

# PAGE<sup>®</sup>

**INCORPORATED**

*Systems for Development, Production  
and Repair of Electronic Assemblies*

**SMR-25/E, 20/E**

**OPERATION/MAINTENANCE  
MANUAL**



**MANUAL NO. 5050-0229  
REV. B**

# GENERAL INFORMATION

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## PRODUCT APPLICATION

The following sections of this manual will familiarize you with the parts and operation of the unit. This product is very versatile, and may be used to satisfy a variety of application requirements. If you require assistance in the use of this product for your particular application, contact your local authorized PACE® dealer or call PACE Applications Engineering at (301) 490-9860.

# GENERAL INFORMATION

## **INTRODUCTION**

The PACE SMR™ “Pulse Heat” System provides the user with the ability to install and remove a wide range of surface mount components. Unlike continuously heated soldering irons, the SMR System features a “Pulse Heat” power output which provides controlled temperature ramp-up to solder reflow and rapid cool down. The SMR helps you avoid thermal shock and unwanted heating of adjacent solder joints often associated with continuously heated soldering irons, or with unfocused hand-held hot air reflow devices. A listing of system components and accessories (standard and optional) is shown below. The system has the following features:

1. The PACE SMR “Pulse Heat” systems incorporate a Zero Power (Voltage) switched, high current, low voltage power source which provides AC output for a variety of handpieces. Output level is analog controlled in both high and low power ranges.
2. A foot pedal switch for actuation of power source outputs.
3. A rapid connect/disconnect system is provided to attach handpieces to the universal power cord of the power source, freeing the operators’ hands.
4. A variety of rapid connect/disconnect handpieces and interchangeable tips allow the operator to perform many different SMD removal/replacement tasks which may be required for any particular repair process.

The SR-2 “Safety Rated” designation on the front panel is your assurance that the SMR meets or exceeds all applicable DOD-2000 and WS6536 specifications as well as other PACE standards essential to high quality/high reliability electronic repair.

## **SPECIFICATIONS**

Power Requirements: SMR-20/E, SMR-25/E

- PPS-30 — Domestic system power source, operates on 115 VAC, 60 HZ, 130 Watt (max).
- PPS-30E — Export system power source, operates on 230 VAC, 50 HZ, 130 Watt (max).

Physical Parameters:

- PPS-30 — 5.3”H x 6.5”W x 9.5”D (13.5 cm H x 16.5 cm W x 24.1 cm D), 7.0 lbs. (3.18 kg).
- PPS-30E — 5.3”H x 6.5”W x 9.5”D (13.5 cm H x 16.5 cm W x 24.1 cm D), 7.0 lbs. (3.18 kg).

# GENERAL INFORMATION

## PARTS IDENTIFICATION

**TABLE 1**

- MAIN POWER SWITCH** - Controls input power to unit.
- OUTPUT LEVEL CONTROL** - Provides variable output to adjust tip temperature.
- OUTPUT RATE LED** - Green flashing LED pulses to indicate set level of the Output Level Control.
- HIGH/LOW SWITCH** - Selects either "High" or "Low" output power to provide appropriate heating range for selected handpiece.
- HIGH POWER LAMP** - Amber lamp illuminated when the High/Low switch is in the "High" position.
- AC OUTPUT TERMINALS** - Electrical output for Universal Power Cord. Controlled by Output Level Control and High/Low switch.
- GROUND TERMINAL** - Provides a positive ground reference connection.
- HOT CUBBY TOOL HOLDER** - Conveniently stores handpieces in use.
- READI-RACK™ HANDPIECE STORAGE HOLDER** - Conveniently stores handpieces not in use (optional item on SMR-20 system). Not shown in Figure 1.
- AC POWER RECEPTACLE** - Provides AC power to the SMR system from AC outlet through Power Cord.
- LINE FUSE (F1)** - provides overload protection for unit.
- FOOT PEDAL RECEPTACLE** - Input for Foot Pedal activation of output power to handpiece.
- FOOT PEDAL** - Controls activation of output power to handpiece.
- POWER CORD** - Provides main power from AC outlet to AC Power Receptacle.



