

201-848-6800

MAINTENANCE MANUAL

~~800-638-8656~~
800-234-1147

IMI INFANT CARE CENTER MODEL 4000 SERIES

4004

Specifications are subject to change without notice.

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SECTION I

WARNINGS AND SAFETY INFORMATION

Read this manual before servicing this equipment. Keep this manual for future reference and new employees. The operating instructions for this instrument are contained in Operating Manual OM-18, IMI Infant Care Center, Model 4000 Series.

When used in a flammable anesthetizing location, all electrical elements in this unit except the temperature probe must be five feet or more above the floor in accordance with the National Electrical Code, 1975, paragraph 517-60.

For your protection against shock hazards, connect this equipment only to an approved power source such as a 3-wire grounded receptacle. Where a 2-wire receptacle is encountered, it must be replaced by a qualified electrician with a properly grounded 3-wire receptacle in accordance with the National Electrical Code. Do not, under any circumstances, remove the grounding prong from the power plug. Do not use extension cords.

Should the power cord or plug become cracked, frayed, broken or otherwise damaged, it should be replaced immediately by a serviceman. Unplug the power cord before cleaning or servicing. The operator should not perform any servicing except as specifically stated in the operating manual.

Do not remove any caution labels from this equipment or the associated work area.

The use of any electrical instrument requires adequate training of personnel. Hospital administrative personnel are responsible for making certain that all operators of the instrument(s) described in this manual receive adequate training beforehand and that B-D ELECTRODYNE training courses for operators be scheduled with your authorized distributor of IMI products on a regular basis. It is especially important that instruction be given for use of the IMI-4000 Infant Care Center as described in the operating manual.

Troubleshooting and repair of the IMI-4000 Infant Care Center should be performed by trained and authorized personnel only. If a hospital desires to use its own maintenance personnel to supplement the B-D ELECTRODYNE authorized service that is available, a hospital official can contact B-D ELECTRODYNE, Sharon, Massachusetts for training information (Tel: (617) 828-9080).

WARNING

Do not, under any circumstances, perform any testing or maintenance on medical instruments, cables, or electrodes while they are connected to a patient.

SECTION II

DESCRIPTION

2.1 INTRODUCTION

The Infant Care Center consists of relatively few basic subassemblies. Its components are shown in figure 1.

- Hood Assembly
- Controller and Bracket Assembly
- Pole
- Carriage Assembly
- Base Assembly (Part of Carriage Assembly)

Hood Assembly

The Hood Assembly consists of a radiant heat panel with a protective cover. A power cord for supplying a-c power to the heating element is at one end of the hood near the mounting hole which fits over the pole. The only electrical elements in the Hood Assembly are a heating element and a thermostat for over-heating protection.

Controller and Bracket Assembly

Two Controller options are available depending on the requirements of the pediatric facility.

- (1) Proportional Controller, Model 4004 (figure 2)
- (2) Manual Controller, Model 4002 (figure 3)

A Model number of an Infant Care Center is modified by a letter to designate the Controller that is included, as follows:

An Infant Care Center with a Model 4004 Proportional Controller is a Model 4000P.

An Infant Care Center with a Model 4002 Manual Controller is a Model 4000M.

A list of the assemblies, subassemblies, and components in the Infant Care Center is given in Table 1.

TABLE 1. INFANT CARE CENTER ASSEMBLIES 4000 SERIES

NAME	PART NO.	DESCRIPTION
Base Assembly	0590555615	Completely assembled base which supports carriage assembly.
Base Assembly	0220006102	Base support for Free Standing Radiant Warmer.
Wall Mounting Bracket Assembly.	0590926239	Wall mounting bracket for Radiant Warmer.
Pole with Indexing Block	0210196001	Used to mount the Controller and Radiant Warmer. The indexing block is used to set the position of the procedure table.

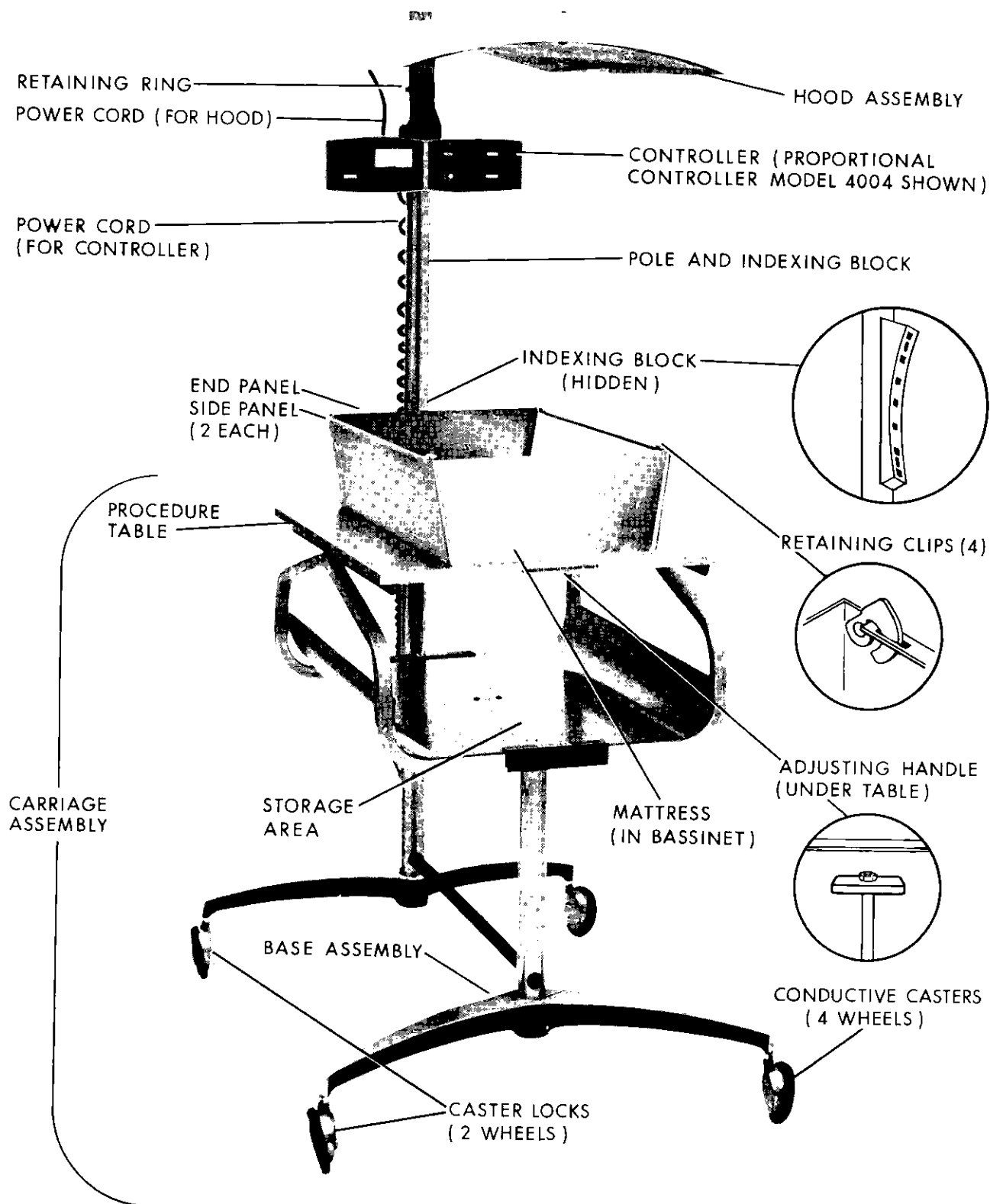


Figure 1. Infant Care Center

TABLE 1. INFANT CARE CENTER ASSEMBLIES 4000 SERIES (Cont)

NAME	PART NO.	DESCRIPTION
Mattress	1040475001	Bassinet mattress.
Radiant Warmer	2620018401 Model 4003	Curved canopy which emits 10-micron infrared heat energy.
Controller (2 Models available):		This unit controls the heat output of the radiant warmer.
Proportional Controller	2520018501 Model No. 4004	Temperature automatically regulated by the patient's demand or manually controlled. The patient's temperature can be monitored at all times.
Manual Controller	2520018301 Model No. 4002	Manual control for temperature selection.
Retaining Ring	0210185901	Stainless steel ring used to support the Controller assembly on the pole. This ring is also used to control the rotation of the radiant warmer.

Proportional Controller, Model 4004

The Proportional Controller, Model 4004 (figure 2) is an electronic control circuit that automatically maintains a preselected temperature by regulating heater output in response to patient's temperature. A skin or rectal probe is used in conjunction with a PROBE switch set in the SKIN or RECTAL position to sense a patient's temperature and provide continuous monitoring. A digital switch on the Proportional Controller is used for preselecting the desired skin or rectal temperature while the actual patient temperature is displayed on a panel meter. Front panel displays also indicate a-c power ON and heater POWER LEVEL and indicate when the AUDIBLE ALARM is enabled. The audible and visible alarms indicate temperatures over 38.3°C and under 34.0°C. The Proportional Controller also has a capability for MANUAL control of patient temperature whenever it is needed.

Manual Controller, Model 4002

The Manual Controller (figure 3) is used to control the temperature of the radiant heater, but does not sense the patient's temperature. Temperature adjustment is made manually by a control on the front panel.

Pole

The pole is a stainless steel tube, two inches (5.1 cm) in diameter and 48-3/8 inches (122.9 cm) long. The pole is the only structural member between the Bassinet Assembly and the Hood and Controller Assembly. It supports the Hood, Controller, and Examination Lamp and allows them to be rotated to any desired position.

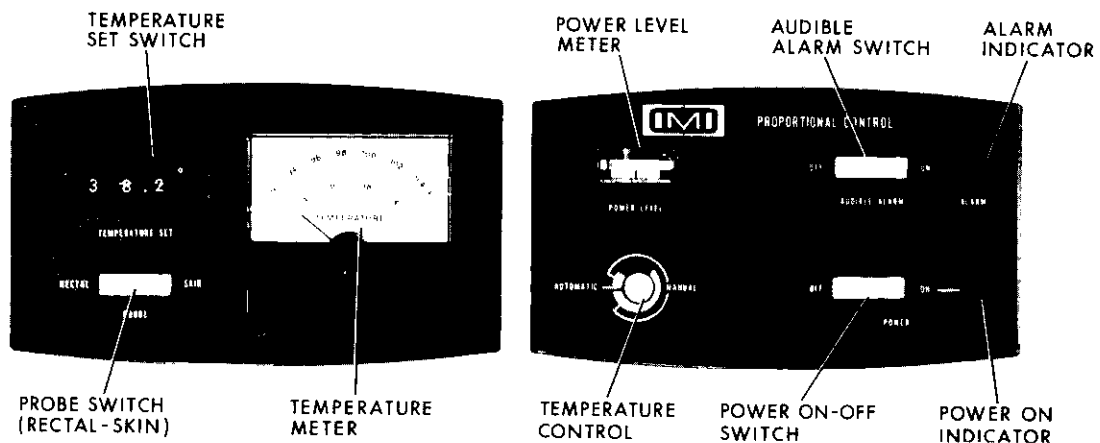


Figure 2. Proportional Controller, Model 4004

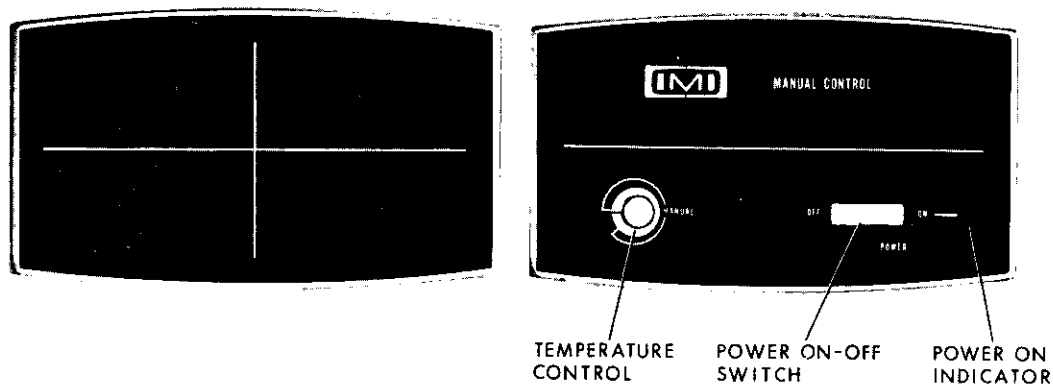


Figure 3. Manual Controller, Model 4002

Carriage Assembly

The Carriage Subassembly consists of a carriage base on locking, conductive casters and a support frame mounted on two carriage support poles. The top of the Carriage Assembly is the "procedure table" and is supported on a tubular frame so that it can tilt both ways for adjusting positions. The frame also encloses a storage bin which is underneath the procedure table and accessible for convenient storage of materials. The procedure table has slots for the panel hinges. When the panels are assembled to the procedure table they form a bassinet which has a conductive mattress for the patient.

Operation of the Infant Care Center consists of adjusting the mechanical parts of the unit for patient access, position, examination or procedures, and operation of the electrical controls on the Controller.

The whole unit may be moved within an eight or ten foot (244 cm to 305 cm) radius of its power source without unplugging by unlocking the conductive casters, and pushing gently.

Bassinet positions may be adjusted by squeezing the position handle and tilting the procedure table to any of the seven positions on the indexing block.

WARNING

Users of the Infant Care Center should make certain that the patient is protected while the table is being adjusted; and that they do not place their hands between the tubular frame and the procedure table while making adjustments. Always lock the side panels.

The bassinet side and end panels may be unlocked and lowered to permit greater access to the patient for medical procedures.

The Hood and Controller Assembly can be rotated around the pole to permit use of other equipment such as x-ray apparatus, or at the physician's discretion. To rotate the Hood and Controller Assembly, hold the spring-loaded plunger out and rotate the Hood to the position desired, then release the plunger.

All of the electrical controls and indicators are on the front panel of the Controller. The two Controller models available have different front panels and controls. The controls and indicators are described in Section 2.4.

WARNING

All surfaces of the Infant Care Center that are within five feet (152 cm) of the floor are conductive and have low resistance to the power cord grounding wire. This surface conductivity includes the bassinet mattress. This conductive state meets the antistatic requirements of NFPA Standard #56A (Inhalation Anesthetics). An infant is grounded at all times while in the bassinet or attached to a skin temperature probe. It is essential that any auxiliary apparatus attached to an infant be suitable for connection to a grounded patient.

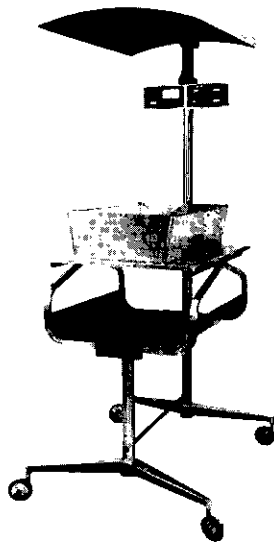
2.2 MODELS AND VARIATIONS OF THE INFANT CARE CENTER

The Infant Care Center is supplied in three major configurations (see figure 4).

- (1) Infant Care Center with Bassinet for infant care.
- (2) Free Standing Radiant Warmer for use over an infant crib, adult bed, or procedure table.
- (3) Wall-mounted radiant warmer.

Model Numbers

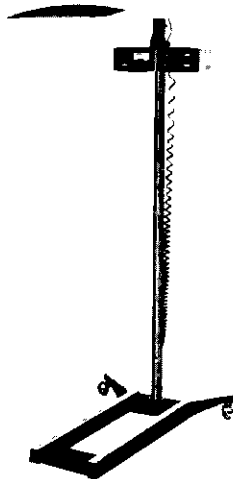
4000P – Infant Care Center with Proportional Controller
4001P – Free Standing Radiant Warmer with Proportional Controller
4009P – Wall Mounted Radiant Warmer with Proportional Controller



**MODEL 4000P Infant Care Center
with Proportional Controller**

**MODEL 4000M Infant Care Center
with Manual Controller**

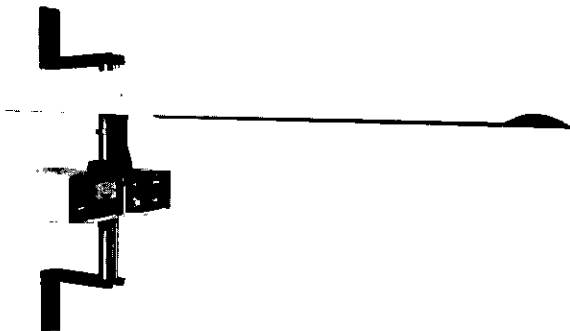
**Hood Model No. 4003
Proportional Controller Model No. 4004
Manual Controller Model No. 4002**



**MODEL 4001P Free Standing Radiant Warmer
with Proportional Controller**

**MODEL 4001M Free Standing Radiant Warmer
with Manual Controller**

**Hood Model No. 4003
Proportional Controller Model No. 4004
Manual Controller Model No. 4002**



**MODEL 4009P Wall Mounted Radiant Warmer
with Proportional Controller**

**MODEL 4009M Wall Mounted Radiant Warmer
with Manual Controller**

**Hood Model No. 4003
Proportional Controller Model No. 4004
Manual Controller Model No. 4002**

Figure 4. Infant Care Center Models and Variations

- 4000M – Infant Care Center with Manual Controller
- 4001M – Free Standing Radiant Warmer with Manual Controller
- 4009M – Wall Mounted Radiant Warmer with Manual Controller

NOTE

All models are available for 120V 50/60 Hz and 240V 50/60 Hz operation.

2.3 THE RADIANT WARMING PRINCIPLE

A heating unit embedded in a silicone rubber pad in the Hood Assembly warms the patient with invisible 10-micron wavelength energy. A curved “canopy” with approximately six square feet (.56 sq. m) of radiant surface directs the heat over and around the entire patient area. The heat penetrates the skin to provide subsurface as well as surface warmth. The long wavelength infrared radiant warmer heats uniformly and penetrates in depth so that with this heating principle hot-spots cannot occur. This principle is illustrated in figure 5.

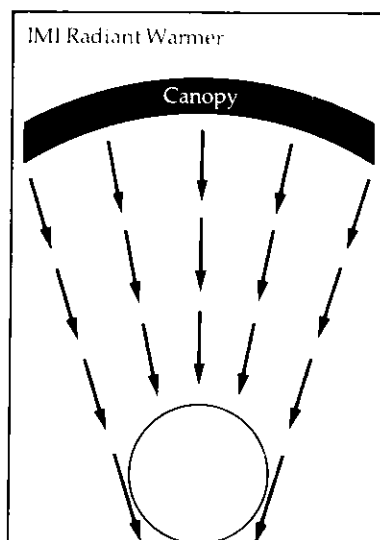


Figure 5. Radiant Warming Principle

When the Infant Care Center is equipped with a Proportional Controller, automatic temperature controls adjust the heat output to meet the patient's needs as sensed by the rectal or skin thermistors.

The desired patient temperature is dialed on the digital TEMPERATURE SET switch (see Section 2.4) and the Hood Assembly produces just enough energy to maintain the selected temperature. As the patient approaches the set temperature, the controller slowly lowers the energy output. If the patient's temperature drops below the setting, the controller immediately responds to maintain the selected temperature within $\pm 0.1^{\circ}\text{C}$ under normal operating conditions.

If Manual Controllers are used, the energy output must be adjusted manually as the patient's temperature needs are determined.

2.4 CONTROLS AND INDICATORS

The front panel controls and indicators are shown in figures 2 and 3. The rear panel components are shown in figure 6.

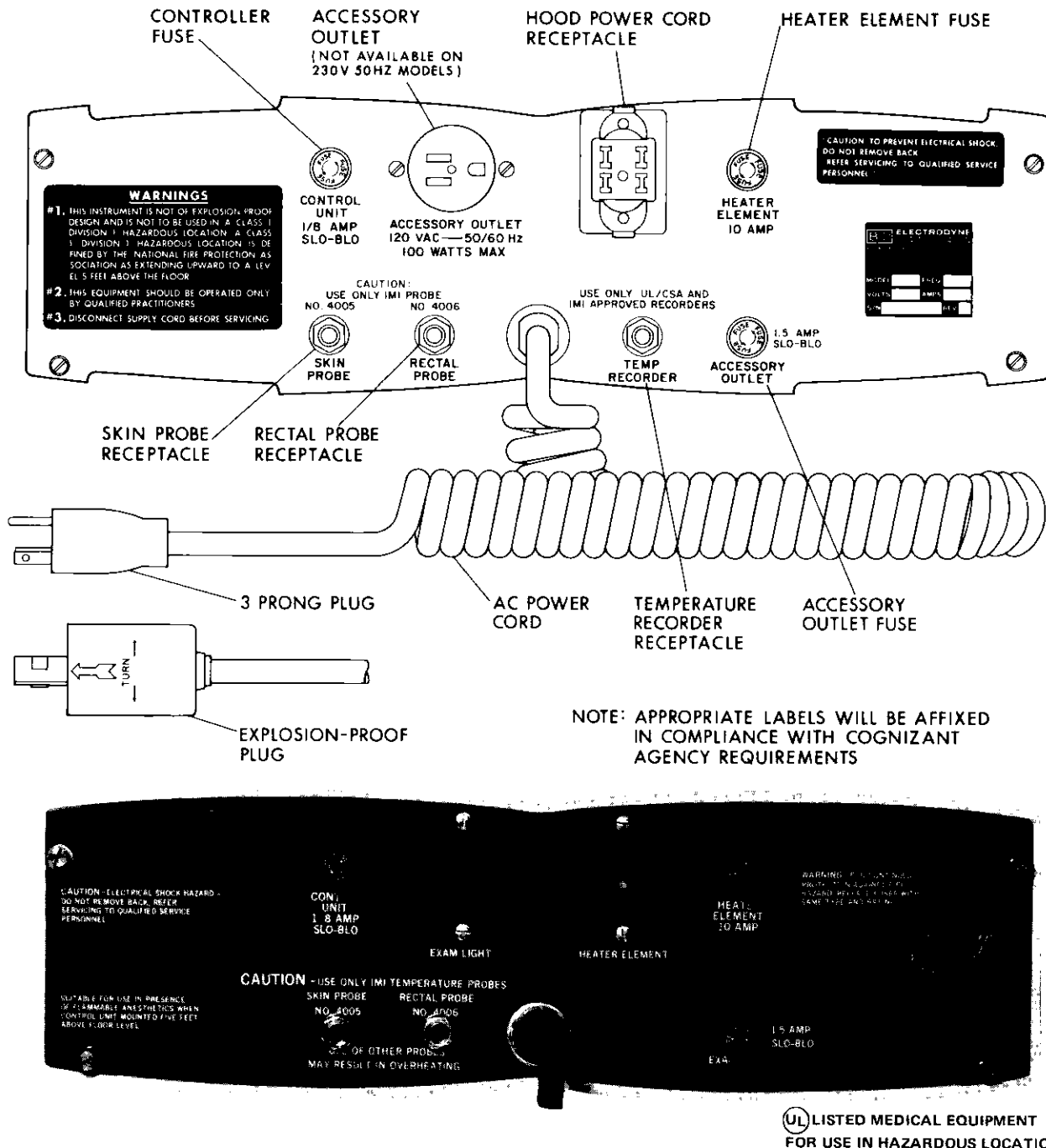


Figure 6. Rear Panel Connectors and Fuses

TEMPERATURE SET Switch (Proportional Controller Only)

This device is a digital switch that is used to select the desired patient temperature when the Proportional Controller is operated in the AUTOMATIC mode. This switch is used to regulate the patient's temperature to within $\pm 0.1^{\circ}\text{C}$ of the preselected value.

POWER LEVEL Meter (Proportional Controller Only)

This meter displays the percentage of full power output of the heating element.

TEMPERATURE Meter (Proportional Controller Only)

The meter indicates patient temperature on a dual scale which correlates the temperature in degrees Centigrade and degrees Fahrenheit.

PROBE Switch (RECTAL-SKIN) (Proportional Controller)

This is a rocker switch used to switch from the skin probe or rectal probe input connectors depending on which Thermistor Assembly is used. Positions are SKIN and RECTAL.

Temperature Control

On the Proportional Controller, the Temperature Control allows the selection of AUTOMATIC or MANUAL modes of operation. In the AUTOMATIC mode it automatically responds to the patient's temperature and controls the patient's temperature by a proportional change in the power output level. In the MANUAL mode the control can be manually adjusted to increase or decrease the power output level at the discretion of the attending physician or nurse.

On the Manual Controller, the Temperature Control does not have an automatic position and can be used only as a manual control.

AUDIBLE ALARM Switch (Proportional Controller)

This switch is a rocker type with ON and OFF positions. In the ON position, this switch activates the AUDIBLE ALARM so that it will sound during alarm conditions. In the OFF position, the AUDIBLE ALARM will not sound.

ALARM Indicator Light (Proportional Controller)

This lamp is red and glows whenever an ALARM condition exists; i.e., when the temperature measured by the skin or rectal probe exceeds the low temperature limit of 34.0°C (93.2°F) and the high temperature limit of 38.3°C (100.9°F).

POWER Switch

This switch is a rocker type with ON and OFF positions used to turn the power to the Controller ON and OFF.

Pilot Light

This lamp is a red indicator light located to the right of the POWER switch that glows when the POWER switch is ON.

The following items are located on the rear panel of the Controller (see figure 6).

Controller Fuse

This fuse is a one-eighth ampere, 120V, (1/16 ampere, 240V) slo-blo type which protects the electronic circuits of the Controller. The fuse is in a twist-open fuse holder.

EXAMINATION LAMP OUTPUT

This outlet is a special receptacle for connection of an examination lamp. It is limited to 100 watts of power. The exam lamp fuse is 1.5A for 120V and 240V.

Hood Power Cord Receptacle

Receptacle for Hood power cord.

Heater Element Fuse

Protects the heating element and thermostat in the Hood Assembly. This fuse is rated at 10 amperes 120V (5 amperes for 240V) and is located in a twist-open fuse holder.

Skin Probe Receptacle

This connector is for the skin probe. It should be used only for Model IMI-4005 Thermistor Assembly (Skin Probe).

Rectal Probe Receptacle

This connector is for the rectal probe. It should be used only for Model IMI-4006 Thermistor Assembly (Rectal Probe).

A-C Power Cord

The a-c power cord is a retractile coil cord with three AWG No. 16 stranded conductors, UL Type SO rates for 10 amperes. The cord is two feet long when retracted, but will extend to 12 feet.

2.5 ACCESSORIES

Thermistor Assemblies

The thermistor assemblies are used as temperature sensors in the Proportional Controller. A skin probe is supplied with the Controller in an Infant Care Center (figure 7). A rectal probe (figure 8) is available as an optional extra.

A list of optional assemblies and equipment that can be supplied with the Infant Care Center appears in Table 2.

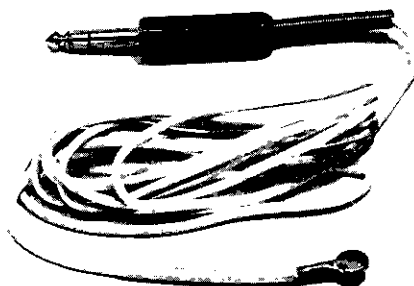


Figure 7. Thermistor Assembly,
Skin Probe Model 4005

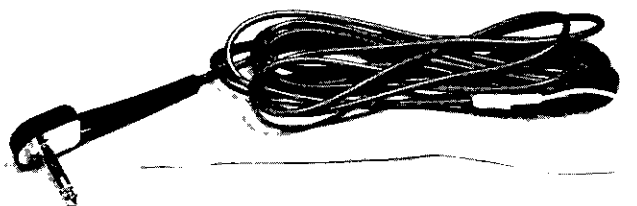


Figure 8. Thermistor Assembly,
Rectal Probe Model 4006

WARNING

Model 4005 skin probe and Model 4006 rectal probe are the only probes that are to be used with the IMI Infant Care Center. DO NOT USE ANY OTHER PROBES.

TABLE 2. OPTIONAL ACCESSORIES FOR USE WITH THE INFANT CARE CENTER

NAME	PART NO.	DESCRIPTION
Thermistor Assembly (2 models available):		Used as temperature sensors. These probes are used with the 4004 Controller.
Thermistor Assembly, Skin Probe	4005	Skin probe to monitor patient's surface temperature.
Thermistor Assembly, Rectal Probe	4006	Rectal probe to monitor patient's core temperature.
Complete Resuscitation Pkg.	2600	Included in this package are items 2601, 2602, 2604, 2605, 2606, and 2607.
Low Pressure Manifold Assembly	2601	Outlets for flowmeter and humidifier, resuscitator, aspirator and quick connect to oxygen source.
Horizontal High Pressure Oxygen System	2602	Mounting for two "D" or "E" oxygen cylinders, pressure regulator and gauge and oxygen line.
Vertical High Pressure Oxygen System	2603	Same as above.
Handy OB Resuscitator	2604	Positive/Negative resuscitator, resuscitator control, infant face mask, and balloon assembly.
Pressure Power Aspirator	2605	Vacuum control valve, venturi, muffler aspirator bottle, fifteen-inch 10F catheters, 30-inch catheter tubing, vacuum connection line.
Humidifier Assembly	2606	Humidifier bottle and lead.
Flow Meter	2607	Monitors Oxygen flow.
Aspirator Bottle	01-6100	Used with Resuscitator Package.
Aspirator Bottle Cap	01-6608	Used with Resuscitator Package.
Infant Mask	01-5998	Used with Resuscitator Package.
Infant Mask Cushion	01-5123	Used with Resuscitator Package.

TABLE 2. OPTIONAL ACCESSORIES FOR USE WITH THE INFANT CARE CENTER (Cont)

NAME	PART NO.	DESCRIPTION
Examination Lamp	4008	An aid in allowing visual access to the patient.
Replacement Bulb	01-6791	Replacement bulb for the 4008 Examination Light.
Foam Pads	120	Miniature foam pads. USE: Covers and holds
Foam Pads	220	Large foam pads. thermistor on skin.
Wall Mount for the Hood and Controller Assembly	231B	Bracket used to mount the Infant Care Center to wall.
Allen Wrench	01-5445	3-32" Allen Wrench (Hexagonal key wrench).

SECTION III

PRINCIPLES OF OPERATION

3.1 GENERAL

All of the electronic circuitry in an Infant Care Center is contained in the Controller. The function of the Controller is the control of the heating element in the hood which radiates the heat to the infant patient. Control can be automatic in response to temperature variations in the patient as sensed by a skin probe or rectal probe, or can be manual. For automatic control, a Model 4004 Proportional Controller is used. For manual control a Model 4002 Manual Controller is used. This section describes the functional operation of each model Controller.

Proportional Controller, Model 4004 (Dwg. D04300412 and D04300413)

A block diagram of the Proportional Controller is shown in figure 9. The diagram shown is for a 120-volt circuit. A proportional controller for 240 volt use differs from the diagram shown only in the power transformer and it has a step-down transformer for the examination light outlet. A simplified block diagram of the 240-volt circuit is shown in figure 10.

Power is supplied to the heating element through power outlet J9. The level of the heat-controlling power is varied in response to sensor variations by the heater element power control circuit A3.

The patient probe circuit, which senses the infant's temperature is energized by a current source consisting of transistor Q1, CR1, and CR2. This circuit limits the maximum current flow in the patient probe circuit to 25 microamperes. The patient probe circuit is a resistive bridge network with a thermistor (patient probe) used as one of its sides. Changes in temperature at the probe cause it to change resistance, unbalancing the bridge circuit. The output of the probe (rectal or skin) appears as a differential d-c voltage at the inputs to the sensor amplifier Z1. When the sensed temperature of the patient rises, the resistance of the patient probe (thermistor) decreases, causing an imbalance of the temperature bridge. At this time the -input of the IC amplifier, type LM308 is driven more positive, causing the output of the amplifier to rise in voltage. This produces a change in the reading of the temperature meter M2 that is directly related to the sensed temperature change of the patient. The output of Z1, the high input impedance high gain sensor amplifier, provides a varying d-c voltage that is proportional to changes in temperature as sensed by the patient probe being used.

The High and Low Alarm Sense circuits sense the high-low temperature limits of the patient. Transistor Q4, the low alarm circuit is forward biased at a point lower than the low limit back bias applied to it by the output of amplifier Z1. Q4 is held in the off condition until the voltage at the output of Z1 drops below the forward bias voltage at the emitter of Q4. When the Z1 output voltage (back bias) falls below the forward bias of low alarm transistor Q4, the transistor Q4 turns on, disabling the flasher gate transistor Q9, indicating the presence of an abnormally low temperature.

The high alarm circuit Q5 is normally reverse biased by the high alarm adjust pot R17. Q5 is held in the off condition until the Z1 output voltage drops below the bias voltage present at the Q5 emitter. This turns high alarm limit transistor Q5 on, disabling flasher gate transistor Q9 and indicating the presence of an abnormally high temperature.

The alarm gate circuit consists of a 3.3 Hz free-running multivibrator (Q7 and Q8) and a gating transistor Q9. The gating transistor, in an on condition throughout the normal temperature range, holds the

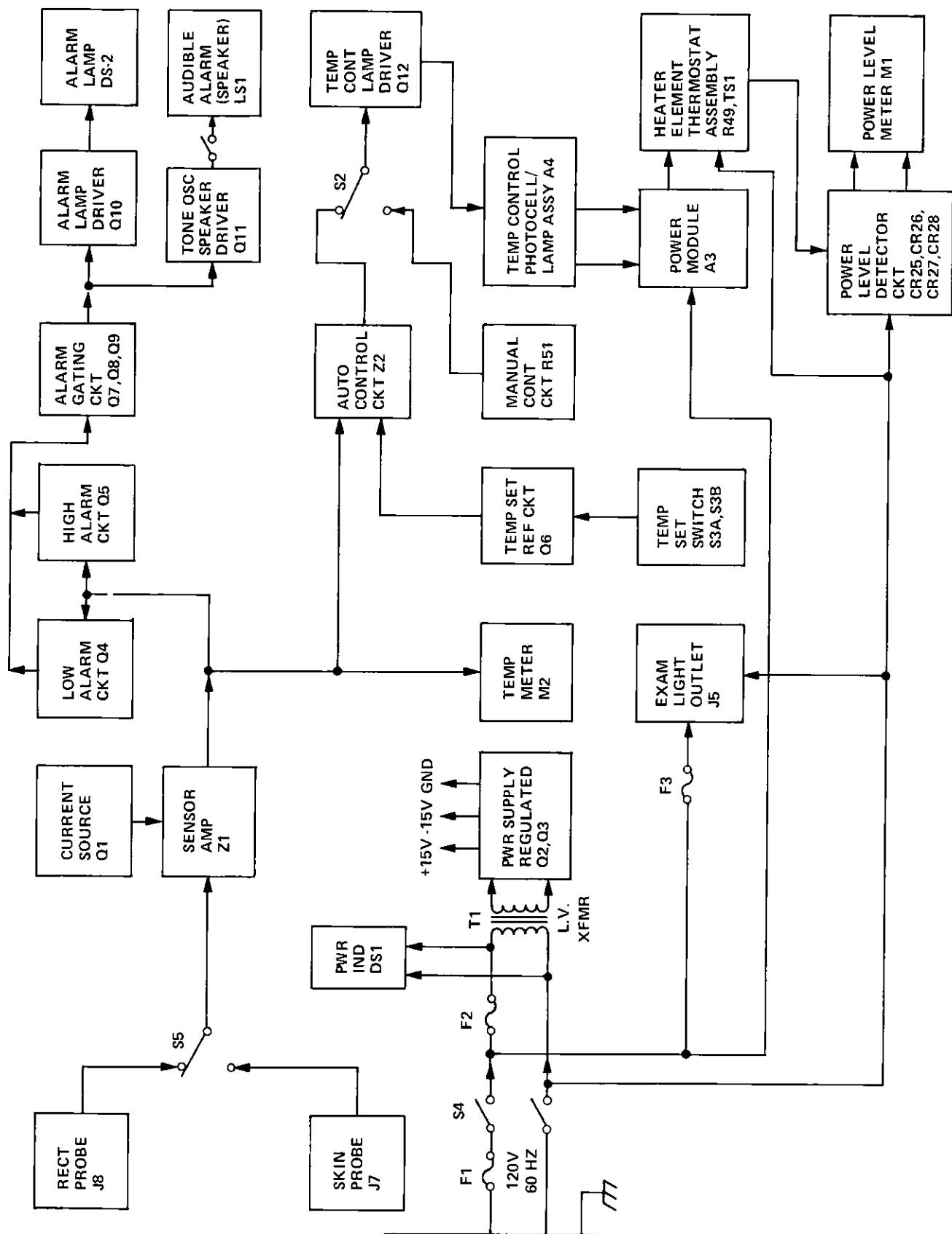


Figure 9. 120V Proportional Controller, Model 4004

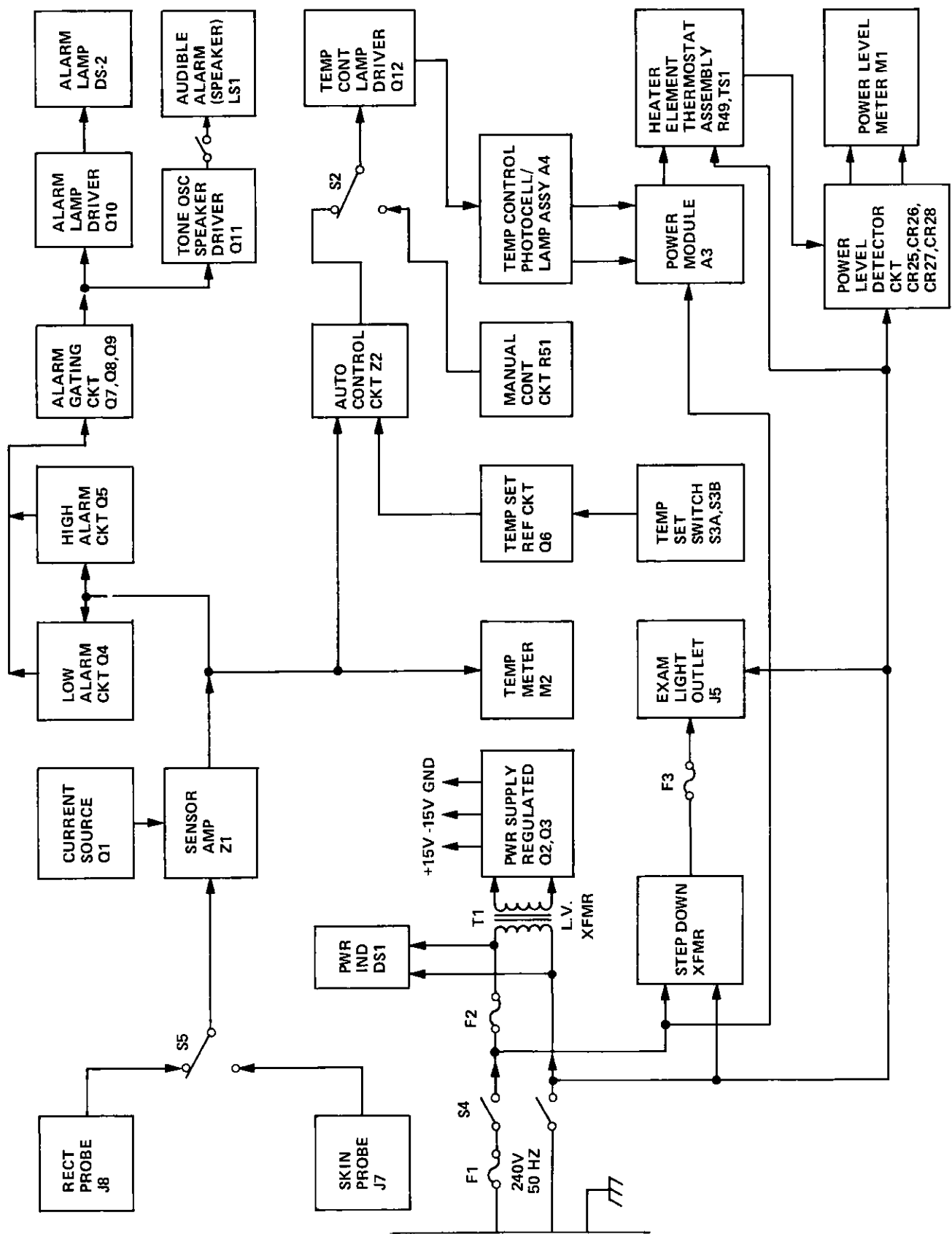


Figure 10. 240V Proportional Controller, Model 4004

multivibrator off, inhibiting its activity until the low alarm Q4 or the high alarm Q5 become active. The multivibrator, when free running, also acts as a gate activating the alarm lamp driver and tone oscillator speaker driver circuits at a 3.3 Hz pulsating rate, giving audible and visible indications that an abnormal temperature is being sensed by the patient probe. The alarm lamp driver circuit is transistor Q10 and the visible alarm is DS-2. The tone oscillator and speaker driver is Q11 and the audible alarm is the speaker, LS1. The audible alarm gives a 100 Hz tone at a 3.3 Hz rate when an alarm condition is present.

The output of Z1 is clamped by zener diode CR11 so that it will not rise above the zener reference voltage of 6.8 Vdc.

The automatic control circuit Z2 operates on fixed voltages from the collector of the temperature set reference transistor Q6. The fixed voltages are reference voltages provided at the Z2 input when input resistances are selected by the TEMPERATURE set switch. The automatic control circuit Z2 provides a controlling output voltage that is a function of the comparison of the reference voltage at its +input (positive) and the temperature sense voltage at its -input (negative).

The Manual control circuit is a potentiometer R51 that provides a manual control of the temperature setting of the heater element. The MAN/AUTO select switch (part of the MANUAL control potentiometer) provides selection of either manual or automatic control of the heater element.

The temperature control lamp driver Q12, controlled by either the manual or automatic control circuits, is an emitter follower that supplies the control voltage to the lamp in the photocell/lamp assembly.

The temperature control assembly is an optical isolator consisting of a lamp and a photocell. The lamp intensity determines the resistance of the photocell which, in turn, determines the amount of control voltage set on the power module.

Heater element power control circuit A3 provides controllable power to the heater element.

The Power level detector is a diode bridge rectifier circuit that displays on meter M1 (POWER LEVEL) the percent of power supplied to the heater element.

The heater element/thermostat assembly is an 800 watt maximum heater with a thermostat set at 300 degrees Fahrenheit.

The power supply Q2 and Q3 provides regulated +12 and -12 volts and an unregulated +20 volt outputs for the logic circuits.

Manual Controller, Model 4002 (Dwg. C04300424)

Simplified block diagrams of the 120 and 240 volt manual controllers are shown in figures 11 and 12. As in the proportional controller, the only differences are in the power transformer and the addition of a step-down transformer in the 240 volt model.

In the manual controller there are no sensing and alarm circuits and the heat control is simplified in that it is directly controlled by the MANUAL control potentiometer R51 and power module A3. The heating element and thermostat in the hood are the same as with the proportional controller. Adjustment of the temperature is made by a nurse who must constantly check the patient's temperature with a thermometer and increase or decrease the hood temperature as she deems necessary.

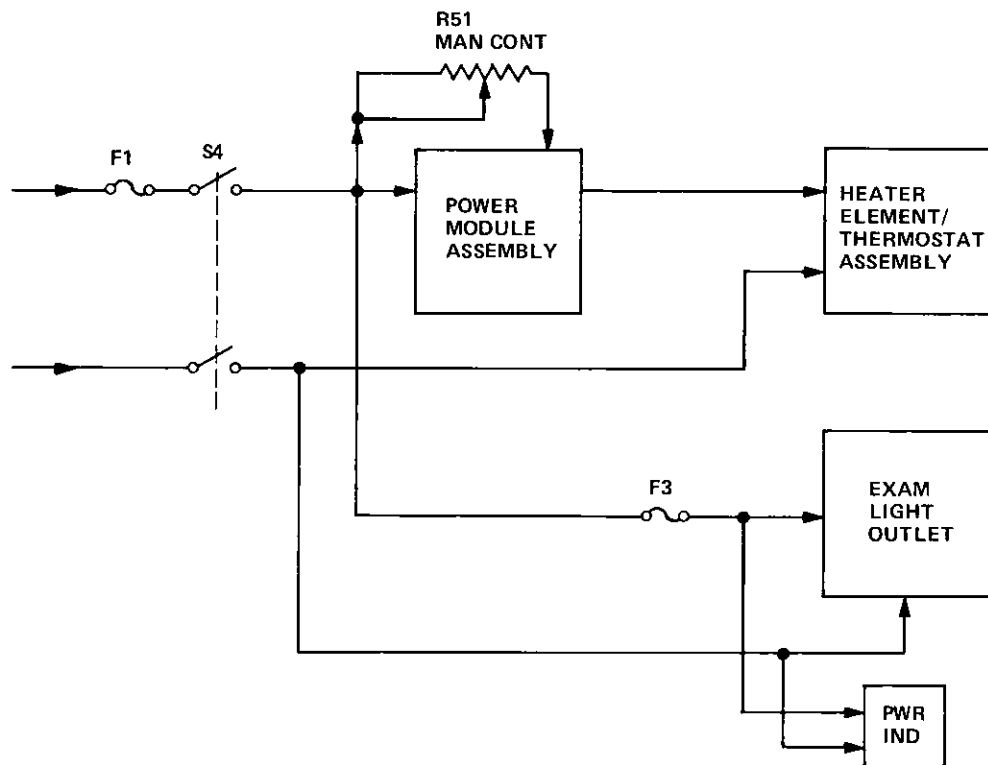


Figure 11. 120V Manual Controller, Model 4002, Simplified Block Diagram

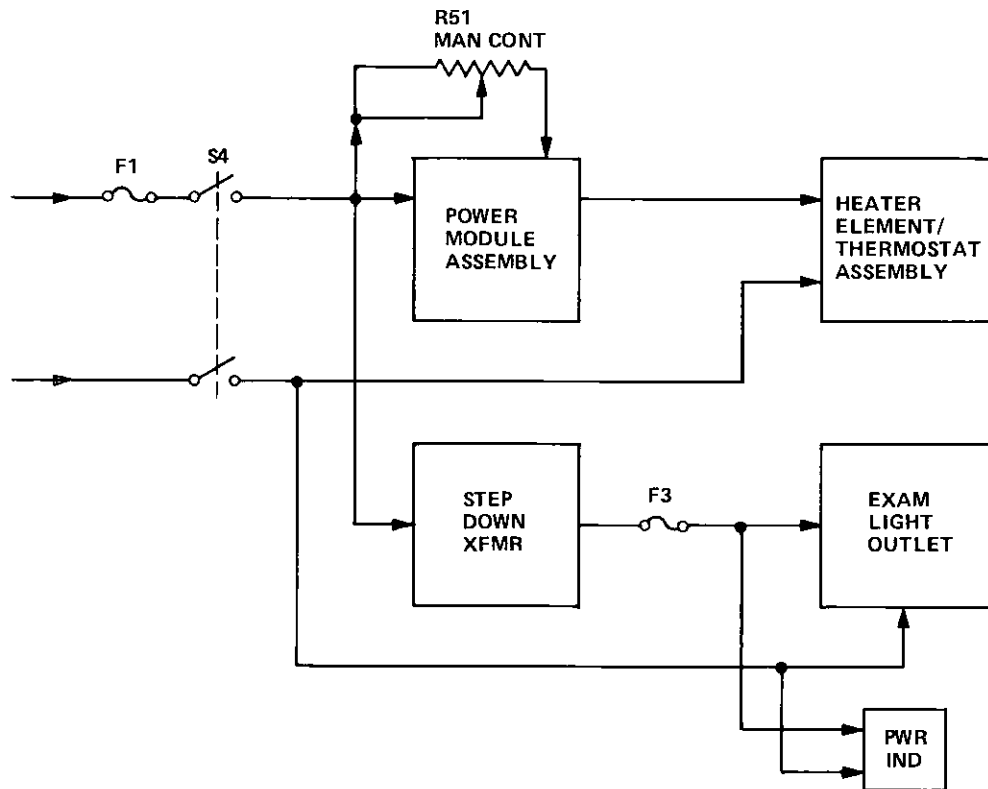


Figure 12. 240V Manual Controller, Model 4002, Simplified Block Diagram

SECTION IV SPECIFICATIONS

4.1 QUALITY STANDARDS COMPLIANCE

The IMI-4000 Series Infant Care Centers meet the high quality standards of B-D ELECTRODYNE and comply with existing and proposed agency standards for electromedical equipment. The standards consulted in the design of these instruments are those of the National Fire Protection Association (NFPA), the Underwriters' Laboratories (UL), the Canadian Standards Association (CSA), the International Electrotechnical Commission (IEC), and the Association for the Advancement of Medical Instrument (AAMI). This instrument will provide safe and efficient service when the instructions for its use are carefully followed.

