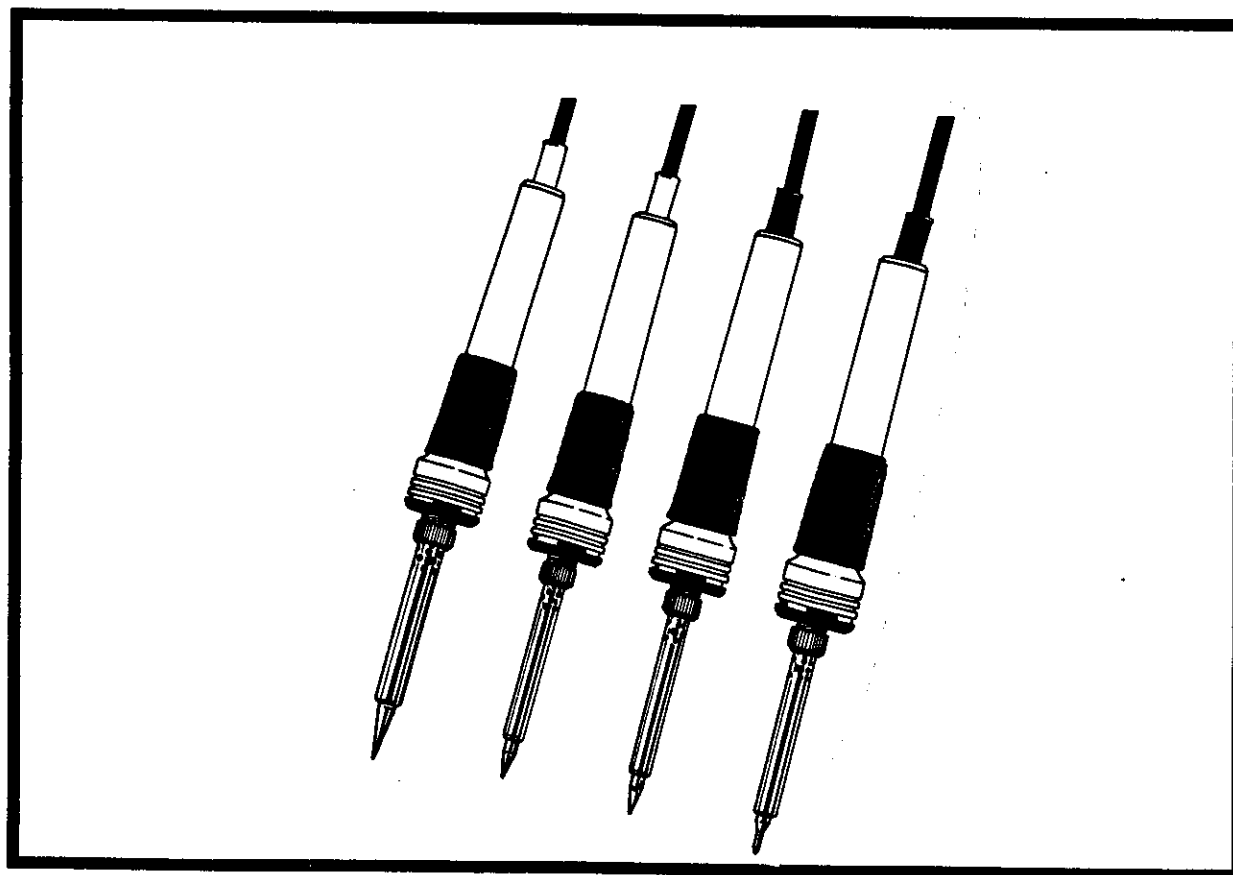


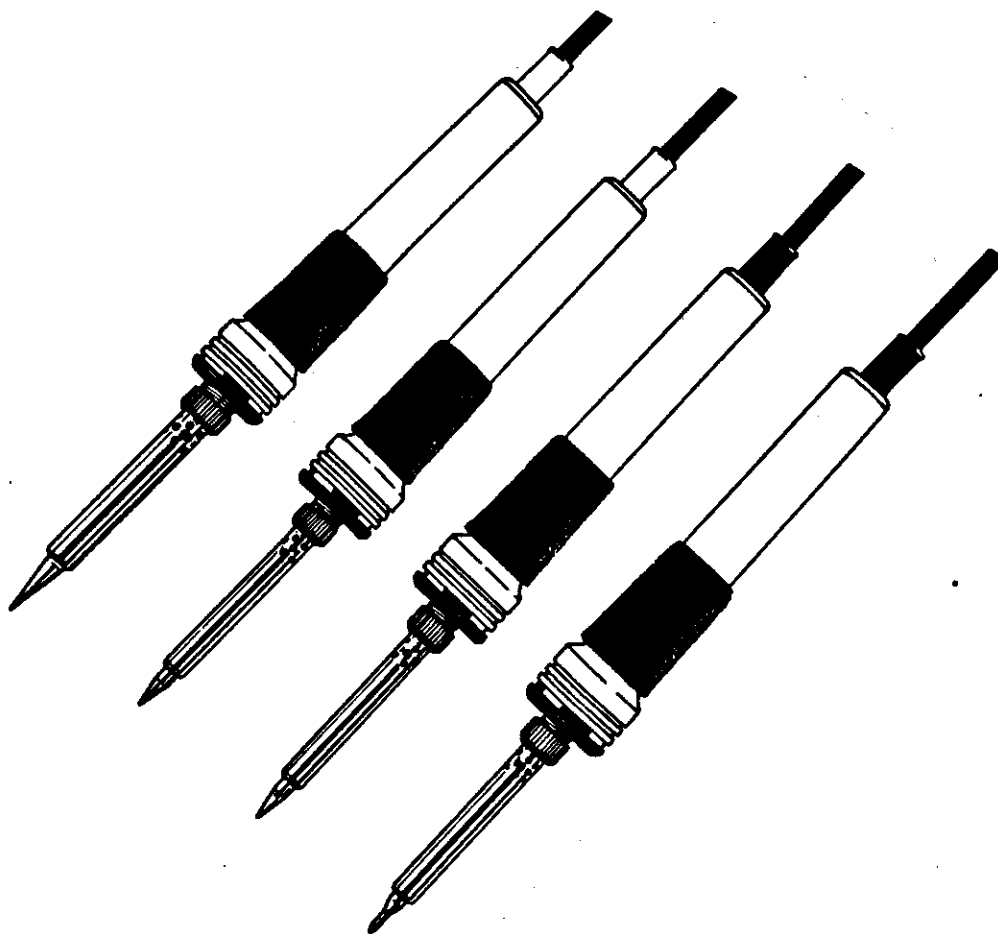
TROUBLE SHOOTING GUIDE
FOR
THE HAKKO 918/920/921/922/924 IRON



AMERICAN HAKKO PRODUCTS, INC.

**TROUBLE SHOOTING GUIDE FOR THE
HAKKO 918/920/921/922/924 IRON**

TROUBLE	POSSIBLE CAUSE
Unit is plugged in, but it does not heat up.	Bad cord, bad heating element or bad PCB
The unit overheats when turned on.	Bad PCB
Iron is out of calibration.	Bad PCB, old tip or incorrect calibration resistor.



Bad Cord: Check the continuity between the three prongs on the power cord and the cord connections on the PCB in the handle. See Figure 1. If the resistance is above 20Ω then the power cord is bad and should be replaced. The power cord part number is 777-014.