# GENERAL INFORMATION

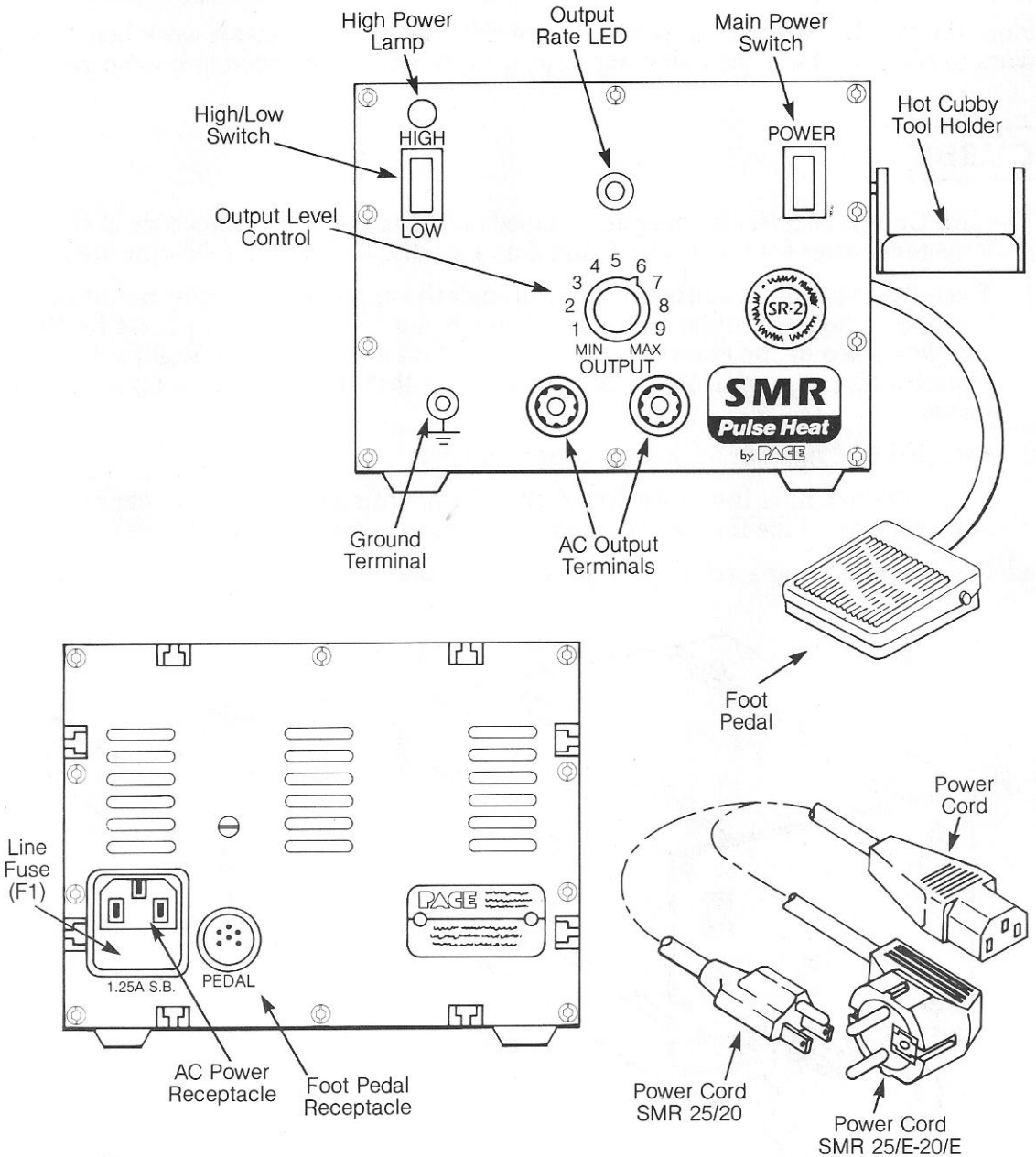


FIGURE 1. PACE SMR-25/E, 20/E SYSTEMS PARTS IDENTIFICATION

# SET-UP

Place the PACE SMR System power source (PPS-30/E) on a suitable work bench or work surface. Perform the following steps prior to placing the system into operation.

## CUBBY

The Hot Cubby Tool Holder may be installed on the top of or on either side of the SMR system power source. Using figure 2 as a guide, perform the following steps:

1. Place the two 6-32 mounting screws through the appropriate Cubby mounting holes. Use the two bottom holes for top mounting, the two left side holes for Right side mounting or the two right side holes for Left side mounting. Right side mounting is pictured in the illustration. Insure that the cubby lip is up and facing forward.
2. Attach a 6-32 hex nut to the end of each screw.
3. Insert the hex nuts into the selected chassis mounting slot from the rear of the power source. Slide the Cubby forward, stopping against the front panel.
4. Tighten mounting screws to secure Cubby in place.

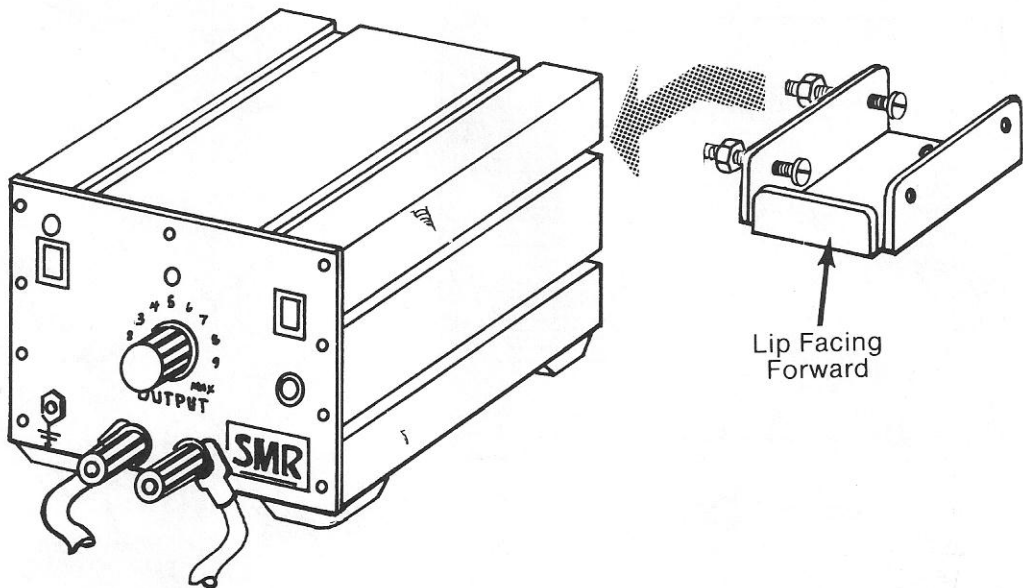


FIGURE 2. HOT CUBBY TOOL HOLDER INSTALLATION.

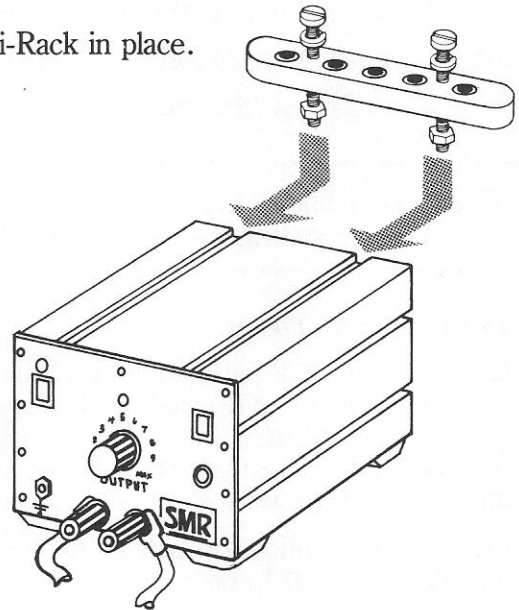
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**READI-RACK**

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The Read-Rack Handpiece Storage Holder is provided with the SMR-25/E system and is installed on the top of the SMR power source. Using Figure 3 as a guide, perform the following steps:

1. Place the two 6-32 mounting screws into the Read-Rack mounting holes.
2. Place a supplied lockwasher and hex nut on the end of each mounting screw.
3. Insert the hex nuts into the chassis mounting slots from the rear of the power source.
4. Tighten mounting screws to secure Read-Rack in place.