The specific criteria applicable to these instruments are classified into categories of their electrical characteristics, performance characteristics, safety characteristics, environmental characteristics, and physical characteristics. The detailed specifications to meet the required characteristics are set forth in this section as the B-D ELECTRODYNE standard. These standards shall be maintained whenever service and maintenance functions are performed, for the useful life of these instruments.

The Calibration and Repair sections of this manual contain information for maintaining these instruments to the standards set forth, and these procedures shall be followed by B-D ELECTRODYNE personnel. B-D ELECTRODYNE assumes no responsibility for deterioration of performance below these standards when service is performed by unauthorized or unqualified personnel not properly trained in the maintenance of these instruments.

4.2 ELECTRICAL CHARACTERISTICS

Controller Ranges:

Temperature Set: 35.0°C to 38.9°C in 0.1° increments. Accuracy 0.1°C.

Temperature Meter: 33.3°C to 40.6°C. Accuracy 2%.

Alarm Limits: 34.0°C and 38.3°C. Accuracy 1/2°C.

Power Level: 0 to 100% equivalent to temperatures of ambient to 270°F (average value over surface of pad).

Power Requirements: 105-135 Vac, 50/60 Hz, 210-270 Vac, 50/60 Hz.

Power Dissipation: 800 watts, maximum.

4.3 SAFETY CHARACTERISTICS

Temperature Probe: All exterior conductive surfaces grounded. Electrical circuits isolated from ground to withstand 500 volts. (Power line tested to withstand 1500 volts.)

Power Cord Grounding Wire Leakage Current: 50 microamperes, maximum.

Overheating Protection: Safety thermostat which turns off power when heating element temperature reaches 300°F ± 7°F.

Mechanical Stability: Anti-tip construction meets requirements of NFPA Standard #56A (Inhalation Anesthetics).

Use in Hazardous Location: All electronics except temperature probes, above five-foot level. Complies with NFPA Standard #56A (Inhalation Anesthetics).

4.4 ENVIRONMENTAL CHARACTERISTICS

Operating Temperature: 0 to 50°C (32°F to 122°F).

Storage Temperature: -25°C to 85°C (-13°F to 185°F).

Relative Humidity: 0 to 95%.

4.5 PHYSICAL CHARACTERISTICS

Controller Dimensions: 40.28 cm x 12.07 cm x 16.24 cm (16-1/4" x 4-3/4" x 6").

Hood Assembly Dimensions: 92.08 cm x 56.69 cm x 10.48 cm (36-1/4" x 23-1/2" x 4-1/8").

Carriage Assembly (with pole): 100.97 cm x 78.74 cm x 192.72 cm (39-3/4" x 31" x 75-7/8").

Shipping Weight:

Proportional Controller: 8.60 kg (18.0 lbs).

Manual Controller: 5.90 kg (13.0 lbs).

Hood Assembly: 9.07 kg (20.0 lbs).

Carriage Assembly: 54.43 kg (120.0 lbs).

6-Ft. Pole: 4.54 kg (10.0 lbs).

SECTION V

CALIBRATION

5.1 CALIBRATION CHECKS AND MEASUREMENTS

This section contains procedures for calibrating the IMI-4000 Series Infant Care Centers whenever faulty operation is suspected or service and repair has been performed. The procedures can also be used to verify the initial factory calibration of the instrument whenever it is deemed advisable while performing regular maintenance or servicing. Performance of these procedures and any repair service as a result of the calibration checks will insure that the modules meet the specifications as stated in Section IV.

WARNING

Do not, under any circumstances, perform any testing or maintenance on medical instruments, cables, or electrodes while they are connected to a patient.

5.2 TEST EQUIPMENT REQUIRED

Table 3 is a list of test equipment required for making calibration checks and measurements and for verifying that the instruments meet the specified standards.

TABLE 3. TEST EQUIPMENT

ITEM	MODEL NO.	DESCRIPTION
Multimeter	268	Simpson Volt Ohmmeter (or equivalent).
Oscilloscope	503	Tektronix dc to 450 Hz differential input. Sensitivity 1 mV/cm - 20V/cm. Sweep 1 μ s/cm - 5 s/cm.
Volt Ohmmeter	601	Triplett FET V-O-M with low power ohms.
Temperature Calibration Box	IMI 4030 See figure 13	Resistance decade box that simulates temperatures by electrical equivalence.

5.3 OPERATIONAL CHECK

Before using the Infant Care Center, make the following operational checks to make certain that it is in good operating condition.

- (1) Check the caster locks to make certain that each caster can be locked and unlocked.
- (2) Make certain that the procedure table can be adjusted to any of the seven available positions.
- (3) Make certain that the panel catches are secure, the tab hinges are properly engaged, and that the panels can be lowered or raised as desired.

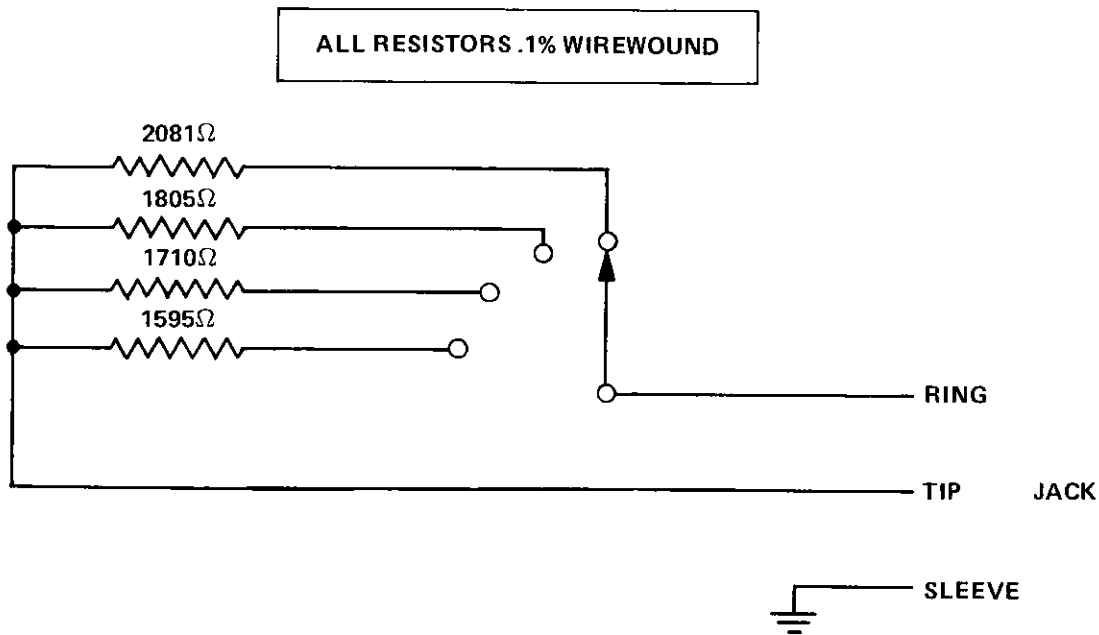


Figure 13. IMI 4030

- (4) Pull the hood position plunger and make certain that the Hood and Controller Assembly can be rotated to any desired position and locked in place.
- (5) Make sure that the a-c power cord is plugged in to an approved 3-wire grounded receptacle.
- (6) Check to make sure that the Hood Assembly cable is plugged into the square receptacle on the rear panel of the Controller.
- (7) Turn the **POWER** switch to ON. The red pilot light should glow and the **ALARM** indicator should glow.
- (8) Set the **AUDIBLE ALARM** switch to ON. The alarm should sound.

NOTE

The **AUDIBLE ALARM** will sound and the **ALARM** indicator will glow because there is no thermistor connected. When a thermistor is in the circuit, the alarm should not sound and the **ALARM** indicator should not glow unless the temperature limits are exceeded.

The following step applies to the Manual Controller:

- (9) Turn the **MANUAL** Temperature Control knob clockwise at least a half turn so that heat can be felt radiating from the Hood Assembly heating element.

- (10) Plug a skin or rectal probe into the appropriate connector on the rear panel and set the PROBE switch to the SKIN or RECTAL position, whichever is appropriate. Briefly hold the sensor end of the thermistor against the heating element and observe the temperature meter. The meter pointer should rise as the heat increases indicating that the meter and thermistor are operational.

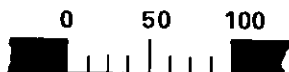
Step 11 applies to the Proportional Controller only.

- (11) Set the digital TEMPERATURE SET dial to a typical temperature setting, for example 37.0°C. Set the Temperature Control to AUTOMATIC. Briefly hold the sensor end of the thermistor against the heating element and observe the TEMPERATURE METER. The pointer should rise. At the same time observe the POWER LEVEL meter. The POWER LEVEL meter should indicate a high reading until the temperature rises to the preset level of 37.0°C. When the TEMPERATURE meter indicates 37.0°C the POWER LEVEL meter should change to a lower reading and move toward zero as the temperature of 37.0°C is exceeded.

5.4 ELECTRICAL CHECKS (See Electrical Characteristics in Section IV.)

Power Meter Calibration

- (1) Adjust the temperature meter mechanical zero to 92°F $\pm$ 1°F (33.3°C $\pm$.55°C).
- (2) Adjust power level meter mechanical zero as shown. Looking straight at the power level meter, the needle rests just so that the edge of the black area can be seen. Refer to the right side for 100% setting.



Temperature Calibration

(Circuits Where Z1 is an LM3124H I.C.) (Schematic Dwg. No. 04300114 & 04300115)

- (1) Place cliplead across R2 (2K temperature null pot). Insert the IMI 4030 Temperature Calibration Box plug into the skin probe receptacle, making sure that the front panel Probe Switch (S5 left front panel) is in the skin probe position and that the Alarm Set/Cal switch of the IMI 4030 is in the Cal (out) position.
- (2) Set the IMI 4030 Calibrate switch to the 33.5 position. Coarse adjust R74 for 33.5°C on the front panel temperature meter.
- (3) Remove the cliplead that is across R2. Fine adjust R2 for a reading of 33.5°C on the front panel temperature meter. Further adjustments of the low setting (33.5°C) are to be made with R2 only, R74 should not be readjusted after the initial coarse setting.
- (4) Set the IMI 4030 Calibrate switch to the 40.0 position. Adjust R13 for a reading of 40.0°C on the front panel Temperature Meter.
- (5) Set the IMI 4030 Calibrate switch to the 37.0 position. The front panel Temperature Meter should read 37.0°C. If the reading is lower than 37.0°C readjust R2 for 37.0°C. If the reading is higher than 37.0°C readjust R13 for 37.0°C.

(Circuits Where Z1 is an LM308H or LM741C I.C.) (Schematic Dwg. No. 04300413, 04300412, 04200119, 2300-200-00)

- (1) Insert the IMI 4030 Temperature Calibration Box plug into the Skin Probe receptacle, making sure that the front panel Probe switch (S5 left front panel) is in the skin probe position, and that the Alarm Set/Cal switch of the IMI 4030 is in the Cal (out) position.
- (2) Turn the calibrate switch on the IMI 4030 to the 33.5 position. Adjust R2 (10K Temperature Null Pot.) for a reading of 33.5°C on the front panel Temperature Meter.
- (3) Set the IMI 4030 calibrate switch to the 40.0 position adjust R13 for a reading of 40.0°C on the front panel Temperature Meter.
- (4) Set the IMI 4030 Calibrate Switch to the 37.0 position, the front panel temperature meter should read 37.0°C. If the reading is less than 37.0°C readjust R2 for 37.0°C. If the reading is greater than 37.0°C readjust R13 for 37.0°C.

High Alarm Calibration

- (1) Insert the IMI 4030 Temperature Calibration Box plug into the Rectal receptacle, making sure that the front panel Probe switch (S5 left front panel) is in the Rectal position. Put the IMI 4030 Alarm Set/Cal switch into the Alarm Set (in) position and adjust the Alarm Set/Cal Pot for a reading of 38.2°C on the front panel Temperature Meter.
- (2) Set the Auto/Man switch to Auto (fully CCW to detent position. Check front panel Power Level Meter for minimum power output (less than 10%).
- (3) Adjust R17 so the alarms (Audio & Visual) just come on.
- (4) Adjust the IMI 4030 Alarm Set/Cal potentiometer to a reading of 38.1°C on the front panel Temperature Meter (the alarms should be off).
- (5) Set the IMI 4030 Alarm Set/Cal switch to the Cal (IN) position. Turn the Calibrate switch to the 38.3 position. (Alarms should be on.)
- (6) Set the Alarm Set/Cal switch to the Alarm Set (IN) position. Adjust the Alarm Set Pot for a reading of approximately 37.0°C. Slowly turn the potentiometer upscale. The Alarms should come on at 38.2°C $\pm$.1°C and remain on as upscale reading is increased.

Low Alarm Check

- (1) Insert the IMI 4030 Temperature Calibration Box plug into the Rectal receptacle, making sure that the front panel Probe switch (S5 left front panel) is in the Rectal position.
- (2) Set the IMI 4030 Alarm Set/Cal switch to the Alarm Set (IN) position. Adjust the Alarm Set/Cal potentiometer for a reading of approximately 37.0°C. Slowly turn the Alarm Set potentiometer downscale, at 34.0°C $\pm$.1°C the Low Alarms should come on and remain on for readings below 34.0°C. There is no adjustment for the low Alarm setting.

Manual Power Calibration

- (1) Rotate the Auto/Man potentiometer fully clockwise (maximum power out of hood).
- (2) Adjust R38 (small PC board on chassis) for a 100% reading on front panel power meter.

Automatic Power Calibration

- (1) Insert the IMI 4030 Temperature Calibration Box plug in either the Rectal or Skin Probe receptacle making sure that the front panel probe switch (S5) is in the
- (2) Set the IMI 4030 Alarm Set/Cal switch to the Cal (OUT) position. Set the IMI 4030 Calibrate switch to the 37.0 position to obtain a 37.0°C reading on the front panel Temperature Meter.
- (3) Set the front panel Temperature Set switch to 37.1°C.
- (4) Set the Auto/Man Switch to Auto (fully CCW into detent) and adjust R19 for a reading of 90% on the front panel Power Level Meter.
- (5) Set the front panel Temperature Set switch to 37.0°C. The front panel Power Level Meter should now read about 10%.
- (6) Set the IMI 4030 Alarm Set/Cal switch to the Alarm Set (IN) position and adjust the Alarm Set/Cal potentiometer for a front panel Temperature Meter reading of 34.0°C. Set the front panel Temperature Set switch to 35.0°C the front panel Power Level Meter should now read 90%. Turn the Alarm Set/Cal potentiometer towards 35°C. The front panel power meter should start decreasing at 34.9°C $\pm$.1°C and at 35.0°C $\pm$.1°C the front panel power meter should read about 10%.
- (7) Set the front panel Temperature Set switch to 36.0°C. Adjust the IMI 4030 Alarm Set/Cal potentiometer towards 36.0°C. The front panel power level meter should again go from 90% to about 10%.
- (8) Repeat Step (7) for 37.0°C, 37.1°C, 37.2°C, 37.3°C, 37.4°C, 37.5°C, 37.6°C, 37.7°C, 37.8°C, 37.9°C, and 38.0°C. Observe as the temperature meter approaches the temperature set reading the front panel Power Level Meter starts dropping. This determines the linearity of the circuit and that the wiring of D161 Switch (Temperature Set Control) is correct. The end points are not specified except when temperature set = 37°C and the temperature meter = 37°C, the minimum power level reading is about 10%. The reading at 35.0°C and 38.0°C should be $\pm$.2°C.

SECTION VI

INSTALLATION

6.1 GENERAL REQUIREMENTS

Installation of an Infant Care Center is a process of removing the assemblies and parts from the shipping cartons and assembling them together. Assembly instructions are shipped with each Infant Care Center. The Infant Care Center can be assembled in one area and then moved to the nursery or other place of use. All electronics in the Infant Care Center are above the five-foot level except the sensor probe and meet the requirements of NFPA Standard 56A (Inhalation Anesthetics). It can be used in an anesthetizing location.

See Assembly Instructions, Infant Care Center, 4000 Series for assembly of the Infant Care Center and Examination Lamp.

SECTION VII

REPAIR AND REPLACEMENT OF PARTS

7.1 DISASSEMBLY FOR REPAIR

The Infant Care Center can be disassembled by referring to the Assembly Instructions and reversing the procedures.

To disassemble the Controller, remove it from the Infant Care Center and, with the power cord disconnected, remove the rear panel by taking out the four screws; then remove the knobs and front panel components and slide the chassis out of the case.

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8.5 2300 TO 4000 SERIES HOOD

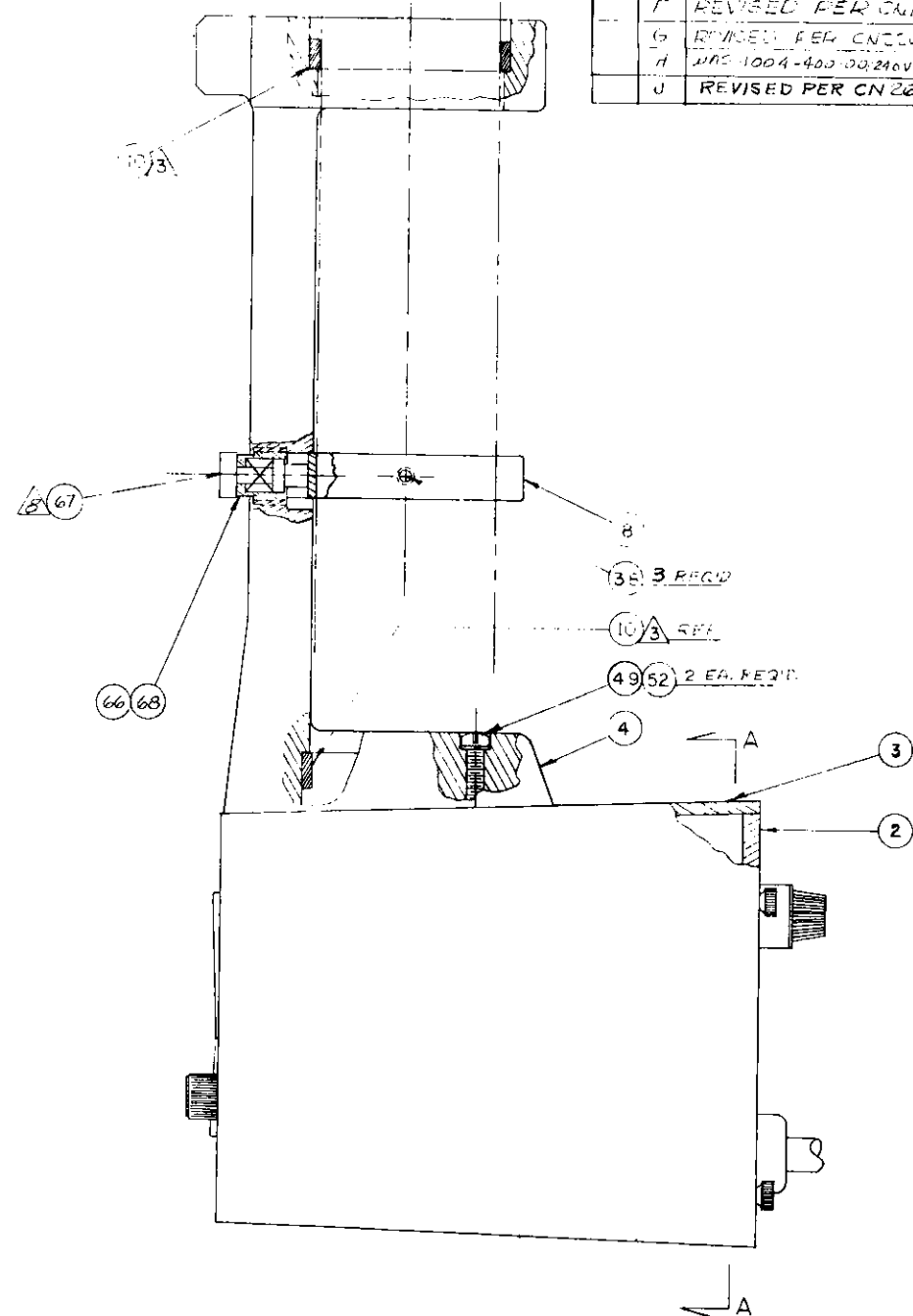
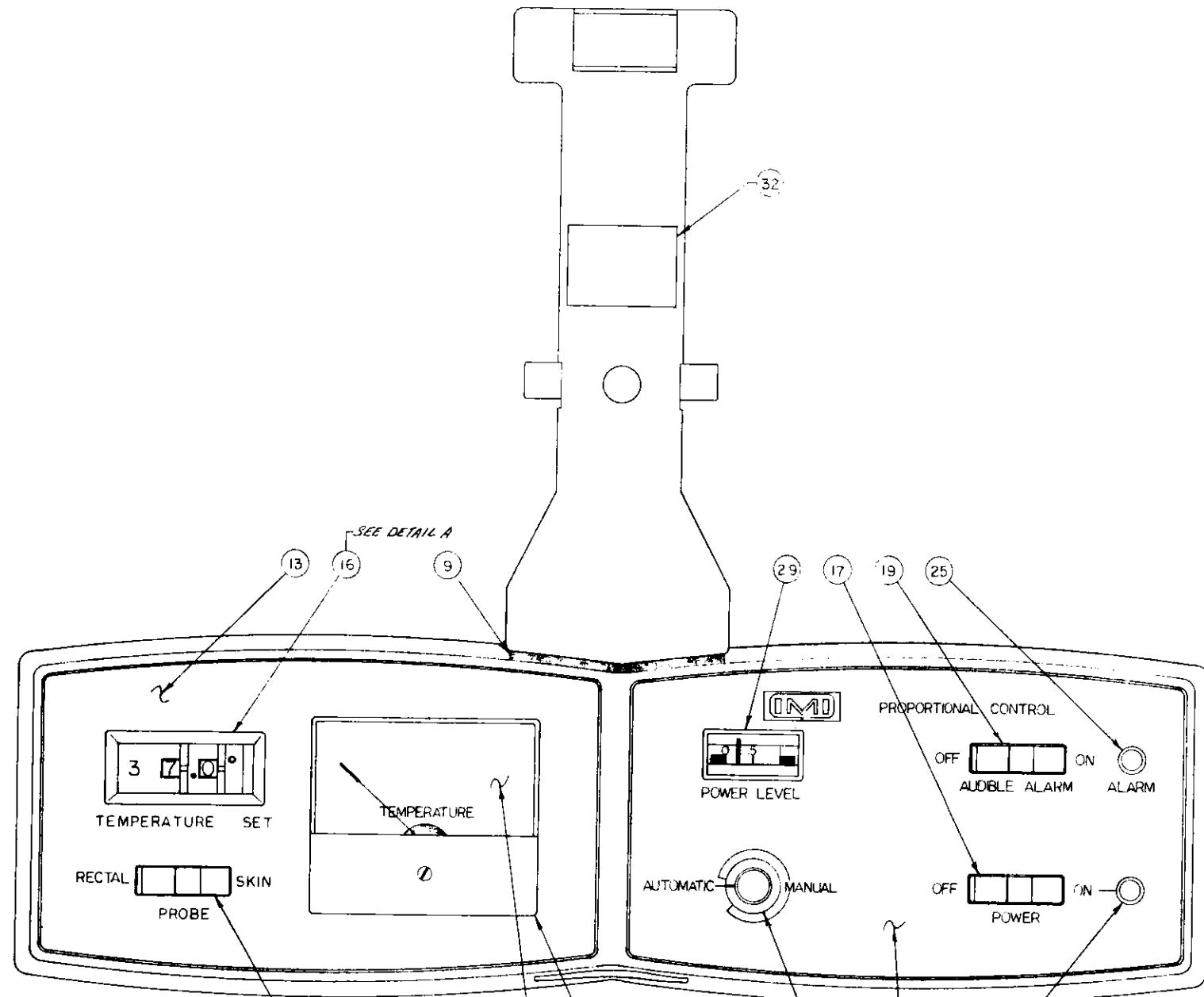
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REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
		SEE E.O. 4-14-	1-25-70	ST
B		SEE E.O. 571	12-1-70	ST
C		SEE E.O. 571	2-9-71	ST
D		SEE E.O. 571	4-3-71	ST
E		RELEASED TO PRODUCTION	1/10/71	ST
F		REVISED PER CN 2643	10/20/71	ST
G		REVISED PER CN 2643	11/10/71	ST
H		WAS 1004-400-00-240V CN 2384	7/29/73	ST
J		REVISED PER CN 2643	11/14/74	ST



9. WORKMANSHIP TO BE IN ACCORDANCE WITH A100649
8. DISCARD STAND-OFF PORTION OF PLUNGER ASSY & ASSEMBLE REMAINING PARTS TO ITEM 66.
7. TEST & CALIBRATE PER IMI SPEC 600V31
6. ITEM 54 SHALL READ: MODEL NO. 4004, THE S/N, 1400 VAC, 50/60 HZ, 100 WATTS.
5. PRESS ON RESPECTIVE SPRING CLIPS ITEMS, 24, 25, & 29.
4. INSTALL ITEMS 36 & 37 BY INSERTING BOLT & NUT INTO INSERT & TIGHTENING NUT AGAINST INSERT, THEN BEING CAREFUL OF ALIGNMENT, THE INSERT IS DRIVEN FLUSH. THE NUT IS THEN LOOSENED & THE BOLT & NUT IS THEN REMOVED.
3. 2, BEARINGS... ITEM 10. TO BE PRESS FITTED INTO CASTING BRACKET, ITEM 4.
2. FOR CABLE HARNESS SEE D04200183
1. FOR SCHEMATIC SEE D04200187 & D04300114

MODEL	DASH NO.	VARIATIONS
4004	-1	HOSPITAL DUTY PLUG
	-2	HOSPITAL DUTY PLUG, PRINTED CIRCUIT BD. W/LOW LEAKAGE

D00200194 APPROVALS

DR. LETINCHE DATE 7-15-71

CHK. E. S. L. DATE 15/11/71

APP. R. J. H. DATE 16 July 71

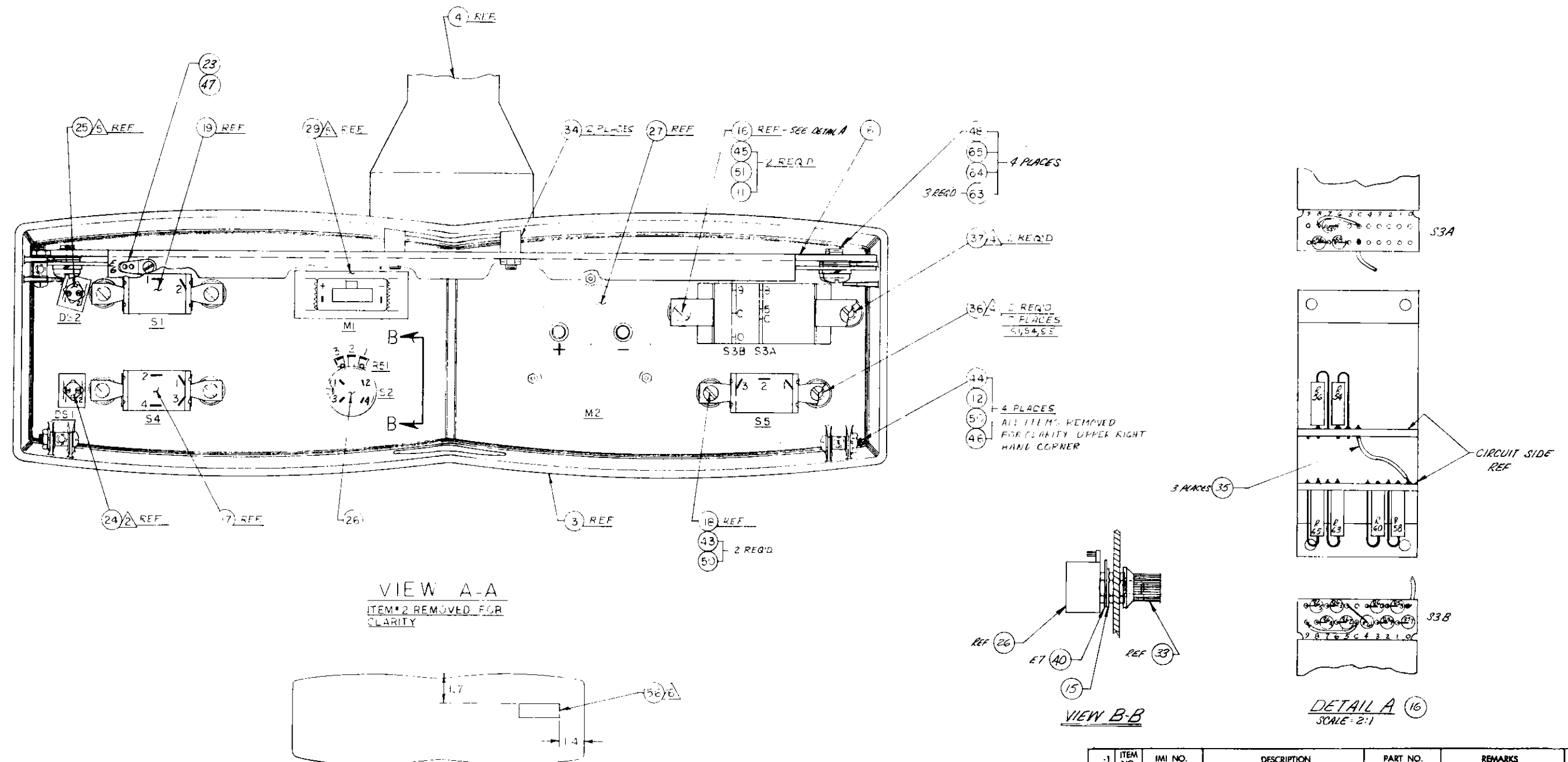
APP. DATE

FINAL	4004	UNLESS OTHERWISE SPECIFIED	BY	DATE	IMD Division of Section, Dickinson and Company
NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES TOLERANCES	DR. D. T. S. H. E. R. S.	10-27-70	
MATERIAL	APPLICATION	X ± .050 ANGULAR ± 0°30'	CHK		
SEE L.M. 00200194		XX ± .020 ALL RADII MAX.	ENGR	2-9-71	
FINISH		XXX ± .010 MACH. SURF. ✓	APPD. Y. L. A. M. E. R.	2-4-71	TITLE PROPORTIONAL CONTROL ASSY. 240V
		THREADS: CLASS 2A OR 2B	APPD.	2-9-71	
		REMOVE BURRS AND SHARP EDGES .020 MAX.			SIZE D
		MACH. SURF. FLAT WITHIN .001 IN/IN			25200194
		OTHER SURF. FLAT WITHIN .005 IN/IN			SCALE FULL
		DO NOT SCALE DRAWING			SHEET 1 OF 2

NOTES: UNLESS OTHERWISE SPECIFIED.

00200194 J

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
SEE SHEET 1 FOR REVISIONS				



NOTES: UNLESS OTHERWISE SPECIFIED.

-1		ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
QTY		MATERIAL LIST					
FINAL	AC/4	UNLESS OTHERWISE SPECIFIED					
NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES					
APPLICATION		TOLERANCES					
MATERIAL		.X ± .050 ANGULAR ± 0°30'					
FINISH		.XX ± .020 ALL RADII MAX.					
		.XXX ± .010 MACH. SURF. ✓					
		THREADS: CLASS 2A OR 2B					
		REMOVE BURRS AND SHARP					
		EDGES .020 MAX.					
		MACH. SURF. FLAT WITHIN					
		.001 IN/IN					
		OTHER SURF. FLAT WITHIN					
		.005 IN/IN					
		DO NOT SCALE DRAWING					
		BY		DATE	TITLE		
		DR D.T. Shears		11-19-70	PROPORTIONAL CONTROL		
		CHK			ASSY. 240V		
		ENGR			SIZE		
		APPD			D		
		APPD			25200194		
					SCALE FULL		
					SHEET 2 OF 2		

BY *J. P. [Signature]* DATE 1670
 DR *J. P. [Signature]* NEXT ASSY USED ON
 CHK FINAL 4004

LM25201 74
 SHEET 1 of 4

TITLE

PROPORTIONAL CONTROL
ASSEMBLY

ENGR 11 9-2-70
 APPD 12 DA 9-24-70
 REV

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
1	1	1			D00200189-01	CABLE HARNESS ASSY, FRONT PANEL			
2	1	-			D20200190-01	REAR PANEL ASSY			
3	1	1			D00200143-01	HOUSING, CONTROLLER			
4	1	1			D00200144-01	CASTING, BRACKET			
5	-	1			D20200190-02	REAR PANEL ASSY			
6	1	1			C00200159-01	SUPPORT, HOUSING			
7	-	REF			D04300114	SCHEMATIC, INFANT WARMER			
8	1	1			B101859	RING, RETAINING			
9	1	1			B00200164-01	GASKET			
10	2	2			B00200165-01	BEARING - CASTING			
11	2	2			B00200167-01	BRACKET, SWITCH			
12	4	4			B00200168-01	SPACER, MODIFIED			
13	1	1			D00200169-03	PLATE, INST., LEFT SIDE			
14	1	1			D00200169-05	PLATE, INST., RIGHT SIDE			
15	1	1			930017	WASHER, LOCK, INT. TOOTH 3/8 ID			
16	1	1			100013	SWITCH, THERM (TEMP. SET)	B-1-19	DIGITRAN	S3A#8
17	1	1			100030-1	SWITCH, DPST (PWR. ON-OFF)	TICK50-SC-WH-G	CARLING	S4
18	1	1			100030-2	SWITCH, SPDT (RETAL SENS/PROBE)	TIL60-SC-WH-G	CARLING	S5
19	1	1			100030-3	SWITCH, SPST (ALUM. ON-OFF)	TIL60-SC-WH-G	CARLING	S1
20	REF	-			D04200187-01	SCHEMATIC, INFANT WARMER			

PROPORTIONAL CONTROL ASSEMBLY

[illegible]



Division of Becton
Dickinson and Company B.D.

TITLE

PROPORTIONAL CONTROL ASSEMBLY

BY

DR *11/18/78*

DATE

-11-78

APPLICATION

NEXT ASSY

USED ON

CHK

ENGR

APPD

REV

LTR

EO

FINAL

A 414

B 500

C 517

D 521

E 1857

F 2262

G 2384

H 2643

4004

REMARKS

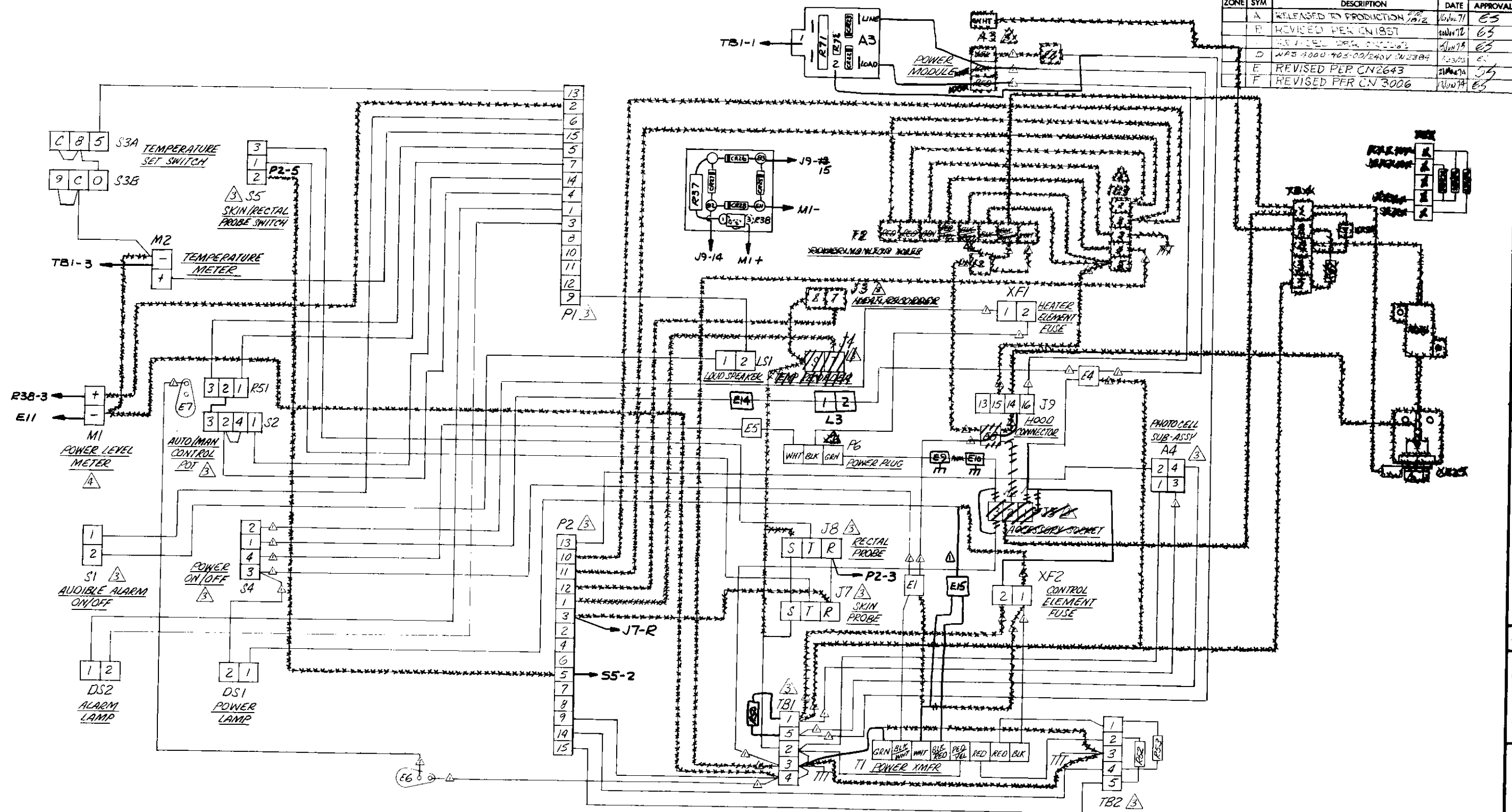
REF. DESIG.

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
41	1	1			900195	BOX, 2.0 X 12 X 16 HIGH TEST			
42	1	1			900197	FOAM INSERT FOR IMI NO. 900195			
43	6	6			910001-308	SCREW, PAN HD., #6-32 x 1/2			
44	4	4			910001-312	SCREW, PAN HD., #6-32 x 3/4			
45	2	2			910001-406	SCREW, PAN HD., #8-32 x 5/8			
46	4	4			920013	NUT, HEX, #6-32			
47	1	1			910001-304	SCREW, PAN HD., #6-32 x 1/4			
48	4	4			910101-708	SCREW, PAN HD., CROSS REC., 1/4-20 x 1/2			
49	2	2			911207-626	SOCKET HD. CAP SCREW, 1/4-32 X 1 1/2 LG.			
50	10	10			932013	WASHER, LOCK, SPLIT, #6			
51	2	2			932014	WASHER, LOCK, SPLIT, #8			
52	2	2			932015	WASHER, LOCK, SPLIT, #10			
53	1	1			900109	BAG, POLY 15 X 20 X 1002		K. LANDSBURG	
54	1	1			600114	OPERATING INSTRUCTIONS BOOKLET			
55	1	1			600011	WARRANTY CARD			
56	1	1			900104	IDENT. PLATE			
57	10	10			600025	#649 DISPOSABLE SKIN CLEANSER SWABS			
58	120	120			900162	1 BOX, ADHESIVE WASHERS			
59	1	1			A102134	THERMISTOR, SKIN PROBE, ASSY.			
60	REF. OPT.	REF. OPT.			C00200059-01	THERMISTOR, RECTAL PROBE, ASSY.			

PROPORTIONAL CONTROL ASSEMBLY

DR 100	BY 	DATE 1-27-71	APPLICATION		REV J
			NEXT ASSY	USED ON	LM25200/194

THIS DRAWING, PRINT OR DOCUMENT AND THE SUBJECT MATTER THEREON ARE PROPRIETARY ITEMS OF THE DIVISION OF BECTON, DICKINSON AND COMPANY. NO PART OF THIS DRAWING, PRINT OR DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE DIVISION OF BECTON, DICKINSON AND COMPANY.



REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		RELEASED TO PRODUCTION	10/12/71	ES
B		REVISED PER CN1857	10/12/71	ES
C		REVISED PER CN1857	10/12/71	ES
D		REVISED PER CN2643	10/12/71	ES
E		REVISED PER CN2643	10/12/71	ES
F		REVISED PER CN3006	10/12/71	ES

6. FOR WIRE LIST SEE WL 4200185
5. FOR SCHEMATIC SEE D04200187 & D04300114
RECOMMEND USE OF HEAT SINK WHEN SOLDERING M1
INDICATED PARTS TO BE SOLDERED WITH HARNESS DURING ASSY USING IMI TOOL NO. 300023
HARNESS TO BE BUILT PER IMI TOOL NO. 300023
INDICATED WIRES ARE TO BE RUN IN A HARNESS SEPARATED FROM HARNESS CONTAINING REMAINING WIRES

NOTES: UNLESS OTHERWISE SPECIFIED,

D04200185
DATE 7-6-71
CHK E. S. L. H.
APPD J. L. H. S. L. H.
DATE 10-12-71

ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
QTY					
MATERIAL LIST					
UNLESS OTHERWISE SPECIFIED					
DIMENSIONS ARE IN INCHES TOLERANCES					
X ± .050 ANGULAR ± 0°30'					
XX ± .020 ALL RADII MAX.					
XXX ± .010 MACH. SURF. ✓					
THREADS: CLASS 2A OR 2B					
REMOVE BURRS AND SHARP EDGES .020 MAX.					
MACH. SURF. FLAT WITHIN .001 IN/IN					
OTHER SURF. FLAT WITHIN .005 IN/IN					
DO NOT SCALE DRAWING					
BY DR J. L. H. S. L. H.					
CHK E. S. L. H.					
APPD J. L. H. S. L. H.					
DATE 10-12-71					
TITLE WIRING HARNESS; SCHEMATIC, PROPORTIONAL CONTROL					
SIZE D					
SCALE NONE					
SHEET 1 of 1					

I M I, Division of Becton,
Dickinson and Company [5 D]BY *L. P. R. R.*

2771

CHK.

WL04200189

REV.

F

TITLE *WIRING HARNESS SCHEMATIC,
PROPORTIONAL CONTROL 240/50~*

ENGR.

SHEET 2 of 4

APPD.

REV	EO	DATE	DESCRIPTION
1			SEE SHEET 1

WIRE RUN LIST

NO.	FROM	TO	NO.	TYPE	GA.	COLOR	LG "
34	E3	TB1-5			22	YEL	
35	TB1-1	TB4-5				YEL	
36	T2-RED	TB3-2				RED	
37	T2-RED	TB3-1				RED	
38	T2-GRN	TB3-3				GRN	
39	T2-RED/YEL	TB3-4				RED/YEL	
40	T2-BLK	TB3-5 Δ				BLK	
41	T2-BLK/RED	TB3-5 E2 Δ				BLK/RED	
42	T2-BLK/WHT	E2 TB4-1 Δ				BLK/WHT	
43	T2-WHT	E2 Δ				WHT	
44	E2	E8 Δ				WHT	
45	E8	J5-2 Δ				WHT	
46	E8	J9-14 Δ				WHT	
47	E8	E1 Δ				WHT	
48	TB4-4	R66				WHT	
49	TB4-1	J5-2				WHT	
50	TB3-4	TB1-3 Δ				GRN	
51	TB3-5	J7-15 Δ				GRN	
52	R66	CR25-ANODE				WHT	
53	T1-BLK	XF2-1 Δ				BLK	
54	T1-BLK/RED	XF2-1 WHT Δ E15				BLK/RED	
55	T1-RED	TB2-1				RED	
56	T1-RED	TB2-2				RED	
57	T1-RED/YEL	TB1-2				RED/YEL	
58	T1-WHT T1 WHT	E5 E1 T1 WHT Δ				WHT	WHT
59	T1-BLK/WHT	E1 Δ				BLK/WHT	
60	E1	J4-3 Δ				WHT	
61	T1-GRN	TB2-3 TB1-3			22	GRN	
62	CR25-ANODE	J9-14			22	WHT	
63	TB2-1	R53					
64	TB2-4	R53					
65	TB2-2	R52					
66	TB2-5	R52					



IMI Division of Becton
Dickinson and Company [B D]

BY *V. Porter*

2-9-71

WL 04200189

RFV

F

TITLE *WIRING HARNESS, SCHEMATIC
PROXIMATIONAL CONTROL 240/50~*

CHK.

