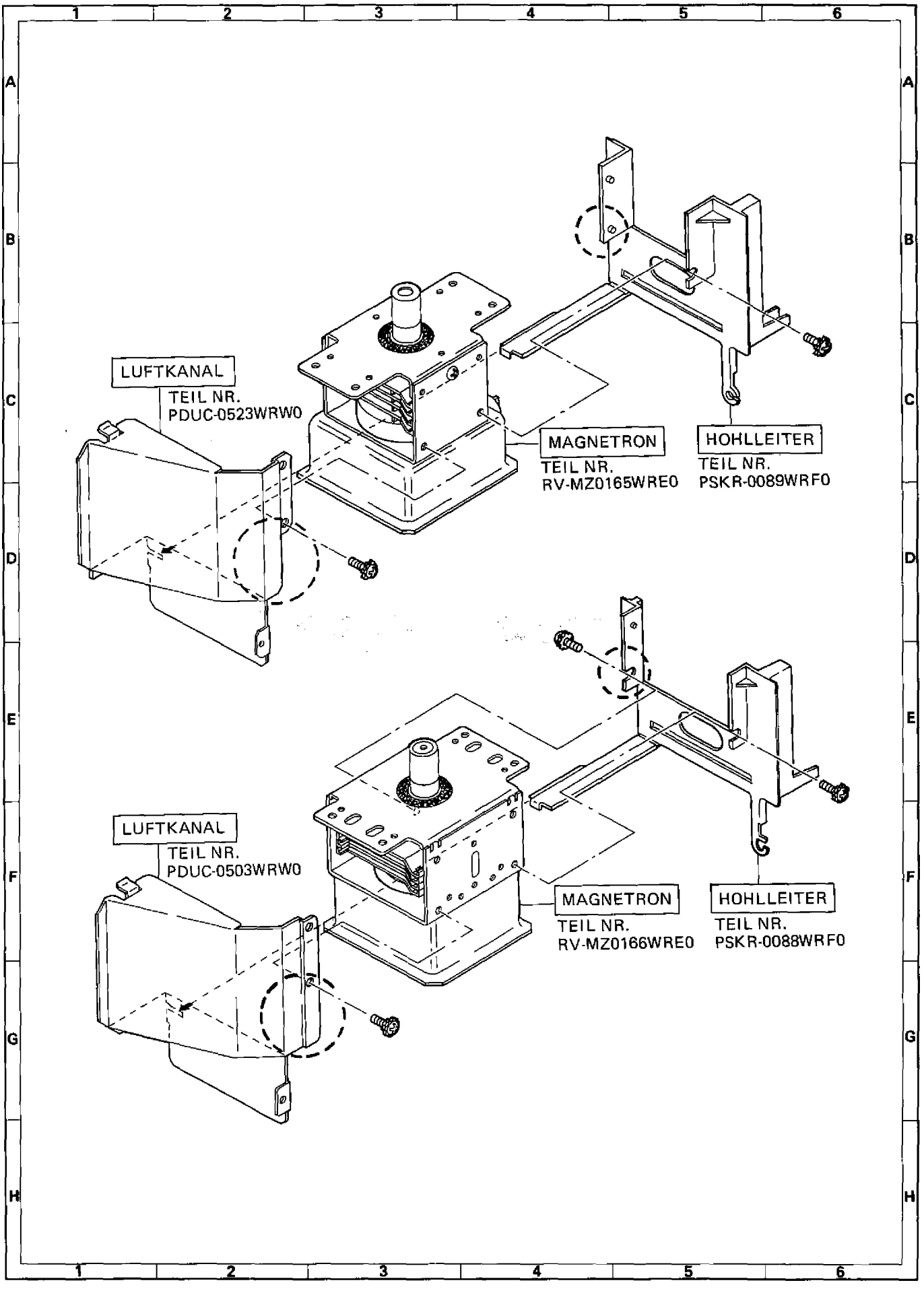
3. WAVEGUIDE KIT, PART NO. FSRK A001WRK0

3-1. This kit includes:

2-Waveguide # PSKR-OO89WRFO (1 piece) for RV MZ0165WRE0 # PSKR-0088WRF0 (1 piece) for RV MZO166WREO

3-2. Maintenance:

When replacing the waveguide, check the magnetron part number and use the appropriate conductor from this kit.
Use of the waveguide is described on page 60.


LUFTKANAL
TEIL NR.
PDUC-0523WRW0
MAGNETRON
TEIL NR.
RV-MZ0165WRE0
HOHLLEITER
TEIL NR.
PSKR-0089WRF0
LUFTKANAL
TEIL NR.
PDUC-0503WRW0
MAGNETRON
TEIL NR.
RV-MZ0166WRE0
HOHLLEITER
TEIL NR.
PSKR-0088WRF0

R"5960

SHARP