**FIGURE 3. READI-RACK INSTALLATION.**

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**POWER SOURCE**

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Perform the following steps to place the SMR System into operation.

1. Attach "quick connect" Universal Power Cord to AC Output terminals.
2. Set the Output Level Control at "Min".
3. Plug AC Power Cord into AC Power Receptacle of SMR power source.
4. Plug free end of AC Power Cord into convenient AC outlet.
5. Position foot pedal for operator convenience and plug into rear panel.



# **OPERATION**

To operate the SMR System, perform the following steps in sequence. Refer to the Application section of this manual for recommended usage of each handpiece and tip.

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## **UNIT POWER UP**

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1. Attach the proper tip for the task at hand, to the selected handpiece (see "Application").
2. Attach selected handpiece to the Universal Power Cord.
3. Insure that the Output Level Control is adjusted to "Min".
4. Set the "High/Low Switch" to the "Low" position.

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**CAUTION:** Do not use the LF-1 or ThermoPart® tip in the "High" switch position. Overheating and premature failure of the tip may result.

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5. Turn the Main Power Switch ON.
6. Activate Foot Pedal and adjust Output Level Control. Increase Output level until selected tip heats to desired level. If higher temperature levels are required, adjust Output Level Control to "MIN"; set High/Low Switch to "High" and readjust Output level for desired temperature. NOTE: The tip is not normally heated unless in contact with a component.
7. Refer to the Application section for recommended procedures to complete the particular task at hand.

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## **PREHEATING**

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Preheating is normally used in the repair process for high heat dissipating printed circuit assemblies and/or heat sensitive components. Listed below is a description of each.

## ASSEMBLIES

Preheating of a printed circuit assembly is normally required in the repair process whenever one or more of the following conditions exists:

1. Epoxy glass substrate with 4 or more layers.
2. Substrate with large ground planes.
3. Substrate of ceramic, polyimide or other high heat dissipative material.
4. PC assembly with large metal heat sinks.

Preheating of assemblies such as those listed above will accomplish the following objectives:

1. Minimize thermal shock by elevating the assembly temperature to a level closer to solder melt.
2. Minimize reflow time.
3. Overcome the heat dissipation characteristics of the assembly.
4. Avoid adjacent melts on densely populated assemblies.

The assembly undergoing repair must be heated for a sufficient time to saturate at the temperature required. Preheat temperatures normally used are 85-95°C (185-203°F) for glass substrates and 120°C (248°F) for ceramics and polyimides.

The user must employ a method which heats the assembly as evenly as possible with the temperature maintained throughout the Removal/Replacement process. PACE recommends the use of the HotSpot (HS150/E) for this purpose.

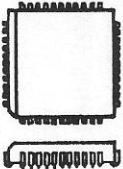
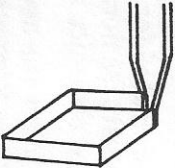
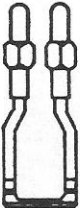
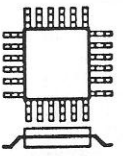
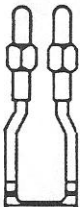
## COMPONENTS




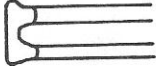
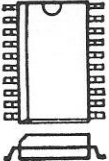
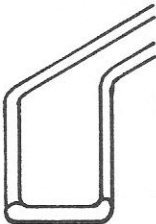





Many of the surface mount components in use today are very sensitive to elevated temperature levels and will degrade or fail if proper precautions are not taken. Elevation of the temperature level thru preheating will minimize thermal shock to the component. The components are preheated to a predetermined level consistent with the manufacturers' recommendations using equipment such as the PACE HotSpot unit. As part of this process, manufacturers are now recommending a gradual ramp-up of temperature on capacitive components. Components are placed on the HotSpot unit which is at ambient (room temperature). Power is then applied to ramp the temperature up to a predetermined level.

Once component preheat is achieved, the device can then be placed on a preheated assembly and reflowed in position using the methods recommended in the "Application" section of this manual.

The Output Level Control setting guidelines listed in the chart below are recommended by PACE as base reference parameters only. In each application, Output Level Control adjustments may be necessary. Start with the applicable setting listed below and increase Output Power Level in small increments until desired results are achieved.

**TABLE 2**  
**BASE REFERENCE PARAMETERS**

COMPONENT TYPE	OPERATION	# LEADS OR SIZE	TIP USED	TIP OUTLINE	HIGH/LOW SWITCH	OUTPUT LEVEL
 PLCC (J LEAD)	REMOVAL	18	RT-1		HIGH	7
		20	RT-2			7
		28	RT-3			7
		44	RT-4			9
	REPLACE- MENT	18	LF-2		LOW	7
		20	LF-2			7
		28	LF-4			7
		44	LF-3			7
 EXTENDED LEAD	REMOVAL	.270"	LF-1		LOW	4
		.440"	LF-2			6
		.540"	LF-3			6
		.540"	LF-4			6

 CHIP COMP.	REMOVAL & REPLACE- MENT	CHIP	CT-1		HIGH	4
 SOT	REMOVAL & REPLACE- MENT	3	CT-5		HIGH	7
 SOIC	REMOVAL & REPLACE- MENT	8	CT-5		HIGH	7
		14, 16	CT-2			7
		20	CT-3			7
		24, 28	CT-4			MAX
CONNECTR OR TERMINAL	REMOVAL & REPLCMNT	ANY	RT-5		HIGH	5
		ANY	RT-6			5
		ANY	RT-7			5
COATING REMOVAL	REMOVAL	POLY U	THERM OPART		LOW	3
		EPOXY				4
WIRE STRIP	REMOVAL	PVC, RBR	STRIP TIPS		HIGH	4
		TEFLON				8

# APPLICATION

The SMR system is able to complete a wide variety of tasks when used in the recommended manner. Following are the procedures, required handpieces and tips which PACE recommends for each task. Select the appropriate procedure for your application.