ENGR.

APPD.

SHEET 3 of 4

REV. LTR EO *3-5-71 SHEET 1*

WIRE RUN LIST

NO.	FROM	TO	NO.	TYPE	GA.	COLOR	LG "
67	XF2-1	DS1-1 Δ			22	BLK	
68	XF2-2	TBI-1 Δ				BLK	
69	XF2-2	J8-1 E4 Δ				BLK	
70	CR25-CATNODE	TBI-1				BLK	
71	TBI-1	A4-3 Δ				BLK	
72	TBI-1	R50					
73	TBI-5	R50					
74	TBI-5	A4-4 Δ				YEL	
75	TBI-2	TBI-3				BALE WIRE, SLEEVED	
76	TBI-2	A4-1				GRN	
77	TBI-2	J4-3 J7-S				GRN	
78	TBI-3	TBI-4				BALE WIRE, SLEEVED	
	TBI-3	J5-3 Δ				GRN	
80	TBI-4	M1 Δ				WHT/BLK	
81	TBI-4	E6 Δ			22	GRN	
82	J4-4	E8 Δ			18	WHT	
83	E1	S4-3 Δ			18	WHT	
84	E6	E7 Δ			22	GRN	
85	E1	S4-1 Δ			18	BLK	
86							
87	XF1-1	S4-2 Δ			18	BLK	
88	J8-S	J4-S			22	GRN	
89	J7-R	J8-R			22	GRN	
90	J7-T	S5-1				WHT/YEL	
91	J8-T	S5-3				WHT/GRN	
92	J8-S	J7-S			22	GRN	
93	P6-GRN	TBI-1 E9 Δ			16	GRN	
94	P6-BLK	XF1-2 Δ			16	BLK	
95	P6-WHT	E5 Δ			16	WHT	
	E5	S4-4 Δ			18	WHT	
97	E10	TBI-3					
98	J4-S	J5-S			22	GRN	
99							



2.9.71

WLO4200189

RFV.

F

TITLE *WIRING HARNESS, SCHEMATIC,
PROPORTIONAL CONTROL 240/50*

ENGR

APPD.

SHEET 4 of 4

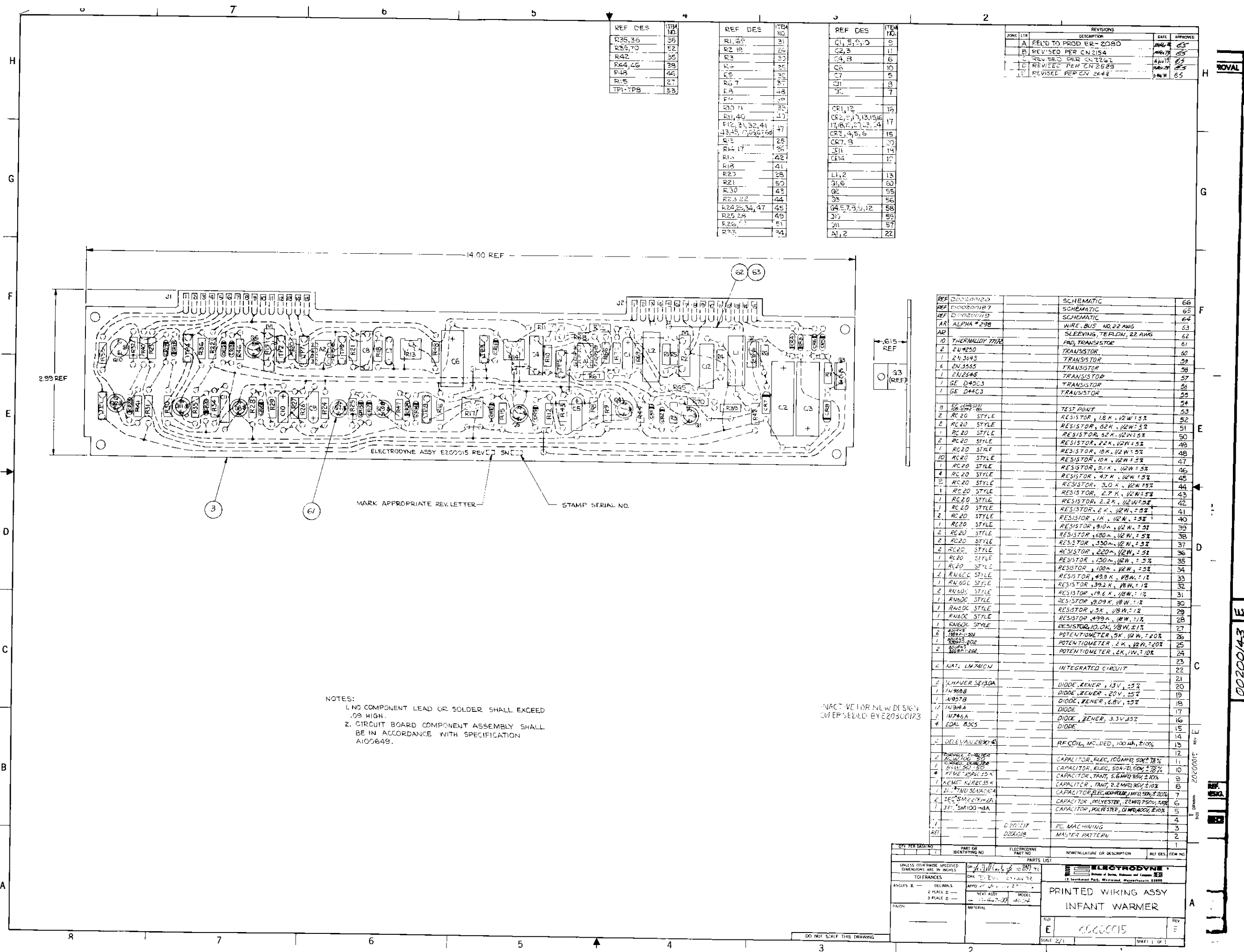
REV. 10/1/80

1265 1267

WIRE RUN LIST

[illegible]

⚠ INDICATED WIRES ARE TO BE RUN IN A HARNESS SEPARATED FROM HARNESS CONTAINING REMAINING WIRES



REF DES	ITEM NO
R35,36	36
R35,70	52
R42	35
R44,46	38
R48	46
R45	27
TPL-TP8	53

REF DES	ITEM NO
R1,20	31
R2,10	24
R3	20
R4	26
R5	25
R6,7	27
R8	28
R9	32
R10,40	17
R12,21,32,41	47
R13,15,23,37,68	47
R16	25
R14,17	26
R18	42
R19	41
R23	28
R21	50
R30	43
R23,22	44
R24,25,34,47	45
R25,28	49
R26	51
R28	34

REF DES	ITEM NO
C1,5,9,10	9
C2,3	11
C4,8	6
C5	10
C7	5
C11	8
C12	7
C11,12	12
C13,14,15,16	17
C17,18,19,21,22,24	15
C23,4,5,6	15
C27,3	10
C31	14
C14	15
L1,2	13
Q1,6	60
Q2	55
Q3	56
Q4,5,7,9,12	58
Q10	59
Q11	57
A1,2	22

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
A		REV'D TO PROD ER-2080	2/14/64
B		REVISED PER CN2154	4/10/64
C		REVISED PER CN2262	4/10/64
D		REVISED PER CN2528	4/10/64
E		REVISED PER CN2642	4/10/64

REF	DESCRIPTION	ITEM NO
REF D0000120	SCHEMATIC	66
REF D0000117	SCHEMATIC	65
REF D0000110	SCHEMATIC	64
AR ALPHA-298	WIRE, BUS NO. 22 AWG	63
AR	SLEEVING, TERFLON, 22 AWG	62
10 THERMALDY T102	PRO. TRANSISTOR	61
2 2N4250	TRANSISTOR	60
1 2N3643	TRANSISTOR	59
4 2N3555	TRANSISTOR	58
1 2N2845	TRANSISTOR	57
1 GE D4003	TRANSISTOR	56
1 GE D4003	TRANSISTOR	55
8 100 OHM 1/4W 5%	TEST POINT	54
2 RC20 STYLE	RESISTOR, 18K, 1/2W, 5%	53
2 RC20 STYLE	RESISTOR, 52K, 1/2W, 5%	52
1 RC20 STYLE	RESISTOR, 52K, 1/2W, 5%	51
2 RC20 STYLE	RESISTOR, 22K, 1/2W, 5%	50
1 RC20 STYLE	RESISTOR, 18K, 1/2W, 5%	49
10 RC20 STYLE	RESISTOR, 10K, 1/2W, 5%	48
1 RC20 STYLE	RESISTOR, 51K, 1/2W, 5%	47
4 RC20 STYLE	RESISTOR, 47K, 1/2W, 5%	46
2 RC20 STYLE	RESISTOR, 3.0K, 1/2W, 5%	45
1 RC20 STYLE	RESISTOR, 2.7K, 1/2W, 5%	44
1 RC20 STYLE	RESISTOR, 2.2K, 1/2W, 5%	43
1 RC20 STYLE	RESISTOR, 2K, 1/2W, 5%	42
2 RC20 STYLE	RESISTOR, 1K, 1/2W, 5%	41
2 RC20 STYLE	RESISTOR, 910K, 1/2W, 5%	40
2 RC20 STYLE	RESISTOR, 880K, 1/2W, 5%	39
2 RC20 STYLE	RESISTOR, 550K, 1/2W, 5%	38
2 RC20 STYLE	RESISTOR, 220K, 1/2W, 5%	37
1 RC20 STYLE	RESISTOR, 150K, 1/2W, 5%	36
1 RC20 STYLE	RESISTOR, 100K, 1/2W, 5%	35
1 RC20 STYLE	RESISTOR, 49.9K, 1/2W, 5%	34
1 RC20 STYLE	RESISTOR, 39.2K, 1/2W, 5%	33
1 RC20 STYLE	RESISTOR, 33.2K, 1/2W, 5%	32
1 RC20 STYLE	RESISTOR, 30.9K, 1/2W, 5%	31
1 RC20 STYLE	RESISTOR, 27.4K, 1/2W, 5%	30
1 RC20 STYLE	RESISTOR, 27K, 1/2W, 5%	29
1 RC20 STYLE	RESISTOR, 22K, 1/2W, 5%	28
1 RC20 STYLE	RESISTOR, 10K, 1/2W, 5%	27
1 100K 1/2W 5%	POTENTIOMETER, 5K, 1/2W, 20%	26
1 100K 1/2W 5%	POTENTIOMETER, 2K, 1/2W, 20%	25
2 100K 1/2W 5%	POTENTIOMETER, 2K, 1/2W, 20%	24
2 NATL LM741CN	INTEGRATED CIRCUIT	23
2 SCHAUER SE130A	DIODE, ZENER, 13V, 2W	22
1 IN968B	DIODE, ZENER, 20V, 5W	21
1 IN957B	DIODE, ZENER, 6.8V, 5W	20
1 IN948A	DIODE	19
2 IN746A	DIODE, ZENER, 3.3V, 1W	18
4 60AL B3CS	DIODE	17
2 2N4250	REF COIL, MC, 100K, 100%	16
2 2N4250	REF COIL, MC, 100K, 100%	15
2 2N4250	CAPACITOR, ELEC, 100MFD, 50V, 75%	14
2 2N4250	CAPACITOR, ELEC, 50MFD, 50V, 75%	13
4 2N4250	CAPACITOR, TANT, 5.6MFD, 35V, 10%	12
1 2N4250	CAPACITOR, TANT, 2.2MFD, 35V, 10%	11
2 2N4250	CAPACITOR, ELEC, 100MFD, 50V, 75%	10
2 2N4250	CAPACITOR, POLYESTER, 22MFD, 250V, 10%	9
1 2N4250	CAPACITOR, POLYESTER, 10MFD, 250V, 10%	8
1 2N4250	CAPACITOR, POLYESTER, 0.1MFD, 250V, 10%	7
1 2N4250	PC MACHINING	6
1 2N4250	MASTER PATTERN	5
1 2N4250	MASTER PATTERN	4
1 2N4250	MASTER PATTERN	3
1 2N4250	MASTER PATTERN	2
1 2N4250	MASTER PATTERN	1

NOTES:
1. NO COMPONENT LEAD OR SOLDER SHALL EXCEED .09 HIGH.
2. CIRCUIT BOARD COMPONENT ASSEMBLY SHALL BE IN ACCORDANCE WITH SPECIFICATION A100649.

INACT. VET. OR NLW DISIN. SUPERSEDED BY E2000173

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TOLERANCES	
FRACTIONS		DECIMALS	
ANGLES ±		2 PLACE ±	
FINISH		MATERIAL	
DATE		BY	
APPROVED		CHECKED	
NEXT ASSY		MODEL	
MATERIAL		SCALE	
REV		REV	
E		E	
SCALE 2/1		SHEET 1 OF 1	

PRINTED WIRING ASSY
INFANT WARMER

00000015

SCALE 2/1

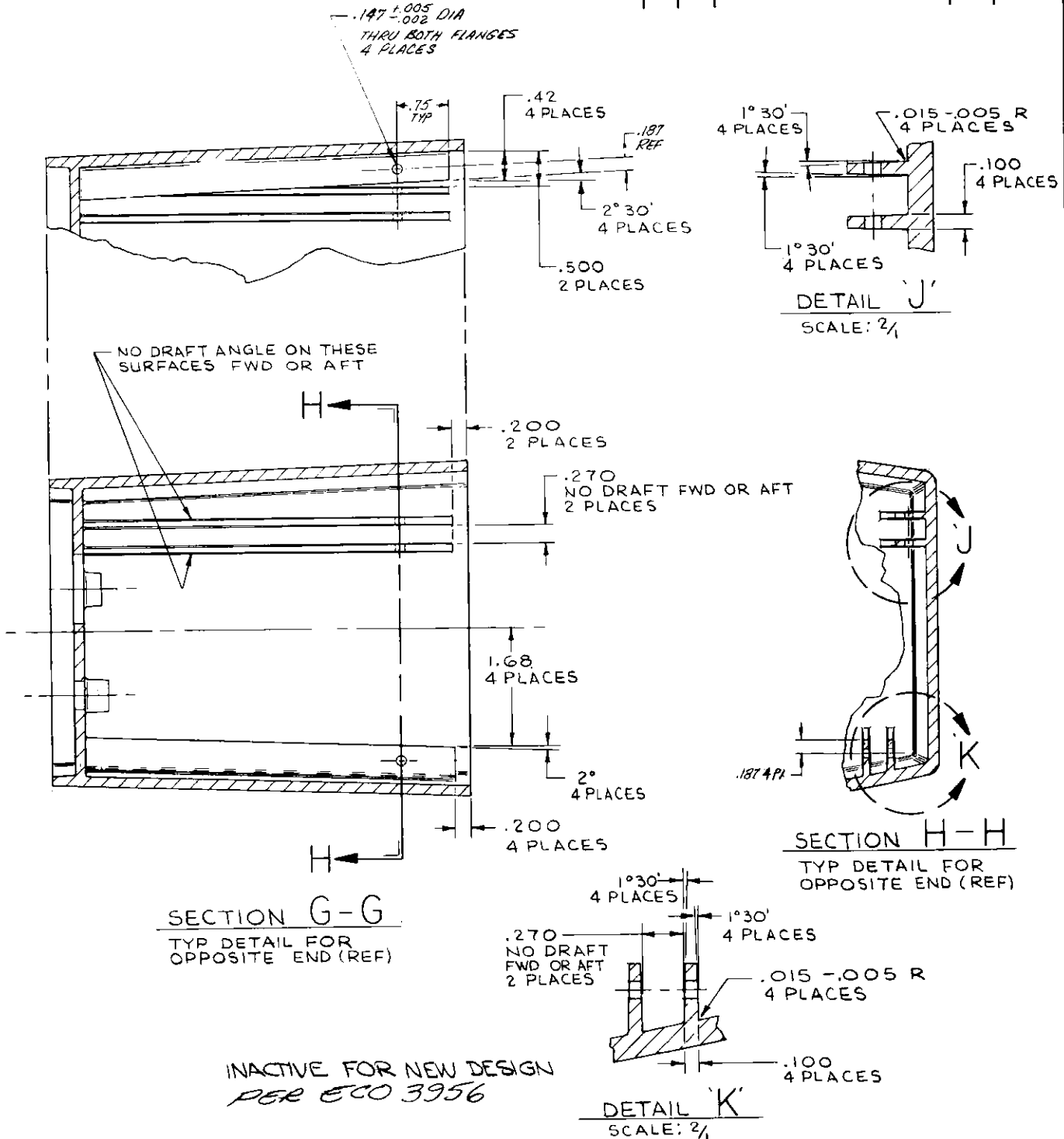
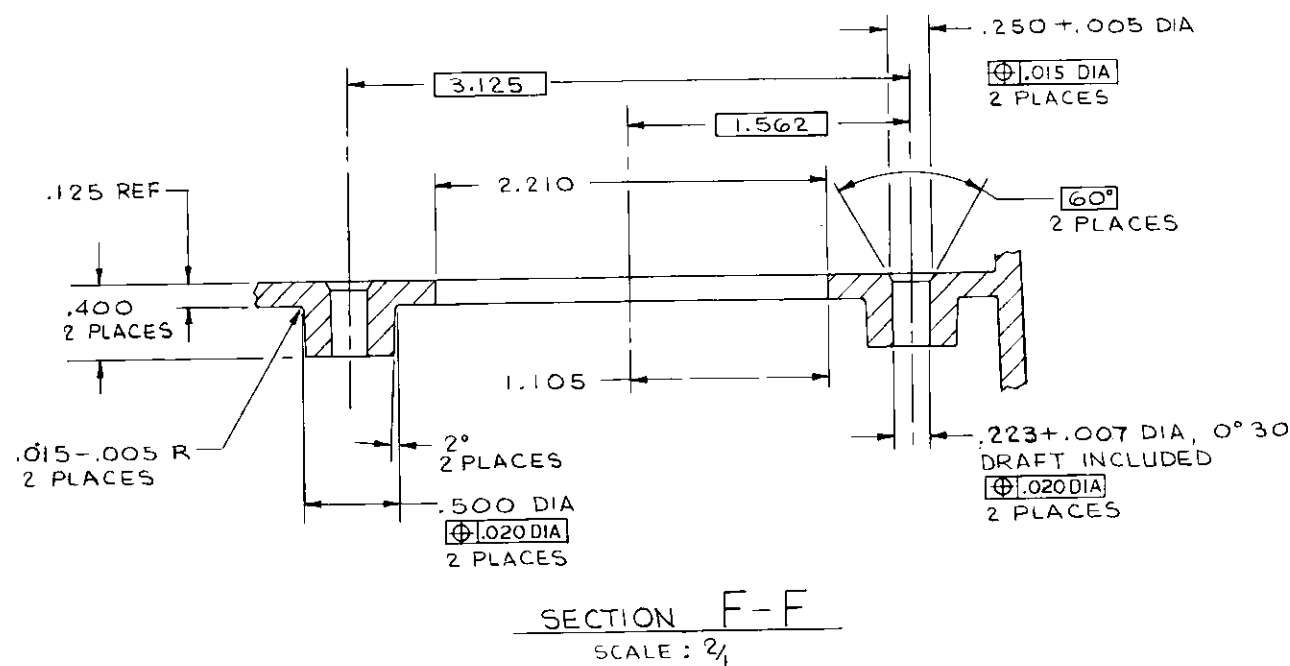
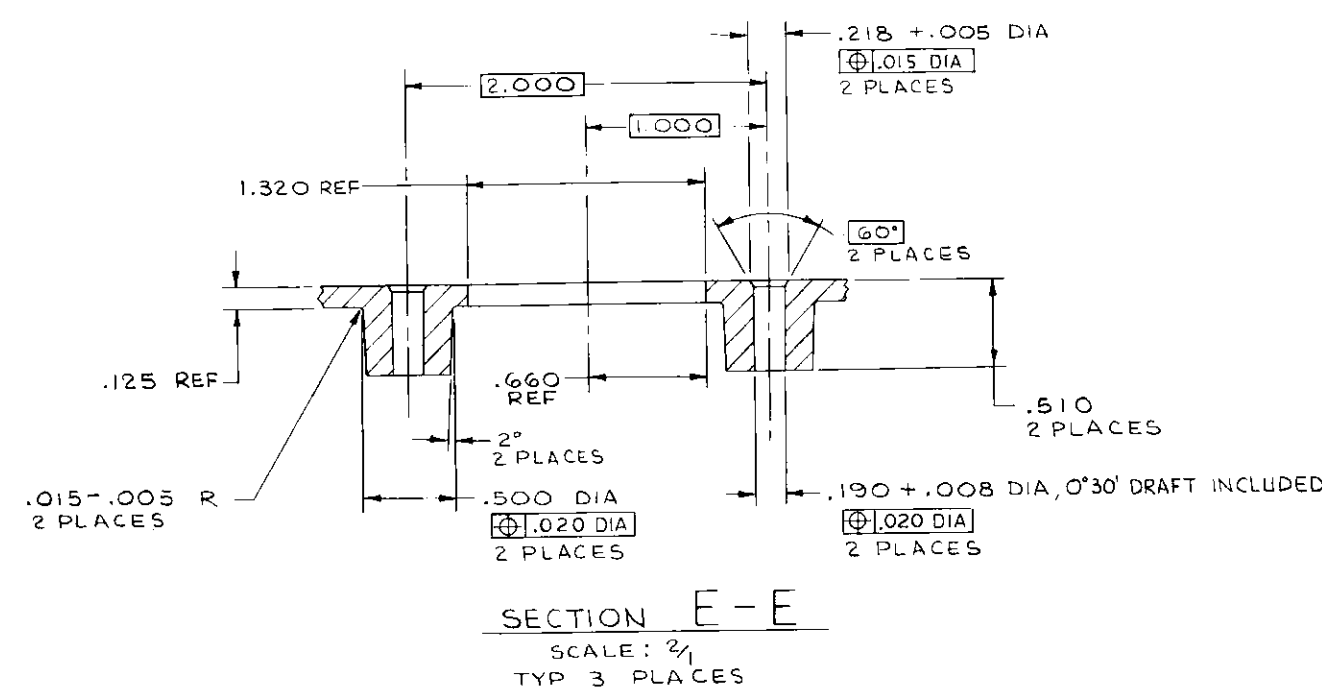
SHEET 1 OF 1

00000143 E

ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN INCHES
TOLERANCES ARE AS SHOWN
UNLESS OTHERWISE SPECIFIED
FINISHES ARE AS SHOWN
UNLESS OTHERWISE SPECIFIED

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL

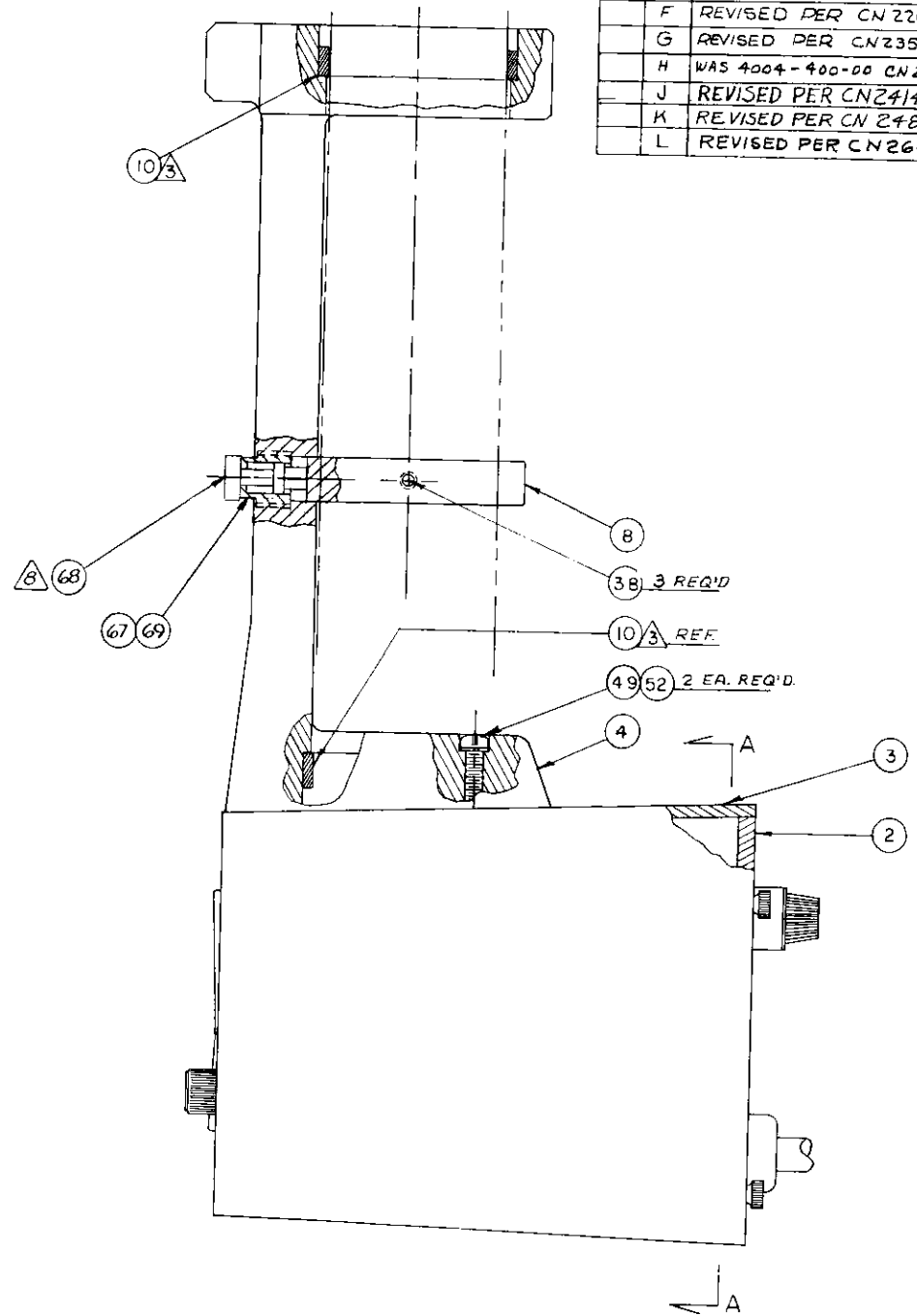
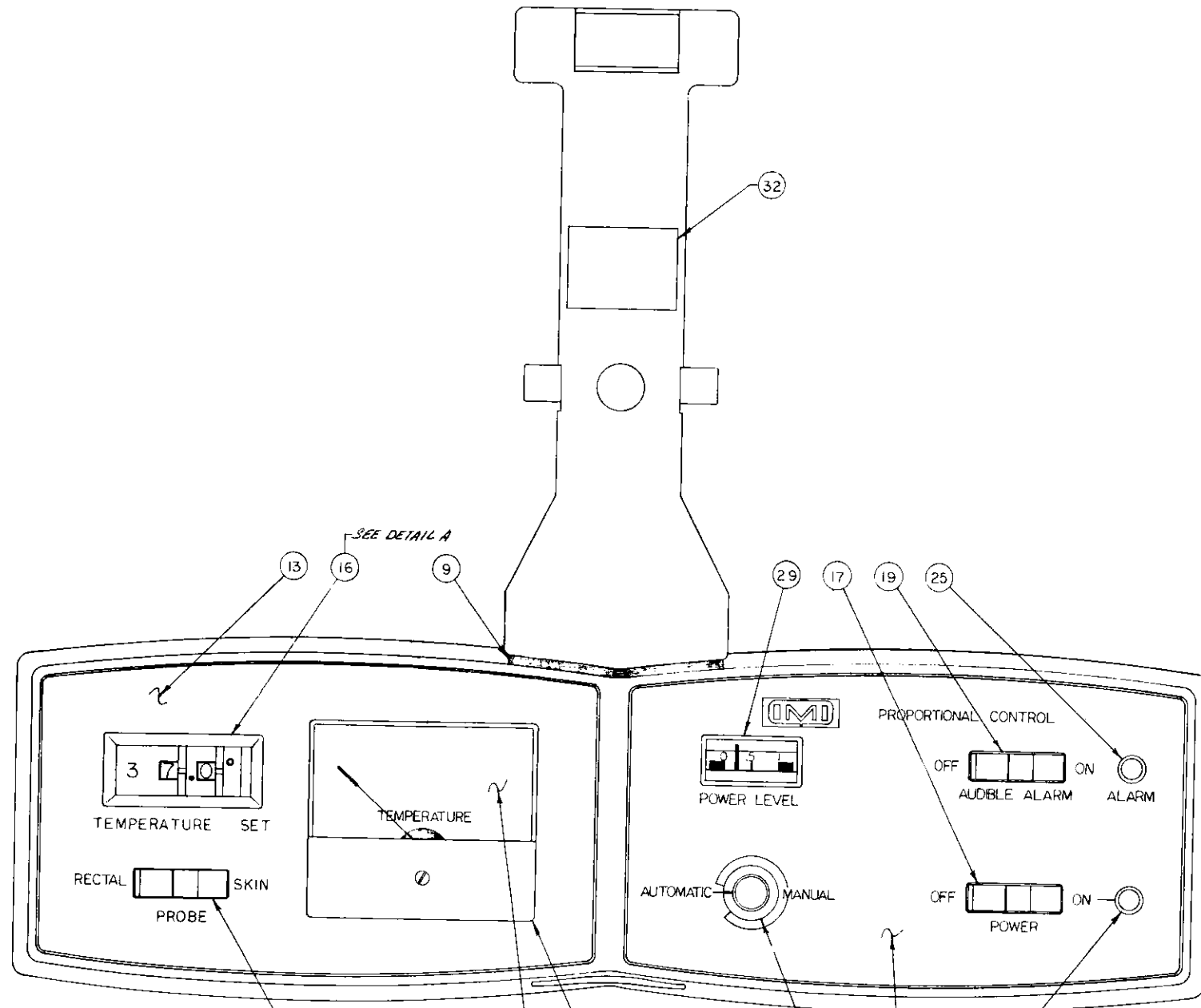
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QTY	ITEM NO.	QTY	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
4000	USED ON	UNLESS OTHERWISE SPECIFIED	BY	DATE	IMD Division of Becton, Dickinson and Company	
NEXT ASSY	APPLICATION	DIMENSIONS ARE IN INCHES TOLERANCES	DR C.R.	6-12-70		
MATERIAL SEE SHT NO. 2		.X ± .050 ANGULAR ± 0°30'	CHK		TITLE	
		.XX ± .020 ALL RADII MAX.	ENGR	7-10-70		
		.XXX ± .010 MACH. SURF. ✓	APPROVED	7-10-70	HOUSING, CONTROLLER	
		THREADS: CLASS 2A OR 2B	APPD			
		REMOVE BURRS AND SHARP EDGES .020 MAX.			SIZE	
		MACH. SURF. FLAT WITHIN .001 IN/IN				
		OTHER SURF. FLAT WITHIN .005 IN/IN			D	
		DO NOT SCALE DRAWING				
					SCALE 1/1 AND NOTED	
					SHEET 3 OF 3	

THE DRAWING, RIGHT OF DOCUMENT AND THE SUBJECT MATTER DESCRIBED HEREIN ARE PROPRIETARY ITEMS OF THE DIVISION OF BECTON, DICKINSON AND COMPANY. RETAINS THE EXCLUSIVE RIGHT OF DISSEMINATION. NO REPRODUCTION, DISSEMINATION, USE AND SALE, INCLUDING THE RIGHT TO BE SUBMITTED IN CONFERENCE FOR CONSIDERATION BY THE RECIPIENT ALONE UNLESS PERMISSION FOR FURTHER DISCLOSURE IS EXPRESSLY GRANTED BY THE DIVISION OF BECTON, DICKINSON AND COMPANY.

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		SEE E.O. 414	10-15-70	S.T.
B		SEE E.O. 500	12-1-70	11
C		SEE E.O. 571	2-9-71	11
D		SEE E.O. 571	4-5-71	11
E		REVISED PER CN1857	11/10/72	65
F		REVISED PER CN2262	11/10/73	65
G		REVISED PER CN2351	11/10/73	65
H		WAS 4004-400-00 CN2384	7/20/73	64
J		REVISED PER CN2414	10/5/73	65
K		REVISED PER CN2489	11/10/73	65
L		REVISED PER CN2643	11/10/74	65



- 9 WORKMANSHIP TO BE IN ACCORDANCE WITH A100649
- 8 DISCARD STAND-OFF PORTION OF PLUNGER ASSY AND ASSEMBLE REMAINING PARTS TO ITEM 67
- 7 TEST & CALIBRATE PER IMI SPEC. 600151
- 6 ITEM 56 SHALL READ: MODEL NO. 4004, THE S/N, 120 VAC, 50/60 HZ, 800 WATTS.
- 5 PRESS ON RESPECTIVE SPRING CLIPS ITEMS, 24, 25, 29.
- 4 INSTALL ITEMS 36 & 37 BY INSERTING BOLT & NUT INTO INSERT; TIGHTENING NUT AGAINST INSERT; THEN BEING CAREFUL OF ALIGNMENT, THE INSERT IS DRIVEN FLUSH. THE NUT IS THEN LOOSENED & THE BOLT & NUT IS THEN REMOVED.
- 3 2, BEARINGS. ITEM 10, TO BE PRESS FITTED INTO CASTING BRACKET, ITEM 4.
- 2 FOR CABLE HARNESS SEE D04200122
- 1 FOR SCHEMATIC SEE D04200119 & D04300123

MODEL	DASH NO.	VARIATIONS
4004	-1	HOSPITAL DUTY PLUG
	-2	EXPLOSION PROOF PLUG
	-3	HOSPITAL DUTY PLUG, PRINTED CIRCUIT BOARD, WITH LOW LEAKAGE

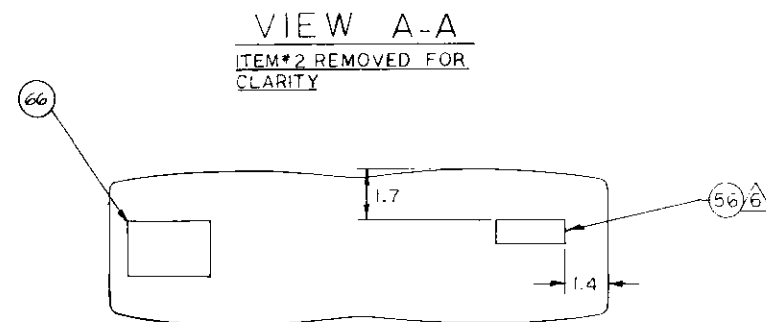
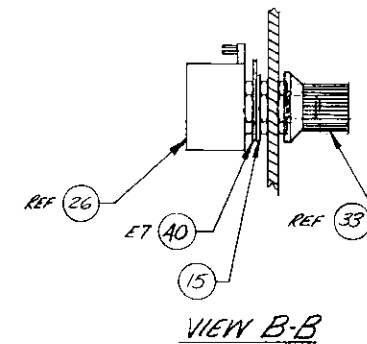
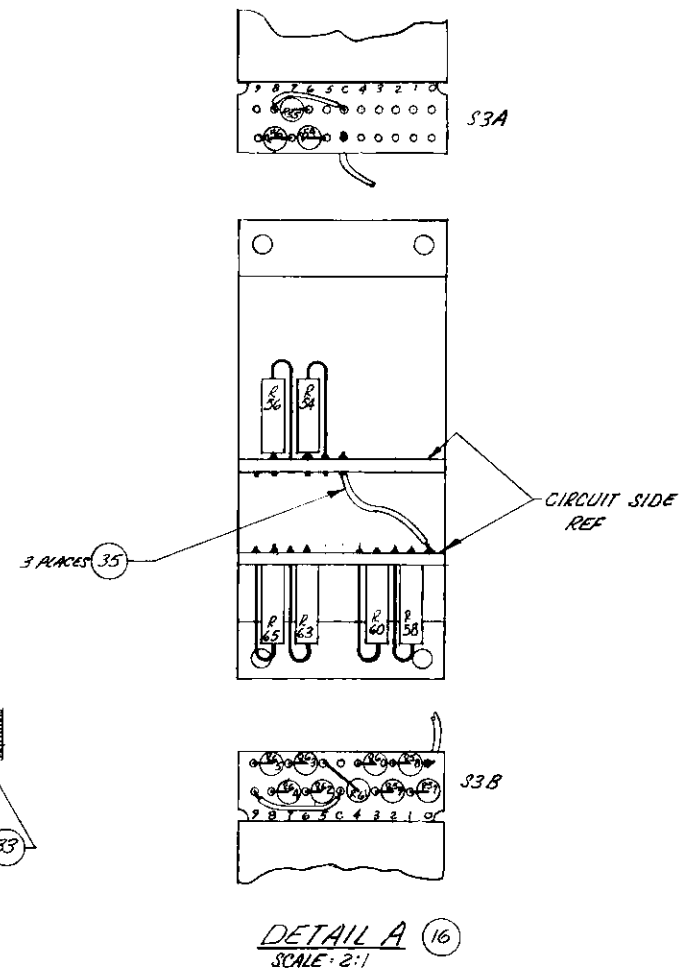
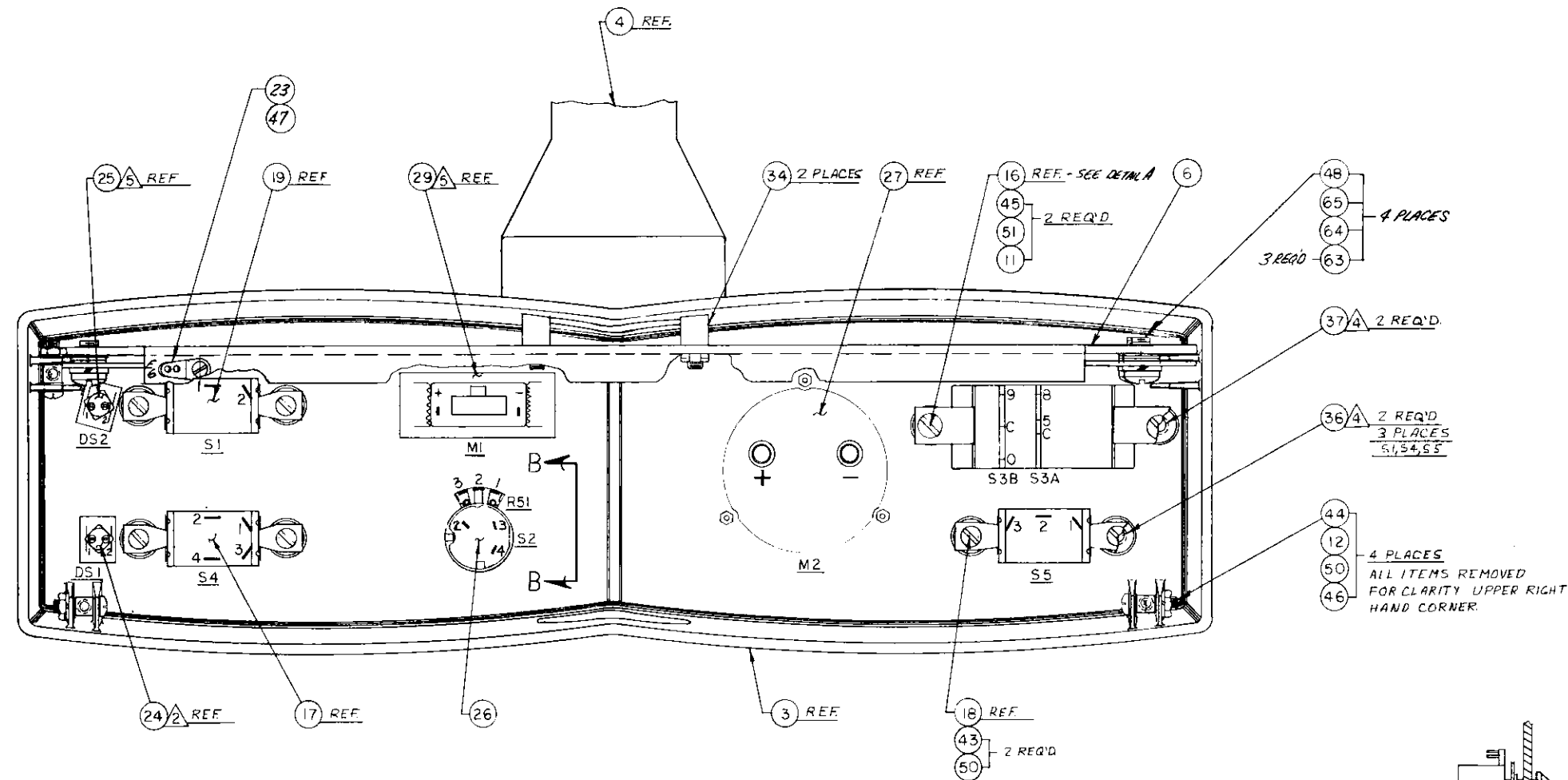
FINAL	4004	UNLESS OTHERWISE SPECIFIED	BY	DATE	 Division of Becton, Dickinson and Company 4321 Birch Street, Newport Beach, California 92660	
NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES TOLERANCES	DR	D.T. Shears		10-27-70
APPLICATION		.X ± .050 ANGULAR ± 0°30'	CHK			
MATERIAL - SEE L.H. 00200185		.XX ± .020 ALL RADII MAX.	ENGR	11		2-9-71
		.XXX ± .010 MACH. SURF. ✓	APPD	St. Larson	2-4-71	
		THREADS: CLASS 2A OR 2B REMOVE BURRS AND SHARP EDGES .020 MAX.	APPD	11	2-9-71	
		MACH. SURF. FLAT WITHIN .001 IN/IN				
		OTHER SURF. FLAT WITHIN .005 IN/IN				
		DO NOT SCALE DRAWING				
MATERIAL LIST					TITLE	
					PROPORTIONAL CONTROL ASSY.	
					SIZE	
					D	
					25200185	
					SCALE FULL	
					SHEET 1 OF 2	

NOTES: UNLESS OTHERWISE SPECIFIED,

00200185 L

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REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
SEE SHEET 1 FOR REVISIONS				



REAR PANEL VIEW
1/3 SCALE ITEM 56 LOCATION

NOTES: UNLESS OTHERWISE SPECIFIED.