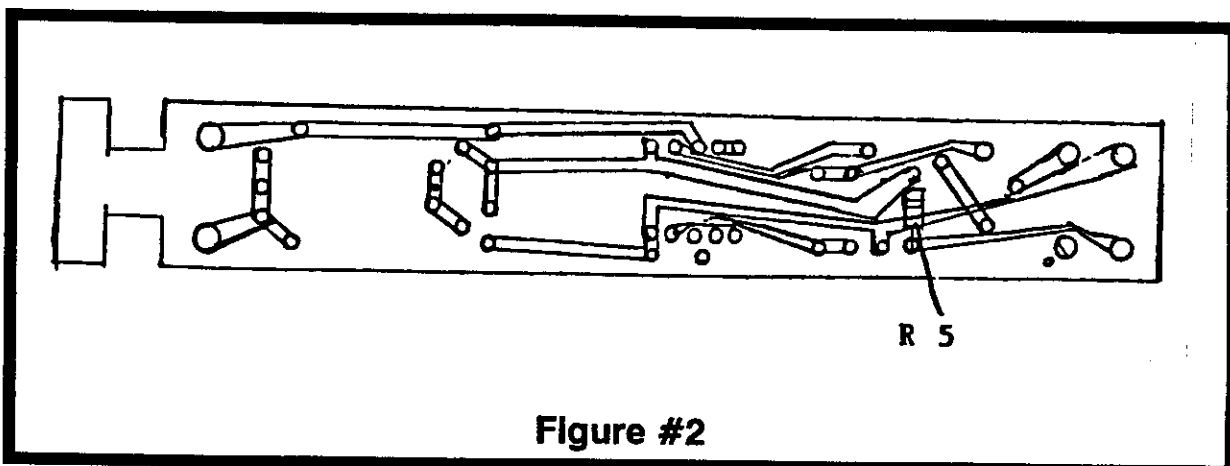
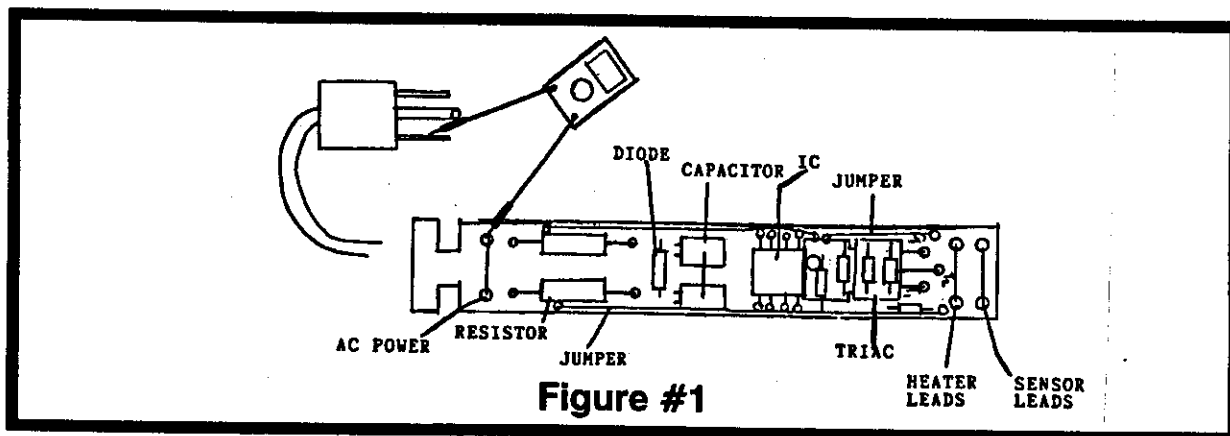
Bad Heating Element: Check the resistance between the two heater leads which is covered by the red tubing. The resistance of the heater should be between $68-76\Omega$. Then check the resistance on the sensor leads which is covered by the white tubing. The resistance of the sensor should be between $135-185\Omega$.

If the resistance between either sets of leads does not match the above resistance, then the heating element is bad and should be replaced. The heating element part number is (See Replacement Parts).

Bad PCB: If the iron over heats by more than 25 degrees the PCB is bad and needs to be replaced. The part number for the PCB is (See Replacement Parts).