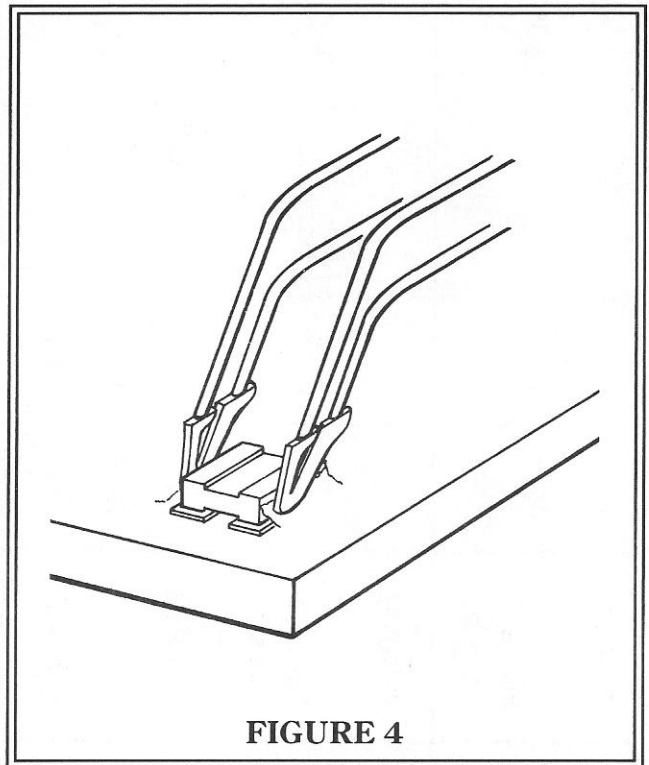
## CHIP COMPONENT REMOVAL/REPLACEMENT

**Handpiece Used: CT-15 ConductTweez**

**Tip Used: CT-1 (1121-0286)**

### REMOVAL Procedure:

1. Preheat PCB and chip component to eliminate the possibility of thermal shock.
2. Grasp component with tweezer tips.
3. Apply power (by actuating the foot pedal) and observe solder melt. If unsure of proper temp setting, start at minimum and slowly increase until melt is observed in appropriate time (see Table 2).
4. Remove component and remove power by releasing foot pedal.  
**NOTE:** Component will lift easily unless bonded to the substrate. Bonded components can be sheared off after solder melt is achieved.



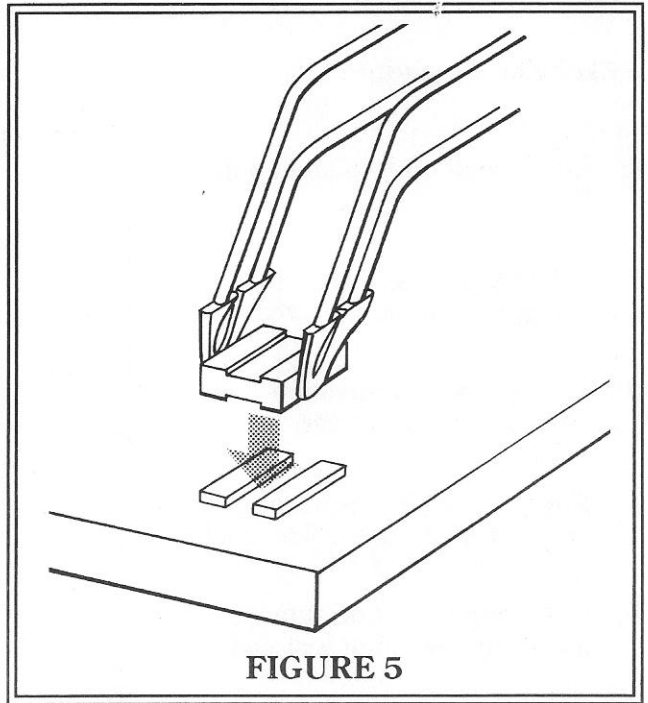
**FIGURE 4**



## CHIP COMPONENT REMOVAL/REPLACEMENT CONT'D.

### REPLACEMENT Procedure:

1. Remove old solder and clean land pattern.
2. Prefill land pattern with either flux core wire solder or solder paste.
3. Clean and apply new flux, if using flux core wire solder.
4. Grasp component with tweezer tip contacting terminal ends. Position component on land pattern.
5. Apply power and observe solder melt.
6. When solder melt is observed, assure component/land pattern alignment.
7. Release foot pedal (to remove power from tips), holding component in place until solder solidifies. NOTE: Tips are not "wetable" and will not adhere to solder.
8. Remove tweezers.



# APPLICATION

## SOT/SOIC REMOVAL/REPLACEMENT

Handpiece Used: CT-15  
ConductTweez

Tip Used: SOT : CT-5 (1121-0269)  
SOIC-8 : CT-5 (1121-0269)  
SOIC-14, 16 : CT-2 (1121-0271)  
SOIC-20 : CT-3 (1121-0270)  
SOIC-24, 28 : CT-4 (1121-0293)

### REMOVAL Procedure:

1. Clean solder joints and apply flux.
2. Select proper size tip for component to be removed.
3. Gently grasp component leads, ensuring good contact.
4. Apply power (by depressing foot pedal) and observe solder melt.
5. Lift component and remove power by releasing foot pedal.
6. Clean and inspect land pattern.