QTY		ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
MATERIAL LIST							
FINAL	4004	UNLESS OTHERWISE SPECIFIED		BY	DATE	IMD Division of Becton, Dickinson and Company	
NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES TOLERANCES		DR D.T. SHEARS	11-19-70	4321 Birch Street, Newport Beach, California 92660	
APPLICATION		X $\pm .050$ ANGULAR $\pm 0^{\circ}30'$		CHK		TITLE	
MATERIAL		XX $\pm .020$ ALL RADII MAX.		ENGR		PROPORTIONAL CONTROL ASSY.	
		XXX $\pm .010$ MACH. SURF. ✓		APPD		SIZE	
		THREADS: CLASS 2A OR 2B		APPD		D	
		REMOVE BURRS AND SHARP EDGES .020 MAX.				25200185	
		MACH. SURF. FLAT WITHIN .001 IN/IN				SCALE FULL	
		OTHER SURF. FLAT WITHIN .005 IN/IN				SHEET 2 OF 2	
		DO NOT SCALE DRAWING					



Division of Section,
Dickinson and Company [B-D]

BY

DATE

APPLICATION

REV

TITLE

PROPORTIONAL CONTROL
ASSEMBLY

DR

CHK

ENGR

APPD

USED ON

SHEET

OF

REV

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	REV	TR	EO	A	B	C	D	E	F	G	H	I	J	K	L	REMARKS	REF. DESIG.
1	1	1	1	1	D00200122-01	CABLE HARNESS ASSY, FRONT PANEL																	
2	1	1	1	1	D020200131-01	REAR PANEL ASSY																	
3	1	1	1	1	D00200143-01	HOUSING, CONTROLLER																	
4	1	1	1	1	D00200144-01	CASTING, BRACKET																	
5	1	1	1	1	D020200131-02	REAR PANEL ASSY																	
6	1	1	1	1	C00200159-01	SUPPORT, HOUSING																	
7	1	1	1	1	D020200131-03	REAR PANEL ASSY																	
8	1	1	1	1	B101859	RING, RETAINING																	
9	1	1	1	1	B00200164-01	GASKET																	
10	2	2	2	2	B00200165-01	BEARING - CASTING																	
11	2	2	2	2	B00200167-01	BRACKET, SWITCH																	
12	4	4	4	4	B00200168-01	SPACER, MODIFIED																	
13	1	1	1	1	D00200169-03	PLATE, INST., LEFT SIDE																	
14	1	1	1	1	D00200169-05	PLATE, INST., RIGHT SIDE																	
15	1	1	1	1	930017	WASHER, LOCK, INT. TOOTH. 3/8 ID																	
16	1	1	1	1	100013	SWITCH, THUMB (TEMP. SET)																	53A42
17	1	1	1	1	100030-1	SWITCH, DPST (PWR. ON-OFF)																	S4
18	1	1	1	1	100030-2	SWITCH, SPST ON-OFF (RECTAL SENS/PROBE)																	S5
19	1	1	1	1	100030-3	SWITCH, SPST ON-OFF (AUM. ON-OFF)																	S1
20	REF	REF	REF	REF	D04200119-01	SCHEMATIC, INFANT WARMER																	



I.M.L., Division of Becton,
Dickinson and Company **B-D**

PROPORTIONAL CONTROL ASSEMBLY

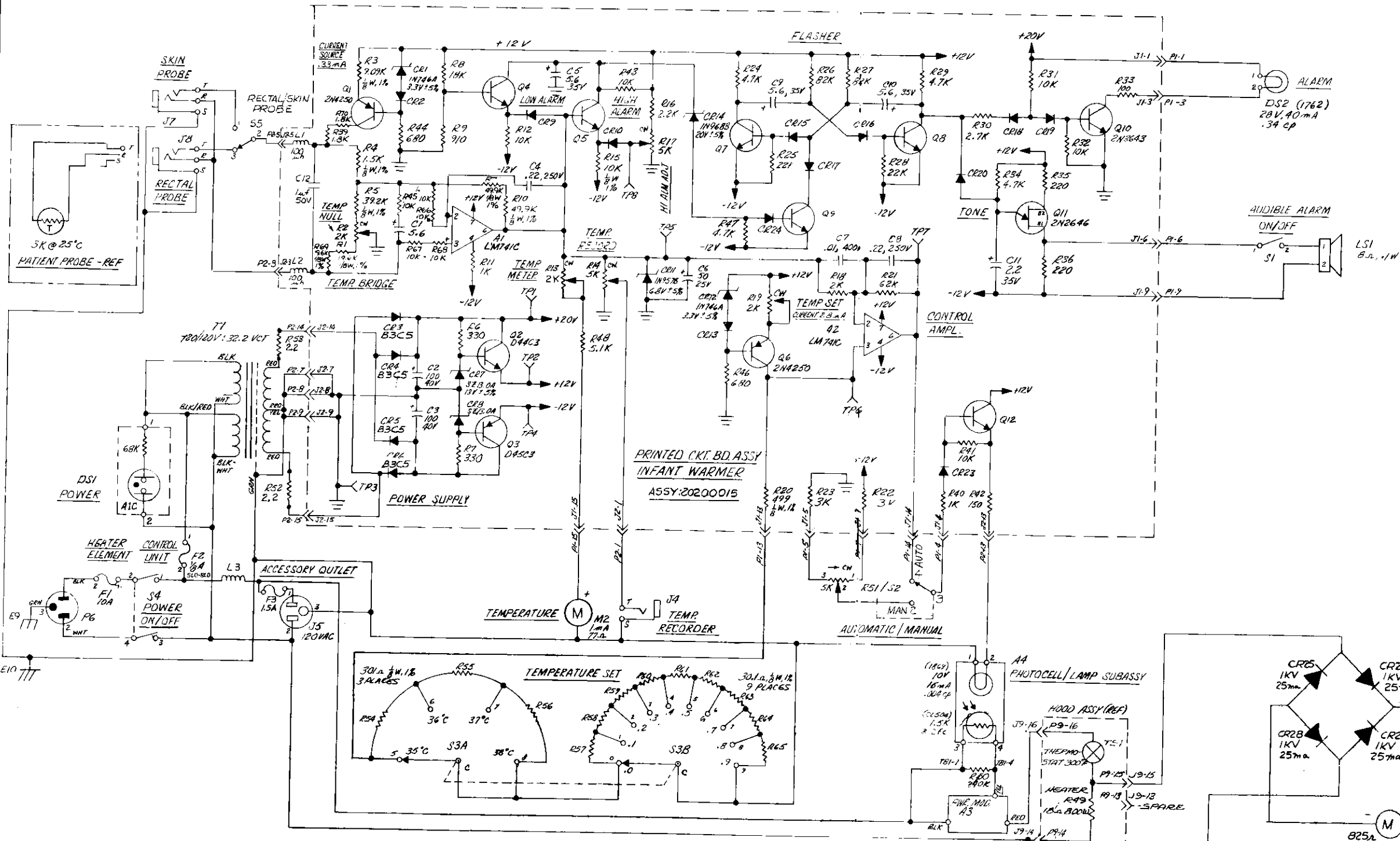
I.M.I., Division of Becton, Dickinson and Company [B-D]										BY DR <i>[Signature]</i> CHK		DATE 2-16-70	APPLICATION NEXT ASSY FIMIL		LM25200/85		REV 1
TITLE PROPORTIONAL CONTROL ASSEMBLY										CHK		9-21-70	USED ON 40'4		SHEET 2 OF 4		
ITEM NO.	QTY.	QTY.	QTY.	QTY.	IMI NO.	DESCRIPTION				REV	FO	LTR	PART NO.	REMARKS	REF. DESIG.		
21	3	3	3	-4	283010	RESISTOR 301 Ω , 1%, $\frac{1}{8}$ W									E54.55 56		
22	9	9	9		2830E1	RESISTOR, 301 Ω , 1%, $\frac{1}{8}$ W									E57 THRU E65		
23	1	1	1		140017	TERMINAL LUG, #6							1416-6	H.H. SMITH	EG		
24	1	1	1		110019	LIGHT INDICATOR (POWER)							858-R-AIC-68K	SLOAN	DS1		
25	1	1	1		110020	LIGHT INDICATOR (ALARM)							858-R-1762	SLOAN	DS2		
26	1	1	1		A1046001-305	SWITCH/POT. (AUTO/MANUAL) 5K $\pm$ 20%, 2W									DS1/52		
27	1	1	1		121006-4	METER (TEMPERATURE)								HONEYWELL	M2		
28	REF	REF	REF		121012	METER SCALE (TEMP)											
29	1	1	1		121017	METER, 0-200 (POWER LEVEL)							122D20	EMICO	M1		
30	1	1	1		900257	SHIPPING CONTAINER INSERT											
31	-	-	-	REF	D04300123	SCHEMATIC, INFANT WARMER											
32	1	1	1		900252	LABEL, HOT ELEMENT											
33	1	1	1		950258	KNOB, SKIRTED							EB-67-0-SK-7MM	ROGAN			
34	2	2	2		950223	SPACER, $\frac{3}{8}$ " DIA, $\frac{1}{16}$ " X $\frac{3}{4}$ " LG.							9325-B194	AMATOM			
35	A/R	A/R	A/R		1905129	WIRE, VINYL, 22GA, 750 WHIT											
36	6	6	6		950199	INSERT, #6-32							N13932-12	TAP-LOK			
37	2	2	2		950200	INSERT, #8-32							N16432-12	TAP-LOK			
38	3	3	3		950204	SCREW, SET, HALF DUG, #10-24 X .25							CAD PLATE "NYLOK"	DUCOMMAN			
39																	
40	1	1	1		140051	TERMINAL LUG, #8 10							#1497	H.H. SMITH	E7		

PROPORTIONAL CONTROL
ASSEMBLY

[illegible]

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REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		SEE EO 407	1-8-70	
B		SEE EO 525	7-9-71	
C		SEE EO 570	1-5-71	
D		SEE EO 604	1-11-71	
E		REVISED PER ECN 1857	10/11/71	ES
F		REVISED PER CN 2154	11/10/71	ES
G		REVISED PER CN 2262	11/10/71	ES
H		WAS 4000-200-00 (1/2/71)	11/10/71	ES
J		REVISED PER CN 2489	11/10/71	ES
K		REVISED PER CN 2523	11/10/71	ES
L		REVISED PER CN 2643	11/10/71	ES

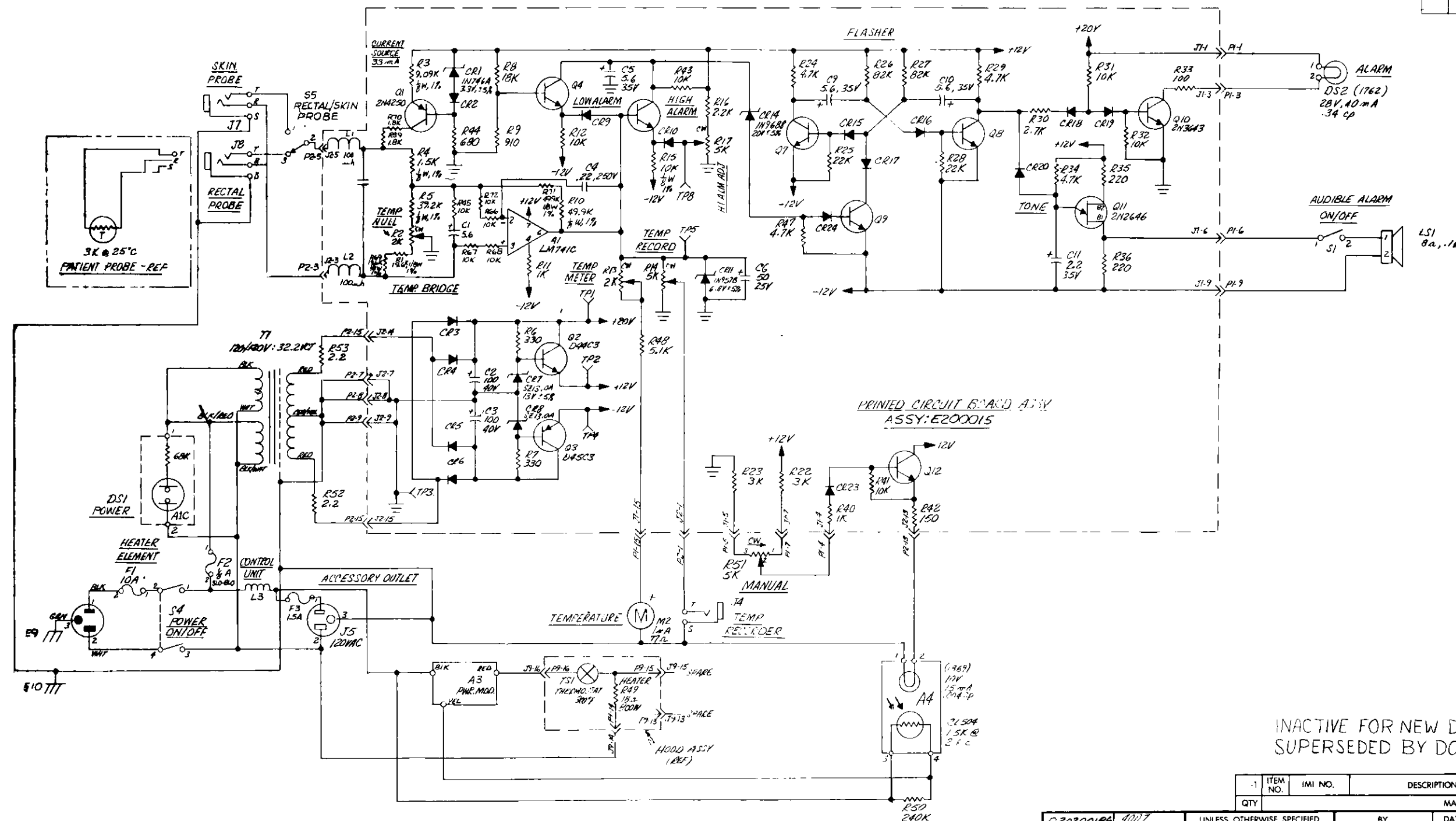


INACTIVE FOR NEW DESIGN,
SUPERSEDED BY DO4300123

- FOR WIRING DIAGRAM SEE DO4200122
 - ALL TRANSISTORS ARE 2N3565
 - ALL DIODES ARE IN914A
 - ALL CAPACITORS ARE IN MICROFARADS
 - ALL RESISTORS ARE IN OHMS, $\pm 5\%$ $\frac{1}{2}W$
- NOTES: UNLESS OTHERWISE SPECIFIED.

ITEM NO.		DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
1	Q1	2N3565			
2	Q2	2N3565			
3	Q3	2N3565			
4	Q4	2N3565			
5	Q5	2N3565			
6	Q6	2N3565			
7	Q7	2N3565			
8	Q8	2N3565			
9	Q9	2N3565			
10	Q10	2N3565			
11	Q11	2N3565			
12	Q12	2N3565			
13	Q13	2N3565			
14	Q14	2N3565			
15	Q15	2N3565			
16	Q16	2N3565			
17	Q17	2N3565			
18	Q18	2N3565			
19	Q19	2N3565			
20	Q20	2N3565			
21	Q21	2N3565			
22	Q22	2N3565			
23	Q23	2N3565			
24	Q24	2N3565			
25	Q25	2N3565			
26	Q26	2N3565			
27	Q27	2N3565			
28	Q28	2N3565			
29	Q29	2N3565			
30	Q30	2N3565			
31	Q31	2N3565			
32	Q32	2N3565			
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36	Q36	2N3565			
37	Q37	2N3565			
38	Q38	2N3565			
39	Q39	2N3565			
40	Q40	2N3565			
41	Q41	2N3565			
42	Q42	2N3565			
43	Q43	2N3565			
44	Q44	2N3565			
45	Q45	2N3565			
46	Q46	2N3565			
47	Q47	2N3565			
48	Q48	2N3565			
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67	Q67	2N3565			
68	Q68	2N3565			
69	Q69	2N3565			
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91	Q91	2N3565			
92	Q92	2N3565			
93	Q93	2N3565			
94	Q94	2N3565			
95	Q95	2N3565			
96	Q96	2N3565			
97	Q97	2N3565			
98	Q98	2N3565			
99	Q99	2N3565			
100	Q100	2N3565			

ZONE	SYM	DESCRIPTION	DATE
A		SEE 60 527	1-15-71
B		SEE 60 589	1-15-71
C		SEE 60 608	1-15-71
D		REVISED PER ESN 1657	1-15-71
E		REVISED PER CN 2154	1-15-71
F		REVISED PER CN 2262	1-15-71
G		WAS 4000-201-00 CN 2384	7/19/73
H		REVISED PER CN 2529	1-15-73
J		REVISED PER CN 2643	10-14-74



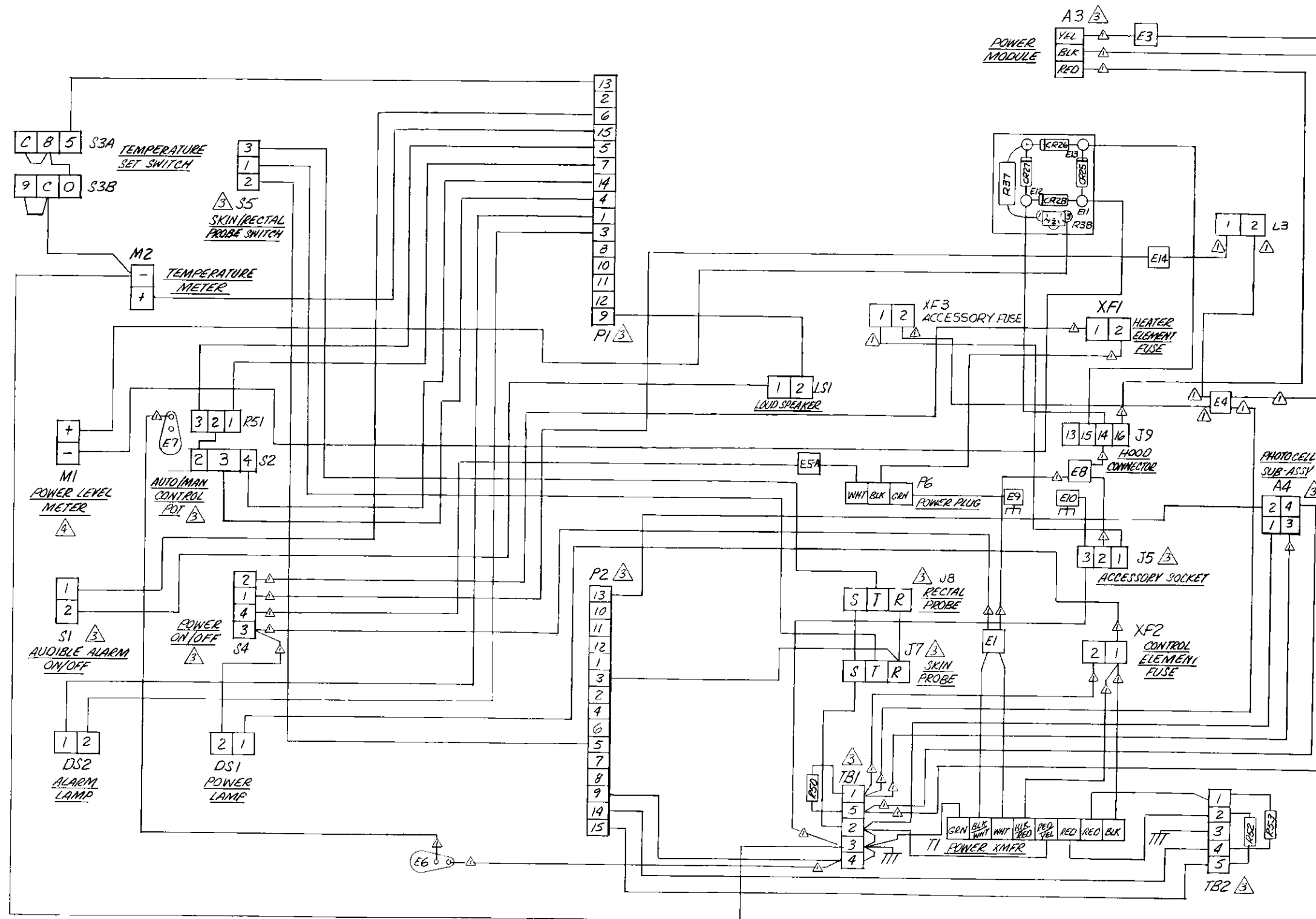
INACTIVE FOR NEW DESIGN,
SUPERSEDED BY D04300115

- ADDITIONAL COMPONENTS APPEAR ON P.C. BOARD ASSY.
 - ONLY FUNCTIONAL COMPONENTS APPEAR IN SCHEMATIC.
 - FOR WIRING HARNESS SEE 4000-404-00.
 - ALL TRANSISTORS ARE 2N3565.
 - ALL DIODES ARE IN914A.
 - ALL CAPACITORS ARE IN MICROFARADS.
 - ALL RESISTORS ARE IN OHMS, $\pm 5\%$, $\frac{1}{2}W$.
- NOTES: UNLESS OTHERWISE SPECIFIED.

QTY	ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
MATERIAL LIST						
1	020200186	4007	UNLESS OTHERWISE SPECIFIED	BY	DATE	
	NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES	DR	1-15-71	
	APPLICATION		TOLERANCES	CHK	1-15-71	
	MATERIAL		X $\pm .050$ ANGULAR $\pm 0.30^\circ$	ENGR	1-15-71	
			.XX $\pm .020$ ALL RADII MAX.	APPD	1-15-71	
			.XXX $\pm .010$ MACH. SURF. $\checkmark$	APPD	1-15-71	
			THREADS: CLASS 2A OR 2B			
			REMOVE BURRS AND SHARP			
			EDGES .020 MAX.			
			MACH. SURF. FLAT WITHIN			
			.001 IN/IN			
			OTHER SURF. FLAT WITHIN			
			.005 IN/IN			
			DO NOT SCALE DRAWING			
			Division of Becton, Dickinson and Company			
			TITLE			
			SCHEMATIC, MANUAL W/MONITOR INFANT WARMER			
			SIZE			
			D			
			SCALE NONE			
			SHEET 1 of 1			

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REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		REVISED PER CN 1857	2/11/71	ES
B		REVISED PER CN 2139		
C		REVISED PER CN 2351	7/16/73	ES
D		WAS 4000-403-00 CN 2384	7/14/73	ES
E		REVISED PER CN 2489	11/1/73	ES
F		REVISED PER CN 2494	11/1/73	ES
G		REVISED PER CN 2643	10/14/74	ES



6. FOR WIRE LIST SEE NO 04200122
5. FOR SCHEMATIC SEE D04300123 & D04200119
4. RECOMMEND USE OF HEAT SINK WHEN SOLDERING M1
3. INDICATED PARTS TO BE SOLDERED WITH HARNESS DURING ASSY USING IMI TOOL NO. 300023
2. HARNESS TO BE BUILT PER IMI TOOL NO 300023
1. INDICATED WIRES ARE TO BE RUN IN A HARNESS SEPARATED FROM HARNESS CONTAINING REMAINING WIRES.

NOTES: UNLESS OTHERWISE SPECIFIED.

ITEM NO.	QTY	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
1	1	4004	UNLESS OTHERWISE SPECIFIED			
2	1	4004	DIMENSIONS ARE IN INCHES			
3	1	4004	TOLERANCES			
4	1	4004	.X ± .050 ANGULAR ± 0°30'			
5	1	4004	.XX ± .020 ALL RADII MAX.			
6	1	4004	.XXX ± .010 MACH. SURF. V			
7	1	4004	THREADS: CLASS 2A OR 2B			
8	1	4004	REMOVE BURRS AND SHARP			
9	1	4004	EDGES .020 MAX.			
10	1	4004	MACH. SURF. FLAT WITHIN			
11	1	4004	.001 IN/IN			
12	1	4004	OTHER SURF. FLAT WITHIN			
13	1	4004	.005 IN/IN			
14	1	4004	DO NOT SCALE DRAWING			
15	1	4004				
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98	1	4004				
99	1	4004				
100	1	4004				

BY	DATE	CHK	ENGR	APPD	APPD
DR	2-11-71		W. Jensen		
CHK					
ENGR	4-5-71				
APPD	4-5-71				
APPD					

TITLE	WIRING HARNESS, SCHEMATIC, PROPORTIONAL CONTROL
SIZE	D
SCALE	NONE
SHEET	1 OF 1



2-9-71

CHK.

WL0+204_2

REV

TITLE WIRING HARNESS SCHEMATIC.
PROPORTIONAL CONTROL

ENGR. *J. Hansen*

4-57

SHEET 1 of 4

APPD.

4-5-7

[illegible]

WIRE RUN LIST

NO.	FROM	TO	NO.	TYPE	GA.	COLOR	LG "
1	P1-1	DS2-1			22	WHT/BLN	
2							
3	P1-3	DS2-2				WHT/ORN	
4	P1-4	S2-2				WHT/YEL	
5	P1-5	R51-3				WHT/GRN	
6	P1-6	S1-1				WHT/BLU	
7	P1-7	R51-1				WHT/VIO	
8	P1-9	LS1-2				WHT/GRY	
9	P1-13	S3A-5				WHT/BLK	
10	P1-14	S2-4				YEL	
11	P1-15	M2+				WHT/RED/YEL	
12							
13							
14							
15	P2-3	J7-R				ORN	
16	P2-5	S5-2				VIO	
17	P2-9	TB1-4				GRN	
18							
19							
20							
21	P2-13	A4-2				WHT/ORN	
22	P2-14	TB2-4				WHT/YEL	
23	P2-15	TB2-5			22	WHT/GRN	
24							
25	XF3-1	J5-1	△		22	BLK	
26	A3 BLACK	E4	△		18	BLK	
27	E4	XF3-2	△		22	BLK	
28	E4	TB1-1	△		18	BLK	
29							
	A3 RED	J9-16	△		22	RED	
31	A3 YEL	E3	△		22	YEL	
32							
33							

TITLE *WIRING HARNESS. SCHEMATIC,
PROPORTIONAL CONTROL*

ENGR.

APPD.

SHEET 2 of 4

REV.	EO.
------	-----

TR	EO.
----	-----

SEE SHEET V

WIRE RUN LIST

NO.	FROM	TO	NO.	TYPE	GA.	COLOR	LG "
34	E3	TB1-5			22	YEL	
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45	E8	J5-2	△			WHT	
46	E8	J7-14	△			WHT	
47	E8	E1	△			WHT	
48							
49							
50			△				
51			△				
52							
53	TI-BLK	XF2-1	△			BLK	
54	TI-BLK/RED	XF2-1	△			BLK/RED	
55	TI-RED	TB2-1				RED	
56	TI-RED	TB2-2				RED	
57	TI-RED/YEL	TB1-2				RED/YEL	
58	TI-WHT	E1	△			WHT	
59	TI-BLK/WHT	E1	△			BLK/WHT	
60							
61	TI-GRN	TB1-3			22	GRN	
62							
63	TB2-1	R53					
64	TB2-4	R53					
65	TB2-2	R52					
66	TB2-5	R52					



2-9-71

WL04200122

REV
G

TITLE *WIRING HARNESS, SCHEMATIC,
PROPORTIONAL CONTROL*

ENGR.

APPD.

SHEET 3 of 4

REV.

LTR	EO
-----	----

SEE SHEET V

WIRE RUN LIST

NO.	FROM	TO	NO.	TYPE	GA.	COLOR	LG "
67	XF2-1	DS1-1 Δ			22	BLK	
68	XF2-2	TB1-1 Δ				BLK	
69							
70							
71	TB1-1	A4-3 Δ				BLK	
72	TB1-1	R50					
73	TB1-5	R50					
74	TB1-5	A4-4 Δ				YEL	
75	TB1-2	TB1-3				BADE WIRE, SLEEVED	
76	TB1-2	A4-1				GRN	
77	TB1-2	J4-S				GRN	
78	TB1-3	TB1-4				BADE WIRE, SLEEVED	
79	TB1-3	J5-3 Δ				GRN	
80							
81	TB1-4	E6 Δ			22	GRN	
82		Δ					
83	E1	S4-3 Δ			18	WHT	
84	E6	E7 Δ			22	GRN	
85		Δ					
86							
87	XF1-1	S4-2 Δ			18	BLK	
88							
89	J7-R	J8-R			22	ORN	
90	J7-T	S5-1				WHT/YEL	
91	J8-T	S5-3				WHT/GRN	
92	J8-S	J7-S			22	GRN	
93	P6 GRN	E9 Δ			16	GRN	
94	P6-BLK	XF1-2 Δ			16	BLK	
95	P6-WHT	E5-A Δ			16	WHT	
96	E5-A	S4-4 Δ			22	WHT	
97	E10	TB1-3			22	GRN	
98	J4-S	J5-S			22	GRN	
99							



2-9-71

CHK.

WL04200122

REV

G

TITLE *WIRING HARNESS, SCHEMATIC,
PROPORTIONAL CONTROL*

ENGR.

SHEET 4 of 4

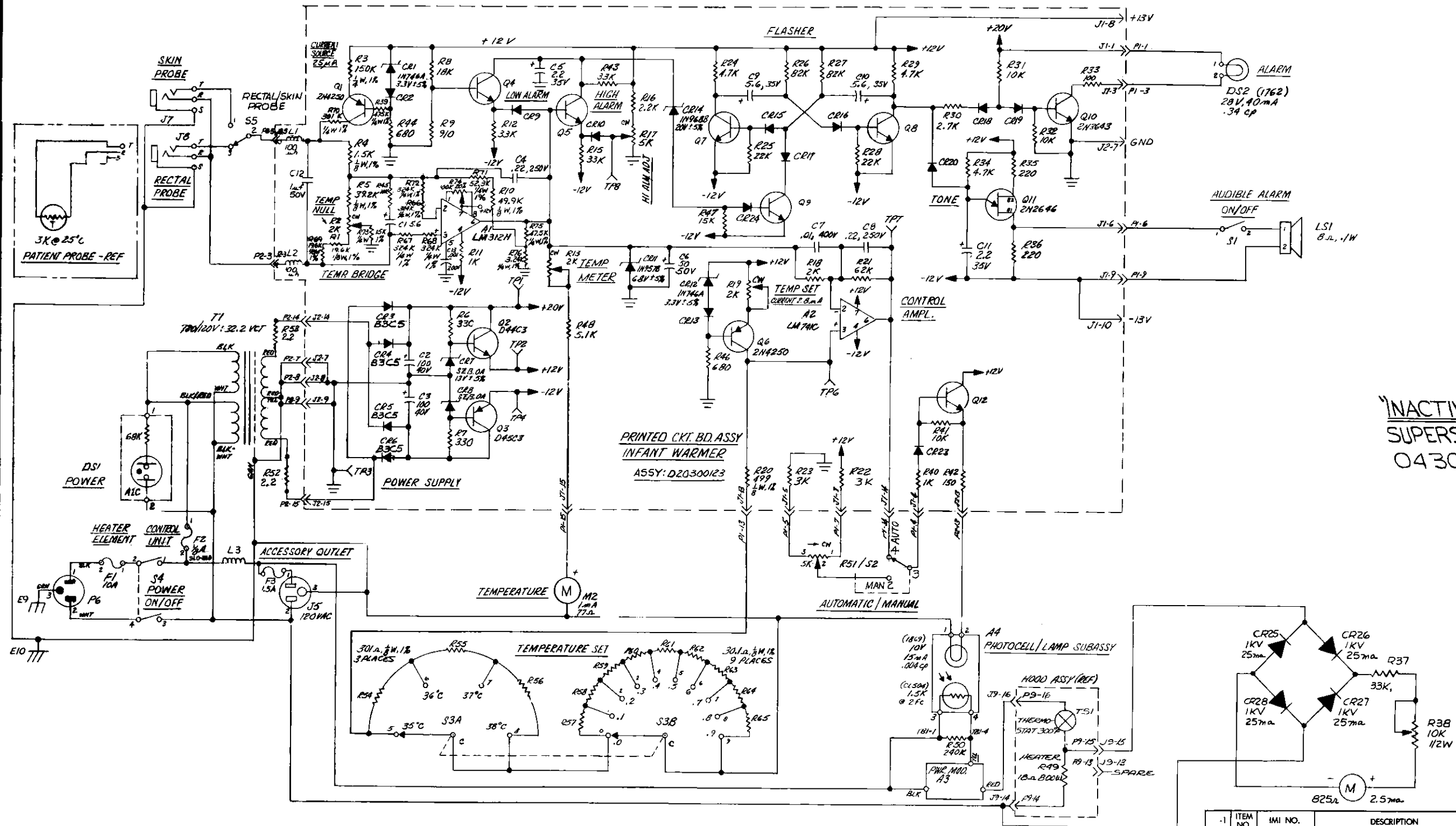
APPD.

IV.	EO:	SEE SHEET X
-----	-----	-------------

WIRE RUN LIST

[illegible]

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		RELEASED TO PROD. ER2761	2-22-74	AMJ
B		INACTIVATED PER CU-3197	9-10-74	BS

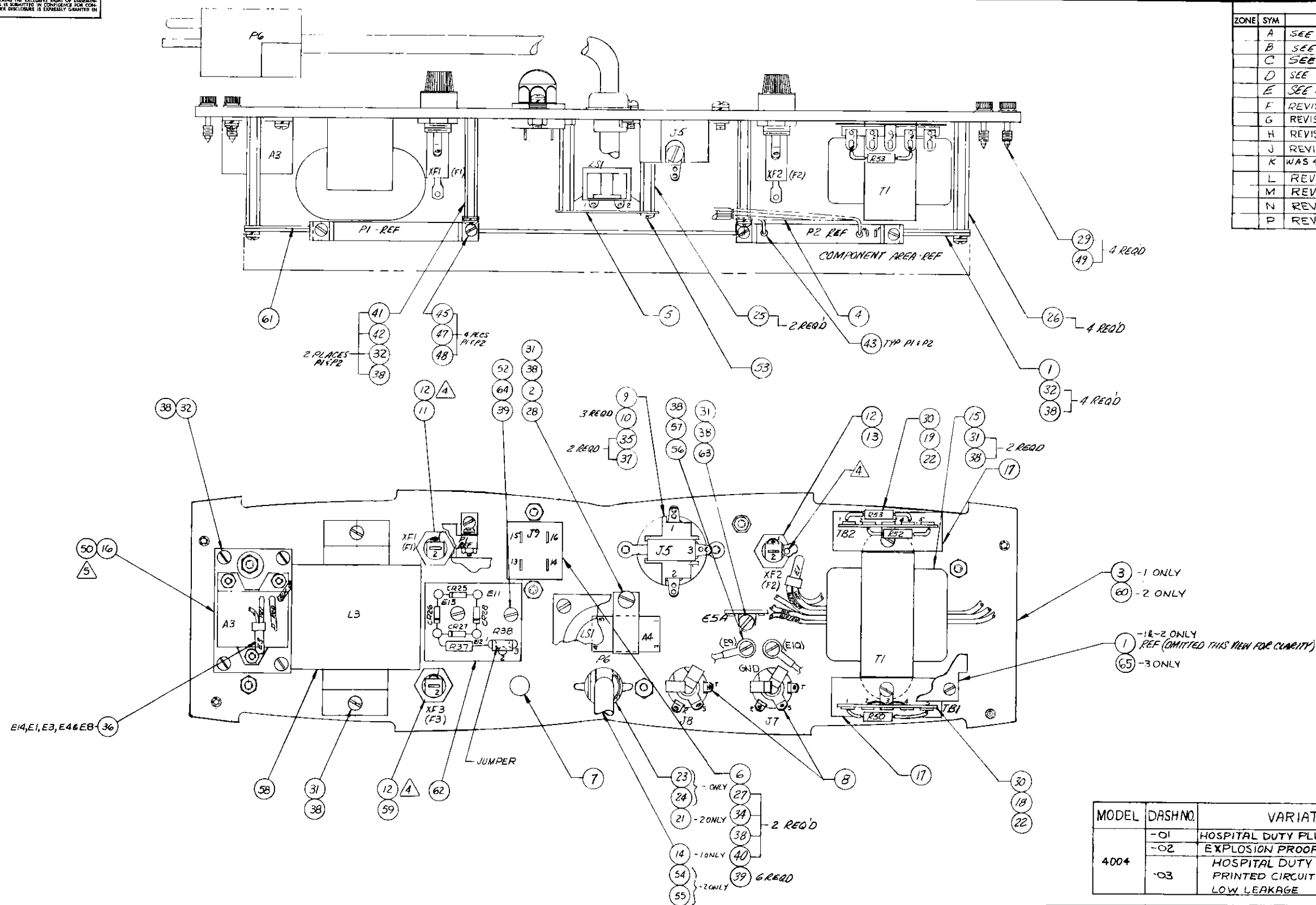


"INACTIVE" AND
SUPERSEDED BY
04300412

5. FOR WIRING DIAGRAM SEE D04200122
 4. ALL TRANSISTORS ARE 2N3365
 3. ALL DIODES ARE IN94A
 2. ALL CAPACITORS ARE IN MICROFARADS
 1. ALL RESISTORS ARE IN OHMS, $\pm 5\%$, $\frac{1}{2}$ W
- NOTES: UNLESS OTHERWISE SPECIFIED.

QTY	ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
MATERIAL LIST						
020200185	4004		UNLESS OTHERWISE SPECIFIED			
	NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES TOLERANCES	BY	DATE	
	APPLICATION		X $\pm .050$ ANGULAR $\pm 0.30^\circ$	DR J. Sandrick	1-31-74	
	MATERIAL		XX $\pm .020$ ALL RADII MAX.	CHK	2-22-74	
			XXX $\pm .010$ MACH. SURF. ✓	ENGR	22 Feb 74	
			THREADS: CLASS 2A OR 2B	APPD	22 Feb 74	
			REMOVE BURRS AND SHARP EDGES .020 MAX.	APPD		
			MACH. SURF. FLAT WITHIN .001 IN/IN			
			OTHER SURF. FLAT WITHIN .005 IN/IN			
			DO NOT SCALE DRAWING			
			TITLE		SIZE	
			SCHEMATIC, PROPORTIONAL CONTROL INFANT WARMER		D	04300123
			SCALE		None	SHEET 1 of 1

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REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		SEE EO 415	1/11	
B		SEE EO 489	1/11	
C		SEE EO 518	1/11	
D		SEE EO 566	1/11	
E		SEE EO 608	1/11	
F		REVISED PER CN1857	2/11/70	ES
G		REVISED PER CN2139	6/16/73	ES
H		REVISED PER CN2189	6/16/73	ES
J		REVISED PER CN2351	2/11/73	ES
K		WAS 4000-447-00 CN2384	7/13/73	ES
L		REVISED PER CN2494	12/16/73	ES
M		REVISED PER CN2643	10/16/74	ES
N		REVISED PER CN2936	16/11/74	ES
P		REVISED PER CN3433	19/11/75	ES

MODEL	DASHNO.	VARIATIONS
4004	-01	HOSPITAL DUTY PLUG,
	-02	EXPLOSION PROOF PLUG,
	-03	HOSPITAL DUTY PLUG, PRINTED CIRCUITBD WITH LOW LEAKAGE

QTY	ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
-----	----------	---------	-------------	----------	---------	-------------

D20200185 4004		UNLESS OTHERWISE SPECIFIED		BY: [Signature] DATE: 2-9-71	
NEXT ASSY USED ON		DIMENSIONS ARE IN INCHES TOLERANCES		DR: [Signature]	
APPLICATION		X ± .050 ANGULAR ± 0°30'		CHK: [Signature]	
MATERIAL		XX ± .020 ALL RADII MAX.		ENGR: [Signature]	
FINISH		XXX ± .010 MACH. SURF. ✓		APPD: [Signature]	
		THREADS: CLASS 2A OR 2B		APPD: [Signature]	
		REMOVE BURRS AND SHARP EDGES .020 MAX.			
		MACH. SURF. FLAT WITHIN .001 IN/IN			
		OTHER SURF. FLAT WITHIN .005 IN/IN			
		DO NOT SCALE DRAWING			
TITLE: REAR PANEL ASSEMBLY, PROPORTIONAL CONTROL				SIZE: D	
SCALE: Full				20200131 P	
SHEET 1					

6. WORKMANSHIP TO BE IN ACCORDANCE WITH A100649
5. COAT BOTTOM SURFACE OF ITEM 16 WITH ITEM 50.
4. INSTALL LOCKING KEY SUPPLIED WITH FUSEHOLDER AS SHOWN 3 PLACES, XFI, XF2 & XF3
3. TEST & CALIBRATE PER IMI SPEC 600133
2. FOR CABLE HARNESS SEE D04200122
1. FOR SCHEMATIC SEE D04300123 & D04200119

NOTES: UNLESS OTHERWISE SPECIFIED.

I.M.I., Division of Becton,
Dickinson and Company **B-D**



TITLE

REAR PANEL ASSEMBLY
PROPORTIONAL CONTROL

I.M.I., Division of Becton, Dickinson and Company [B-D]				BY		DATE	APPLICATION		REV	
[IMI]				DR	CHK		NEXT ASSY	USED ON	LM 20200131	
TITLE							D00200185	4004	SHEET 2 of 4	
REAR PANEL ASSEMBLY PROPORTIONAL CONTROL				ENGR	APPD	9-21-70	REV	SEE	SHEET	
ITEM NO.	QTY.	QTY.	QTY.	QTY.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.	
21	-	1	-	-		BUSHING, STRAIN RELIEF	SR-8P-2	HEYCO		
22	A/R	A/R	A/R		900233	TUBING, SLEEVING, #18 WHT	D-105-18-WHT	DABURN		
23	1	-	1		900251	ADAPTER	A4CF	HEYCO		
24	1	-	1		950069	BUSHING, STRAIN RELIEF	SR-7P-2	HEYCO		
25	2	2	2		950197	STANDOFF, MALE FEMALE, #6-32x1/8	9748-B-0632	ANATOM		
26	4	4	4		A200058-2	STANDOFF, MALE FEMALE, #6-32x2 1/4				
27	2	2	2		950220	AUXILIARY LOCK	#63	CINCH		
28	1	1	1		950248	CABLE CLAMP, 3/4 10	#841	H.H. SMITH		
29	4	4	4		950215	SCREW, CAPTIVE	3200-10	USECO		
30	2	2	2		140016	TERMINAL STRIP, 5 LUG	#54C	CINCH-JONES	781, 782, 783	
31	7	7	7		910001-303	SCREW, PAN HD., #6-32x 3/16				
32	10	10	10		910001-304	↑ ↑ ↑, #6-32 x 1/4				
33										
34	2	2	2		910001-310	↑ ↑ ↑, #6-32 x 5/8				
35	2	2	2		910007 406	SCREW, PAN HD., #5-32 x 3/8 (BLK. COLORED)				
36	5	5	5		140041	SPLICE, CLOSED END	35653	A-MP	81, 3, 4, 8, 14	
37	2	2	2		932074	WASHER, LOCK, SPLIT, #8 (BLK. COLORED)				
38	21	21	21		932013	WASHER LOCK, SPLIT, #6				
39	8	8	8		941013	WASHER, FLAT, #6				
40	4	4	4		020012	NUT 1/4" DIA. X 5/8"				



I.M.I., Division of Becton,
Dickinson and Company [B-D]

TITLE

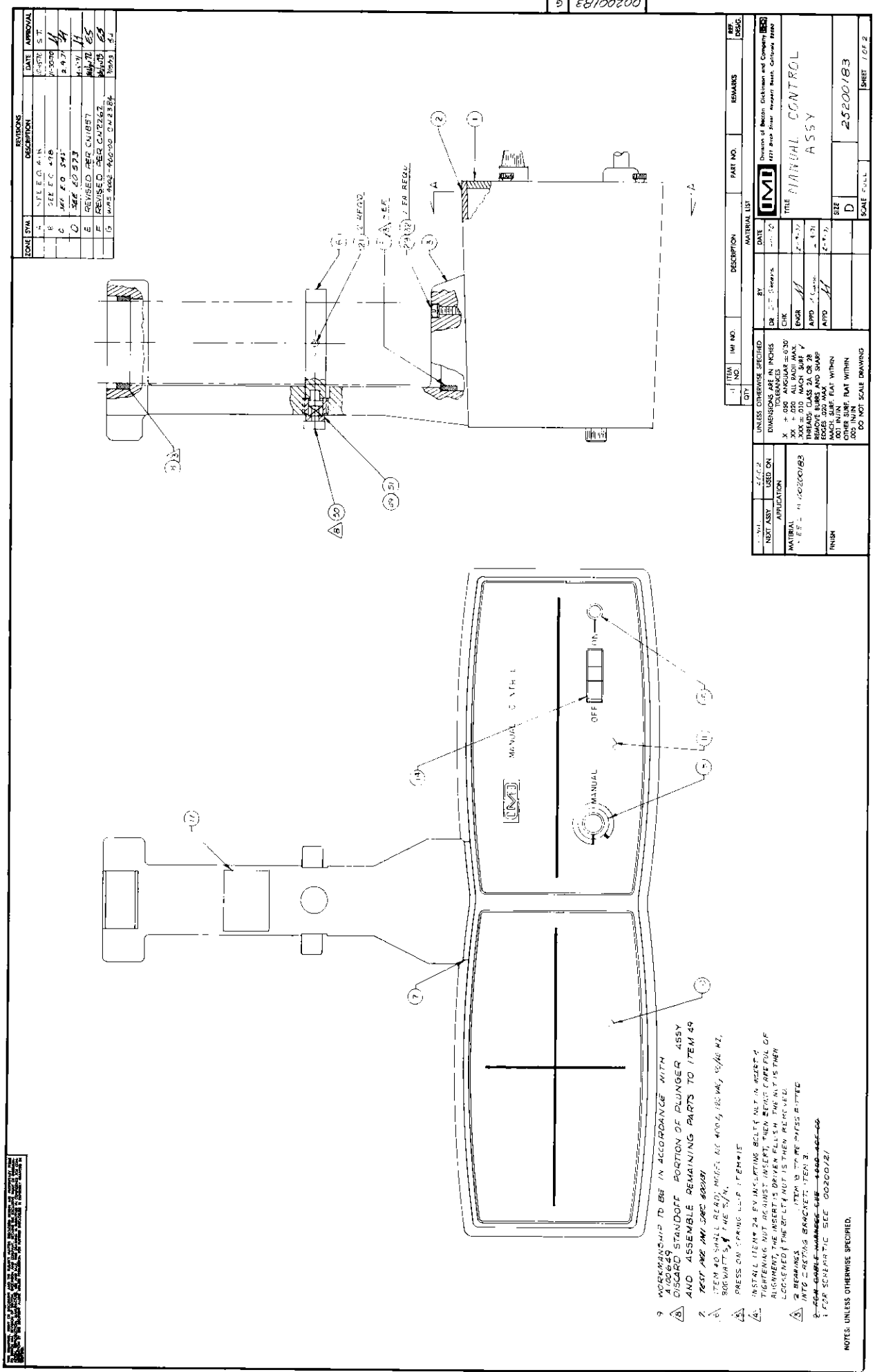
REAR PANEL ASSY,
PROPORTIONAL CONTROL

TITLE										BY		VTE		APPLICATION		REV			
REAR PANEL ASSY, PROPORTIONAL CONTROL										DR <i>J. Porter</i>		1-26-71		NEXT ASSY		USED ON		LM 20200131	
										CHK				D00200185		4004		SHEET 3 of 4	
										ENGR				REV		SEE SHEET 1			
										APPD				LTR					
ITEM NO.	QTY.	-1	-2	-3	-4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.									
41	2	2	2	2	2	950246	BRACKET, ANGLE	4928-2	SEASTROM										
42	2	2	2	2	2	A200058-1	STANDOFF, MALE FEMALE, #6-32x2												
43	21	21	21	21	21	900271	SHRINK TUBING, BLK, 5/8 LONG	FIT-221-1/8	ALPHA										
44	4	4	4	4	4		DIODE, 1KV, 25ma	25D10	AF1	CR25-28									
45	4	4	4	4	4	910001-208	SCREW, PAN HD, #4-40x1/2												
46	1	1	1	1	1		RESISTOR, 33K, 1/2W, 5%			R57									
47	4	4	4	4	4	932012	WASHER, SPLIT LOCK, #4												
48	4	4	4	4	4	920012	NUT, PLAIN/HEX, #4-40												
49	4	4	4	4	4	940015	WASHER, FLAT, #10												
50	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	500108	THERMACOTE	251	THERMALLOY										
51	1	1	1	1	1		POTENTIOMETER 10K, 1/2W, 20%	3389H-1-103	BOURN'S	R38									
52	2	2	2	2	2	910040-306	SCREW, NYLON, PAN HD, #6-32x7/16												
53	2	2	2	2	2	910040-304	SCREW, NYLON, PAN HD, #6-32x1/4												
54	-	1	-	-	-		CAP, EXPLOSION PROOF	#24312	BELDEN	P6									
55	-	1	-	-	-		CORD, COIL, RETRACTILE	#670-2	ALPHA										
56	2	2	2	2	2	A1164410-025	SCREW, PAN HD, #6-32x3/16 LG												
57	2	2	2	2	2		LUG, CRIMP	R4158SF	HOLLINGSWORTH	E9 E10									
58	1	1	1	1	1	A200041	CHOKE			L3									
59	1	1	1	1	1		FUSE, 1.5A SLO-BLO	31301.5	LITTLE FUSE	F3									
60	-	1	-	-	-	D02200157-02	REAR PANEL												



REAR PANEL ASSEMBLY PROPORTIONAL CONTROL

[illegible]



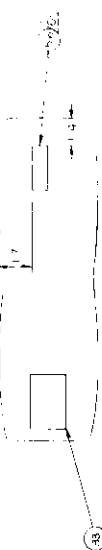
FORM	SYMBOL	DESCRIPTION	DATE	APPROVAL
1	FILED	415	1-25-55	S.T.
2	SEE E.C. 415		2-2-57	H
3	REV. 20 545		4-1-57	H
4	REV. 20 573		4-1-57	H
5	REVISED PER CUBERT		4-1-57	ES
6	REVISED PER CARTZ		4-1-57	ES
7	WAS 4000-440-00 0 40284		4-1-57	2-1

UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES		TOLERANCES	
XX	± .005	ALL SURF. FINISH	XX	± .005	ALL SURF. FINISH
XXX	± .010	ALL SURF. FINISH	XXX	± .010	ALL SURF. FINISH
THREADED CLASS 2A OR 2B		THREADED CLASS 2A OR 2B		THREADED CLASS 2A OR 2B	
EDGES .020 MAX		EDGES .020 MAX		EDGES .020 MAX	
ALL SURF. FLAT WITHIN		ALL SURF. FLAT WITHIN		ALL SURF. FLAT WITHIN	
OTHER SURF. FLAT WITHIN		OTHER SURF. FLAT WITHIN		OTHER SURF. FLAT WITHIN	
DO NOT SCALE DRAWING		DO NOT SCALE DRAWING		DO NOT SCALE DRAWING	

TEST NO.	QTY.	DESCRIPTION	PART NO.	REMARKS	REV.