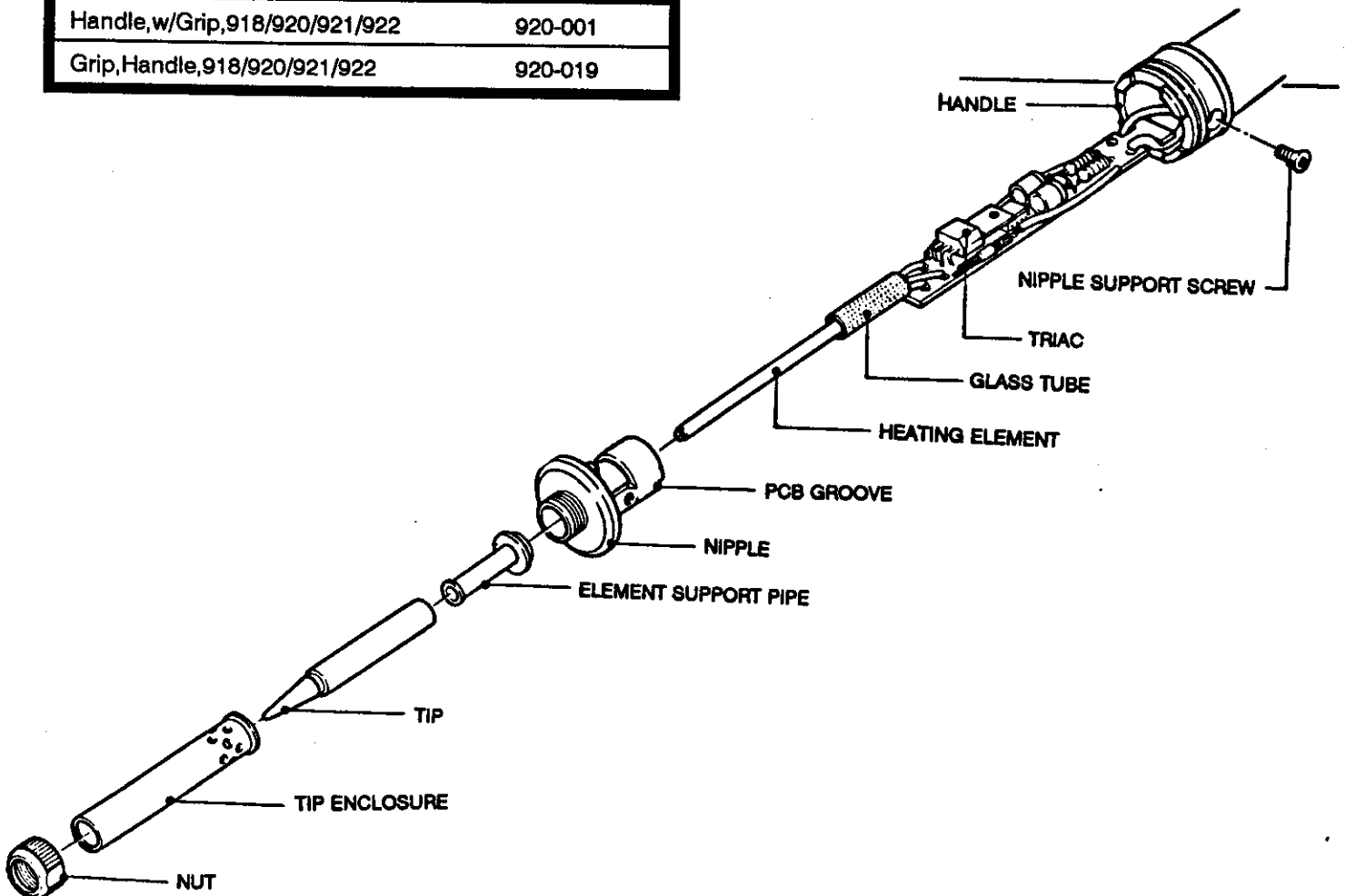
Old Tip: In many cases an old tip will not come up to the proper temperature. Replace with a new tip and check the temperature.

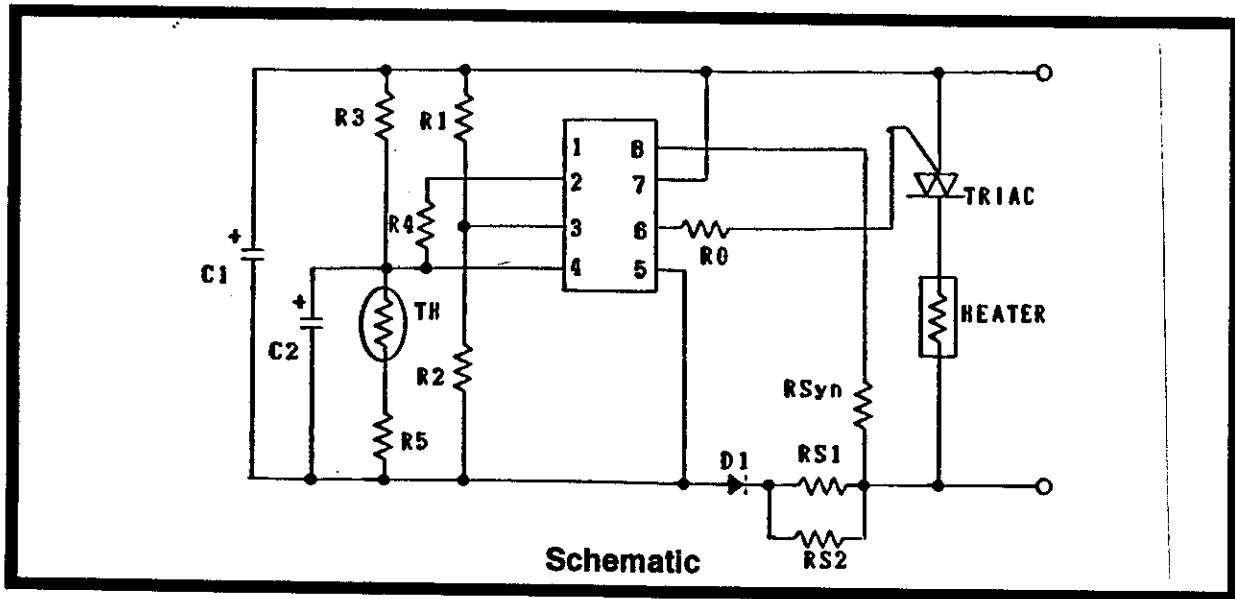
Incorrect Calibration Resistor: Check the resistance of the R 5 resistor on the back of the PCB. See Figure 2. If the resistance of the sensor in the heating element and the R 5 resistor do not match as shown in the chart below, then the temperature will be out of calibration. If this is the case, then change the R 5 resistor to match the correct resistance.