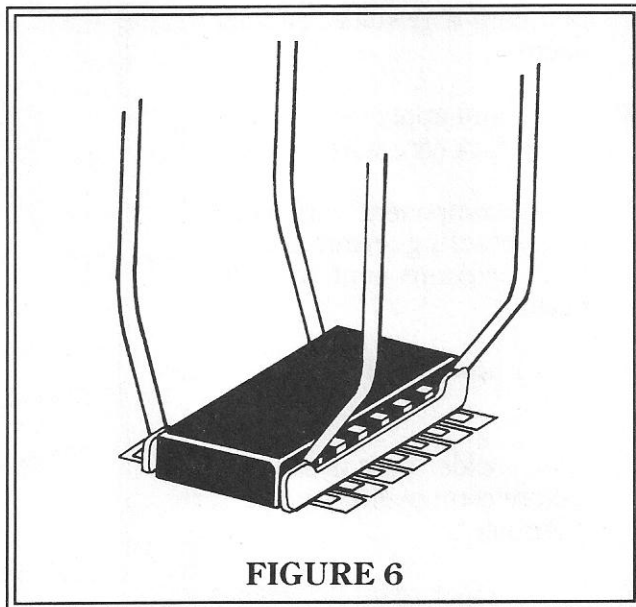
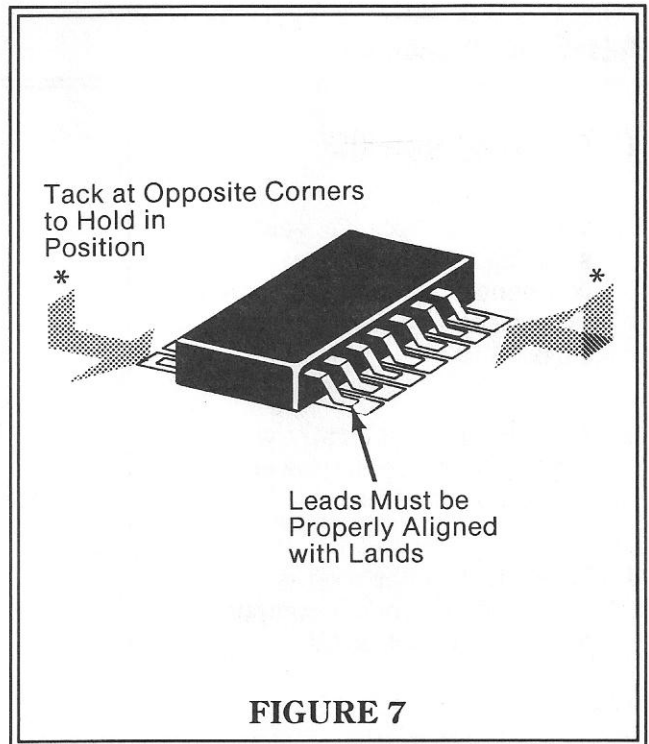


FIGURE 6

## SOT/SOIC REMOVAL/REPLACEMENT CONT'D.

### REPLACEMENT Procedure:

1. Remove old solder and clean land pattern.
2. Prefill land pattern with either flux core wire solder or solder paste.
3. Clean and apply new flux, if using flux core wire solder.
4. Place component on land pattern. Tack opposite corner leads in place to insure proper component alignment.
5. Gently grasp component with proper size tweezer tips.
6. Apply power and observe solder melt.
7. When solder melt is observed, assure component/land pattern alignment.
8. Release foot pedal (to remove power from tips), holding component in place until solder solidifies.
9. Remove tweezers.



# APPLICATION

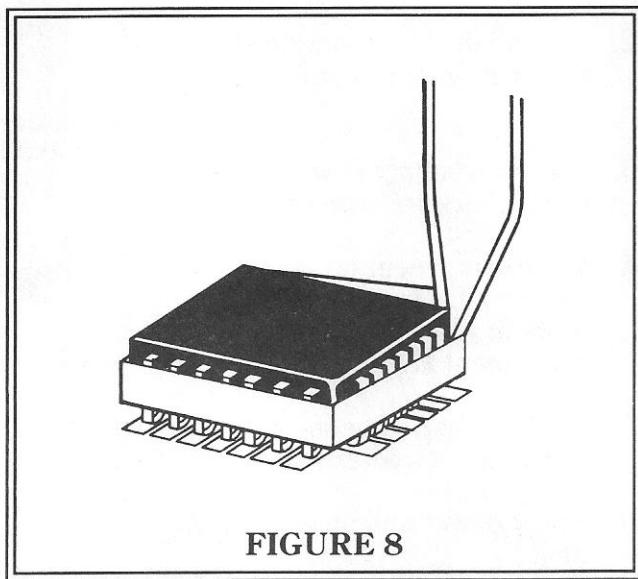
## ***PLCC ("J" Leaded Component) REMOVAL/REPLACEMENT***

**Handpiece Used:** TW-15  
ResisTweez

**ThermoBand Tip Used:** PLCC-18: RT-1 (1121-0294)  
PLCC-20: RT-2 (1121-0295)  
PLCC-28: RT-3 (1121-0296)  
PLCC-44: RT-4 (1121-0297)

### **REMOVAL Procedure:**

1. Clean and apply flux.
2. Using the proper tip, gently slide tip band over the component leads. Take care to insure that tip does not touch PCB.
3. Hold component firmly with tweezers and apply power by depressing foot pedal.
4. When full solder melt is observed, gently lift component and release foot pedal.