DATE	BY	CHK	APPROVED
1-25-55	S.T.	H	H

UNION	00200/183	00200/183
00200/183	00200/183	00200/183



NOTES: UNLESS OTHERWISE SPECIFIED.



I.M.I., Division of Becton,
Dickinson and Company [B.D.]

MANUAL CONTROL ASSEMBLY

BY	DATE
DR <i>M. P. Lee</i>	9-18-70
CHK	
ENGR <i>M</i>	9-19-70
APPD	

APPLICATION	
NEXT ASSY	USED ON
FINAL	4002

REV	LM25200183	REV
	SHEET 2 of 3.	

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	REV	PART NO.	REMARKS	REF. DESIG.
21	3	3			950204	SCREW, SET, HALF DOWEL, #10-24 X .25		CAD PLATE "NYLOK"	DUKAMON	
22	1	1				INSULATED SHAFT EXTENSION		39023	JAMES MILLEN CO	
23										
24	2	2			950199	INSERT, #6-32		N13832-12	TAP-LOK	
25	2	2			910001-308	SCREW, PAN HD, #6-32 X 1/2				
26	4	4			910001-312	↑ ↑ ↑, #6-32 X 3/4				
27	2	2			910001-606	↑ ↑ ↑, #10-32 X 3/8				
28	4	4			910001-708	SCREW, PAN HD, CROSS RECESSED, 1/4-20 X 1/2				
29	2	2			911207-626	SOCKET HD. CAP SCREW 10-32 X 1 5/8" LG				
30	4	4			9200013	NUT, HEX. #6-32				
31	6	6			93201-3	WASHER, LOCK, SPLIT, #6				
32	2	2			93201-5	WASHER, LOCK, SPLIT, #10				
33	1	-			C101615-8	NAME PLATE				
34	2	2			950223	SPACER, 3/8" DIA, #10 X 3/4" LG.		9325-B194	AMATOM	
35	1	1			900195	BOX, 20 1/2 X 12 X 16 HIGH 200 LB. TEST				
36	1	1			900197	FOAM INSERT FOR IMI #900175				
37	1	1			900109	BAG, POLY 15 X 20 X .003			KENT LANDSBERG	
38	1	1			600114	OPERATING INSTRUCTIONS BOOKLET				
39	1	1			600011	WARRANTY CARD				
40	1	1			900104	IDENT. PLATE				



IMC, Division of Becton,
Dickinson and Company B-D

BY _____ DATE _____

APPLICATION

USED ON

REV

TITLE

MANUAL CONTROL ASSEMBLY

SHEET 3 of 3

LM 2520 33

DR

CHK

ENGR

APPD

REV

FINAL

4002

2384

2262

1857

573

545

498

418

EO

LTR

F

G

PART NO.

1416-6

DESCRIPTION

TERMINAL LUG, #6

IMI NO.

140017

QTY. -1

1

QTY. -2

1

QTY. -3

1

QTY. -4

1

QTY. -5

1

QTY. -6

1

QTY. -7

1

QTY. -8

1

QTY. -9

1

QTY. -10

1

QTY. -11

1

QTY. -12

1

QTY. -13

1

QTY. -14

1

ITEM NO.

41

42

43

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66

67

REMARKS

H.H. SMITH

REF. DESIG.

EG

SCREW, PAN HD, #6-32 x 1/4

WASHER, FLAT, 1/4" .265 10 X .500 00 X

WASHER, FLAT, 1/4" .03 THK, STL. CAD. ALT

WASHER, FLAT, 1/4" .261 10 X 1.500 00 X

BUSHING

PLUNGER

LOCTITE

COMMERCIAL

EQUN AN 960

5702-104

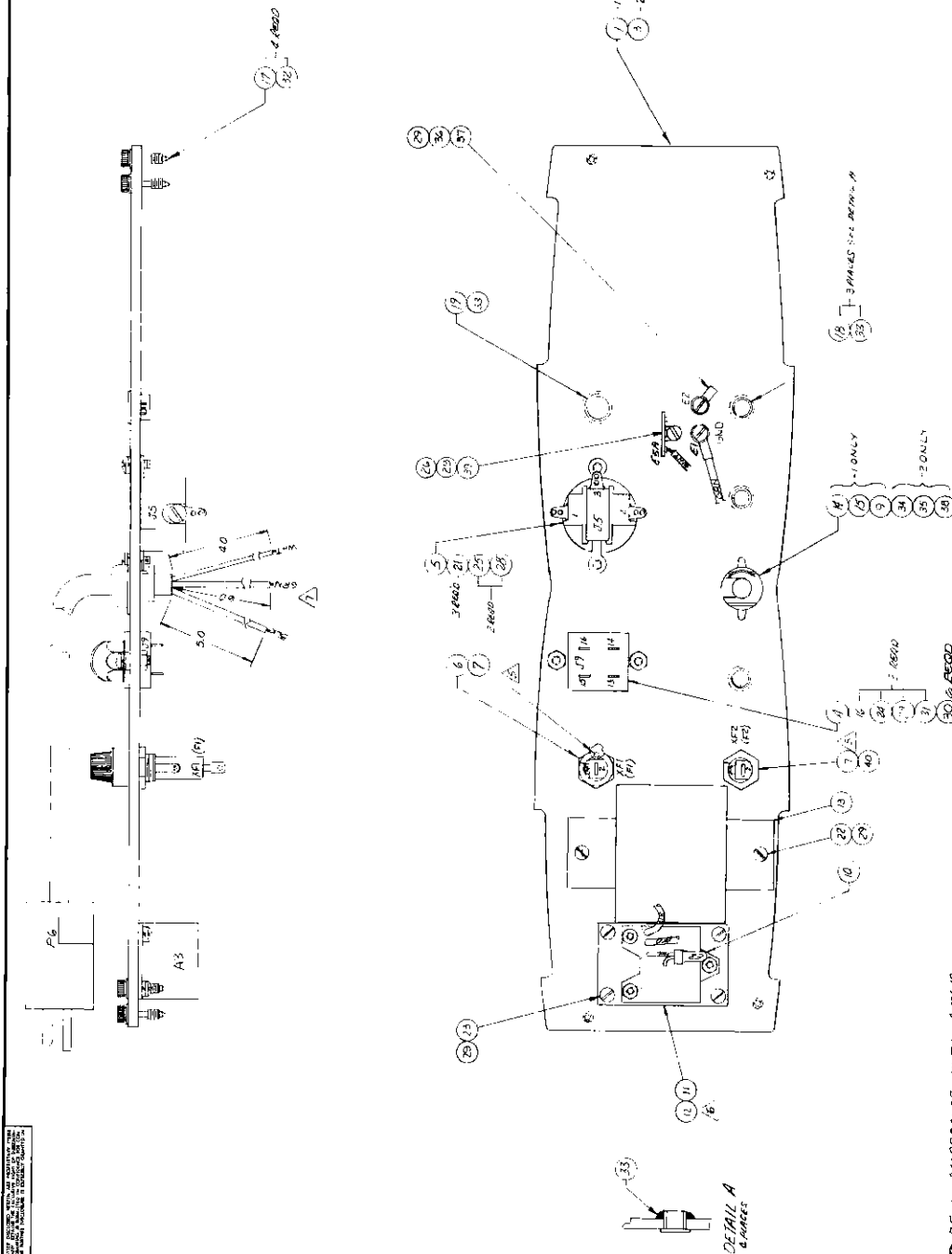
56-10-803-10

#222

R.G. WALLACE

SEASTROM

SOUTHCO



FORME	SYM	REWORK	DATE	APPROVAL
		DISCOUNT		
A		\$545 600 512	1/10	
B		\$545 600 512		
C		\$545 600 520	1/10	
D		\$545 600 520		
E		REVISED PER CNA57	1/11	2-5-77
F		REVISED PER CNA59	1/11	1-5-77
G		REVISED PER CNA57	1/11	6-5
H		REVISED PER CNA57	1/11	6-5
I		REVISED PER CNA57	1/11	6-5
J		REVISED PER CNA57	1/11	6-5
K		REVISED PER CNA57	1/11	6-5

8. WORKMANSHIP TO BE IN ACCORDANCE WITH 4.000009

9. PREPARE POWER CORD AS SHOWN

10. INTERNAL SURFACE OF ITEM 11 WITH ITEM 12

11. INSTANT LOCKING KEY SUPPLIED WITH FUSEBLOWERS AT SHOWN

12. TEST FUSEBLOWERS PER MIL-SPEC 6000033

13. REMOVE PAINT UNDER FL TO EXPOSE

14. ADOPTIVE GROUNDING

15. 2-4MM JAWBITE-HARNESS-SEE 4000-400-50-

16. FOR STRENGTH SEE 600200121

NOTES: UNLESS OTHERWISE SPECIFIED.



J.M.I., Division of Becton,
Dickinson and Company [B.D.]

WAS 4000-449-00

D SIZE ASSY

TITLE

REAR PANEL ASSEMBLY
(MANU-CONTROL)

I.M.I., Division of Becton, Dickinson and Company [B-D]										APPLICATION		REV									
BY										NEXT ASSY		USED ON		LM00200134							
DATE										D00200183		4002		SHEET 1 of 2							
CHK										REV		LTR									
ENGR										EO		A									
APPD 1 & 2										419		B									
5-21-70										520		C									
										568		D									
										1857		E									
										2139		F									
										2262		G									
										2351		H									
										2494		J									
										K											
TITLE										PART NO.		REMARKS		REF. DESIG.							
REAR PANEL ASSEMBLY (MANU-CONTROL)										DESCRIPTION		IMI NO.		QTY. -1		QTY. -2		QTY. -3		QTY. -4	
1										REAR PANEL		D00200157-01		1		-					
2										CABLE HARNESS ASSY, REAR PANEL		400-405-00		1		1					
3										REAR PANEL		D00200157-02		-		1					
4										CONNECTOR, RECEPT., 4 PIN		105092		1		1				J9	
5										OUTLET, SINGLE (ACCESSORY)		105081		1		1				J5	
6										FUSE, 10 A		120003		1		1				F1	
7										FUSE HOLDER (HEATER ELEMENT)		120005		1		1				XF122	
8																					
9										POWER CORD		B20300004-01		1		-				P6	
10										SPRICE, CLOSED END		140041		3		3				E3,4,14	
11										POWER MODULE		B102557-1		1		1				A3	
12										THERMACOTE		500108		A/R		A/R					
13										CHOKE		A200041		1		1					
14										ADAPTER		900251		1		-					
15										BUSHING, STRAIN RELIEF		950069		1		-					
16										AUXILIARY LOCK		950220		2		2					
17										SCREW, CAPTIVE		950215		4		4					
18										HOLE PLUG, 3/8 DIA		950072		4		4				HEYCO	
19										HOLE PLUG, 1/2 DIA		950218		1		1				HEYCO	
20										SCHEMATIC, INFRANT.		B00200121-01		REF							



I.M.I., Division of Becton,
Dickinson and Company [B-D]

BY
[Signature]

DATE
15-72

APPLICATION
NEXT ASSY
USED ON

LM00200 34
SHEET 2 of 2

REV
K

TITLE

REAR PANEL ASSEMBLY
(MANUAL CONTROL)

CHK

ENGR

APPD

REV

000200183

4002

2384
2351
2262
2139
1857
568
520
458
419
EO

K
J
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F
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D
C
B
A
LTR

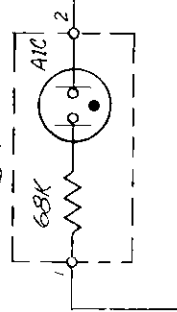
ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
21	3	3			140050	TERMINAL LUG, #8	1416-8	H.H. SMITH	
22									
23	4	4			910001-304	SCREW, PAN HD 6-32 x 1/4			
24	2	2			910001-310	SCREW, PAN HD, #6-32 x 5/8			
25	2	2			910007-406	SCREW, PAN HD, #8-32 x 5/8 (BLK) (one)			
26	1	1			910001-303	SCREW, PAN HD, 6-32 x 3/16			
27									
28	2	2			932074	WASHER, LOCK, SPLIT, #8 (BLK) (one)			
29	11	11			932013	WASHER, LOCK, SPLIT, #6			
30	6	6			941013	WASHER, FLAT, #6			
31	2	2			920013	NUT, PLAIN HEX, #6-32			
32	4	4			940015	WASHER, FLAT, #10			
33	APR	APR			500149	SEAL, SILICONE, BLACK		G.E.	
34	-	1				CAP, EXPLOSION PROOF	#24312	HUBBELL	P6
35	-	1				CORD, COIL, RETRACTILE	#67012	ALPHA	
36	2	2				SCREW, HEX, SLOTTED GREEN	#6-32 x 3/16 LG		
37	2	2				LUG, CRIMP	R4158SF	HOLLINGSWORTH	E1 E2
38	-	1				STRAIN RELIEF	SR-8P-2	HEYCO	
39	1	1				TERMINAL, STRIP TIE DOWN	863	H.H. SMITH	E5
40	1	1				FUSE 1.5A SLO-BLO	31301.5	LITTLE FUSE	F2

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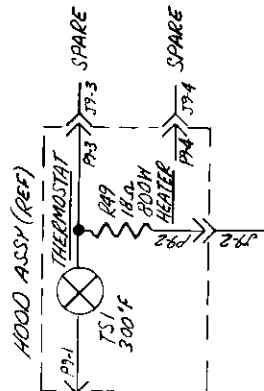
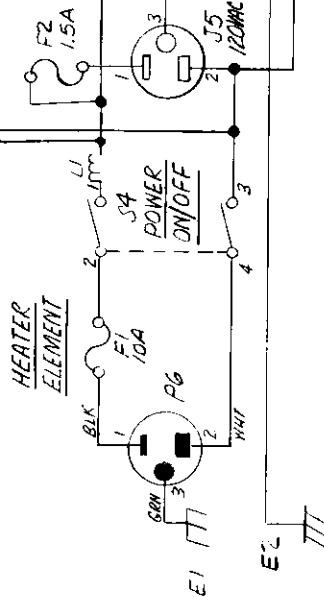
REVISIONS			
ZONE	SYM	DESCRIPTION	DATE
	A	SEE E0 585	4-15-77
	B	REVISED PER CN1857	8/10/78
	C	REVISED PER CN2262	10/10/78
	D	WAS 4000-202-00 CN2384	7/18/79

POWER

DS1



HEATER ELEMENT



ITEM NO.	QTY	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
1					

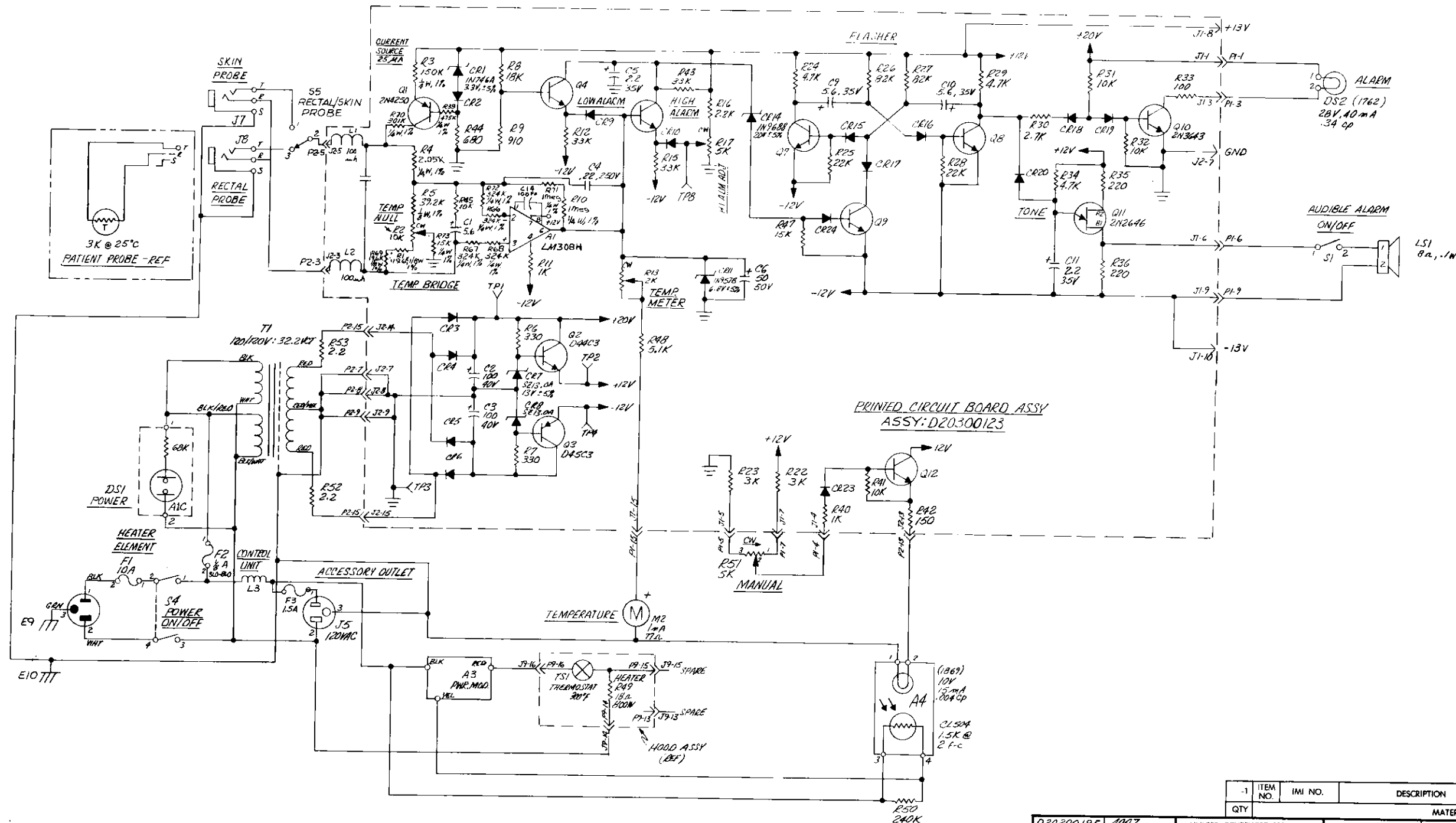
MATERIAL LIST		BY: <i>Stanley</i>		DATE: 9-24-78	
DR: <i>Stanley</i>	CHK: <i>Stanley</i>	ENGR: <i>Stanley</i>	APPD: <i>Stanley</i>	DATE: 9-24-78	10-5-78
UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES			
TOLERANCES		X = .050 ANGULAR ± 0°30'			
		XX = .020 ALL RADII MAX.			
		XXX = .010 MACH. SURF. ✓			
		THREADS: CLASS 2A OR 2B			
		REMOVE BURRS AND SHARP EDGES .020 MAX.			
		MACH. SURF. FLAT WITHIN .001 IN/IN			
		OTHER SURF. FLAT WITHIN .005 IN/IN			
		DO NOT SCALE DRAWING			
FINAL	4002	USED ON			
NEXT ASSY		APPLICATION			
MATERIAL					
FINISH					
TITLE		SCHEMATIC, MANUAL CONTROL			
SIZE		B			
SCALE		None			
SHEET		1 of 1			

FOR WIRING HARNESS SEE 4000-405-00

NOTE: UNLESS OTHERWISE SPECIFIED

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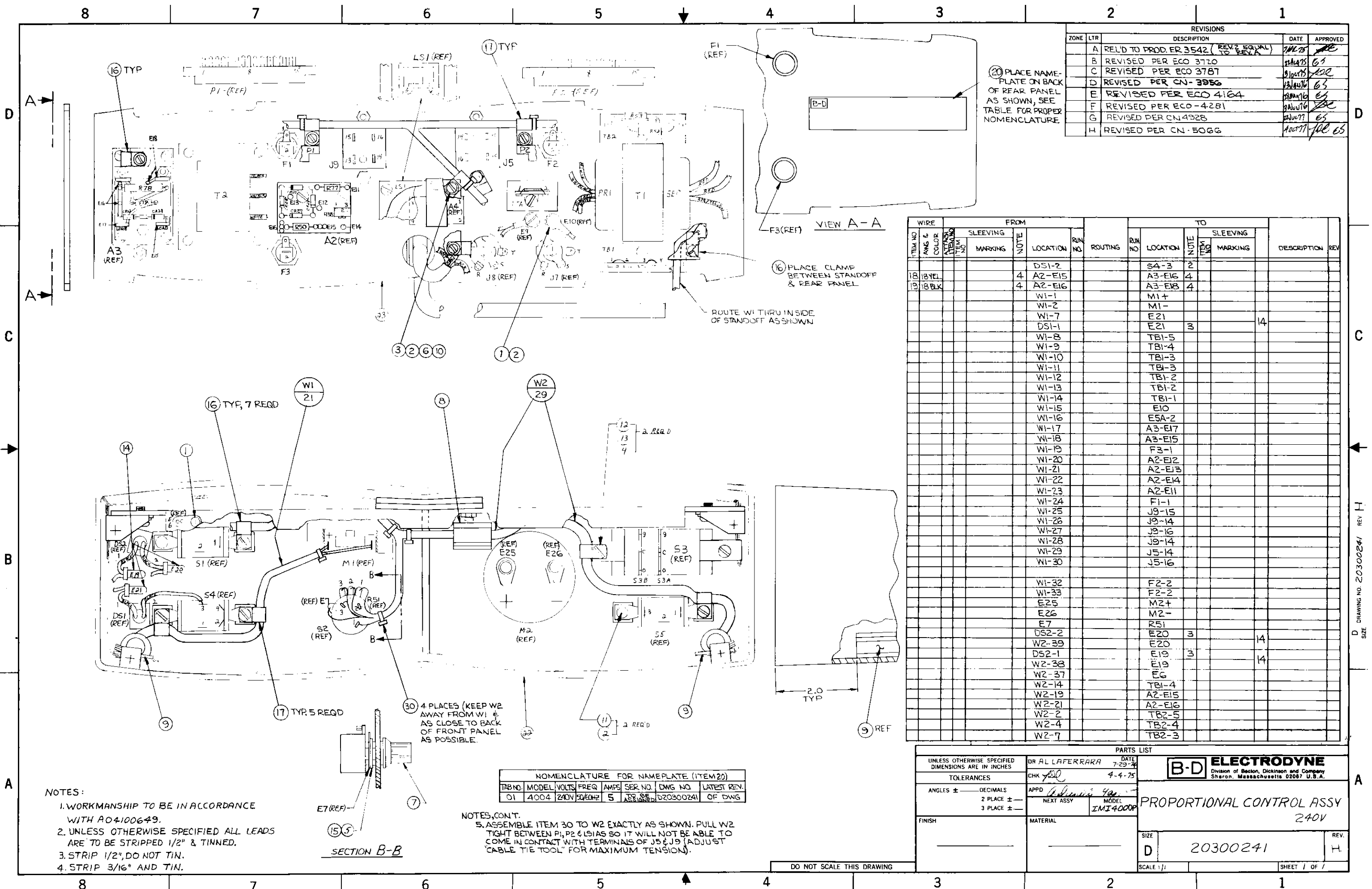
REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVED
A		RELEASED TO PROD. ER 2751	2-22-74	CS
B		REVISED PER ECO-3441	2-22-74	CS
C		REVISED PER ECO-3980	2-22-74	CS
D		REVISED PER ECO-4258	2-22-74	CS



6. ADDITIONAL COMPONENTS APPEAR ON P.C. BD. ASSY
 - ONLY FUNCTIONAL COMPONENTS APPEAR ON SCHEMATIC
 5. FOR WIRING DIAGRAM SEE D04200122.
 4. ALL TRANSISTORS ARE 2N3565
 3. ALL DIODES ARE 1N914A
 2. ALL CAPACITORS ARE IN MICROFARADS
 1. ALL RESISTORS ARE IN OHMS, 1/2W
- NOTES: UNLESS OTHERWISE SPECIFIED,

QTY	ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
-----	----------	---------	-------------	----------	---------	-------------

D20200185 4007		UNLESS OTHERWISE SPECIFIED		BY DATE	
NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES TOLERANCES		DR. M. SANDOCK 1-31-74	
APPLICATION		X ± .050 ANGULAR ± 0°30'		CHK. B. J. 2-22-74	
MATERIAL		XX ± .020 ALL RADII MAX.		ENGR. J. J. 2-22-74	
FINISH		XXX ± .010 MACH. SURF. ✓		APPD. J. J. 2-22-74	
		THREADS: CLASS 2A OR 2B			
		REMOVE BURRS AND SHARP EDGES .020 MAX.			
		MACH. SURF. FLAT WITHIN .001 IN/IN			
		OTHER SURF. FLAT WITHIN .005 IN/IN			
		DO NOT SCALE DRAWING			
TITLE				SIZE	
SCHEMATIC, MANUAL W/MONITOR INFANT WARMER				D	
SCALE NONE				SHEET 1 OF 1	



'D' ASSY

**ELECTRODYNE**Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

20300241

REV.
H

TITLE

PROPORTIONAL CONTROL ASSY
240V

SHEET

1 OF 1

USED ON INFANT WARMER

DRAWN	DATE	CHECKED	DATE	APPROVED	DATE
AL LAFERRARA	7-26-74	JAC	4-4-75	G. [Signature]	1/24/75

ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.			
					01			
1	A	1164410-025	SCREW, PAN HD, 6-32 X 3/16 LG		2			
2	A	1183600-136	WASHER, LOCK SPLIT, #6		8			
3	A	1164509-325	SCREW, NYLON, PAN HD, #6-32 X 3/8 LG		1			
4	B	02200167-01	BROKE, SWITCH		2			
5	A	1183621-002	WASHER, LOCK, NUT 7000 3/8" I.D.		1			
6	A	1141400-064	NUT, PLAIN, HEX, 6-32		1			
7	A	1137008-001	KNOB, SKIRTED		1			
8	A	1116501-001	CLAMP, CABLE		1			
9	A	1116501-003	CLAMP, CABLE		2			
10	A	1183500-805	WASHER, FLAT, #6		1			
11	A	1164410-030	SCREW, PAN HD, 6-32 X 1/2"		6			
12	A	1164410-043	SCREW, PAN HD, 8-32 X 3/8"		2			
13	A	1183600-137	WASHER, LOCK SPLIT, #8		2			
14	A	1024000-011	SPLICE CLOSED END	E19,20,21	3			
15	A	1141408-001	NUT, HEX, 3/8		1			
16	A	1116507-003	CLAMP, CABLE		7			
17	A	1116507-002	CLAMP, CABLE		5			
18	A	1185501-048	WIRE, YELLOW, 18 AWG		6"			
19	A	1185501-028	WIRE, BLACK, 18 AWG		5 1/2"			
20	C	02101615-16	NAME PLATE		1			
21	C	21300248-01	A.C. CABLE ASSY	W1	1			
22	D	21300238-01	HOUSING ASSY		1			
23	D	20300240-01	REAR PANEL ASSY		1			
24	D	04300413	SCHEMATIC		REF			
25	A	04300411	TEST SPEC		REF			
26	A	04300113	PRODUCT SPEC		REF			
27	D	04300444	DOCUMENT PLAN		REF			
28	A	05000012	TEST PROCEDURE		REF			
29	D	21300239-01	CABLE LOGIC ASSY	W2	1			
30	A	1116500-002	CLAMP, CABLE		7			

NOTES:

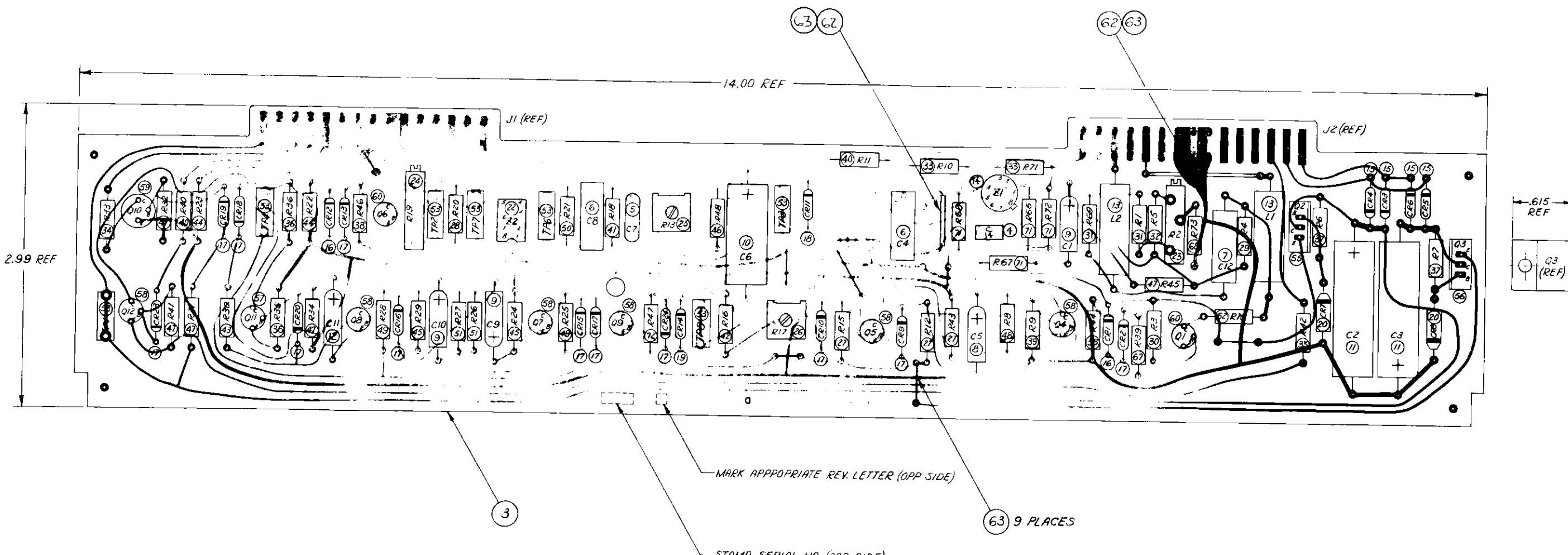
REVISIONS				
ZONE	DATE	DESCRIPTION	DATE	APPROVED
A	2-22-74	RELEASE TO PRODUCTION PER ERN 2751	2-22-74	SMJ
B	11-6-74	REVISED PER CN 3099	11-6-74	ES
C	11-6-74	REVISED PER CN 3187	11-6-74	ES
D	11-6-74	REVISED PER CN 3197	11-6-74	ES
E	11-6-74	REVISED PER ECO - 3441	11-6-74	ES
F	11-6-74	REVISED PER ECO 3787	11-6-74	ES
G	11-6-74	REVISED PER ECO - 3980	11-6-74	ES
H	11-6-74	REVISED PER ECO - 4258	11-6-74	ES
J	11-6-74	REVISED PER ECO - 4272	11-6-74	ES

D

C

B

A



- NOTES -
1. NO COMPONENT LEAD OR SOLDER SHALL EXCEED .09 HIGH.
 2. CIRCUIT BOARD COMPONENT ASSEMBLY SHALL BE IN ACCORDANCE WITH SPECIFICATION A04100649.
 3. ENCIRCLED NUMBERS REFER TO ITEMS ON PL20300123.

FOR PARTS LIST SEE PL20300123

QTY PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DR M.SANDOCK	DATE 1-25-74		
TOLERANCES		CHK SMJ	DATE 2-22-74		
ANGLES ± DECIMALS		APPD G. Danish	DATE 2-22-74		
2 PLACE ±		NEXT ASSY	MODEL		
3 PLACE ±		D20200131	400444007		
FINISH		MATERIAL SEE PL20300123			
SIZE D		20300123		REV J	
SCALE 3/4		SHEET 1 OF 1			

DO NOT SCALE THIS DRAWING

DRAWING NO. 20300123 REV J



ELECTRODYNE

Division of Becton, Dickinson and Company **B-D**

15 Southwest Park, Westwood, Massachusetts 02090

DRAWN	DATE	CHECKED	DATE	APPROVED	DATE
M. SANDOCK	1-31-74	BMD			2-28-74

QTY.	PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.
4	-3		
	-2		
	-1		

REF	MASTER PATTERN	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
				1
				2
				3
			C14	4
			C7	5
			C4, C8	6
			C12	7
			C5	8
			C4, C9, C10	9
			C6	10
			C2, C3	11
			C11	12
			L1, L2	13
			Z1	14
			CR3, 4, 5, 6	15
			CR1, 12	16
			CR2, 9, 10, 13, 15 16, 17, 18, 19, 20, 23, 24	17
			CR11	18
			CR14	19
			CR7, 8	20
				21
			Z2	22

PL 20300123

USED ON 020200131

SHEET 1 OF 3

J

REV.

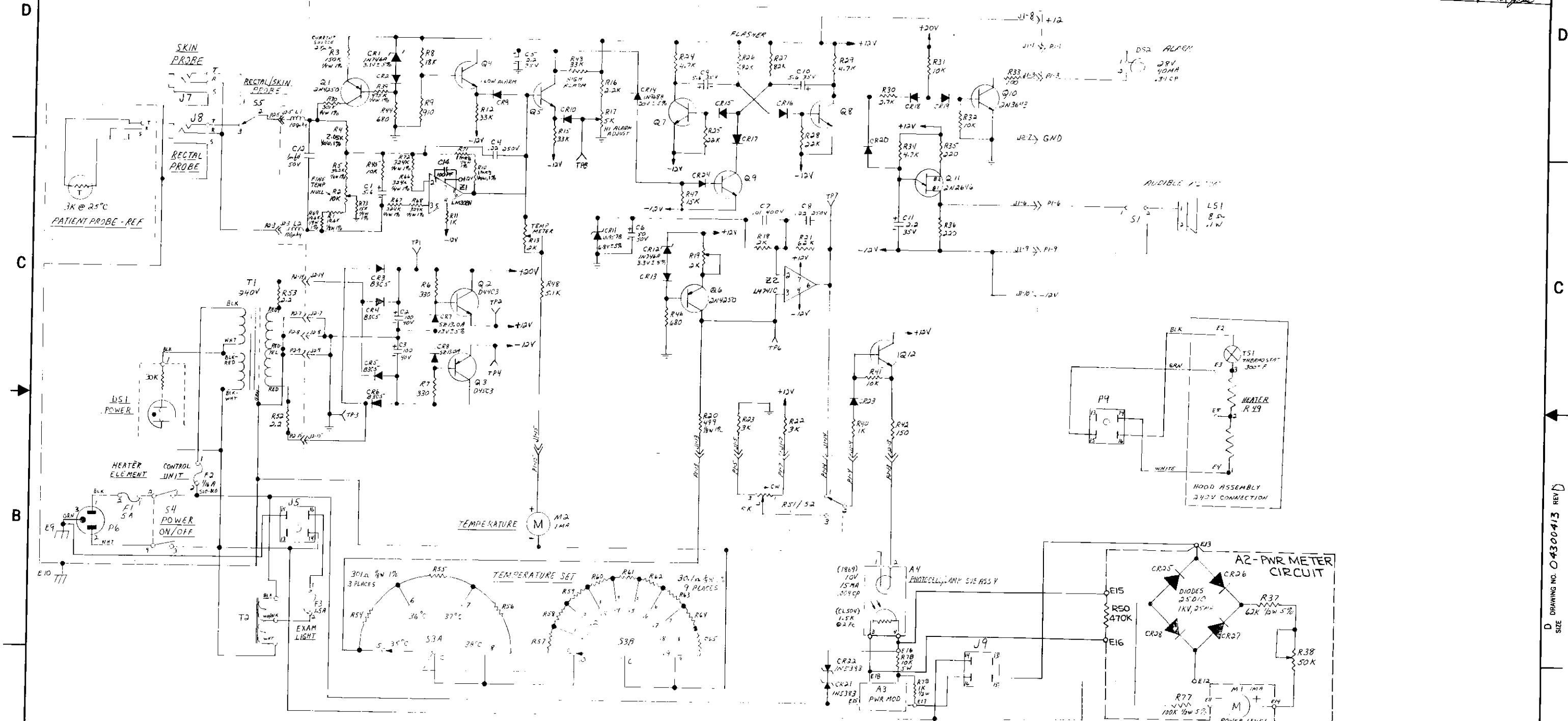
PRINTED WIRING ASSY,

INFANT WARMER

DATE $\frac{1}{5}$	USED ON $\frac{1}{5}$	SHEET 2 C	PL 20300/23	REV J
--------------------	-----------------------	-----------	-------------	-------

QTY.	PER	H NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
		-/-					
		2	01-2600	A1047002-382	RESISTOR, 82K, 1/2 W, ±5%	R26,27	51
		1	01-7902	A1050133-301	RESISTOR, 301K, 1/4 W, ±1%	R70	52
		7	01-5564	A1036801-001	TEST POINT	TP1-4, 6,7,8	53
							54
		1	01-5562	A1079606-001	TRANSISTOR D44C3	Q2	55
		1	01-5563	A1079705-001	TRANSISTOR D45C3	Q3	56
		1	01-0952	A1080100-001	TRANSISTOR 2N2646	Q11	57
		6	01-2424	A1079601-001	TRANSISTOR 2N3565	Q4,5,7 8,9,12	58
		1	01-5569	A1079607-001	TRANSISTOR 2N3643	Q10	59
		2	01-5561	A1079702-003	TRANSISTOR 2N4250	Q1,6	60
							61
		A/R	01-0987	A1169001-002	SLEEVING, TEFLON, NO.22		62
		A/R	01-0233	A1185500-005	WIRE, BUS, NO.22 AWG		63
		R _{EF}		D04300412	SCHEMATIC, 120V		64
		R _{EF}		D04300413	SCHEMATIC, 240V		65
		R _{EF}		D04300115	SCHEMATIC		66
		1	01-2613	A1050133-475	RESISTOR, 475K, 1/4 W, 1%	R39	67
		1		A1050132-150	RESISTOR, 15K, 1/4 W, 1%	R73	68
							69
							70
		4		A1050133-324	RESISTOR, 324K, 1/4 W, 1%	R66,67 68,72	71
		1	01-2340	A1047002-315	RESISTOR, 15K, 1/2 W, ±5%	R47	72
							73
							74
							75
							76
							77
			USED ON	SHEET 3 OF 3		PL 20300123	REV J
DATE 1/31/74							

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	REL'D TO PROD. ER 3542 (REV'S EQUAL TO REV A)	MAR 25	HR
	B	REVISED PER ECO-3980	3/29/76	BS
	C	REVISED PER ECO-425A	4/14/76	BS
	D	REVISED PER ECO-428	4/14/76	BS



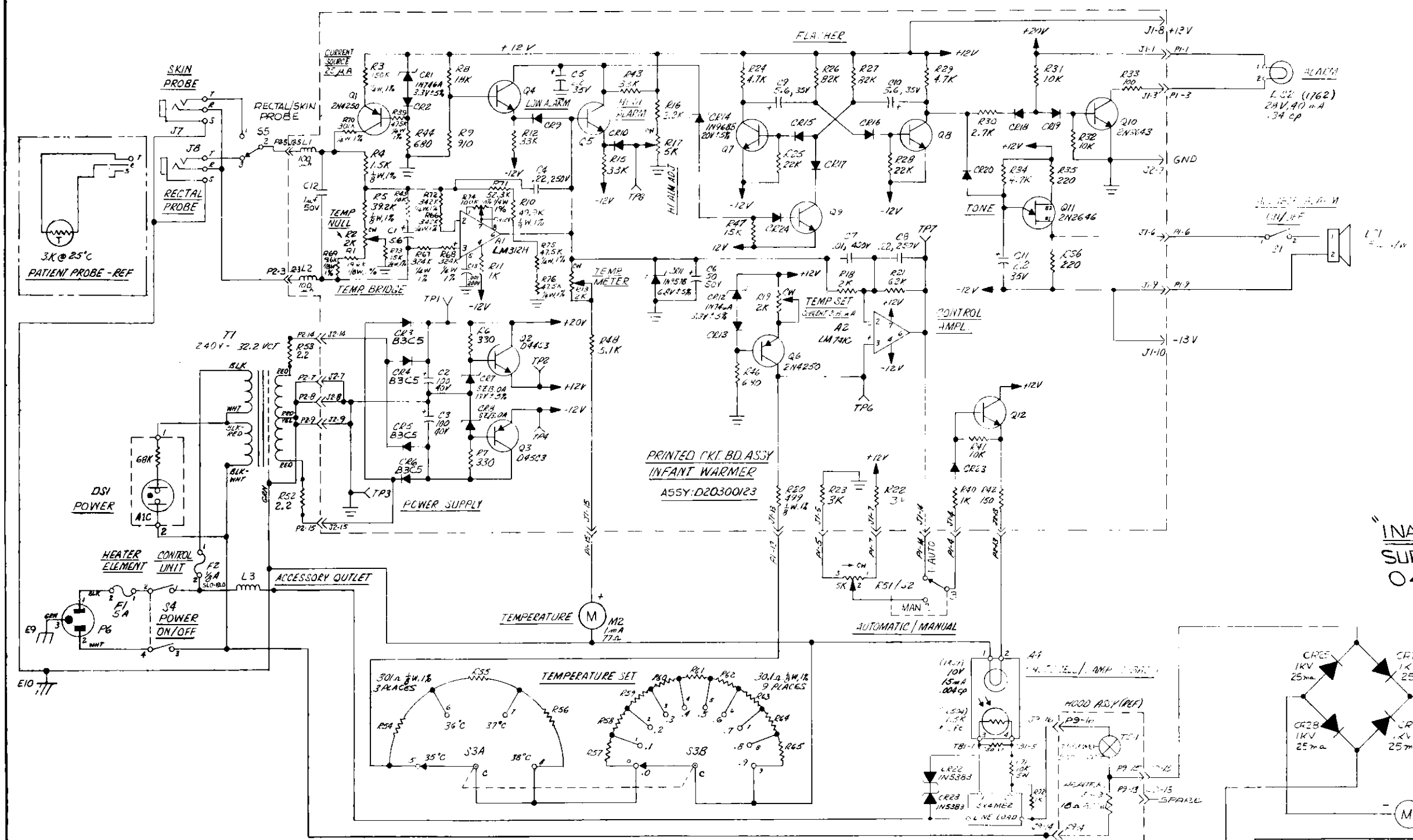
A NOTES:
1. UNLESS OTHERWISE SPECIFIED:
ALL TRANSISTORS ARE 2N3565
ALL DIODES ARE 1N914A
ALL CAPACITORS ARE IN MICROFARADS
ALL RESISTORS ARE IN OHMS $\pm 5\%$ $\frac{1}{4}W$

HIGHEST REF DES		
A4	C14	CR28
D52	F3	J9
L2	LS1	M2
P9	Q12	R79
S5	T2	TP8
TS1	Z2	

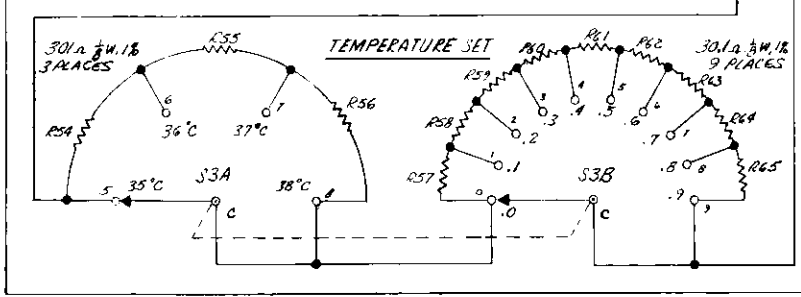
QTY. PER DASH NO.		PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO
PARTS LIST						
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DR AL LAFERRARA DATE 7-24-74		B-D ELECTRODYNE Division of Boston, Dickinson and Company Sharon, Massachusetts 02067 U.S.A.		
TOLERANCES		CHK JAC	4-9-75			
ANGLES ± — DECIMALS	APPD 4. Davis 4-28-75					
2 PLACE ± —	NEXT ASSY					
3 PLACE ± —	MODEL					
	D20300241-01 IMJ 40080					
FINISH	MATERIAL	SCHEMATIC, PROPORTIONAL CONTROL 240V				
		SIZE				REV.
		D	O4300413			D
		SCALE				SHEET / OF /

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REVISIONS			
ZONE	SYM	DESCRIPTION	DATE
A		RELEASE TO PROD. ECU 225	11/1/74
B		REVISED PER CN 3026	11/1/74
C		INACTIVATED PER CN-3197	11/1/74



"INACTIVE" AND
SUPERSEDED BY
04300413



ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
----------	---------	-------------	----------	---------	-------------

MATERIAL LIST			
QTY	BY	DATE	
1	CHK	2-22-79	
1	ENGR	2-22-79	
1	APPD	2-22-79	
1	APPD	2-22-79	
TITLE			
SCHEMATIC, 240V, 50~			
PROPORTIONAL CONTROL			
INFANT WARMER			
SIZE			
D			
SCALE			
None			
SHEET 1 of 1			

5. FOR WIRING DIAGRAM SEE D00200189
6. ALL TRANSISTORS ARE 2N3365
7. ALL DIODES ARE IN914A
8. ALL CAPACITORS ARE IN MICROFARADS
9. RESISTORS ARE IN OHMS, 1/2W, 1%
10. UNLESS OTHERWISE SPECIFIED