REPLACEMENT PARTS

Cord, Power, 918/920/921/922	777-014	PCB, 100V, 918	777-040
Enclosure, Tip, 918	918-002	PCB, 100V, 921	777-042
Enclosure, Tip, 920/921/922	920-002	PCB, 918	918-011-V12
Nipple, 918	918-003	PCB, 920	920-011-V12
Nipple, 920/921/922	920-003	PCB, w/Heater, 921/924	921-012-V12
Nut, Enclosure, 918	918-006	PCB, 922	922-011-V12
Nut, Enclosure, 920/921/922	920-006	Heater, 918	918-H-V12
Pipe, Tip Support, 918	918-103E	Heater, 920	920-H-V12
Pipe, Tip Support, 920/921/922	920-103E	Heater, 921/924	921-H-V12
Iron, Sdrg, 788F, 918	918M-V12	Heater, 922	922-H-V12
Iron, Sdrg, 572F, 920	920M-V12	Tips, 918	918-T(-)
Iron, Sdrg, 698F, 921	921M-V12	Tips, 920/921/922	920-T(-)
Iron, Sdrg, 788F, 922	922M-V12		
Handle, w/Grip, 918/920/921/922	920-001		
Grip, Handle, 918/920/921/922	920-019		





Heater	Heating Element
IC	PC1701C
Triac	AC030GM 400V3A
RSyn	75kΩ 1/6w
RS1	22kΩ 1w
RS2	22kΩ 1w
R0	300Ω 1/6w
R1	20kΩ 1/6w
R2	510Ω 1/6w
R3	20kΩ 1/6w
R4	20kΩ 1/6w
D1	200v 1A
C1	10v 100uF
C2	10v 100uF
TH	Resistance of Sensor
R5	See Sensor Resistance Chart

RESISTANCE CHART FOR 918/920/921/922

918 Iron	
Resistance of the R 5 resistor.	Resistance of the sensor of the heating element.
91 Ω	135 - 140 Ω
82 Ω	140 - 145 Ω
68 Ω	145 - 150 Ω
62 Ω	150 - 155 Ω

920 Iron	
Resistance of the R 5 resistor.	Resistance of the sensor of the heating element.
130 Ω	165 - 170 Ω
120 Ω	170 - 175 Ω
110 Ω	175 - 180 Ω
100 Ω	180 - 185 Ω

921/924 Iron	
Resistance of the R 5 resistor.	Resistance of the sensor of the heating element.
130 Ω	135 - 140 Ω
120 Ω	140 - 145 Ω
110 Ω	145 - 150 Ω
100 Ω	150 - 155 Ω
91 Ω	155 - 160 Ω
82 Ω	160 - 165 Ω

922 Iron	
Resistance of the R 5 resistor.	Resistance of the sensor of the heating element.
100 Ω	135 - 140 Ω
91 Ω	140 - 145 Ω
82 Ω	145 - 150 Ω
68 Ω	150 - 155 Ω
62 Ω	155 - 160 Ω