**FIGURE 8**

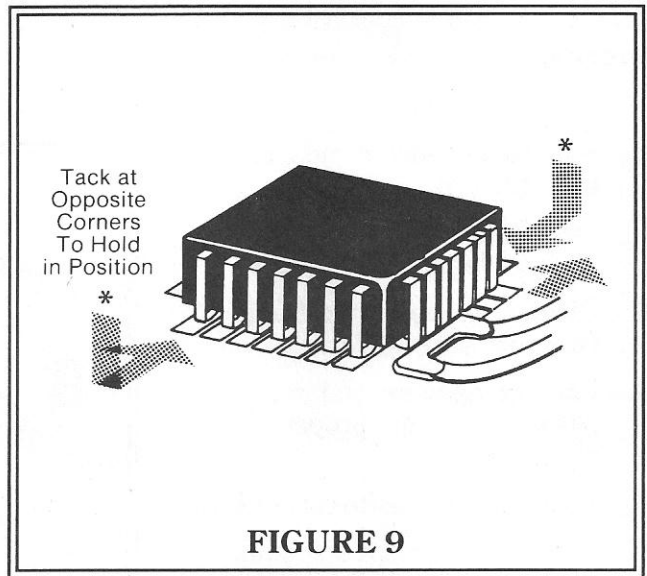
## **PLCC ("J" Leaded Component) REMOVAL/REPLACEMENT**

**Handpiece Used: LF-15  
LapFlo**

**Tip Used: PLCC-18 : LF-2 (1121-0298)  
PLCC-20 : LF-2 (1121-0298)  
PLCC-28 : LF-4 (1121-0300)  
PLCC-44 : LF-3 (1121-0299)**

### **REPLACEMENT Procedure:**

1. Remove old solder and clean land pattern.
2. Prefill all lands using flux core wire solder or solder paste if not using solder preforms.
3. Clean and apply flux if using flux core wire solder.
4. Place component on land pattern and tack opposite corners to insure proper alignment.
5. Place any solder preforms (if used) at this time.
6. Contact multipoint SMD tip to "J" lead/land junctions on one side of component. Apply power (by depressing foot pedal) and pass tip along each lead, watching for solder melt and wetting up of the leads. Avoid excessive pressure, especially against lands.





# APPLICATION

## EXTENDED LEAD DEVICE REPLACEMENT

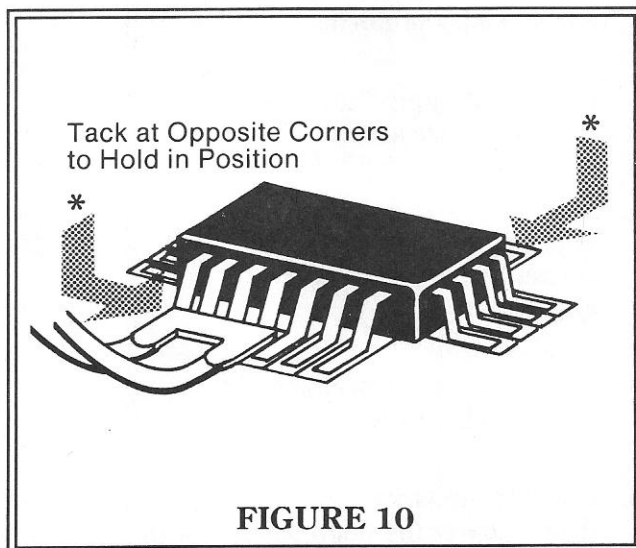
NOTE: The SMR System is not recommended for extended lead device removal. These devices may be removed in a variety of ways such as with the use of a hot air jet device or by clipping and removing leads individually.

**Handpiece Used: LF-15  
LapFlo**

**Tip Used: Operator's Choice**  
LF-1 (6000-0008)  
LF-2 (1121-0298)  
LF-3 (1121-0299)  
LF-4 (1121-0300)  
ThermoPart (6000-0009)

### **Procedure:**

1. Remove old solder and clean land pattern.
2. Prefill all lands using flux core wire solder or solder paste.
3. Clean and apply flux if using flux core wire solder.
4. Place component on land pattern ensuring proper alignment.
5. Solder two opposite corner leads.
6. With a convenient size multi-point tip, contact leads with gentle downward pressure at center of pads and apply power by depressing foot pedal.
7. Once complete melt is observed, release foot pedal to remove power and continue to hold leads down until solder solidifies.
8. Repeat steps 6 and 7 until all leads are soldered, making sure that no lead is reflowed more than once.
9. Clean and inspect all joints.



**FIGURE 10**

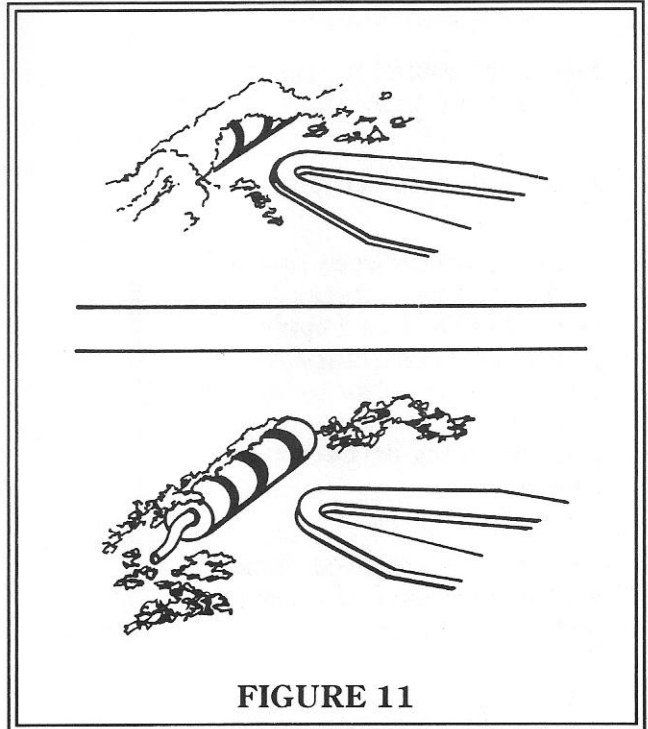
## EPOXY/POLYURETHANE COATING REMOVAL

**Handpiece Used: LF-15  
LapFlo**

**Tip Used: ThermoPart- (6000-0009)**

### Procedure:

1. Install tip and clean rework area.
2. Apply tip to coating using pressure and apply power by depressing foot pedal. Epoxy should overcure into a white powder. Adjust Output Level control as necessary to obtain proper results. If material being removed produces smoke, reduce input power.
3. During coating removal, push bulk of overcured material away from component with tip. **NOTE:** As a safety precaution, do not attempt to remove coating all the way down to the component or substrate.
4. Release foot pedal to remove power.