"D" ASSY



ELECTRODYNE

Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

20300240

REV.
F

TITLE PANEL, REAR ASSY

SHEET

ED ON INFANT WARMER

PROPORTIONAL SOLID-STATE 240V

1 OF 2

DRAWN
AL LAFERRARA

DATE

7-22-74

CHECKED

MC

DATE

4-4-75

APPROVED

40, 75

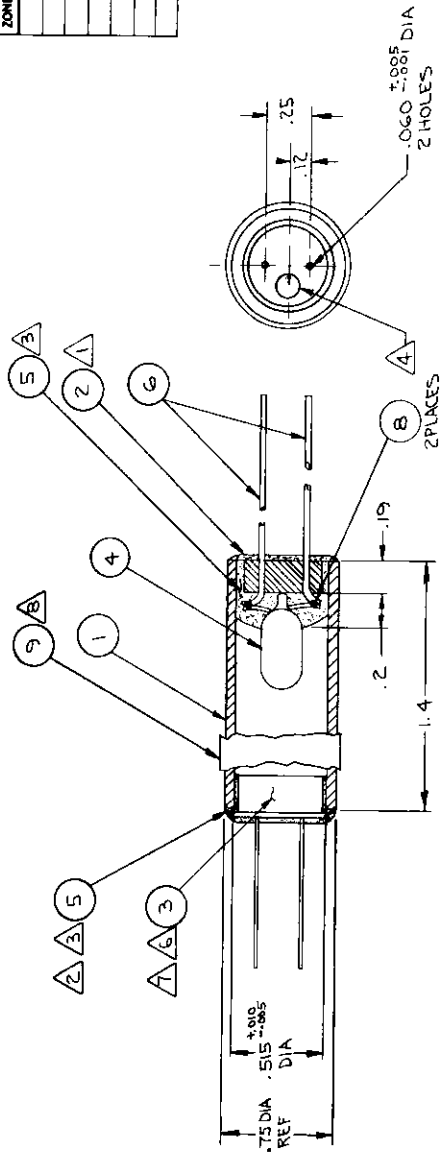
DATE

ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.
1	D	20300123-01	P.C. BOARD ASSEMBLY	A1	01
2					1
3	D	02300248-01	REAR PANEL		1
4					
5	A	1072600-002	SPEAKER, MINI, 8Ω	LS1	1
6	A	1019007-003	CONNECTOR, RECEPT, 4 PIN	J5, J9	2
7	A	1028301-010	FUSE, 5A	F1	1
8	A	1029205-001	FUSEHOLDER W/LOCKING KEY	XF1, XF2, XF3	3
9	A	1028325-003	FUSE, 1/16 A, SLO-BLO	F2	1
10	B	20300004-01	POWER CORD	W3	1
11	A	1077712-001	TRANSFORMER, POWER	T1	1
12	C	20300237-02	POWER MODULE ASSEMBLY	A3	1
13	B	02200176-01	INSULATOR TERM STRIP		2
14					
15	A	1047002-922	RESISTOR, 2.2Ω, 1/4W, 5%	R52, R53	2
16	A	1169001-003	SLEEVING, INS, TEFLON, #20		AR
17	A	1104507-001	ADAPTER		1
18	A	1104501-021	BUSHING, STRAIN RELIEF		1
19	A	1171101-212	STANDOFF M-F, 6-32 X 1 5/8"		2
20	A	1171101-215	STANDOFF M-F, 6-32 X 2"		4
21	A	1116505-016	CABLE CLAMP, 3/4" I.D.		1
22	A	1168100-001	SCREW, CAPTIVE		4
23	A	1077501-866	TERM STRIP, 5 LUG	TB1, TB2	2
24	A	1164410-025	SCREW, PAN HD, 6-32 X 3/16"		3
25	A	1164410-026	SCREW, PAN HD, 6-32 X 1/4"		13
26	A	1164401-030	SCREW, PAN HD, 6-32 X 1/2" BLK		4
27	A	1183600-136	WASHER, LOCK, SPLIT #6		19
28	A	1183500-805	WASHER, FLAT #6		19
29	A	1141400-064	NUT, PLAIN, HEX, #6-32		16
30	A	1101401-001	BRACKET, ANGLE		2
31	A	1171101-213	STANDOFF M-F, 6-32 X 1 3/4"		2
32	A	1164410-017	SCREW, PAN HD, 4-40 X 1/2"		4
33	A	1183600-135	WASHER, SPLIT, LOCK, #4		4

NOTES:

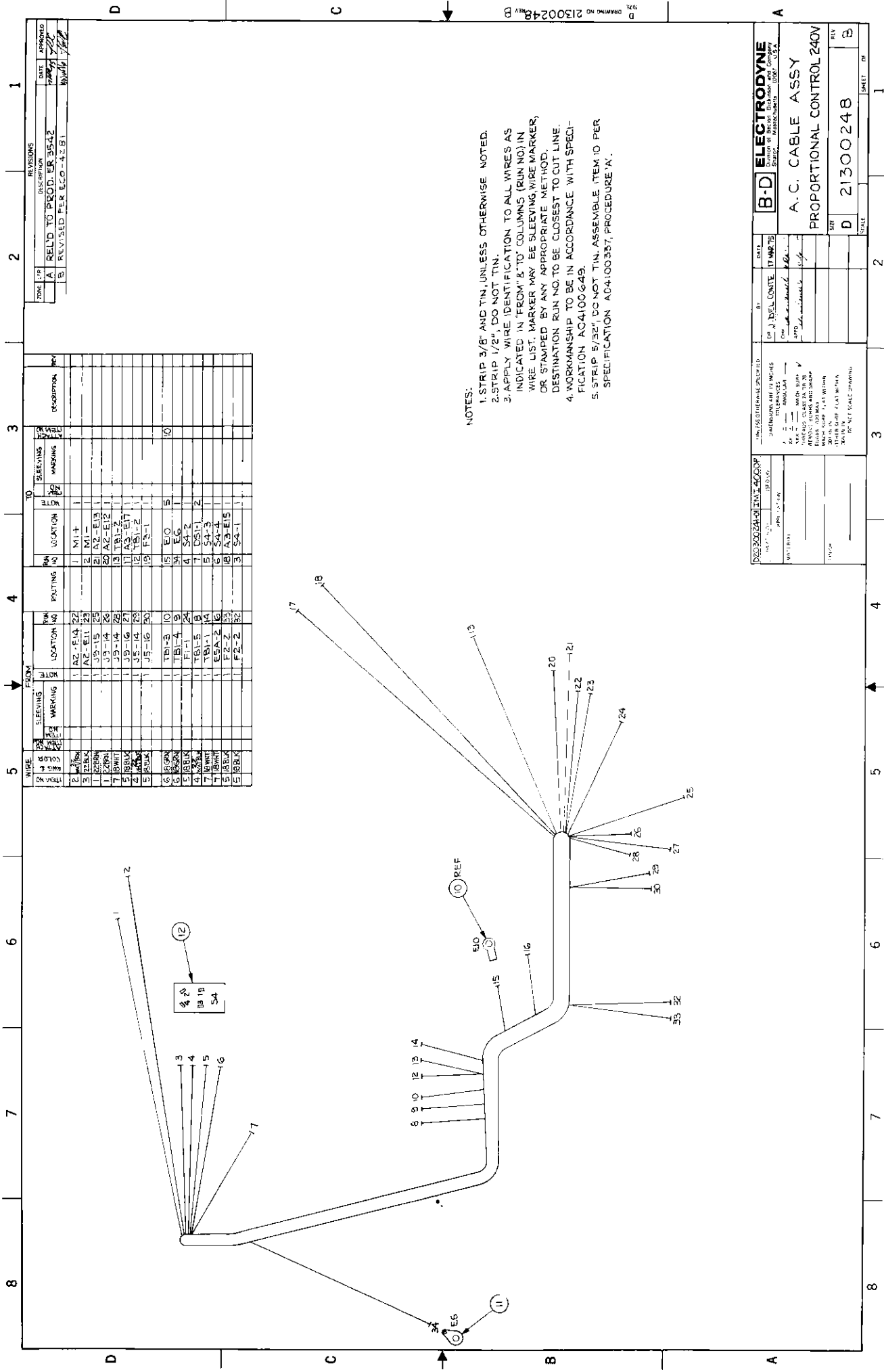
4 3 2 1

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
A	SEE EO 421		10/8/70
B	SEE EO 516		1/15/71
C	SEE EO 552		4/13/71
D	SEE EO 599		4/27/71
E	WAS DWG NO. 4000-448-00 CN 23B4		7/18/73
F	REVISED PER ECO-3546		20 MAR 75
G	REVISED & REDRAWN WAS "B" SIZE-4422 II per 16		ES



NOTES:
1. INSTALL LAMP ④ INTO PLUG ② (CENTERS SHOWN 1.10 & SOLD-
ER LAMP LEADS TO ITEM ②). COAT LOWER PORTION OF LAMP
WITH RTV ⑤ AND CURE AT ROOM TEMPERATURE FOR 24 HRS.
COAT OUTSIDE DIAMETER OF ASSEMBLED PLUG WITH RTV ⑤ AND
INSERT INTO TUBE ①. APPLY 10VDC ACROSS LAMP LEADS AND
ADJUST LOCATION OF LAMP IN TUBE UNTIL THE RESISTANCE
BETWEEN LEADS OF PHOTOCELL ③ IS 0.70 KΩ TO 0.80 KΩ. APPLY
8VDC ACROSS LAMP AND VERIFY THAT THE PHOTOCELL RE-
SISTANCE IS 1.25 KΩ TO 1.4 KΩ. READJUST LAMP LOCATION
UNTIL BOTH RESISTANCE MEASUREMENTS ARE WITHIN SPEC.
APPLY ADDITIONAL RTV ⑤ TO BASE OF PLUG.
2. COAT INDICATED AREA OF PHOTOCELL ③ WITH RTV ⑤ & IN-
SERT INTO TUBE ①.
3. CURE AT ROOM TEMPERATURE FOR 24 HOURS.
4. DOT TO BE APPROX. .18 DIA. USING WHITE INK OR EQUIV.
LOCATE APPROX. AS SHOWN ON BULB SIDE.
5. DEVICE TO WITHSTAND 2500V RMS FROM BOTH LEADS
OF PHOTOCELL ③ TO BOTH WIRE LEADS ⑤ FOR 1 MINUTE.
6. RESISTANCE BETWEEN LEADS OF PHOTOCELL ③ TO BE GREAT-
ER THAN 4 MEGOHM WITH NO VOLTAGE APPLIED TO LAMP.
7. RESISTANCE BETWEEN LEADS OF PHOTOCELL ③ SHALL BE
LESS THAN 1 KΩ WITH 10VDC APPLIED BETWEEN LEADS OF
LAMP ④.
8. APPLY SHRINK SLEEVING ③ OVER TUBE ①.

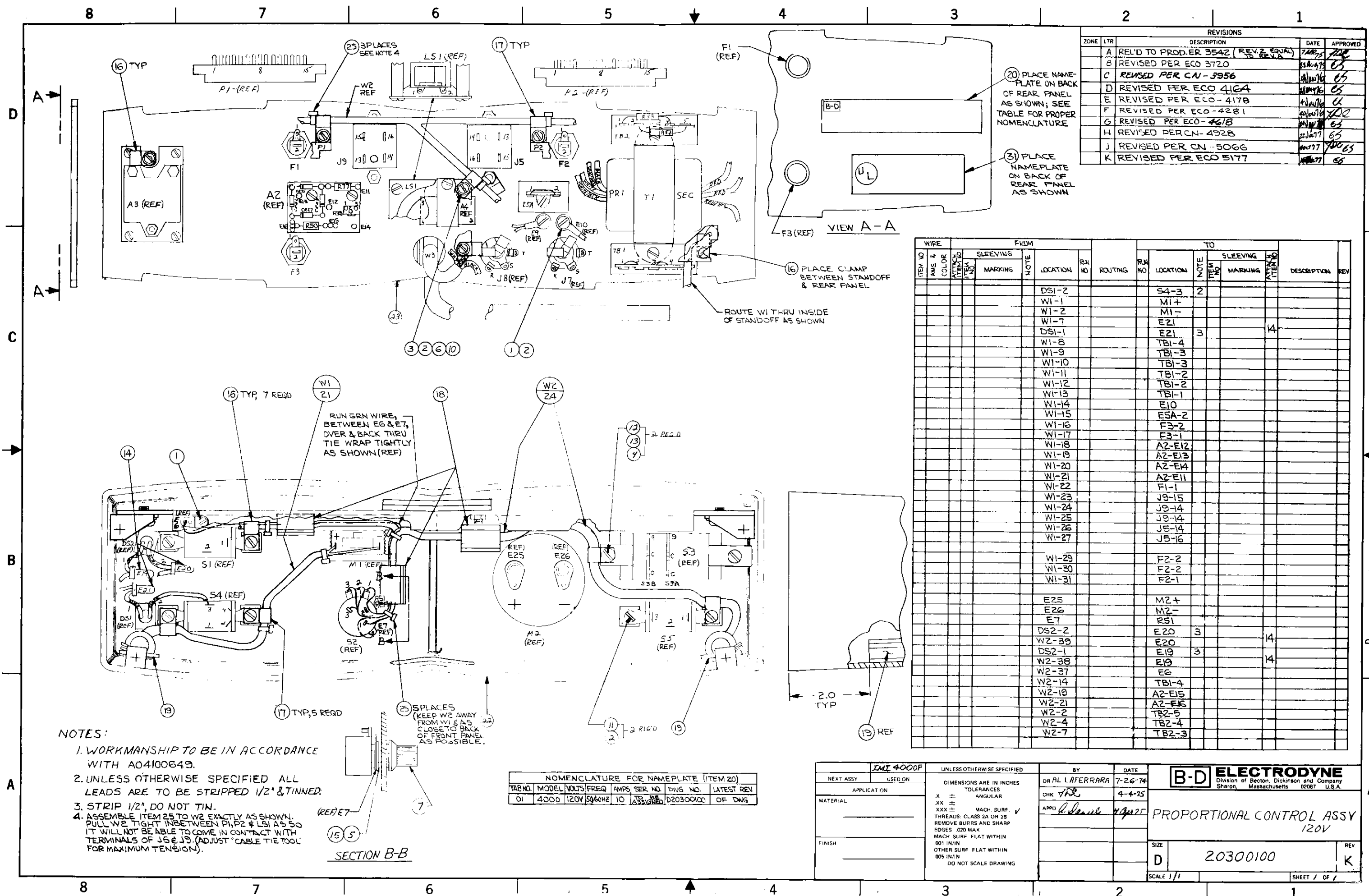
B-D ELECTRODYNE Division of Boston, Dedmon and Company Sharon, Massachusetts 02087 U.S.A.		DATE 7-10-70	BY R. J. [Signature]
PHOTOCELL SUB-ASSY INFANT WARMER		7-11-70	CHK V. L. [Signature]
		7-17-70	APP H. [Signature]
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES X ± .050 ANGULAR 0°-30° XX ± .020 XXX ± .010 MACH SURF. V THREADS CLASS 2A OR 2B REMOVE BURRS AND SHARP EDGES .020 MAX. MACH SURF. FLAT WITHIN 0.01 IN/IN OTHER SURF. FLAT WITHIN 0.05 IN/IN DO NOT SCALE DRAWING		SCALE 2/1	
MATERIAL SEE LM 20200133		REV. G	
FINISH		SIZE C	
DO NOT SCALE THIS DRAWING		SHEET 1 OF 1	



NOTES:

1. STRIP 3/8" AND TIN, UNLESS OTHERWISE NOTED.
2. STRIP 1/2", DO NOT TIN.
3. APPLY WIRE IDENTIFICATION TO ALL WIRES AS INDICATED IN "FROM" & "TO" COLUMNS (RUN NO) IN WIRE LIST. MARKER MAY BE SLEEVING WIRE MARKER, OR STAMPED BY ANY APPROPRIATE METHOD. DESTINATION RUN NO. TO BE CLOSEST TO CUT LINE.
4. WORKMANSHIP TO BE IN ACCORDANCE WITH SPECIFICATION AC4100/649.
5. STRIP 5/32", DO NOT TIN. ASSEMBLE ITEM 10 PER SPECIFICATION AC4100/357, PROCEDURE 'A'.

B-D ELECTRODYNE A.C. CABLE ASSY PROPORTIONAL CONTROL 240V		DATE: 17 MAR 75 BY: J. DEL CONTE APPROVED: [Signature] TITLE: [Title]
PART NO: 21300248 REV: B		SHEET: 1 OF 1



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		REV'D TO PROD. ER 3542 (REV. 2 EQUAL TO REV. 1)	7/26/74	AL
B		REVISED PER ECO 3720	11/16/73	CS
C		REVISED PER CN-3956	11/16/73	CS
D		REVISED PER ECO 4164	11/16/73	CS
E		REVISED PER ECO-4178	11/16/73	CS
F		REVISED PER ECO-4281	11/16/73	CS
G		REVISED PER ECO-4618	11/16/73	CS
H		REVISED PER CN-4928	22 Jan 77	CS
J		REVISED PER CN-5066	4/27/77	CS
K		REVISED PER ECO 5177	4/27/77	CS

WIRE		FROM		TO		DESCRIPTION	
ITEM NO	ANG & COLOR	ITEM NO	MARKING	ITEM NO	MARKING		
		DS1-2		S4-3	2		
		W1-1		M1+			
		W1-2		M1-			
		W1-7		E21			
		DS1-1		E21	3		14
		W1-8		TBI-4			
		W1-9		TBI-3			
		W1-10		TBI-3			
		W1-11		TBI-2			
		W1-12		TBI-2			
		W1-13		TBI-1			
		W1-14		E10			
		W1-15		ESA-2			
		W1-16		F3-2			
		W1-17		F3-1			
		W1-18		A2-E12			
		W1-19		A2-E13			
		W1-20		A2-E14			
		W1-21		A2-E11			
		W1-22		F1-1			
		W1-23		J9-15			
		W1-24		J9-14			
		W1-25		J9-14			
		W1-26		J5-14			
		W1-27		J5-16			
		W1-29		F2-2			
		W1-30		F2-2			
		W1-31		F2-1			
		E25		M2+			
		E26		M2-			
		E7		R51			
		DS2-2		E20	3		14
		W2-39		E20			
		DS2-1		E19	3		14
		W2-38		E19			
		W2-37		E6			
		W2-14		TBI-4			
		W2-19		A2-E15			
		W2-21		A2-E16			
		W2-2		TBI-5			
		W2-4		TBI-4			
		W2-7		TBI-3			

NOMENCLATURE FOR NAMEPLATE (ITEM 20)					
TAB NO.	MODEL	VOLTS	FREQ	AMPS	SER. NO.
01	4000	120V	50/60HZ	10	120300100

- NOTES:
1. WORKMANSHIP TO BE IN ACCORDANCE WITH A04100649.
 2. UNLESS OTHERWISE SPECIFIED ALL LEADS ARE TO BE STRIPPED 1/2" & TINNED.
 3. STRIP 1/2", DO NOT TIN.
 4. ASSEMBLE ITEM 25 TO W2 EXACTLY AS SHOWN. PULL W2 TIGHT IN BETWEEN P1, P2 & LSI AS SO IT WILL NOT BE ABLE TO COME IN CONTACT WITH TERMINALS OF J5 & J9. (ADJUST "CABLE TIE TOOL" FOR MAXIMUM TENSION).

NEXT ASSY USED ON		BY DATE		B-D ELECTRODYNE	
APPLICATION		DR AL LAFERRARA 7-26-74		Division of Becton, Dickinson and Company	
MATERIAL		CHK AL 4-4-75		Sharon, Massachusetts 02067 U.S.A.	
FINISH		APPD [Signature] 4/27/77		PROPORTIONAL CONTROL ASSY	
				120V	
				SIZE D 20300100	
				REV K	

"D" ASSY



ELECTRODYNE

Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

20300100

REV.
K

TITLE

PROPORTIONAL CONTROL ASSY
120V

SHEET

1 OF 1

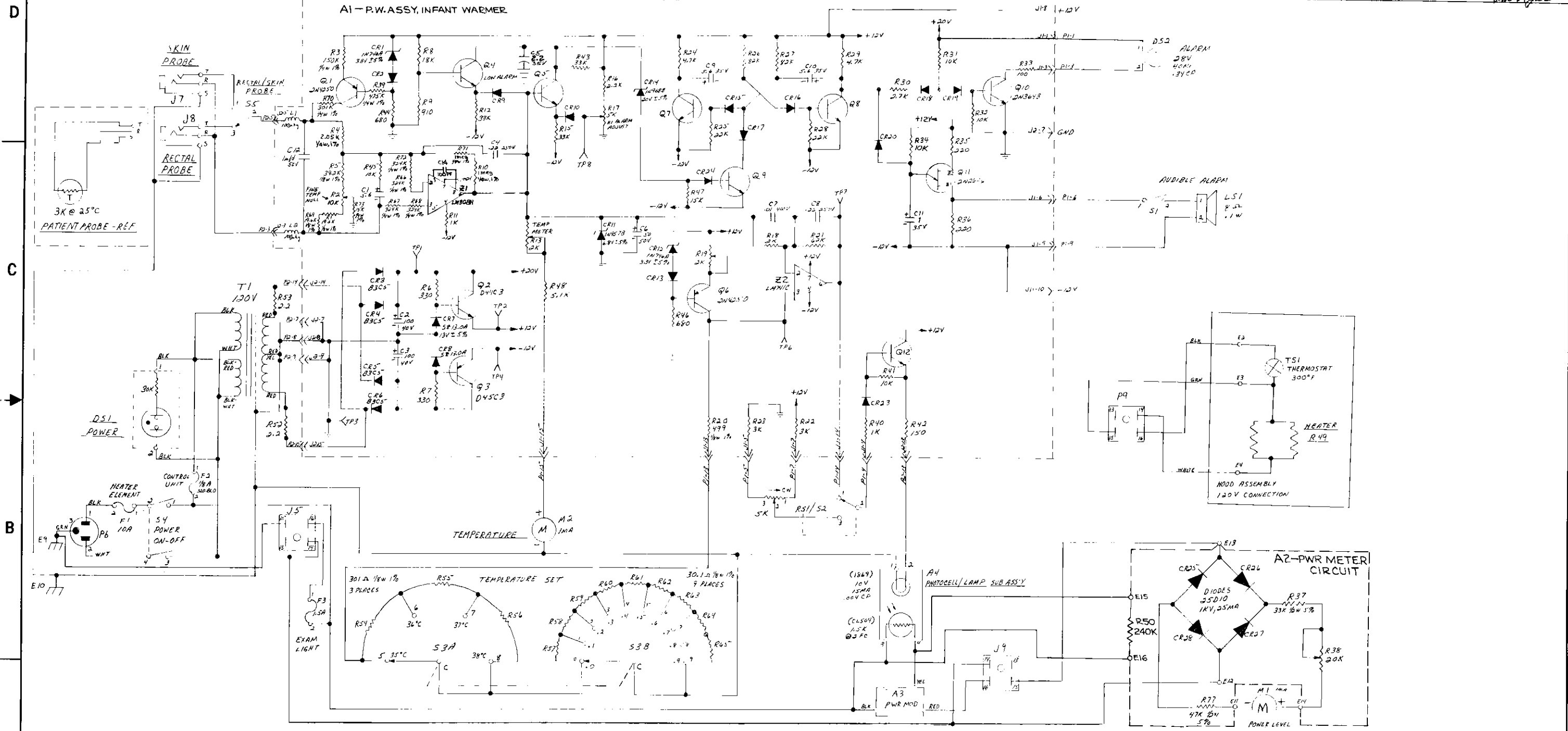
USED ON INFANT WARMER

DRAWN AL LAFERRARA	DATE 7-26-74	CHECKED JDC	DATE 4-9-75	APPROVED A. J. J. J.	DATE 4 Apr 75
-----------------------	-----------------	----------------	----------------	-------------------------	------------------

ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.			
					01			
1	A	1164410-025	SCREW, PAN HD, 6-32 X 3/16 LG		2			
2	A	1183600-136	WASHER, LOCK SPLIT #6		8			
3	A	1164509-325	SCREW, NYLON, PAN HD, 6-32 X 3/8 LG		1			
4	B	02200167-01	BRACKET, SWITCH		2			
5	A	1183621-002	WASHER, LOCK INT TOOTH, 3/8" I. D.		1			
6	A	1141400-064	NUT, PLAIN, HEX, 6-32		1			
7	A	1137008-001	KNOB SKIRTED		1			
8								
9								
10	A	1183500-805	WASHER, FLAT, #6		1			
11	A	1164410-030	SCREW, PAN HD, 6-32 X 1/2"		6			
12	A	1164410-043	SCREW, PAN HD, 8-32 X 3/8"		2			
13	A	1183600-137	WASHER, LOCK SPLIT #8		2			
14	A	1024000-011	SPLICE, CLOSED END	E19,20,21	3			
15	A	1141408-001	NUT, HEX, 3/8		1			
16	A	1116507-003	CLAMP, CABLE		7			
17	A	1116507-002	CLAMP, CABLE		5			
18	A	1116501-001	CLAMP, CABLE		3			
19	A	1116501-003	CLAMP, CABLE		2			
20	C	02101615-16	NAMEPLATE		1			
21	C	21300247-01	A.C. CABLE ASSY	W1	1			
22	D	21300238-01	HOUSING ASSY		1			
23	D	20300102-01	REAR PANEL ASSY		1			
24	D	21300239-01	CABLE LOGIC ASSY	W2	1			
25	A	1116500-002	CLAMP, CABLE		8			
26	D	04300412	SCHEMATIC		REF			
27	A	04300411	TEST SPEC		REF			
28	A	04300113	PRODUCT SPEC		REF			
29	D	04300444	DOCUMENT PLAN		REF			
30	A	05000012	TEST PROCEDURE		REF			
31	C	02101615-27	NAMEPLATE		1			

NOTES:

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		REL'D TO PROD. ER 3542 (REV. & EQUIV. TO REV. A)	7/10/75	JAC
B		REVISED PER ECO 3787	8/10/75	JAC
C		REVISED PER ECO-3980	11/20/76	ES
D		REVISED PER ECO-4258	1/10/76	ES
E		REVISED PER ECO-4281	3/20/76	JAC



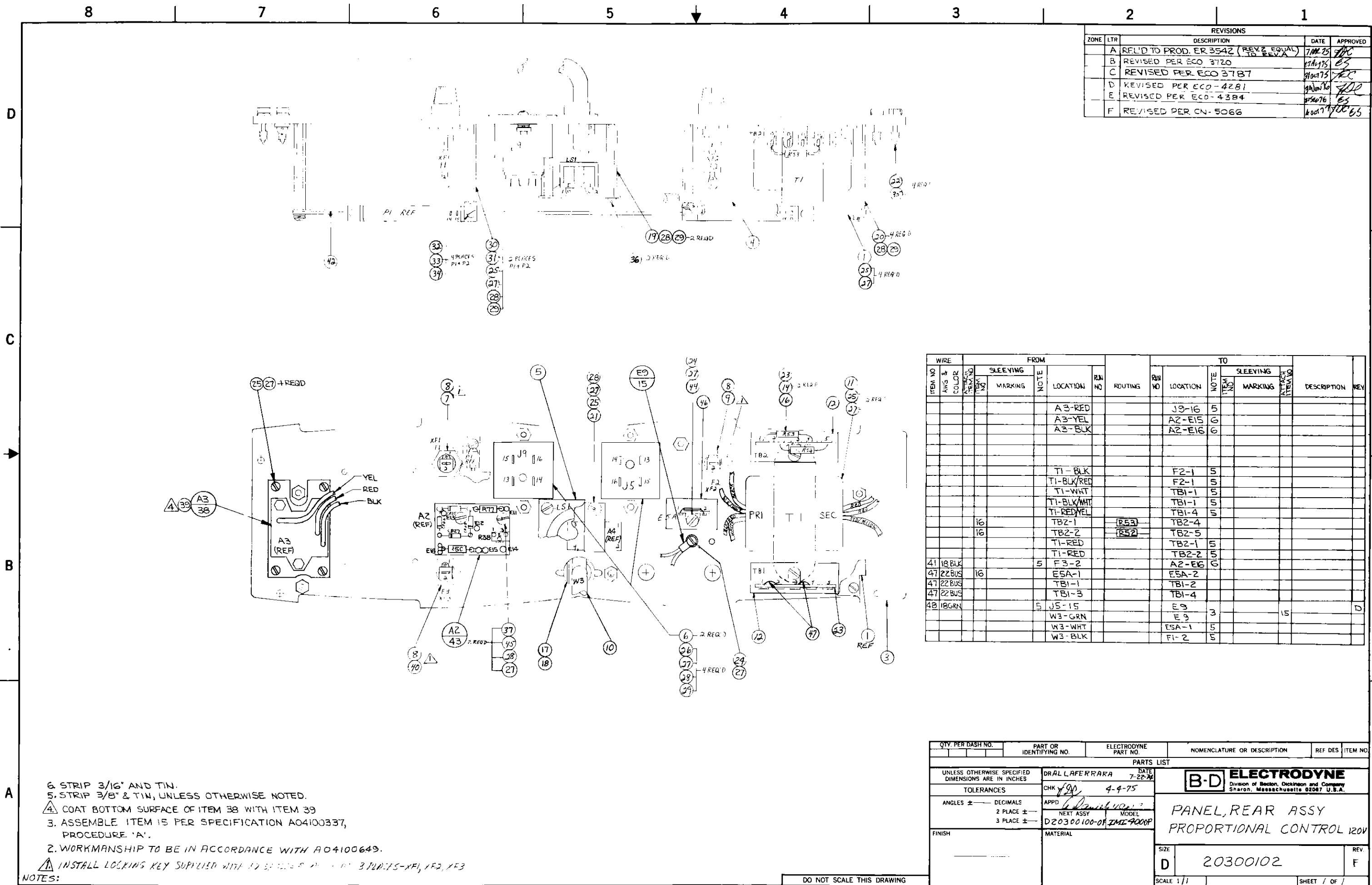
- NOTES:
- UNLESS OTHERWISE SPECIFIED:
ALL TRANSISTORS ARE 2N3565
ALL DIODES ARE 1N414A
ALL CAPACITORS ARE IN MICROFARADS
ALL RESISTORS ARE IN OHMS $\pm 5\%$ $\frac{1}{2}W$

HIGHEST REF DES		
A4	C14	CR28
DS2	F3	J9
L2	M2	P9
Q12	R77	S5
T1	TP8	TS1
LS1	ZZ	

REF DES NOTUSED		
A1,2	CR21,22	J3,6
P3,4,5,7,8	R14,74	TP5
C13	R75,76	

QTY. PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DR AL LAFERRARA	DATE 7-24-74	B-D ELECTRODYNE Division of Becton, Dickinson and Company Sharon, Massachusetts 02067 U.S.A. SCHMATIC, PROPORTIONAL CONTROL 120V	
TOLERANCES		CHK JAC	4-4-75		
ANGLES $\pm$ DECIMALS		APPD J. Daniels	4/21/75		
2 PLACE $\pm$		NEXT ASSY	MODEL		
3 PLACE $\pm$		D20300100-01	IMI 4000P		
FINISH		MATERIAL		SIZE D 04300412 REV E	
DO NOT SCALE THIS DRAWING		SCALE		SHEET 1 OF 1	

D DRAWING NO. 04300412 REV E



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		REF'D TO PROD. ER 3542 (REV 2 EQUAL TO REV A)	7 MAR 75	APC
B		REVISED PER ECO 3720	11 MAR 75	BS
C		REVISED PER ECO 3787	9 MAR 75	RC
D		REVISED PER ECO 4281	9 MAR 76	RC
E		REVISED PER ECO 4384	9 MAR 76	BS
F		REVISED PER CN 5066	8 MAR 77	RC/BS

WIRE		FROM		TO	
ITEM NO	ANG & COLOR	SLEEVING	NOTE	ITEM NO	ANG & COLOR
			A3-RED	J9-16	5
			A3-YEL	A2-E15	6
			A3-BLK	A2-E16	6
			T1-BLK	F2-1	5
			T1-BLK/RED	F2-1	5
			T1-WHT	TB1-1	5
			T1-BLK/WHT	TB1-1	5
			T1-RED/YEL	TB1-4	5
			TB2-1	TB2-4	
			TB2-2	TB2-5	
			T1-RED	TB2-1	5
			T1-RED	TB2-2	5
41 18 BLK		5	F3-2	A2-E16	6
47 22 BUS			ESA-1	ESA-2	
47 22 BUS			TB1-1	TB1-2	
47 22 BUS			TB1-3	TB1-4	
48 18 GRN		5	J5-15	E9	3
			W3-GRN	E9	
			W3-WHT	ESA-1	5
			W3-BLK	F1-2	5

6. STRIP 3/16" AND TIN.
5. STRIP 3/8" & TIN, UNLESS OTHERWISE NOTED.
4. COAT BOTTOM SURFACE OF ITEM 38 WITH ITEM 39
3. ASSEMBLE ITEM 15 PER SPECIFICATION A04100337, PROCEDURE 'A'.
2. WORKMANSHIP TO BE IN ACCORDANCE WITH A04100649.
1. INSTALL LOCKING KEY SUPPLIED WITH 12 3/16" DIA. 3 DIA. 15-XF1, XF2, XF3

NOTES:

QTY. PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REV DES	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRALAFERRARA DATE 7-22-74		B-D ELECTRODYNE	
TOLERANCES		CHK 490 4-9-75		Division of Becton, Dickinson and Company	
ANGLES ± — DECIMALS		APPD 6 1/2" DIA. 15-XF1, XF2, XF3		Sharon, Massachusetts 02087 U.S.A.	
2 PLACE ±		NEXT ASSY MODEL		PANEL, REAR ASSY	
3 PLACE ±		D20300100-01 ZML 9000P		PROPORTIONAL CONTROL 120V	
FINISH		MATERIAL		SIZE	
				D 20300102	
				REV. F	
				SCALE 1/1	
				SHEET 1 OF 1	



ELECTRODYNE

Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

20300102

REV.
F

TITLE PANEL, REAR ASSY

SHEET

1 OF 2

ED ON INFANT WARMER

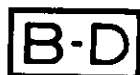
PROPORTIONAL CONTROLLER 120V

DRAWN	DATE	CHECKED	DATE	APPROVED	DATE
AL LAFERRARA	7-22-74	JPO	4-4-75	A. Daniel	4/24/75

ITEM NO.	S	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.
1	D	20300123-01	P.C. BOARD ASSY	A1	1
2					
3	D	02300248-01	REAR PANEL		1
4					
5	A	1072600-002	SPEAKER, MINI, 8Ω	LS1	1
6	A	1019007-003	CONNECTOR, RECEPT, 4 PIN	J5, J9	2
7	A	1028301-014	FUSE, 10A	F1	1
8	A	1029205-001	FUSE, 20A, W/LOCKING KEY	XF1, XF2, XF3	3
9	A	1028325-005	FUSE, 1/8A, SLO-BLO	F2	1
10	B	20300004-01	POWER CORD	W3	1
11	A	1077712-001	TRANSFORMER, POWER	T1	1
12	B	02200176-01	INSULATOR, TERM STRIP		2
13					
14	A	1047002-922	RESISTOR, 2.2Ω, 1/6W, 5%	R52, R53	2
15	A	1076002-023	LUG, TERMINAL, CRIMP	E9	1
16	A	1169001-003	SLVG, INS, TEFLON, #20		AR
17	A	1104507-001	ADAPTER		1
18	A	1104501-021	BUSHING, STRAIN RELIEF		1
19	A	1171101-212	STANDOFF, M-F, 6-32 X 1 5/8"		2
20	A	1171101-215	STANDOFF, M-F, 6-32 X 2"		4
21	A	1116505-016	CLAMP, CABLE, 3/4" I.D.		1
22	A	1168100-001	SCREW, CAPTIVE		4
23	A	1077501-866	TERMINAL STRIP, 5 LUG	TB1, TB2	2
24	A	1164410-025	SCREW, PAN HD, 6-32 X 3/16"		2
25	A	1164410-026	SCREW, PAN HD, 6-32 X 1/4"		13
26	A	1164401-030	SCREW, PAN HD, 6-32 X 1/2", BLK		4
27	A	1183600-136	WASHER, LOCK, SPLIT, #6		25
28	A	1183500-805	WASHER, FLAT, #6		15
29	A	1141400-064	NUT, PLAIN, HEX, 6-32		12
30	A	1101401-001	BRACKET, ANGLE		2
31	A	1171101-213	STANDOFF, M-F, 6-32 X 1 3/4"		2
32	A	1164410-017	SCREW, PAN HD, 4-40 X 1/2"		4
33	A	1183600-135	WASHER, SPLIT, LOCK, #4		4

NOTES:

"D" ASSY

**ELECTRODYNE**Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

21300238

REV.
D

TITLE HOUSING ASSEMBLY

SHEET

ED ON INFANT WARMER

PROPORTIONAL CONTROLLER 120/240V

1 OF 1

DRAWN AL LAFERRARA 7-26-74	DATE 7-26-74	CHECKED JOC	DATE 9-4-75	APPROVED [Signature]	DATE 9-25-75
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ITEM NO.	QTY	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.
1	D	02300522	HOUSING, CONTROLLER		01
2	C	02200159-01	SUPPORT, HOUSING		1
3					
4	A	1142405-001	SPEED NUT		2
5	A	1035801-002	LIGHT INDICATOR (POWER)	DS1	1
6	A	1035801-001	LIGHT INDICATOR (ALARM)	DS2	1
7	A	0212100604	METER, (TEMPERATURE)	M2	1
8	A	1040500-001	METER, (POWER LEVEL)	M1	1
9	A	1171502-542	SPACER, 3/8" DIA #10 x 9/16" LONG		2
10					
11					
12	B	02300525-01	GASKET		2
13	A	1164410-078	SCREW, PAN HD, SLOTTED, 1/4-20 x 7/16		4
14	C	02300524-01	BRACKET		1
15	A	1183500-416	WASHER, FLAT 1/4 x .565 I.D. x .300 O.D.		4
16	A	1167003-016	SCREW SET, HEX, 5/8 x 5/8 LG	NOTE 1	OPT
17	A	1183600-139	WASHER, SPLIT LOCK 1/4"		4
18	D	02300521-03	PLATE, INST, LEFT SIDE		1
19	D	02300521-04	PLATE, INST, RIGHT SIDE		1
20	C	02300524-02	BRACKET		1
21	A	1183500-803	WASHER, FLAT #4		3
22	A	1183600-135	WASHER, SPLIT LOCK #4		3
23	B	02300320-01	LABEL, HOT ELEMENT		1
24	B	02200165-01	BEARING, CASTING		2
25	A	1131112-001	PLUNGER		1
26	A	02102325	BUSHING		1
27	A	0500017792	LOCTITE #222		AIR
28	B	02101859	RING, RETAINING		1
29	A	1167005-141	SCREW SET, HALF DOG, #10-24 x 5/16		3
30	A	1165001-016	SCREW, SKT. HD #10-32 x 15/16		2
31	A	0590016077	WASHER, LOCK, SPLIT #10		2
32	D	02200144-01	CASTING, BRACKET		1
33	B	02200164-01	GASKET		1

NOTES: 1. WHEN CONTROLLER AND INFANT WARMER ARE NOT TO BE ROTATED REPLACE ITEMS 25, 26 & 27 WITH ITEM 16.



ELECTRODYNE

Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

21300239

REV.
D

TITLE CABLE LOGIC ASSY

SHEET

ED ON INFANT WARMER

PROPORTIONAL CONTROL 120V/240V

1 OF 1

DRAWN

DATE

CHECKED

DATE

APPROVED

DATE

J. DELCONTE 13 MAR 75

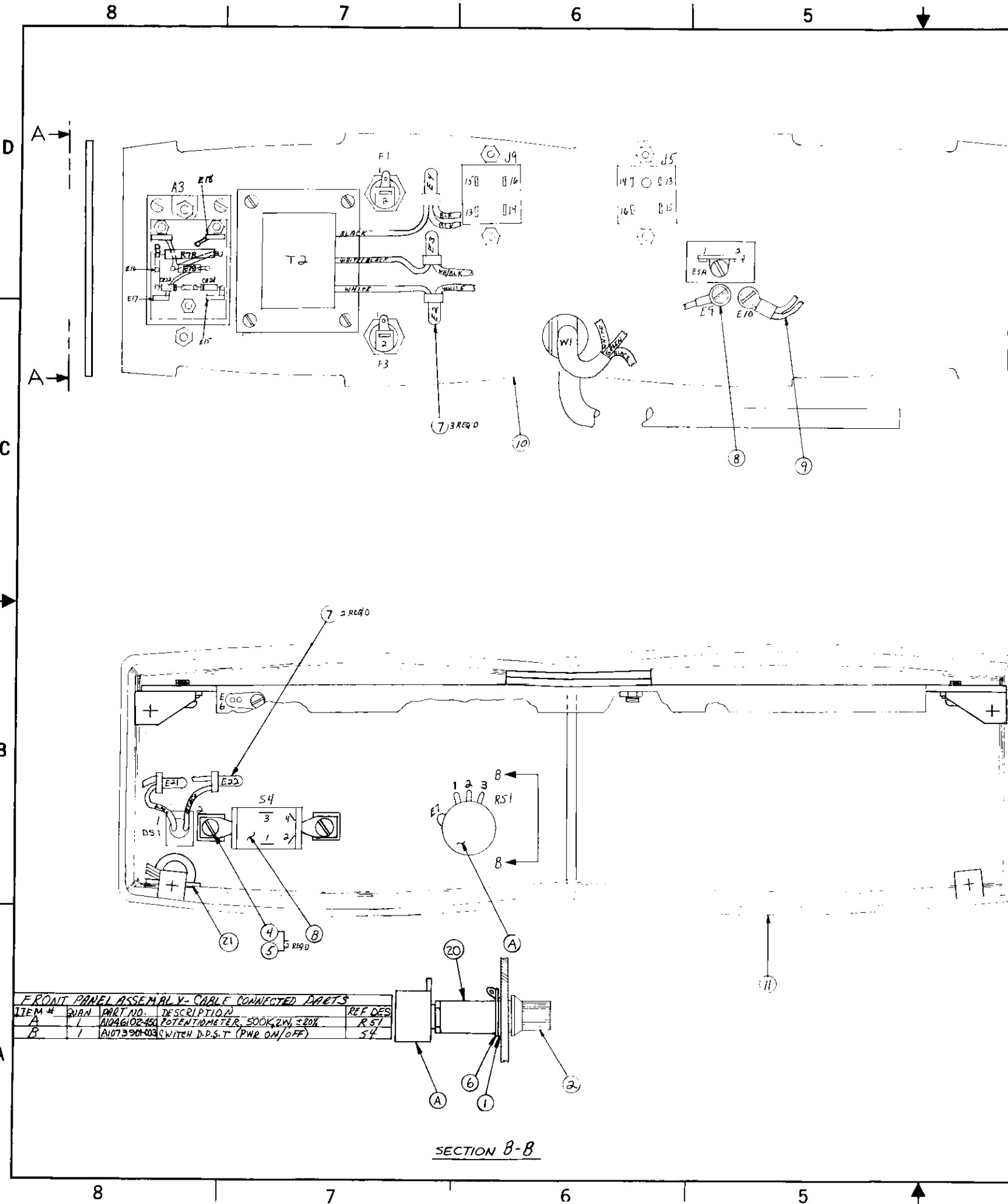
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ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY.	PER TAB NO.
1	A	1185501-172	WIRE, WHT/ORN, 22AWG		-01	
2	↑	-072	, BROWN, ↑		39 1/2"	
3		-042	, GREEN,		36"	
4		-082	, ORANGE,		68"	
5		-052	, YELLOW,		30"	
6		-182	, WHT/GRY,		29"	
7		-192	, WHT/VIO,		6"	
8		-152	, WHT/BLU,		28"	
9		-132	, WHT/GRN,		32"	
10		-142	, WHT/YEL,		27"	
11		-162	, WHT/BRN,		28"	
12		-062	, BLUE,		32"	
13		-122	, WHT/RED,		36"	
14		-112	, WHT/BLK, ↓		28"	
15	↓	-022	, BLACK, 22AWG		8"	
16	A	1185501-044	WIRE, GREEN, 18AWG		13 1/2"	
17						
18	A	1169000-412	INS, SLEEVING, YELLOW		8 1/2"	
19	A	1170000-103	INS, SLEEVING, SHRINK		3"	
20	B	20200133-01	PHOTOCELL SUB-ASSY	A4	1	
21	A	1073901-001	SWITCH, SPST, (ALARM)	S1	1	
22	A	1046113-250	SWITCH/POT. 5K, 2W, ±20%	S2/R51	1	
23	C	20300324-01	SWITCH ASSEMBLY	S3	1	
24	A	1073901-004	SWITCH, SPDT, (RECT/SKIN)	S5	1	
25	A	1036800-001	JACK (RECT/SKIN PROBES)	J7, 8	2	
26					1	
27	A	1019999-003	CONN, RECPT, 15 PIN	P1, 2	2	
28						
29	A	1076003-020	TERMINAL LUG, SOLDER	E7	1	
30	A	1076004-005	TERMINAL LUG, SOLDER	E25, 26	2	
31						
32						
33						

NOTES:

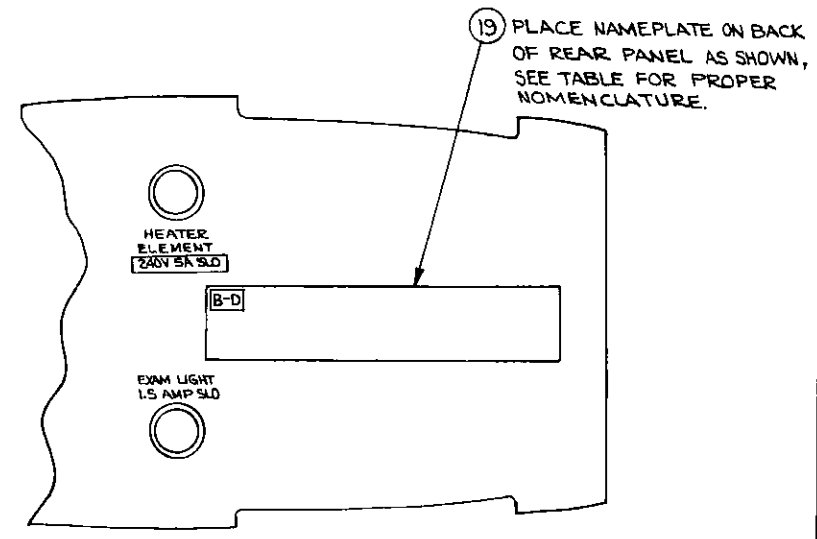


ITEM NO.	POINT TO POINT WIRING AND JUMPERS	FROM	TO	PART NO.	LENGTH
12	WHITE/GREEN	E5A-1	E5A-2	A1085500-005	
13	WHITE/GREEN	E6	E7	A1085501-132	
	WHITE	W1	E5A-1		
	GREEN	W1	E9		
	BLACK	W1	F1-2		

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		RECD TO PROD. ER 3503 (REV. A EQUAL TO REV. 2)	3/24/75	AD
B		REVISED PER CN 3720	6/24/75	ES
C		REVISED PER ECO 3787	8/20/75	AD
D		REVISED PER CN-3836	12/20/76	ES
E		REVISED PER ECO 4164	8/20/76	ES
F		REVISED PER ECO-4281	12/20/76	AD
G		REVISED PER ECO 4380	1/20/77	AD

A.C. CABLE		
LEAD #	COLOR	DESTINATION
1	BLACK	E17
3	WHITE	E16
5	BLACK	E15
7	BLACK	E18
9	WHITE	E2
T-2	WHITE	E2
11	WHITE/BLACK	E3
T-2	WHITE/BLACK	E3
6	BLACK	E4
15	BLACK	E4
T-2	BLACK	E4
17	BLACK	F1-1
12	WHITE/BLACK	F3-2
13	WHITE/BLACK	F3-2
23	BLACK	F3-1
10	WHITE	J9-14
21	WHITE	J9-14
2	BLACK	J9-16
22	WHITE	J5-14
23	WHITE	J5-14
24	BLACK	J5-16
27	GREEN	J5-15
34	WHITE	E5A-2
28	GREEN	E10
29	GREEN	E10
30	GREEN	E6
14	WHITE/BLACK	E21
DST-1	BLACK	E21
32	WHITE	E22
DST-2	BLACK	E22

NOMENCLATURE FOR NAMEPLATE (ITEM 19)						
TAB NO.	MODEL	VOLTS	FREQ	AMPS	SERNO.	DWG NO.
-01	4002	240	50/60	5	TO BE ASSIGNED	20300252-01



NOTES:
1. WORKMANSHIP TO BE IN ACCORDANCE WITH A04100649.