**FIGURE 11**

# APPLICATION

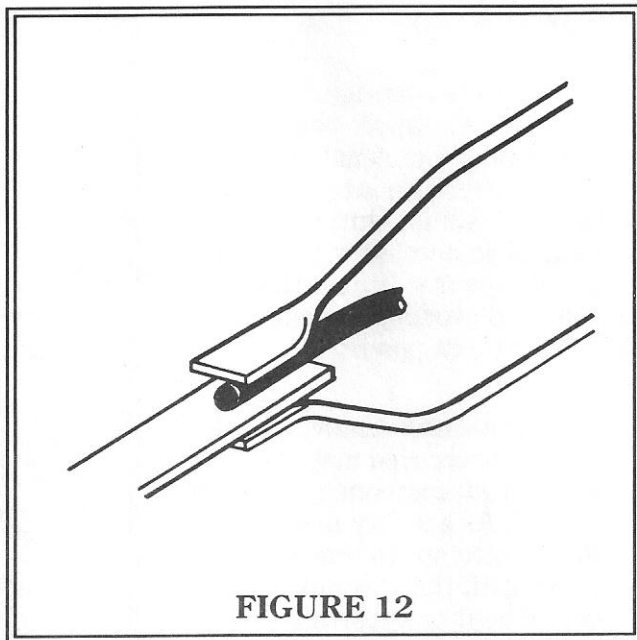
## CONNECTOR WIRE REMOVAL/REPLACEMENT

**Handpiece Used: TW-15**  
**ResisTweez**

**Tip Used: Operator's Choice**  
**RT-5 (1121-0301)**  
**RT-6 (1121-0009-P2)**  
**RT-7 (1121-0006-P2)**

### REMOVAL Procedure:

1. Select and install the proper tips for your application.
2. Apply flux to solder joint.
3. Grip contact between tips and apply power by depressing foot pedal. **NOTE: Don't apply power until contact is made. Remove power prior to breaking contact. These steps will prevent arcing between tips and connector.**
4. Once melt is observed, remove wire connection and release foot pedal to remove power.



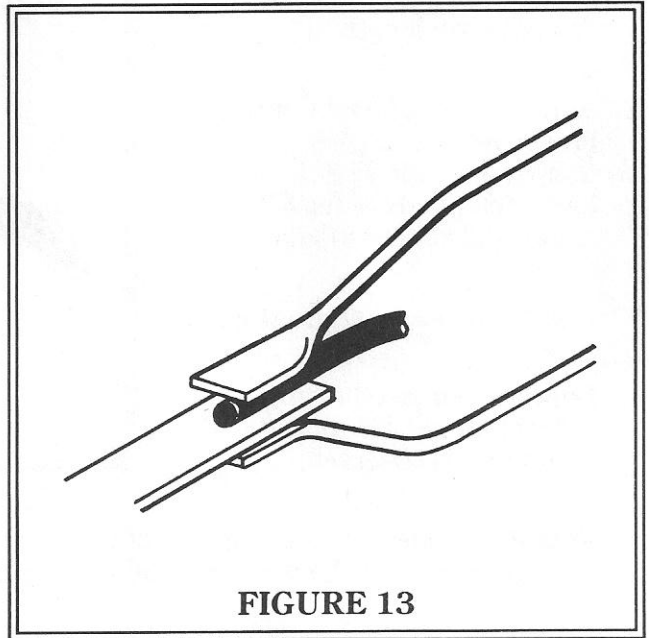
## CONNECTOR WIRE REMOVAL/REPLACEMENT CONT'D

**Handpiece Used: TW-15**  
**ResisTweez**

**Tip Used: Operator's Choice**  
**RT-5 (1121-0301)**  
**RT-6 (1121-0009-P2)**  
**RT-7 (1121-0006-P2)**

### REPLACEMENT Procedure:

1. Select and install the proper tips for your application.
2. Prefill the contact using flux core wire solder.
3. Clean contact and apply flux.
4. Place pretinned wire on contact.
5. Grip connection between tips and apply power by depressing foot pedal.
6. Once melt is observed, make wire connection and release foot pedal to remove power.



**FIGURE 13**

# APPLICATION

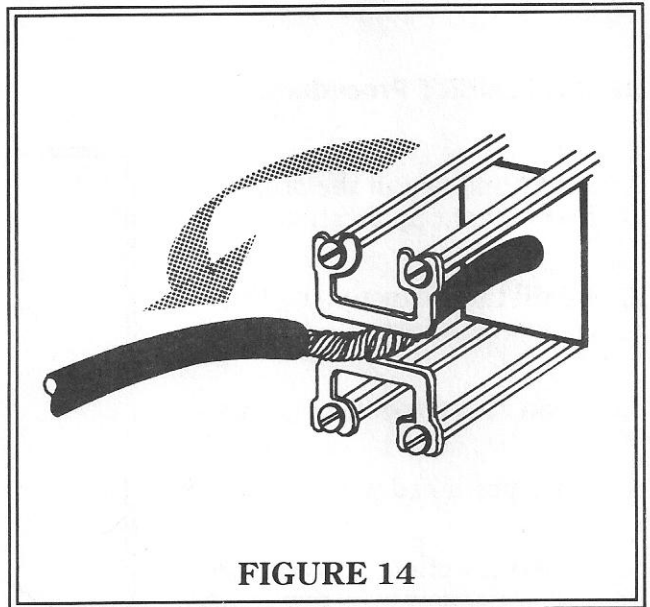
## THERMAL WIRE STRIPPING

**Handpiece Used: TS-15 StripTweez**

**Tip Used: TS-1 (1121-0003-P2)**

### **Procedure:**

1. Ensure that tips are clean.
2. Adjust handpiece stop for desired strip length.
3. Adjust Output Level Control for proper results. Higher temperature for Teflon and lower temperature for PVC, mylar and rubber insulation.
4. Insert wire end fully to stop.
5. Depress foot pedal to apply power and until melt of insulation is observed.
6. Rotate handpiece in the direction of the wire strands insuring complete melt of the insulation around the wire and pull to strip insulation.
7. Release foot pedal to remove power.





# CORRECTIVE MAINTENANCE

Most malfunctions are easily cleared. Refer to the table shown below to clear these malfunctions.

**TABLE 3**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
No Power to Unit	Blown Fuse	Replace fuse. Check for shorted handpiece or Universal Power Cord.
	Broken Power Cord	Replace Power Cord
	Defective Power Switch	Replace Switch
No Power Output - when depressing Foot Pedal. Output rate LED flashes.	Defective Foot Pedal Switch	Clean Switch
No Power Output - when depressing Foot Pedal. Output rate LED does not flash.	Defective Control Assembly	Contact PACE for assistance.





# SMR-20/E, 25/E PARTS

Refer to Table 4 and Figure 16 for replacement parts. Contact PACE for any parts required which are not listed.

## UNIT

TABLE 4

ITEM NO.	DESCRIPTION	PACE Part No.	
		PPS-30 (115 VAC SYSTEM)	PPS-30E (230 VAC SYSTEM)
1	SMR-20/E System	8042-0001	8042-0002
2	SMR-25/E System	8042-0003	8042-0004
3	PPS-30/E System (includes Power Source, Power Cord and Foot Pedal)	7018-0041	7018-0042
4	PPS-30/E Power Source Only	7008-0172	7008-0173
5	Power Cord	1332-0094	1332-0093
6	Rear Panel Assembly	6000-0158	6000-0159
7	Power Entry Module	1207-0151	1207-0151
8	Fuse, 2.0 Amp S.B. Fuse, 1.0 Amp S.B.	1159-0219	1159-0216
9	Front Panel Assembly	6000-0156	6000-0157
10	Main Power Switch	1157-0052	1157-0052
11	High/Low Switch	1157-0067	1157-0067
12	Indicator Light	1165-0024	1165-0025
13	LED, Green	1349-0241	1349-0241
14	Control Knob	1222-0073	1222-0073
15	Main PCB Assembly	6020-0059	6020-0059
16	Terminal Post (Qty. 2)	1205-0045	1205-0045
17	Ground Terminal	1207-0200	1207-0200
18	Transformer, 18 Volt, .2 Amp	1192-0060	1192-0062
19	Transformer, 2.3 Volt, 50 Amp	1192-0061	1192-0063
20	Operation Manual	5050-0229	5050-0229



# SMR-25/E, 20/E PARTS CONT'D.

## ACCESSORIES

Refer to Table 5 when ordering accessory parts for your PACE SMR-25/20 System. The table designates each part as either standard (STD) or optional (OPT) when shipped with your SMR System.

TABLE 5

ITEM	DESCRIPTION	PACE PART NO.	SMR-25	SMR-20
1	Hot Cubby Tool Holder	6019-0022	STD	STD
2	Readi-Rack Handpiece Storage Holder	6019-0023	STD	OPT
3	CT-15 ConducTweez Handpiece	7020-0001	STD	STD
4	TW-15 ResisTweez Handpiece	7009-0005	STD	OPT
5	TS-15 StripTweez Handpiece	7012-0002	OPT	OPT
6	TP-15-02 LapFlo Handpiece	7013-0004-02	STD	OPT
7	Universal Power Cord	7000-0023	STD	STD
8	Foot Pedal	6008-0115	STD	STD
9	Screwdriver	1100-0230	STD	STD
10	SMD Tip Kit	6993-0125	OPT	OPT

# SMR-25/E, 20/E PARTS CONT'D.

## HANDPIECE TIPS

Refer to Table 6 when ordering accessory tips for your PACE SMR-25/20 System. The table designates each handpiece with the applicable tip and each tip as either standard (STD) or optional (OPT) when shipped with your SMR System.

**TABLE 6**

ITEM	DESCRIPTION	PACE PART NO.	SMR-25	SMR-20
<b>CT-15 ConducTweez TIPS</b>				
1	CT-1 Chip Component	1121-0286	STD	STD
2	CT-2 14-16 Lead SOIC	1121-0271	STD	STD
3	CT-3 20 Lead SOIC	1121-0270	STD	OPT
4	CT-4 24-28 Lead SOIC	1121-0293	OPT	OPT
5	CT-5 SOT	1121-0269	OPT	OPT
6	CT-6 Rounded End Aux. Heating	1121-0004	STD	STD
<b>TW-15 ResisTweez TIPS</b>				
7	RT-1 18 Lead ThermoBand	1121-0294	OPT	OPT
8	RT-2 20 Lead ThermoBand	1121-0295	STD	OPT
9	RT-3 28 Lead ThermoBand	1121-0296	OPT	OPT
10	RT-4 44 Lead ThermoBand	1121-0297	OPT	OPT
11	RT-5 Tapered Flat End Resistance	1121-0301	OPT	OPT
12	RT-6 Round End Resistance	1121-0009-P2	OPT	OPT
13	RT-7 Flat End Resistance	1121-0006-P2	STD	OPT



# SMR-25/E, 20/E PARTS CONT'D.

## HANDPIECE TIPS CONT'D

TABLE 6 (Cont'd)

ITEM	DESCRIPTION	PACE		
		PART NO.	SMR-25	SMR-20
<b>StripTweez TIPS</b>				
14	Thermal Wire Stripper	1121-0003-P2	OPT	OPT
<b>LF-15 LapFlo TIPS</b>				
15	LF-1 Single-Point SMD Soldering	6000-0008	STD	OPT
16	LF-2 Multi-Point SMD Soldering (.270)	1121-0298	OPT	OPT
17	LF-3 Multi-Point SMD Soldering (.540)	1121-0299	OPT	OPT
18	LF-4 Multi-Point SMD Soldering (.440)	1121-0300	STD	OPT
19	ThermoPart Removal	6000-0009	STD	OPT

NOTE: Additional Tips will be available in the future. Contact PACE or your local authorized PACE distributor for current information.



# NOTES



*Systems for Development, Production  
and Repair of Electronic Assemblies*

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