FRONT PANEL ASSEMBLY - CABLE CONNECTED PARTS				
ITEM #	QTY	PART NO.	DESCRIPTION	REF DES
A	1	A1046102-451	POTENTIOMETER, 500K OHM, 20K	R51
B	1	A1073901-003	SWITCH D.P.S.T. (PWR ON/OFF)	S4

SECTION B-B

QTY. PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES					
TOLERANCES					
ANGLES ± — DECIMALS					
2 PLACE ±					
3 PLACE ±					
FINISH					
MATERIAL					
DATE 7-29-74					
CHK AD					
3-20-75					
APPD B. DeLuca					
NEXT ASSY MODEL INFLANT WARMER					
B-D ELECTRODYNE					
Division of Boston, Dickinson and Company					
Sharon, Massachusetts 02067 U.S.A.					
MANUAL CONTROL ASSY 240V					
SIZE D					
20300252					
REV. G					
SCALE 1/1					
SHEET / OF /					

DO NOT SCALE THIS DRAWING

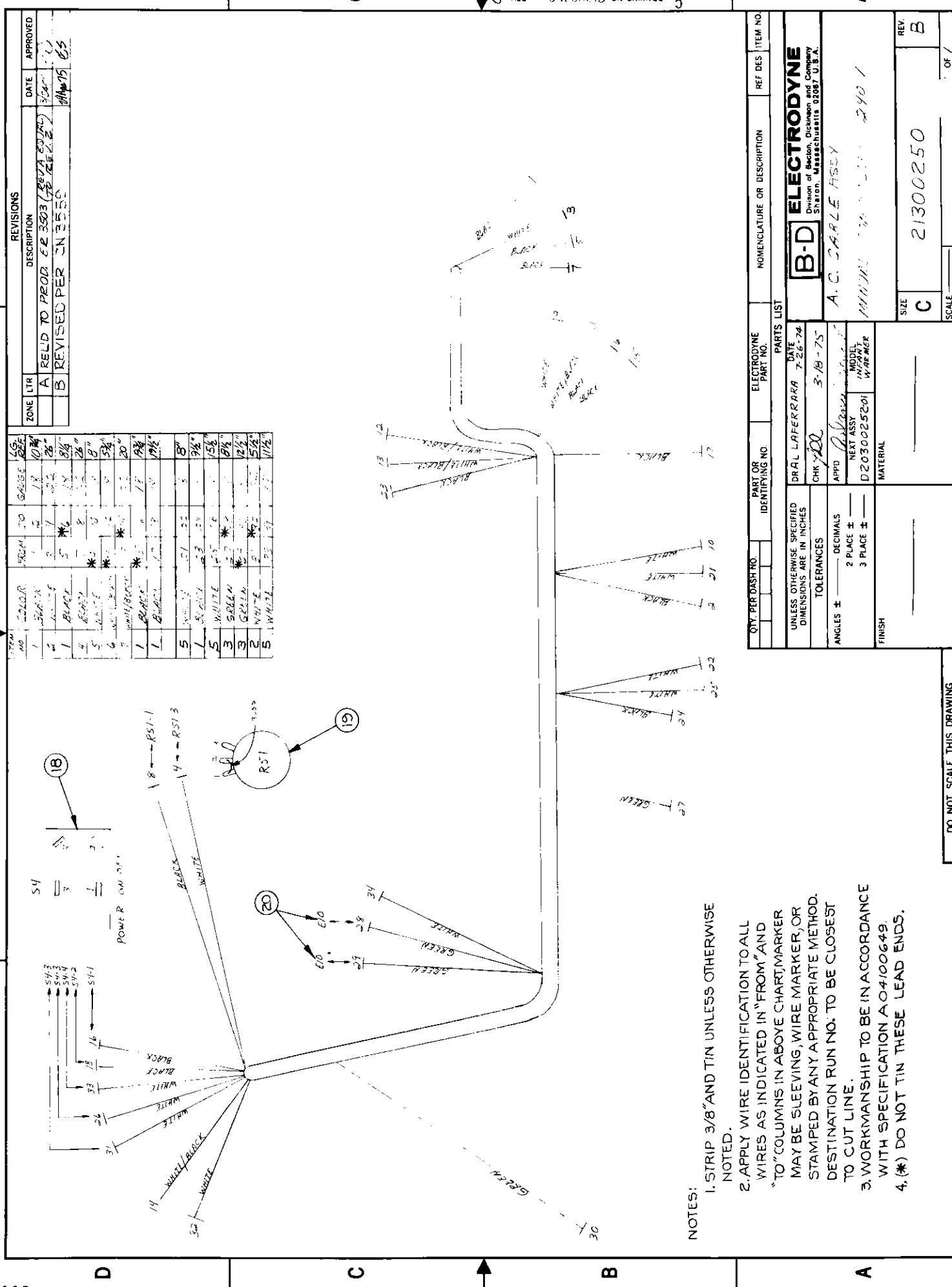
D DRAWING NO. 20300252
REV. G
SIZE

1

2

3

4



C

DRAWING NO. 21300250

REV

B

C

D

A

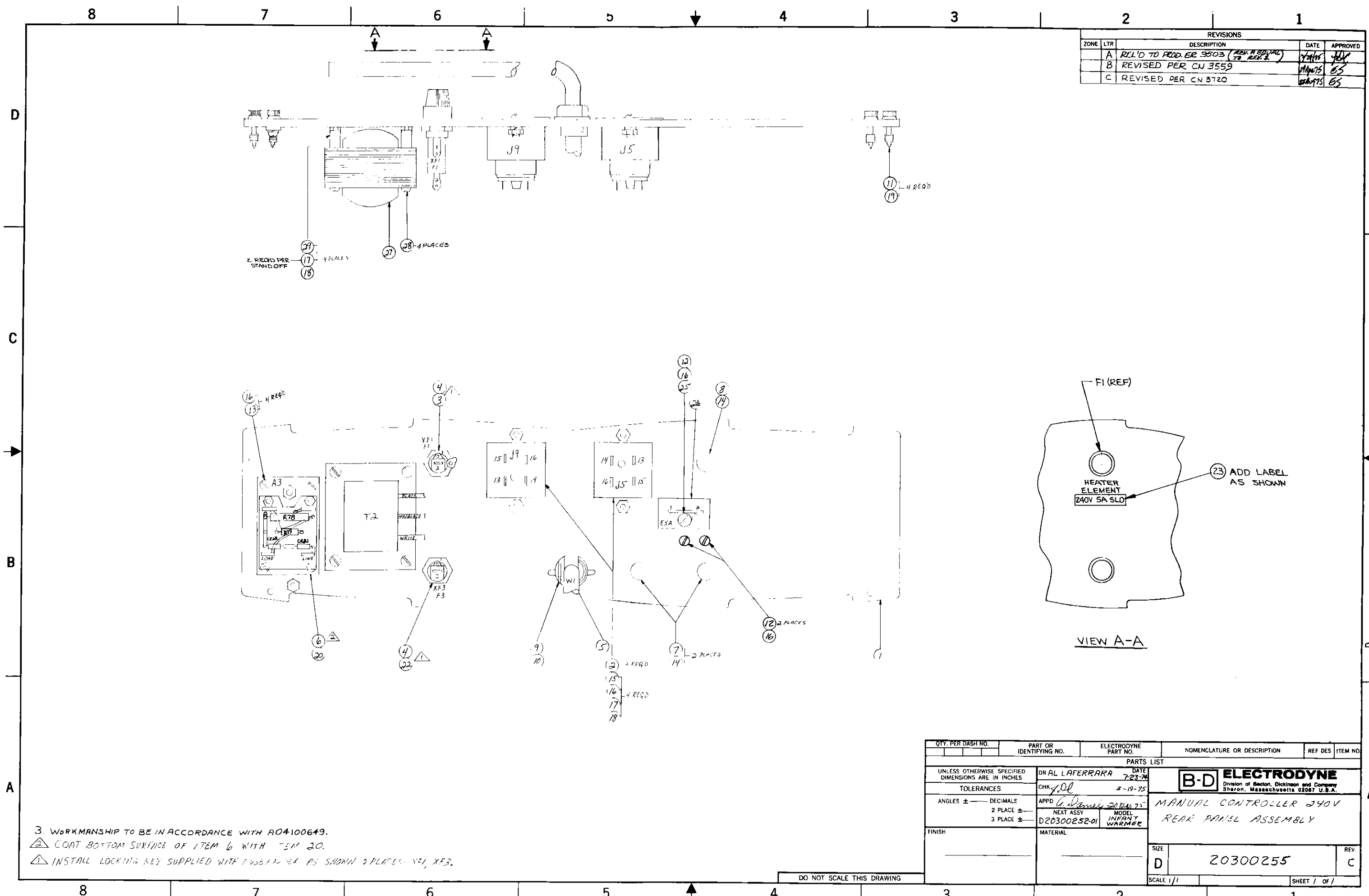
QTY.	PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES						
TOLERANCES						
ANGLES ± — DECIMALS 2 PLACE ± — 3 PLACE ± —						
FINISH						
PARTS LIST						
DATE 7-28-74 CHK JDL APPD [Signature] MODEL D2030025001 WARRANTY						
DRAL LAFERRARA						
B-D ELECTRODYNE Division of Boston, Dickson and Company Sharon, Massachusetts 02087, U.S.A.						
A. C. CARLE HSEY MINUTE 2401						
SIZE C 21300250						
SCALE						
REV B						

DO NOT SCALE THIS DRAWING

3

2

1



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		REL'D TO PROD. PER 3503 (REV. A SPECIAL TO REV. A)	7/24/75	YB
B		REVISED PER CN 3559	8/14/75	ES
C		REVISED PER CN 3720	8/14/75	ES

QTY. PER DASH NO.		PART OR IDENTIFYING NO.		ELECTRODYNE PART NO.		NOMENCLATURE OR DESCRIPTION		REF DES		ITEM NO.	
PARTS LIST											
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				DR AL LAFERRARA		DATE 7-23-75		B-D ELECTRODYNE Division of Becton, Dickinson and Company Sharon, Massachusetts 02087 U.S.A.			
TOLERANCES				CHK ydl		8-19-75					
ANGLES ± — DECIMALS				APPD G. Dennis		20/11/75		MANUAL CONTROLLER 240V REAR PANEL ASSEMBLY			
2 PLACE ±				NEXT ASSY		MODEL					
3 PLACE ±				D20300252-01		INFANT WARMER					
FINISH				MATERIAL				SIZE D 20300255 REV. C			
				SCALE 1/1				SHEET 1 OF 1			

3. WORKMANSHIP TO BE IN ACCORDANCE WITH AO4100649.
Ⓜ COAT BOTTOM SURFACE OF ITEM 6 WITH TEM 20.
Ⓛ INSTALL LOCKING KEY SUPPLIED WITH 145517 PER AS SHOWN 2 PLACES: XF1, XF3.

DO NOT SCALE THIS DRAWING

DRAWING NO. 20300255 REV C

'D' ASSY

**ELECTRODYNE**Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

20300255

REV.

C

TITLE REAR PANEL ASSEMBLY

SHEET

1 OF 1

USED ON INFANT WARMER

MANUAL CONTROLLER 240V

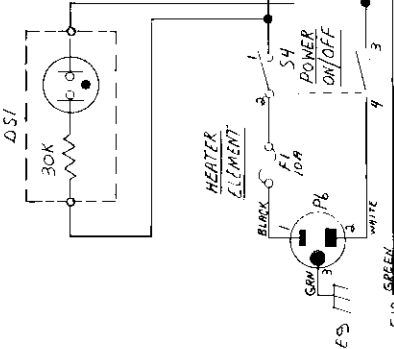
DRAWN ALLAFERRARA	DATE 7-23-74	CHECKED <i>ADG</i>	DATE 3-19-75	APPROVED <i>A. Lamm</i>	DATE 20 MAR 75
----------------------	-----------------	-----------------------	-----------------	----------------------------	-------------------

ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY.	PER TAB NO.
1	D	02300248-01	REAR PANEL (01-5457)		1	
2	A	1019007-003	CONNECTOR, RECPT, 4 PIN	J5, J9	2	
3	A	1028301-010	FUSE, 5A	F1	1	
4	A	1029205-001	FUSEHOLDER W/LOCKING KEY	XF1, XF3	2	
5	B	20300004-01	POWER CORD	W1	1	
6	C	20300237-01	POWER MODULE ASSEMBLY	A3	1	
7	A	1142900-004	HOLE PLUG 3/8" DIA		2	
8	A	1142900-006	HOLE PLUG 1/2" DIA		1	
9	A	1104507-001	ADAPTER		1	
10	A	1104501-021	BUSHING, STRAIN RELIEF		1	
11	A	1168100-001	SCREW, CAPTIVE		4	
12	A	1164410-025	SCREW, PAN HD, 6-32 X 3/16"		3	
13	A	1164410-026	SCREW, PAN HD, 6-32 X 1/4"		4	
14	A	0500015472	SEAL, SILICON, BLACK		AR	
15	A	1164410-031	SCREW, PAN HD, 6-32 X 5/8"		4	
16	A	1183600-136	WASHER, LOCK SPLIT, #6		11	
17	A	1183500-805	WASHER, FLAT, #6		8	
18	A	1141400-064	NUT, PLAIN, HEX, 6-32		8	
19	A	1183500-808	WASHER, FLAT, #10		4	
20	A	0500012481	THERMACOTE #250		AR	
21						
22	A	1028325-021	FUSE, 7.5A, SLO-BLO	F3	1	
23	C	02100895-20	IDENT PLATE, FUSE 5A		1	
24						
25	A	1077501-863	TERM STRIP, 3 LUG	E5A	1	
26	B	02200176-02	INSULATOR, TERM STRIP		1	
27	A	1077225-221	AUTO-TRANSFORMER	T2	1	
28	A	1164410-035	SCREW, PAN HD, 6-32 X 1 1/4"		4	
29	A	1171101-522	SPACER, (AMATON 9253-A-0632)		4	

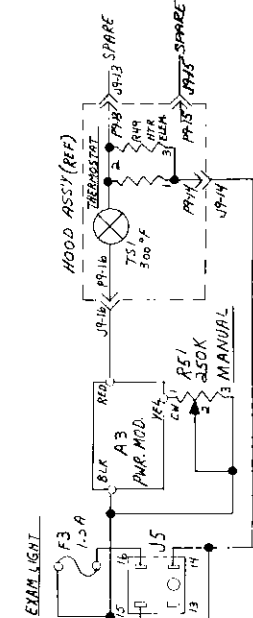
NOTES:

4 3 2 1

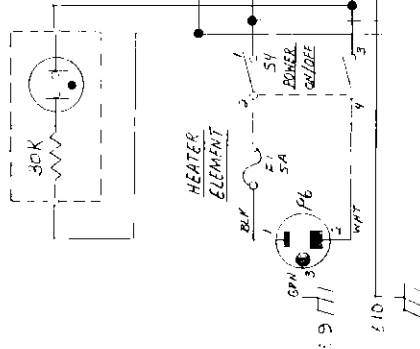
POWER



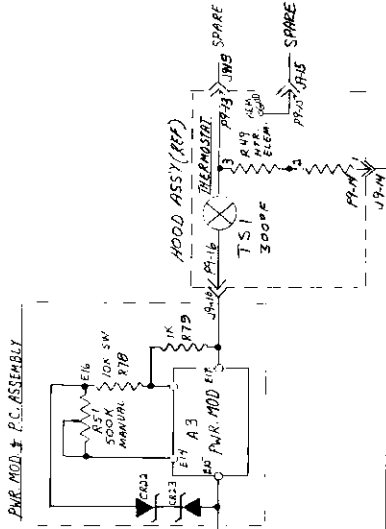
120V MANUAL CONTROLLER



POWER



240V MANUAL CONTROLLER



NOTES:
1. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/4W.5% AND
ARE IN OHMS
ALL DIODES ARE 1N5383

120V

HIGHEST REF DES	
A3	DS1 F3
J9	P9 R51
S4	T51
REF DES NOT USED	
A1,2	F2 J1-4,6,7,8
PI-5,7,8	RI-4,5,6,7,8

240V

HIGHEST REF DES	
A3	DS1 F3
J9	P9 R79
S4	T2 T51
CR23	
REF DES NOT USED	
A1,2	F2 J1-4,6,7,8
PI-5,7,8	RI-4,5,6,7,8
SI,2,3	T1 CR1-21

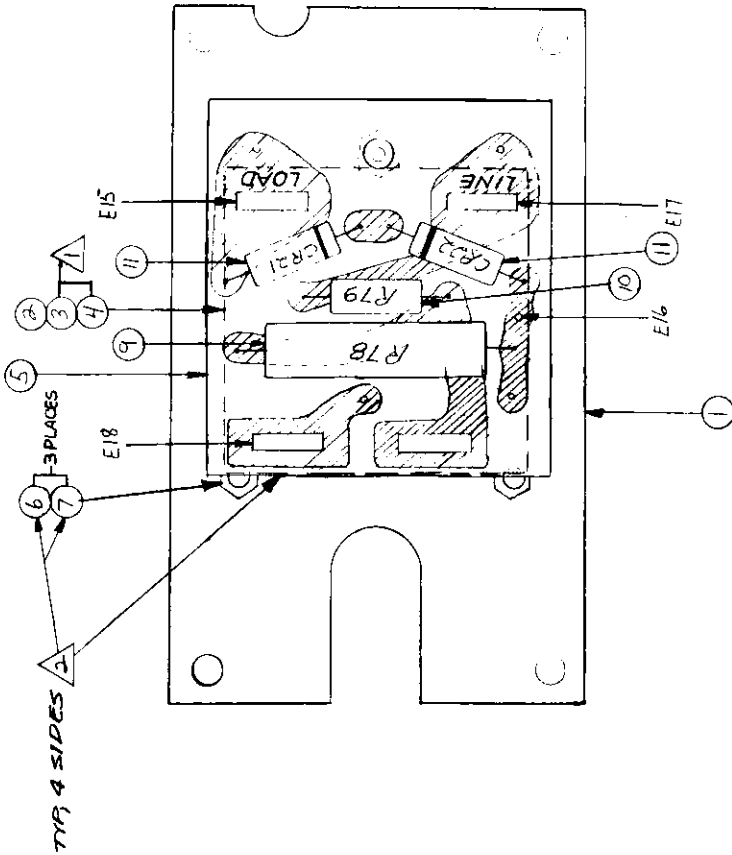
QTY PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DATE	ELECTRODYNE		
TOLERANCES		7-25-74	[B-D] ELECTRODYNE		
ANGLES ±		3-18-75	Division of Becton, Dickinson and Company Sharon, Massachusetts 02087 U.S.A.		
DECIMALS			SCHEMATIC, MANUAL CONTROLLER		
2 PLACE ±			INFANT WARMER		
3 PLACE ±			120V 4-240V		
FINISH					
MATERIAL					
NEXT ASSY					
PREVIOUS ASSY					
REV.					
C					
04300424					
SCALE					
SHEET					
OF					
1					

DO NOT SCALE THIS DRAWING

4 3 2 1

5 4 3 2 1

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
A	REL'D TO PROD	EP 3503 (RECA EDU) 19/14/75	19/14/75
B	REVISED PER ECO	4281	19/16/76



3. WORKMANSHIP TO BE IN ACCORDANCE WITH AO4100649.
- △ CONT HEADS OF ITEM 6 (PLATE UNDERSIDE), CONT ENTIRE VISIBLE SURFACES OF ITEMS 6 AND 7 (PLATE UNDERSIDE), CONT ENTIRE PERIPHERY IN JUNCTION OF ITEMS 1, 3 AND 4 WITH ITEM 2 AFTER COMPLETION OF ASSEMBLY.
- △ CONT BOTTOM SURFACE OF ITEM 4 AND BOTH SURFACES OF ITEM 3 WITH ITEM 2.

QTY PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
PART LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DR A.J.L., DATE 7-24-74			
TOLERANCES		CHK 10 3-18-75			
ANGLES ± DECIMALS		APPR 10 3-18-75			
2 PLACE ±		NEXT ASSY MODEL 75			
3 PLACE ±		IN PART WARMER			
FINISH		MATERIAL			
SCALE 1/1		SHEET 1 OF 1			

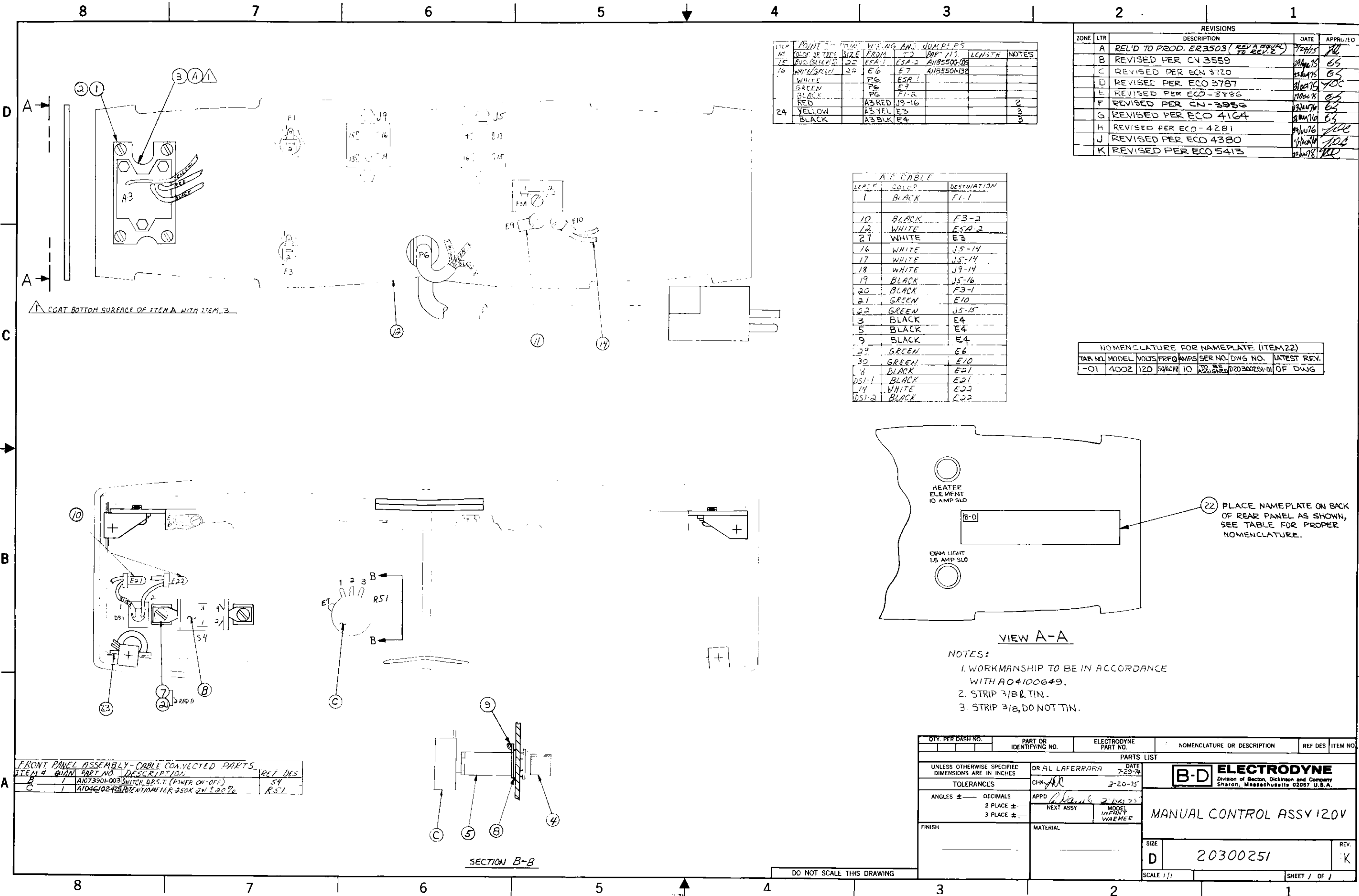
B-D ELECTRODYNE
Division of Electric Division and Company
BOSTON, MASSACHUSETTS 02107 U.S.A.

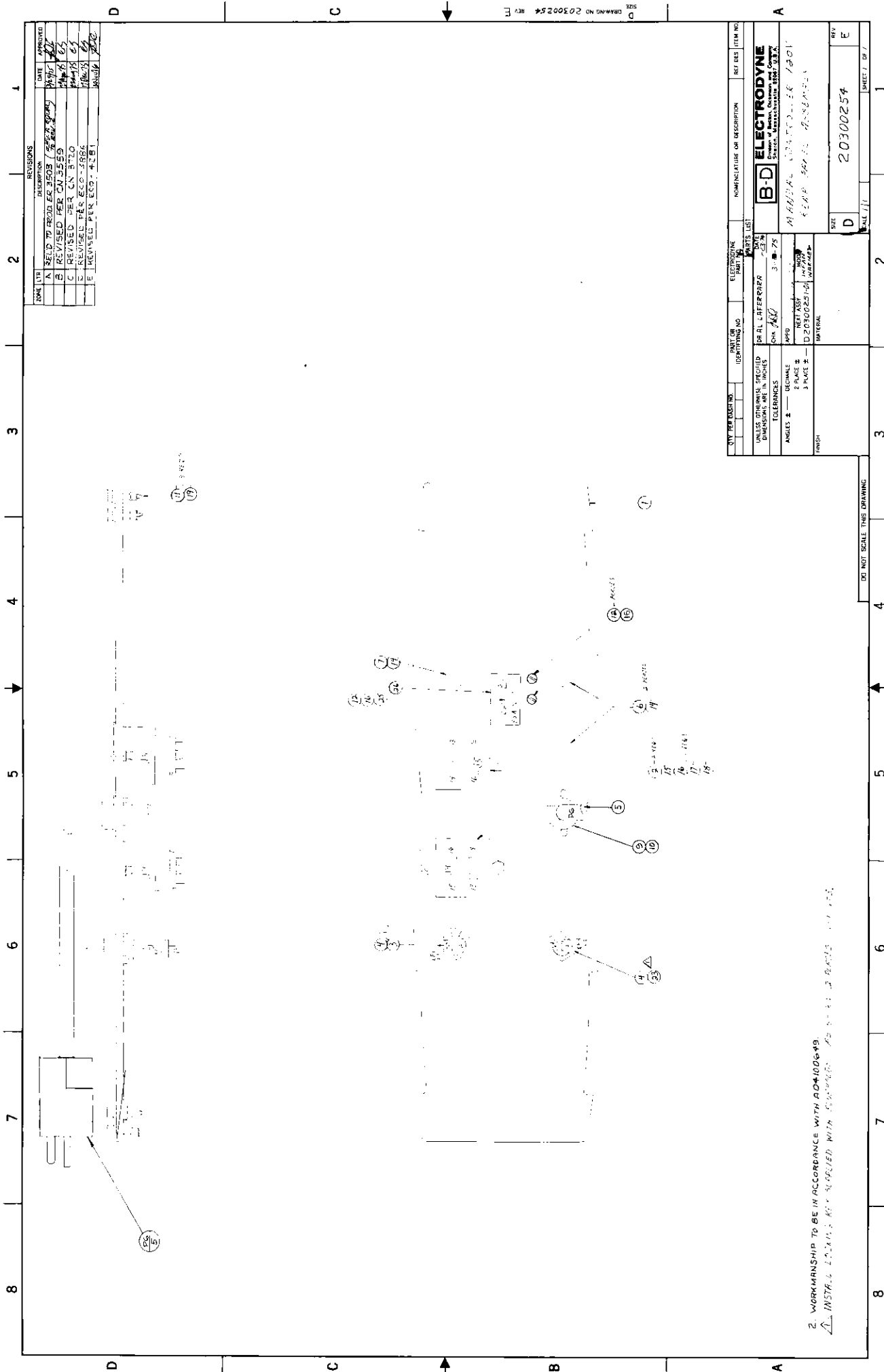
POWER MODULE ASSEMBLY

MANUAL/PROPORTIONAL CONT-340V, 50Hz

SIZE **B** 20300237

REV **B**





DATE	DESCRIPTION	REVISIONS	DATE	APPROVED
10/1/75	REVISED PER CN 3550	1	10/1/75	10/1/75
10/1/75	REVISED PER CN 3550	2	10/1/75	10/1/75
10/1/75	REVISED PER CN 3550	3	10/1/75	10/1/75
10/1/75	REVISED PER CN 3550	4	10/1/75	10/1/75
10/1/75	REVISED PER CN 3550	5	10/1/75	10/1/75

ITEM NO.		ELECTRODYNE		REF DES		ITEM NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DATE		PARTS LIST		REF DES	
TOLERANCES		3 - 75		B-D ELECTRODYNE		20300254	
ANGLES 2 - DECIMAL		3 - 75		ELECTRODYNE		20300254	
FACE 2 - DECIMAL		3 - 75		ELECTRODYNE		20300254	
EDGE 2 - DECIMAL		3 - 75		ELECTRODYNE		20300254	
FINISH		3 - 75		ELECTRODYNE		20300254	

2. WORKMANSHIP TO BE IN ACCORDANCE WITH 20300254-9
 1. INSTALL 1.00x1.00x.063 ALUMINUM PLATE 1.00x1.00x.063



ELECTRODYNE

Division of Becton, Dickinson and Company
Sharon, Massachusetts 02087 U.S.A.

PARTS LIST

PL

20300254

REV.
F

TITLE REAR PANEL ASSEMBLY

SHEET
/ OF /

SED ON INFANT WARMER

MANUAL CONTROLLER 120V

DRAWN

DATE _____

CHECKED

DATE _____

APPROVED

DATE _____

AL LAFERRAKA

7-23-74

100

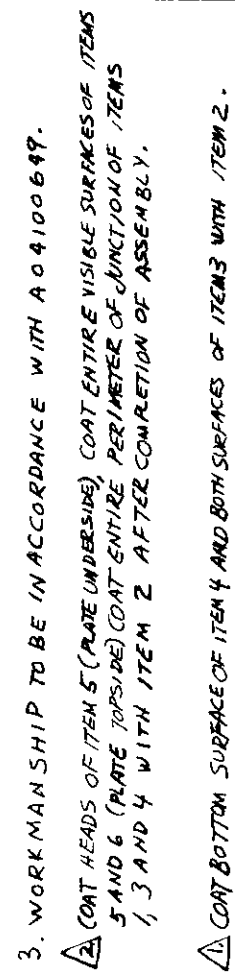
3-19-75

A. Lewis

2044-21

[illegible]

NOTES:



ZONE		LITR		DESCRIPTION		DATE		APPROVED	
A		A		REL'D TO PROD ER 3503		10/1/75		AD	

QTY. PER DASH NO.		PART OR IDENTIFYING NO.		ELECTRODYNE PART NO.		NOMENCLATURE OR DESCRIPTION		REV DES		ITEM NO	
						PART LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DATE: 10/1/75		CHK: AD		3 120-75		B-D		ELECTRODYNE 2001 U.S.A. Sharon, Massachusetts 02061 U.S.A.	
TOLERANCES		APPR: 10/1/75		NET AS TO		10/1/75		POWER MODULE ASSEMBLY			
ANGLES ± — DECIMALS 2 PLACE ± — 3 PLACE ± —		CZ 200002		CZ 200002		CZ 200002		MANUAL/PRODUCTION CONTROL-120V			
FINISH		MATERIAL		WARMER		SIZE		B		REV	
								20300314		A	
								SCALE		SHEET / OF /	

B-D

Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PL

20300314

REV.
A

SHEET
/ OF /

MANUAL PROPORTIONAL CONTROLLER-120 V

DATE _____

2000.01.01

NOTES:

'D' ASSY

**ELECTRODYNE**Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

21300253

REV.
D

TITLE HOUSING ASSEMBLY

SHEET

10

USED ON INFANT WARMER

MANUAL CONTROLLER 120/240V

DRAWN

DATE

CHECKED

DATE

APPROVED

DATE

AL LAFERRARA 7-26-74

JRL

3-26-75

[Signature]

20 MAR 75

ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.			
					01			
1	D	02300522-01	HOUSING, CONTROLLER		1			
2	C	02200159-01	SUPPORT HOUSING		1			
3								
4	A	1076004-023	TERMINAL LUG #6	E6	1			
5	A	1035801-002	LIGHT, INDICATOR (POWER)	DS1	1			
6	A	1171502-542	SPACER 3/8" DIA #10 X 9/16" LONG		2			
7								
8								
9	A	1164410-026	SCREW, PAN HD. 6-32 X 1/4"		1			
10	A	1164410-078	SCREW, PAN HD. SLOTTED, 1/4-20 X 7/16		4			
11								
12	A	1183500-416	WASHER, FLAT 1/4" X .265 I.D. X .500 O.D.		4			
13	A	1167003-016	SCREW SET, HEX, #3/8 X 3/8 LG	NOTE 1	OPT			
14	A	1183600-139	WASHER, SPLIT, LOCK, 1/4"		4			
15	D	02300521-01	PLATE, INST, LEFT SIDE		1			
16	D	02300521-02	PLATE, INST, RIGHT SIDE		1			
17	B	02200164-01	GASKET		1			
18	B	02300320-01	LABEL, NOTE ELEMENT		1			
19	B	02200165-01	BEARING, CASTING		2			
20	A	1131112-001	PLUNGER		1			
21	A	02102325	BUSHING		1			
22	A	0500017792	LOCTITE #222		A/R			
23	B	02101859	RING, RETAINING		1			
24	A	1167005-141	SCREW SET, HALF DOG, #10-24 X 3/8		3			
25	A	1165001-016	CAP. SCREW, SKT HD, 10-32 X 1 1/2		2			
26	A	0590016077	WASHER, LOCK, SPLIT #10		2			
27	D	02200144-01	CASTING, BRACKET		1			
28								
29	A	1142405-001	SPEED NUT		1			
30	B	02300525-01	GASKET		2			
31	C	02300524-01	BRACKET		1			
32	C	02300524-02	BRACKET		1			

NOTES:

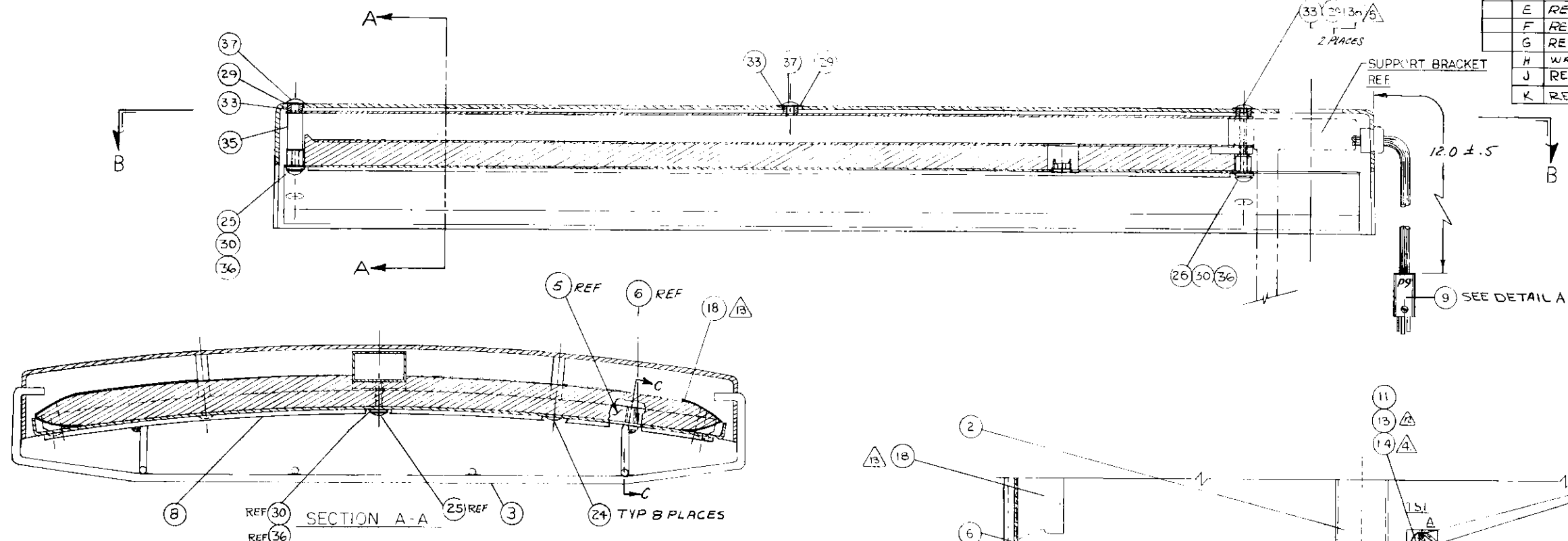
1. WHEN CONTROLLER AND INFANT WARMER ARE NOT TO BE ROTATED REPLACE ITEMS 20, 21 & 22 WITH ITEM 13.

THIS DRAWING, PRINT OR DOCUMENT AND THE SUBJECT MATTER DISCLOSED HEREIN ARE PROPRIETARY ITEMS OF THE DIVISION OF BECTON, DICKINSON AND COMPANY, BEING THE EXCLUSIVE RIGHT OF INVENTION, REPRODUCTION, MANUFACTURE, USE AND SALE, THIS DRAWING IS SUBMITTED IN CONFIDENCE FOR CONSIDERATION BY THE RECIPIENT ALONE UNLESS PERMISSION FOR FURTHER DISCLOSURE IS EXPRESSLY GRANTED IN WRITING.

T	REVISED PER F.O. 4213	10/10/76	ES
U	REVISED PER E.O. 4173	2/20/77	ES

L	REVISED PER C.V. 3089	10/10/76	ES
M	REVISED PER CN 3358	10/10/76	ES
N	REVISED PER CN 3433	10/10/76	ES
P	REVISED PER E.O. 3546	2/20/77	ES
R	REVISED PER E.O. 4120	3-29-78	ES
S	REVISED PER E.O. 4151	10/10/76	ES

REVISIONS			
ZONE	SYM	DESCRIPTION	DATE
A		SEE E.O. 422	
B		SEE E.O. 478	2-9-71
C		SEE E.O. 565	4-5-71
D		SEE CN 1835	12-13-72
E		REVISED PER CN 1857	2/20/77
F		REVISED PER CN 2262	10/10/76
G		REVISED PER CN 2351	10/10/76
H		WRS 4003-400-00 CN 2384	1/25/78
J		REVISED PER CN 2426	3/16/78
K		REVISED PER CN 2941	10/10/76



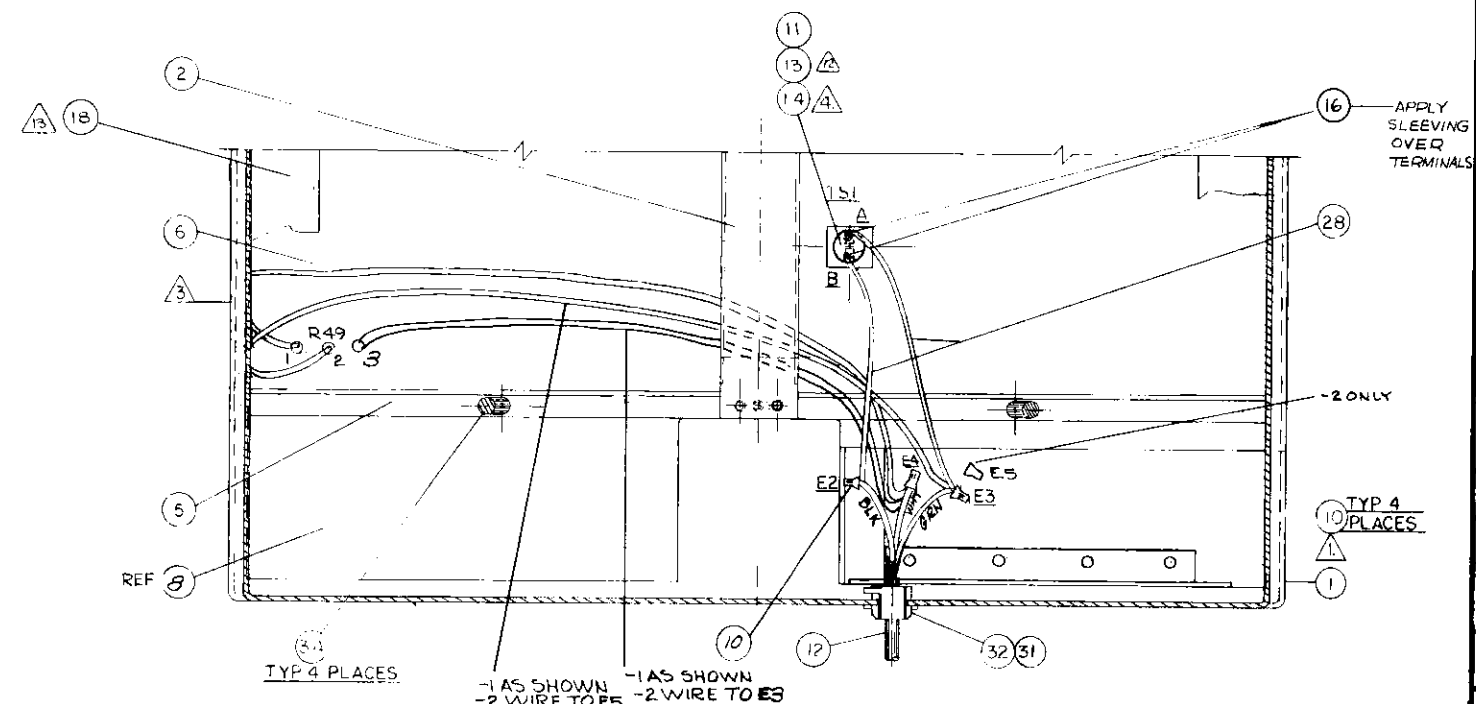
- 13 FOLD ALUM. FOIL OVER ALL 4 EDGES OF INSULATION (ITEM 16) AND STAPLE AS REQD.
- 12 APPLY ITEM 13 TO ENTIRE TOP OF THERMOSTAT.
11. WORKMANSHIP TO BE IN ACCORDANCE WITH A100649.

-1		-2		LN6
120 VAC		240 VAC		120 V, 240 V
FROM	TO	FROM	TO	
P9-16	E-2	P9-16	E-2	24"
P9-14	E-4	P9-14	E-4	
P9-15	E-3	P9-15	E-3	
E-2	TSI-B	E-2	TSI-B	7"
E-3	TSI-A	E-3	TSI-A	9"
E-4	R49-1	E-4	R49-1	
E-4	R49-3	E-3	R49-3	
E-3	R49-2	E-3	R49-2	

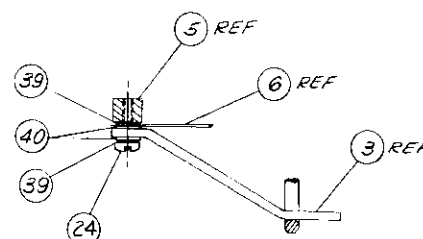
- 8 REFORM CABLE CLAMP (OF ITEMS 9) TO SECURE CABLE (ITEM 12).
- 7 REMOVE EXISTING SCREWS AND REPLACE WITH ITEM (21) 2 PLACES.
- 5 HARDWARE TO BE USED IN ASSEMBLY TO CONTROLLER.
- 4 BOND THERMOSTAT (ITEM*14) TO HEATER (ITEM*8) USING (ITEM*11).
- 3 LOOP WIRES FROM HEATER (ITEM*8) OVER & AROUND (ITEMS *6 & *18).

- 1 DRESS WIRES OF CABLE (ITEM*12) ABOVE INSULATION (ITEM*6) NEXT TO HOOD (ITEM*1) TO KEEP CABLE WIRES (ITEM*12) AWAY FROM RADIANT SURFACE.

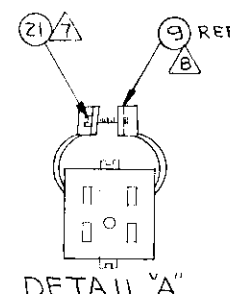
NOTES: UNLESS OTHERWISE SPECIFIED.



PARTIAL SECTION B-B SHOWING INTERNAL WIRE CONNECTIONS (ROTATED 90°)



SECTION C-C
TYP. 2 PLACES



DETAIL A

ITEM NO.	QTY	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
1	1	ITEM NO. 1			
2	1	ITEM NO. 2			
3	1	ITEM NO. 3			
4	1	ITEM NO. 4			
5	1	ITEM NO. 5			
6	1	ITEM NO. 6			
7	1	ITEM NO. 7			
8	1	ITEM NO. 8			
9	1	ITEM NO. 9			
10	1	ITEM NO. 10			
11	1	ITEM NO. 11			
12	1	ITEM NO. 12			
13	1	ITEM NO. 13			
14	1	ITEM NO. 14			
15	1	ITEM NO. 15			
16	1	ITEM NO. 16			
17	1	ITEM NO. 17			
18	1	ITEM NO. 18			
19	1	ITEM NO. 19			
20	1	ITEM NO. 20			
21	1	ITEM NO. 21			
22	1	ITEM NO. 22			
23	1	ITEM NO. 23			
24	1	ITEM NO. 24			
25	1	ITEM NO. 25			
26	1	ITEM NO. 26			
27	1	ITEM NO. 27			
28	1	ITEM NO. 28			
29	1	ITEM NO. 29			
30	1	ITEM NO. 30			
31	1	ITEM NO. 31			
32	1	ITEM NO. 32			
33	1	ITEM NO. 33			
34	1	ITEM NO. 34			
35	1	ITEM NO. 35			
36	1	ITEM NO. 36			
37	1	ITEM NO. 37			

**ELECTRODYNE**Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.**PARTS LIST**

PL

26200184

REV

U

TITLEHOOD ASSEMBLY
INFANT WARMER

SHEET

1 OF 2

DON 4000, 4003, 4001

DRAWN

DATE

CHECKED

DATE

APPROVED

DATE

AL LAFERRARA 6-13-74

E.S.

19 SEP 74

A. DANIELS

19 SEPT 74

ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.			
					-01	-02		
1	D	02200160-01	HOOD		1	1		
2	C	02200161-01	HOOD SUPPORT		1	1		
3	D	02300247-01	HEAT GUARD WARMER		1	-		
4								
5	C	02200163-01	BAR, ELEMENT FORMING		2	2		
6	B	00200166-01	INSULATION		1	1		
7								
8	D	20200198-01	HEATER ASSY		1	1		
9	A	1019007-102	PLUG, 4 PIN	P9	1	1		
10	A	1024000-011	SPLICE, CLOSED END		3	4		
11	A	0500015508	ADHESIVE, ECCO BOND #286		A/R	A/R		
12	A	1189017-002	CORDAGE, PORTABLE, TYPE SUT-3 BLACK, 16 AWG, UL APPROVED		1	1		
13	A	0500017872	RTV ADHESIVE SEALANT		A/R	A/R		
14	A	1075300-001	THERMOSTAT "KLIXON"		1	1		
15								
16	A	1170000-105	ALPHA FIT		A/R	A/R		
17								
18	A	0500015534	ALUM. FOIL 3" WIDE, .004 THK		A/R	A/R		
19								
20								
21	A	1165000-226	SCREW, FILISTER HD, #6-32x1/4		2	2		
22								
23								
24	A	1164600-031	SCREW, 8-32x3/4" LONG		10	8		
25	A	1164600-063	SCREW, 1/4-20x1.00 LONG		1	1		
26	A	1164600-062	SCREW, 1/4-20x7/8 LONG		1	1		
27								
28	A	1185504-037	WIRE INS. 18AWG RED		16"	16"		
29	A	1183500-111	WASHER, TYPE B REGULAR SERIES		4	4		
30	A	1183500-110	WASHER, FLAT #1/4		2	2		
31	A	1104507-001	ADAPTER		1	1		
32	A	1104501-021	STRAIN RELIEF, CABLE		1	1		
33		0590015550	SPACER, BRASS		4	4		

NOTES:

- 01 120VAC-UL LISTED
- 02 240VAC



U

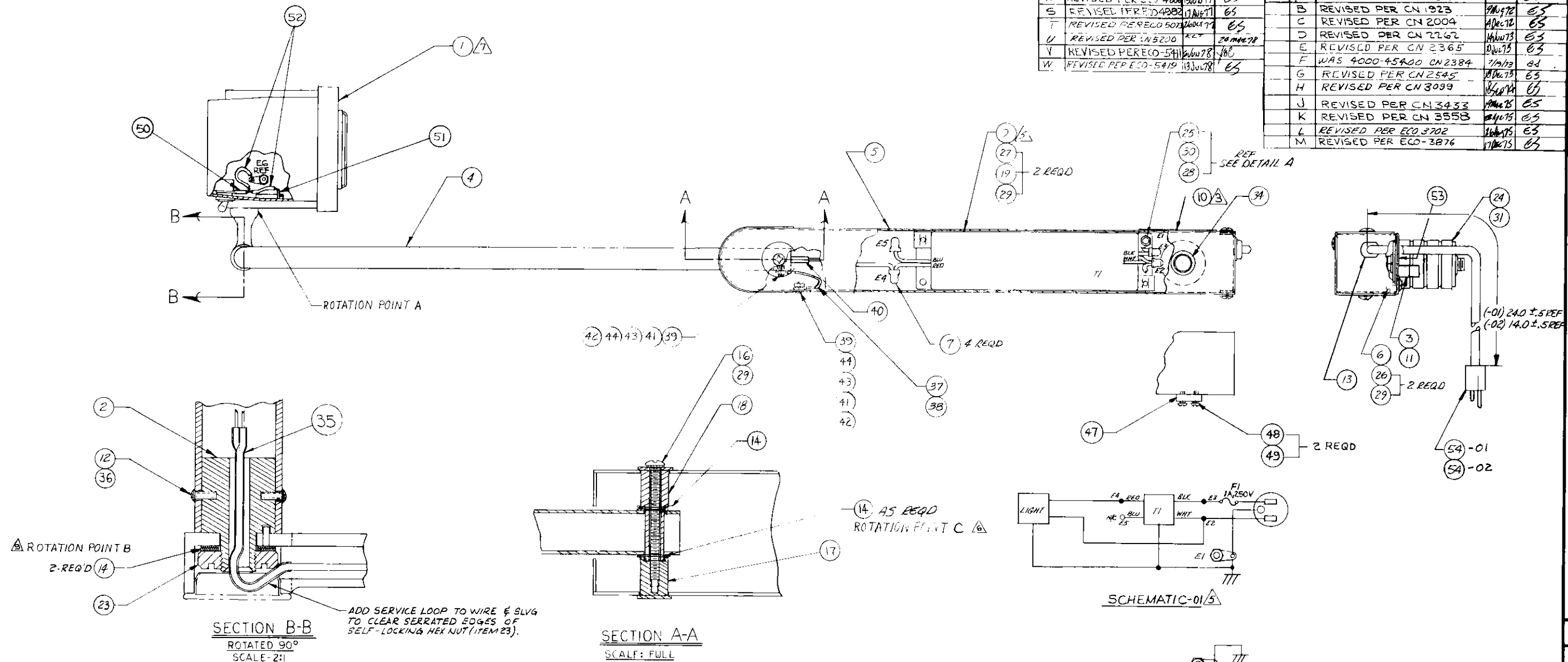
OF

[illegible]

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REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		REL'D TO PROD ER-1931	10/18/71	ES
B		REVISED PER CN 1923	7/16/72	ES
C		REVISED PER CN 2004	4/26/72	ES
D		REVISED PER CN 2262	1/11/73	ES
E		REVISED PER CN 2365	10/16/73	ES
F		WAS 4000-45400 CN 2384	1/15/73	ES
G		REVISED PER CN 2545	10/16/73	ES
H		REVISED PER CN 3099	10/16/73	ES
J		REVISED PER CN 3433	10/16/73	ES
K		REVISED PER CN 3558	10/16/73	ES
L		REVISED PER ECO 3702	10/16/73	ES
M		REVISED PER ECO-3876	10/16/73	ES

N	REVISED PER ECO-4151	10/16/76	ES
P	REVISED PER ECO-4151	10/16/76	ES
R	REVISED PER ECO-4886	10/16/77	ES
S	REVISED PER ECO-4886	10/16/77	ES
T	REVISED PER ECO-5072	10/16/77	ES
U	REVISED PER CN 5200	10/16/78	ES
V	REVISED PER ECO-5411	10/16/78	ES
W	REVISED PER ECO-5419	10/16/78	ES



- △ ROTATION POINT B, WHERE TWO WASHERS (ITEM 14) ARE REQ'D & NUT (ITEM 23) TO BE TIGHTENED AS REQ'D TO BE AS STIFF AS ROTATION POINT A.
8. WORKMANSHIP TO BE IN ACCORDANCE WITH SPEC A04100649.
- △ WIRING OF EXAM LIGHT (ITEM 1) AS SHOWN, CAN BE ACCOMPLISHED AFTER REMOVAL OF FRONT COVER, LAMP & SWITCH. REASSEMBLE UPON COMPLETION.
- △ QUANTITY OF ITEM 14 IS AS REQ'D. AMOUNT TO BE USED, IS TO BE DETERMINED BY THE AMOUNT NEEDED, ANY, TO MAKE ROTATION POINT C, AS STIFF AS ROTATION POINT A.
- △ WIRING OF TRANSFORMER SHOULD BE ACCOMPLISHED PRIOR TO MOUNTING IN ITEM 5.
- △ REMOVE PAINT FROM ITEM 9 WHERE ITEM 22 IS MOUNTED TO ENSURE ADEQUATE GROUNDING.
- △ LABEL TO CONTAIN THE FOLLOWING INFORMATION: MODEL NO. 4008, 120 VAC, 50/60 Hz, & SERIAL NO.

NOTES: UNLESS OTHERWISE SPECIFIED.

QTY	ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
MATERIAL LIST						
FINAL	4000	UNLESS OTHERWISE SPECIFIED				
NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES				
APPLICATION		TOLERANCES				
MATERIAL		X .001 ± .001 ANGULAR ± 0°30'				
SEE L/M 26200140		.XX ± .020 ALL RADII MAX.				
FINISH		.XXX ± .010 MACH. SURF. ✓				
		THREADS: CLASS 2A OR 2B				
		REMOVE BURRS AND SHARP EDGES .020 MAX.				
		MACH. SURF. FLAT WITHIN .001 IN/IN				
		OTHER SURF. FLAT WITHIN .005 IN/IN				
		DO NOT SCALE DRAWING				
		BY DATE				
		DR 10/16/71 10/16/71				
		CHK 10/16/71 10/16/71				
		ENGR 10/16/71 10/16/71				
		APPD				
		APPD				
		TITLE				
		EXAMINATION LIGHT ASSY				
		INFANT WARMER				
		SIZE				
		D 26200140				
		SCALE 1/2" = 1"				
		SHEET 1 of 1				

**ELECTRODYNE**Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PARTS LIST

PL

26200140

REV.

S

SHEET

1 OF 2

ED ON 4000

TITLE EXAMINATION LIGHT ASSY,
INFANT WARMER

DRAWN	DATE	CHECKED	DATE	APPROVED	DATE
AL LAFERRARA		E.S.	19 SEP 74	A. DANIELS	19 SEPT 74

ITEM NO.	SIZE	PART NO.	DESCRIPTION	REF. DES.	QTY. PER TAB NO.			
					-01	-02		
1	C	20300327-01	EXAMINATION LIGHT SUB-ASSY		1	1		
2	B	02200178-01	INSERT		1	1		
3	A	1028325-019	FUSE, 3AG, 1A, 250V	F1	1	1		
4	C	02200179-01	TUBING		1	1		
5	C	02200180-01	ARM, EXTENSION		1	1		
6	B	02200181-01	BRACKET		1	1		
7	A	1024000-011	SPLICE, CLOSED END	E2-E5	4	4		
8								
9	A	1077733-001	TRANSFORMER	T1	1	1		
10	C	02101615-16	LABEL, IDENT		1	1		
11	A	1029205-014	FUSE HOLDER	XFI	1	1		
12	A	1164910-003	SCREW, MACH, PH, 2-56 x 1/4		4	4		
13	A	1104501-018	BUSHING, STRAIN RELIEF		1	1		
14	A	1183624-001	WASHER, CURVED SPRING		A/R	A/R		
15								
16	A	1164403-058	SCREW, 10-32 x 2 1/4 PAN HD. PHILLIPS REC		1	1		
17	B	200014	BUSHING, FEMALE		1	1		
18	B	200013	BUSHING, MALE		1	1		
19	A	1142402-002	SPEED NUT, CAD PLT, 10-24		2	2		
20	A	1131118-002	RETAINING RING		1	1		
21								
22								
23								
24	B	21200213-02	RUBBER EXPANSION SOCKET		1	1		
25	A	1164504-050	SCREW FLAT HD. 8-32 x 3/8		1	1		
26	A	1164600-047	SCREW, TRUSS HD, 10-32 x 7/16		2	2		
27	A	1164600-037	SCREW, TRUSS HD, 10-24 x 3/8		2	2		
28	A	1141400-084	NUT, FLAT HEX, #8-32		1	1		
29	A	1183620-173	LOCKWASHER, INT TOOTH, #10		5	5		
30	A	1183610-059	LOCKWASHER, EXT TOOTH, #8		1	1		
31	A	1183600-143	WASHER, LOCK, SPLIT, 1/2		1	1		
32		600011	WARRANTY CARD		1	1		
33		600141	OPERATING INSTRUCTIONS		1	1		

NOTES:

- 01 HOSPITAL GRADE PLUG
- 02 UL LISTED



PL

76200140

REV.

5

SHEET

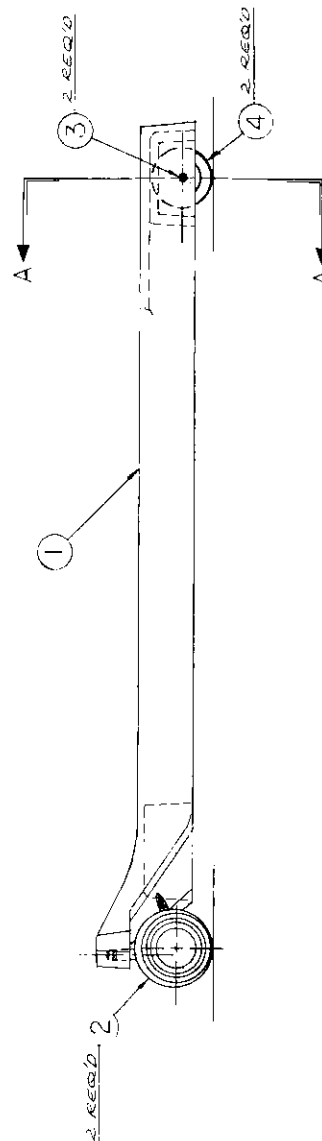
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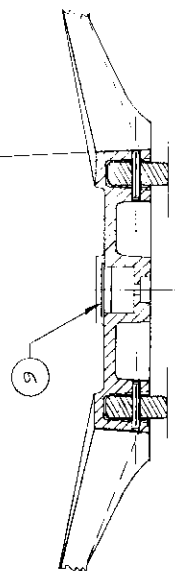
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REVISIONS			
ZONE	SYM	DESCRIPTION	DATE
A		SEE P.O. # 26	10-1-54
B		SEE EO 360	4-1-54
C		SEE CU 2099	4-1-54
D		WAS 9020-450-100 ON 2-3-54	2-3-54



INSTALL SEE SPIN F.E.
WITH V.D. SURFACE
TYP. 2 PLACES



NEW A.A.

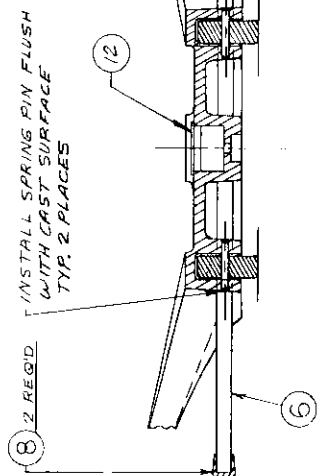
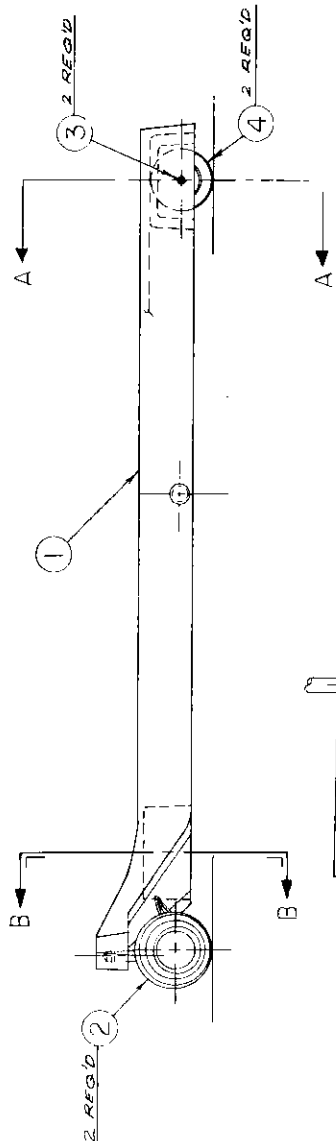
PARTIAL VIEW SUBSTITUTED SEE P.O. # 26

ITEM NO.	QTY	ITEM NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
MATERIAL LIST						
NEXT ASSY		4020		USED ON		
APPLICATION		SEE 44100200125				
MATERIAL		SEE 44100200125				
FINISH		MACH. SURF. FLAT WITHIN .001 IN/IN OTHER SURF. FLAT WITHIN .005 IN/IN DO NOT SCALE DRAWING				
UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES				
TOLERANCES		X ± .050 ANGULAR ± 0°30'				
		XX ± .020 ALL RADI MAX.				
		XXX ± .010 MACH. SURF. V				
		THREADS: CLASS 2A OR 2B				
		REMOVE BURRS AND SHARP EDGES .020 MAX.				
		MACH. SURF. FLAT WITHIN .001 IN/IN				
		OTHER SURF. FLAT WITHIN .005 IN/IN				
		DO NOT SCALE DRAWING				
BY		DR. R. W. MEALEY		DATE 4-20-70		
CHK		ENGR		7-10-70		
APPD		ME. L. L. L.		7-11-70		
APPD						
TITLE		BASE ASSEMBLY				
IMD		Division of Becton, Dickinson and Company				
SCALE		1/4" = 1"				
SHEET		1 OF 1				

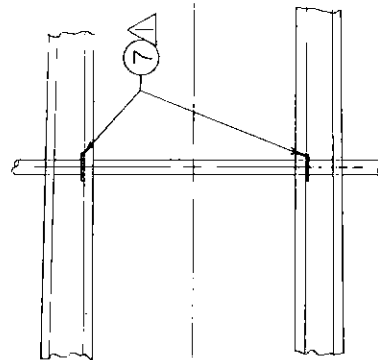
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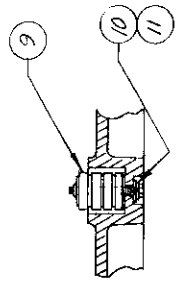
REVISIONS		DATE	APPROVAL
ZONE	SYM	DESCRIPTION	
A	SEE 40561		
B	WAS 4000-410-00 LK 2354		



VIEW A-A
PARTIAL VIEW SHOWING FRONT WHEEL ASSEMBLY



BOTTOM VIEW
SHOWING ITEM 7 INSTALLED



VIEW B-B
PARTIAL VIEW SHOWING EXPANSION SOCKET ASSEMBLY

ITEM NO.	QTY	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
1					

MATERIAL LIST			
UNLESS OTHERWISE SPECIFIED		QTY	
DIMENSIONS ARE IN INCHES			
TOLERANCES			
X ± .050 ANGULAR ± 0°30'			
XX ± .020 ALL RADII MAX.			
XXX ± .010 MACH. SURF. ✓			
THREADS: CLASS 2A OR 2B			
REMOVE BURRS AND SHARP			
EDGES .020 MAX.			
MACH. SURF. FLAT WITHIN			
.001 IN/IN			
OTHER SURF. FLAT WITHIN			
.005 IN/IN			
DO NOT SCALE DRAWING			
NEXT ASSY	4000/2300	USED ON	
APPLICATION			
MATERIAL			
SEE 4M 00200126			
FINISH			
DR D. T. SHEARS		BY	DATE
CHK			10-8-70
ENGR			4/6/71
APPD			10/1/70
APPD			
SIZE			
C			
SCALE 3/4"=1"			
SHEET			1 OF 1
TITLE		BASE ASSEMBLY ANTI TILT	
IMD		Division of Becton, Dickinson and Company	
BDO			

ITEM 6 ROD TO BE SYMMETRICAL ABOUT BASE WITHIN .10 INCHES AND LOCKED IN PLACE USING ITEM 7

NOTES: UNLESS OTHERWISE SPECIFIED,

IMD		Division of Becton, Dickinson and Company	
TITLE		BASE ASSEMBLY	
		ANTI TILT	
SIZE		C	
SCALE		1/2" = 1"	
SHEET		1 OF 1	



I.M.I., Division of Becton,
Dickinson and Company [B-D]

WAS 4000-410-00

C SIZE ASSY

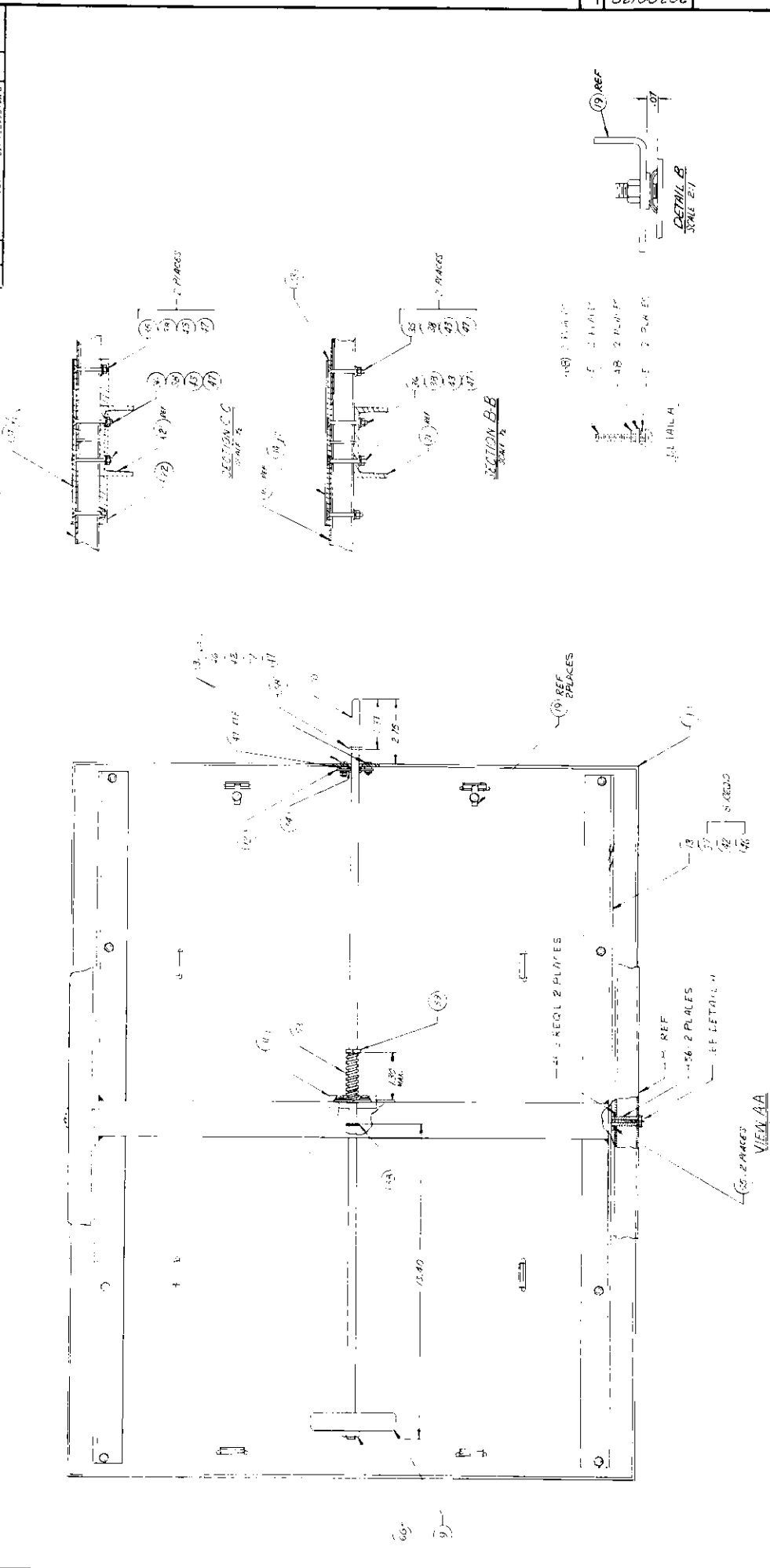
TITLE

BASE ASSY. ANTI TILT

BY		DATE	APPLICATION		REV			
DR D.T. SHEARS		10-8-70	NEXT ASSY	USED ON	LM00200126 B			
CHK			4000/2300		SHEET 1 of 1			
ENGR		10/13/70	REV					
APPROV		10/13/70	FO					
			TR					
			8					
			2384					
ITEM NO.	QTY.	QTY.	QTY.	QTY.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
1	1	-1	-2	-3	-4			
2	2							
3	2							
4	2							
5	1							
6	1							
7	2							
8	2							
9	1							
10	1							
11	1							
12	1							
13								
14								
15								
16								
17								
18								
19								
20								

DATE	BY	REVISION	DATE	APPROVAL
1/1/82	W.E.	EST. 1/1/82		

ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SPECIFIED



ITEM NO.	QTY.	DESCRIPTION	PART NO.	REMARKS	REV.	DATE
1	1	UNLESS OTHERWISE SPECIFIED				
2	1	DIMENSIONS ARE IN INCHES				
3	1	X = .000 ANGULAR ± 0.00				
4	1	XX = .000 ALL RADII MAX.				
5	1	XXX = .000 ALL SURF. FINISH				
6	1	REMOVE BURRS AND SHARP				
7	1	REMOVE BURRS AND SHARP				
8	1	REMOVE BURRS AND SHARP				
9	1	REMOVE BURRS AND SHARP				
10	1	REMOVE BURRS AND SHARP				
11	1	REMOVE BURRS AND SHARP				
12	1	REMOVE BURRS AND SHARP				
13	1	REMOVE BURRS AND SHARP				
14	1	REMOVE BURRS AND SHARP				
15	1	REMOVE BURRS AND SHARP				
16	1	REMOVE BURRS AND SHARP				
17	1	REMOVE BURRS AND SHARP				
18	1	REMOVE BURRS AND SHARP				
19	1	REMOVE BURRS AND SHARP				

DATE	BY	CHK	ENGR	APPD	FINISH
1/1/82	W.E.				
TITLE: BASSINET SUB-ASSEMBLY					
DRAWN BY: INFANT WARMER					
SCALE: 1/2"					
SHEET 2 OF 2					

NOTES: UNLESS OTHERWISE SPECIFIED



I.M.I., Division of Becton,
Dickinson and Company [B.D.]

TITLE

BASSINET SUB-ASSEMBLY
INFANT WARMER

DR

BY

DATE

APPLICATION

NEXT ASSY

USED ON

REV

CHK

ENGR

APPD

REV

LTR

EO

REMARKS

PART NO.

REF. DESIG.

SHEET 2 of 4

LM 20200128

L

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
21	1	1	1		C00200171-01	SUPPORT, FRAME			
22	1	1	1		B00200172-01	ANGLE, FRAME RETAINER			
23	1	1	1		B00200172-02	ANGLE, FRAME RETAINER			
24	1	1	1		B00200173-01	BAR, TUBING RETAINER			
25	1	1	1		B00200174-01	SUPPORT, BIN			
26	1	1	1		C00200175-01	BLOCK, INDEXING			
27	1	1	1		B00200060-01	LABEL, SQUEEZE HANDLE			
28	1	1	1		C101615-5	IDENT. PLATE, MODEL & SER. NO.			
29	1	1	1		900158	MATTRESS			
30	1	1	1		900250-1	EXPANSION SOCKET			
31	1	1	1		900246	TAPE, MYLAR, 3/16 WIDE x 20 LG	6401	MYSTIC TAPE	
32	2	2	2		910001-408	SCREW, PAN HD, SLOTTED, #8-32 x 1/2			
33	2	2	2		910001-406	SCREW, PAN HD, SLOTTED, #8-32 x 3/8			
34	2	2	2		910001-512	SCREW, PAN HD, SLOTTED, #10-24 x 3/4			
35	4	4	4		911301-624	SCREW, FLAT HD, 100°, SLOTTED, #10-32 x 1 1/2			
36	4	4	4		911301-628	SCREW, FLAT HD, 100°, SLOTTED, #10-32 x 1 3/4			
37	10	10	10		921014	NUT, HEX, #8-32			
38	8	8	8		921016	NUT, HEX, #10-32			
39	8	8	8		922017	NUT, HEX, 1/4-20			
40	2	2	2		A1140407-001	LOCK NUT, 8-32 (N)			



I.M.I., Division of Becton,
Dickinson and Company [B-D]

TITLE

BASSINET SUB-ASSEMBLY INFANT WARMER

BY	ITE	APPLICATION	
DR <i>[Signature]</i>	<i>11-12-70</i>	NEXT ASSY	USED ON
CHK			
ENGR	<i>11-11-70</i>		
APPD <i>[Signature]</i>	<i>11-11-70</i>		

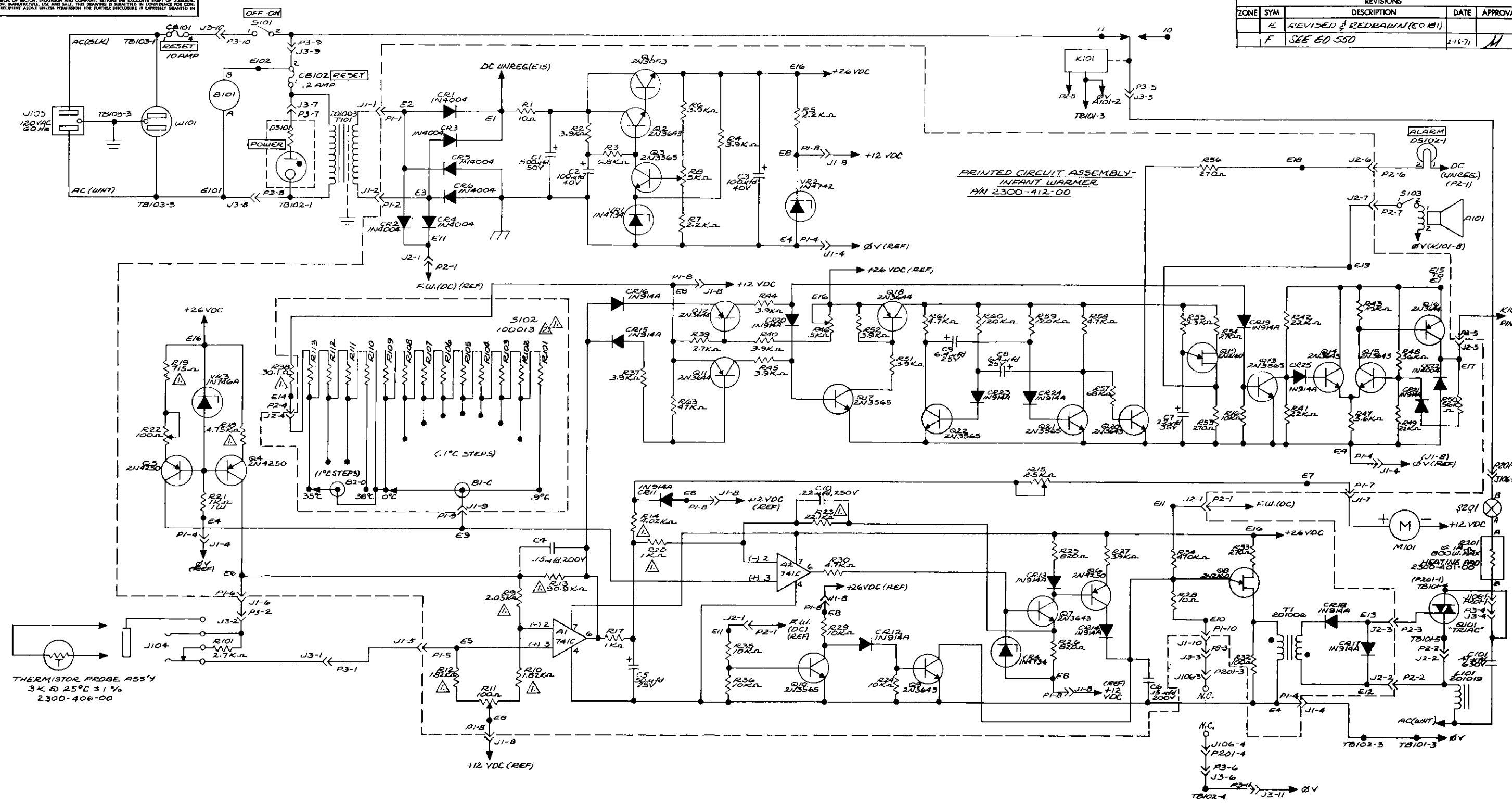
REV	LM2020c 28
SHEET 3 of 4	

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
41	2	2	2	2	930015	WASHER, LOCK, INT. TOOTH, #10			
42	12	12	12		933014	WASHER, LOCK, #8			
43	10	10	10		933015	WASHER, LOCK, #10			
44	2	2	2	2	934019	WASHER, SPLIT LOCK, #1/2			
45	4	4	4	4	950247	WASHER, CURVED SPRING	U375-0160	SPEC	
46	14	14	14	14	940014	WASHER, FLAT, #8			
47	12	12	12	12	941015	WASHER, FLAT, #10			
48	2	2	2	2	941105	WASHER, FLAT, #10 (STAINLESS)			
49	4	4	4	4	140031	WASHER, SPRING	3-W	DIMCO - GRAY	
50	2	2	2	2	942019	WASHER, FLAT, #1/2			
51	4	4	4	4	930105	WASHER, INT. TOOTH			
52									
53	1	1	1	1	950208	SPRING, 2" LONG	LC-047F-9SS	LEE SPRING CO.	
54	2	2	2	2	950209	BEARING, NYLON	5L1-FF	THOMSON IND.	
55	2	2	2	2	950211	WASHER, NYLON, 3/8 I.D. 3/4 O.D.	2352-N385	AMATOM	
56	2	2	2	2	950212	SPACER, BRASS, 10(3/400x1 1/8)	9331-B194	AMATOM	
57	2	2	2	2	950213	SCREW SET, HALF-DOG, NYLON	BLACK OXIDE 1/4-20 x 3/8 LG	DULCOMMION	
58	2	2	2	2	950216	RETAINING RING, EXTERNAL	5555-31 STAINLESS	WALDES TRU-ARC	
59	1	1	1	1	950257	STEEL SETSCREW COLLAR	SC-31	BOSTON GEAR	
60	1	1	1	1	B021019580	COLLAR, S/S 5" LONG			

[illegible]

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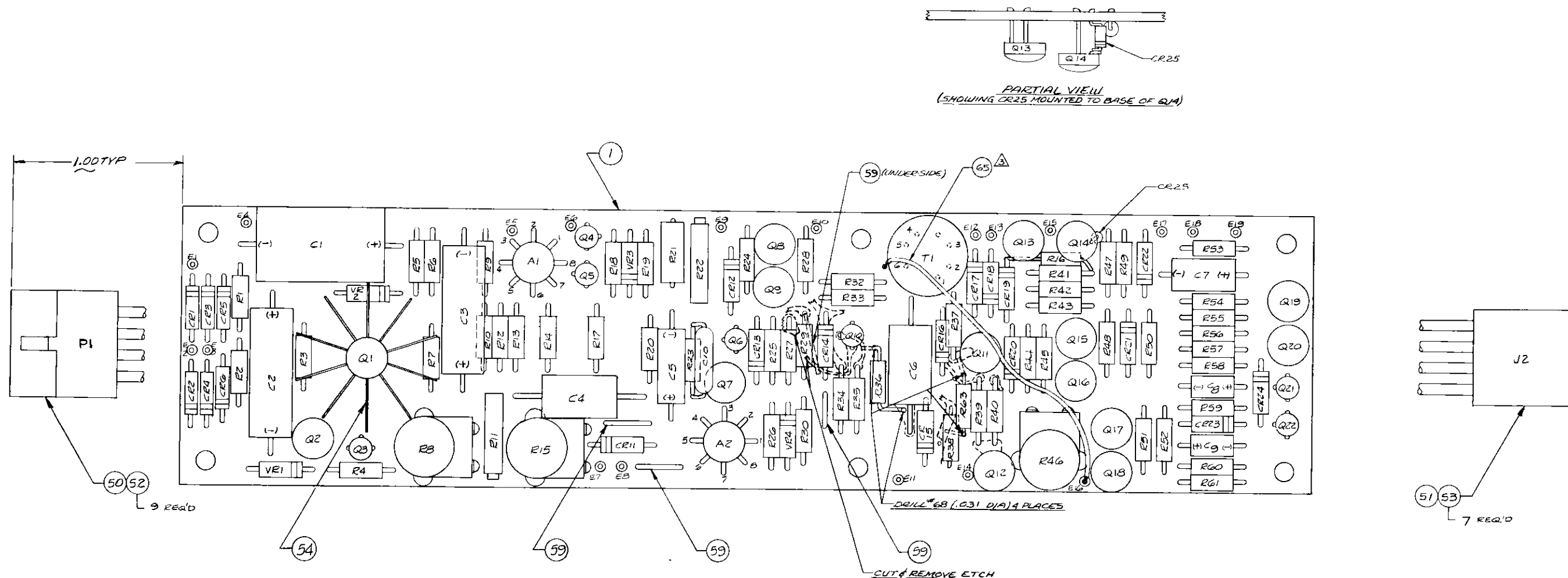
REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
E		REVISED & REDRAWN (EO 81)		
F		SEE EO 550	2-11-71	M



NOTES: UNLESS OTHERWISE SPECIFIED.
R101 THRU R109, 30.1Ω; R110 THRU R113, 301Ω
METAL FILM 1/8 W, ± 1%, ALL OTHER RESISTORS 1/2 W, 5%, UNLESS NOTED.

QTY	ITEM NO.	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
MATERIAL LIST						
2300-400-00	2300		UNLESS OTHERWISE SPECIFIED	BY	DATE	
NEXT ASSY	USED ON		DIMENSIONS ARE IN INCHES TOLERANCES	DR. W. MEALEY	12-8-69	
APPLICATION			X ± .050 ANGULAR ± 0°30'	CHK. P. P. P.	12-16-69	
MATERIAL			.XX ± .020 ALL RADII MAX.	ENGR. W. J. J. J.	DEC 16 69	
			.XXX ± .010 MACH. SURF. ✓	APPD. W. J. J. J.	DEC 16 69	
			THREADS: CLASS 2A OR 2B			
			REMOVE BURRS AND SHARP EDGES .020 MAX.			
			MACH. SURF. FLAT WITHIN .001 IN/IN			
			OTHER SURF. FLAT WITHIN .005 IN/IN			
			DO NOT SCALE DRAWING			
FINISH						
TITLE						SCHEMATIC - INFANT WARMER
SIZE						2300-200-00
SCALE						SHEET 1 OF 1

REVISIONS				
ZONE	SYM	DESCRIPTION	DATE	APPROVAL
A		RELEASE FOR PROD	1-22-69	RR
B		SEE EO 106	3/19/69	
C		SEE EO #115	3/30/69	
D		SEE EO #171	11/20/69	
E		SEE EO #178	11/23/69	
F		SEE EO #188	1-5-70	
G		SEE EO #200		



PRINTED CIRCUIT BOARD WIRE LIST							
FROM	TO	COLOR	LENGTH	FROM	TO	COLOR	LENGTH
E1	E15	BLK	9	E11	J2-1	BROWN	5 3/4
E2	P1-1	WHITE	2	E12	J2-2	RED	5 3/4
E3	P1-2	BROWN	2	E13	J2-3	BLUE	5 1/2
E4	P1-4	GRAY	2 1/2	E14	J2-4	GREEN	5 1/4
E5	P1-5	RED	4 3/4	E15	E1	BLK	9
E6	P1-6	BLUE	5 3/4	E16	NO CONN		
E7	P1-7	ORANGE	6	E17	J2-5	VIOLET	3 1/2
E8	P1-8	YELLOW	6 1/4	E18	J2-6	ORANGE	3 1/4
E9	P1-9	VIOLET	7	E19	J2-7	YELLOW	3
E10	P1-10	GREEN	7 3/4	E20	NO CONN		

1. INSULATED JUMPER, 5 1/2 IN. LONG, LACED TO HARNESS DURING HARNESS INSTALLATION.
2. CLINCH ALL LEADS BEFORE SOLDERING.
3. MAX HEIGHT OF SOLDERED ASSEMBLY TO BE 1.00.

NOTE: UNLESS OTHERWISE SPECIFIED,

2300-402-00	2300	UNLESS OTHERWISE SPECIFIED	BY	DATE	DIVISION OF BECTON, DICKINSON AND COMPANY 4362 Compton Drive, Newport Beach, California 92660
NEXT ASSY	USED ON	DIMENSIONS ARE IN INCHES TOLERANCES .X ±.050 ANGULAR ±0°30'	DR	1/16/69	
APPLICATION		.XX ±.020 .XXX ±.010 MACH. SURF. THREADS: CLASS 2A OR 2B REMOVE BURRS AND SHARP EDGES .020 MAX. MACH. SURF. FLAT WITHIN .001 IN/IN OTHER SURF. FLAT WITHIN .005 IN/IN DO NOT SCALE DRAWING	CHK	1/16/69	
MATERIAL	SEE L/M 2300-412-00		ENGR	1/16/69	
FINISH			APPD	1-23-69	TITLE PRINTED CIRCUIT BOARD ASSEMBLY- INFANT WARMER
			APPD	11/23/69	SIZE D
					SCALE 2/1
					2300-412-00
					SHEET 1 OF 1

TITLE

PRINTED CIRCUIT BOARD

ASSY - INFANT WALKMER

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
21	2				115014	POTENTIOMETER, 1000Ω	3007P-1-101	B000115	R11, R22
22	2				115002	POTENTIOMETER, 5K	UTH 201	CTS	R23, R24
23	2				271321	RESISTOR, 1.8K, 1%			R10, R12
24	1				272051	2.05K, 1%			R3
25	1				274751	4.75K, 1%			R13
26	1				279092	90.9K, 1%			R15
27	1				277150	715Ω, 1%			R10
28	1				271001	1K, 1%			R20
29	1				272212	22.1K, 1%			R23
30	2				260100	10Ω, 1/2W, 5%			R1, R2
31	11				260392	3.9K		R3, R4, R6, R27, R27, R44, R45, R51, R52	R27, R27
32	1				260692	6.8K			R5
33	1				260473	47K			R63
34	2				260222	2.2K			R25, R27
35	1				260101	100Ω			R32
36	1				260102	1K			R17
37	1				260562	5.6K			R47
38	2				260821	820Ω			R25, R26
39									
40	5				260103	RESISTOR, 10K, 1/2W, 1%			R29, R35, R43, R44, R45, R46



Industrial Medical Instruments,
DIV. OF BECTON DICKINSON AND CO.

BY
DR 97

DATE
1/63

APPLICATION
NEXT ASSY
USED ON

2300-402-00

2500

LM 2300-1-00

SHEET 3 OF 4

REV

REF. DESIG.

R33, R50, R39, R58, R61, R59, R60, R57, R33, R53, 54, 56, R55, R39, R41, R43, R45, R34

TITLE

PRINTED CIRCUIT BOARD

ASSY - INFANT WARMER

CHK

ENGR P. J.

APPD P. J.

W. Spingarn, #14 N. 5th St.

REV

1-16-63

1-16-63

1-16-63

EO

171

178

192

TR

171

178

192

REMARKS

RESISTOR, 56K, 1/2W, 5%

4.7K

120K

DESCRIPTION

260565

260472

260124

IMI NO.

260565

260472

260124

QTY. -1

QTY. -2

QTY. -3

QTY. -4

QTY. -1

QTY. -2

QTY. -3

QTY. -4

QTY. -1

QTY. -2

QTY. -3

QTY. -4



Industrial-Medical Instruments,
DIV. OF BECTON DICKINSON AND CO.

BY

DATE

APPLICATION

USED ON

REV

TITLE

PRINTED CIRCUIT BOARD
ASSY - INFANT WARMER

CHK

ENGR

APPROV

W. J. Anderson III

DR

2/13/74

NEXT ASSY

2300-402-00

USED ON

2300

SHEET

4 OF 4

REV

F

ITEM NO.	QTY. -1	QTY. -2	QTY. -3	QTY. -4	IMI NO.	DESCRIPTION	PART NO.	REMARKS	REF. DESIG.
51	A/E				190454-0	WIRE, HOOK UP, 22 GA, BLACK	TELCO	TYPE 1015, TYPE TEV-1052	
52	A/E				1	BROWN			
53	A/E				2	RED			
54	A/E				3	ORANGE			
55	A/E				4	YELLOW			
56	A/E				5	GREEN			
57	A/E				6	BLUE			
58	A/E				7	VIOLET			
59	A/E				8	GRAY			
70	A/R				190454-9	WIRE, HOOK UP, 22 GA, WHITE	TELCO	TYPE 1015, TYPE TEV-1052	
71	1				274021	RESISTOR, 4.02K Ω , 1%			R14
72	1				2730R1	RESISTOR, 30.1K Ω , 1%			R33
73	1				115020	RESISTOR, 2.5K Ω	U20R252B	CTS	R15
74	1				263102	RESISTOR, 1K Ω , 1W, 5%			R21
75									
76									
77									
78									
79									
80									

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		RELEASE PER ERN-4772	15 Apr 77	ES
B		REVISED PER CN-4858	11 Jun 77	ES

QTY. PER DASH NO.		PART OR IDENTIFYING NO.		ELECTRODYNE PART NO.		NOMENCLATURE OR DESCRIPTION		REV DES		ITEM NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				DATE 4/4/77		PART LIST					
TOLERANCES				CHK. J. BRANDT		B-D ELECTRODYNE Division of Section, Dickinson and Company Sharon, Massachusetts 02067 U.S.A.					
ANGLES ± — DECIMALS 2 PLACE ± — 3 PLACE ± —				APPROV. <i>[Signature]</i> NEXT ASBY MODEL		INSTALLATION INSTRUCTIONS 2300 TO 4000 SERIES HOOD					
FINISH				MATERIAL		SIZE		07000043		REV B	
						SCALE				SHEET 1 OF 3	

5

4

3

2

1

Changing Element from 2300 to 4000 Series

- A. Wire hood (Figure B) take 3 wires from element and find 18 Ω combination (2 wires will go together) 3rd will be used by itself. Figure A shows hood before rewiring.
- B. Put connector into Proportional Control replacing old connector. Leave the two black wires off. Remove R28, 10 ohm resistor from P.C. board as shown on assembly Drawing No. 2300-412-00.
- C. Drill hole in bar 2 11/16 inches down from bottom of original hole and 1 5/16 inches in from sided drill size 5/16 of an inch whole (See Figure E).

<u>Qty.</u>	<u>Part Required</u>	<u>Number</u>
1	Element	2020019802
2	Forming Bars	0220016301
1	Connector 4 Pin	1019007003
1	Plug 4 Pin	1019007102
1	Thermostat	1075300001

A	07000043	REV. B
B-D ELECTRODYNE		SHT. 2

Adding Heat Guard to Hood

- A. Can only be done to 4000 Series Units.
- B. Look on prints to find where to drill holes in shell and element.

<u>Qty.</u>	<u>Parts Required</u>	<u>Numbers</u>
1	Guard	02300247-01
2	Screws 8/32 x 3/4	1164600031
1	Forming Bar	0220016301

A	070000043	REV. B
B-D ELECTRODYNE		SHT. 3

Putting a new thermostat in a 2300 Series hood:

- A. Remove Old Thermostat and put in new one
- B. Wire thermostat in Series with Element not using wires on Pin 15 and 13



Remove R28 10 ohm Resistor from the board. Also remove two black wires from connector for hood on Proportional Control Unit. (See Figure C,D&F)

<u>Qty.</u>	<u>Part Required</u>	<u>Number</u>
1	Thermostat	1075300001
1	Connector 4 Pin	1019007003
1	Plug 4 Pin	1019007102

A

070000043

REV.

B

B-D

ELECTRODYNE

SHT. 4

Changing Hood Assembly

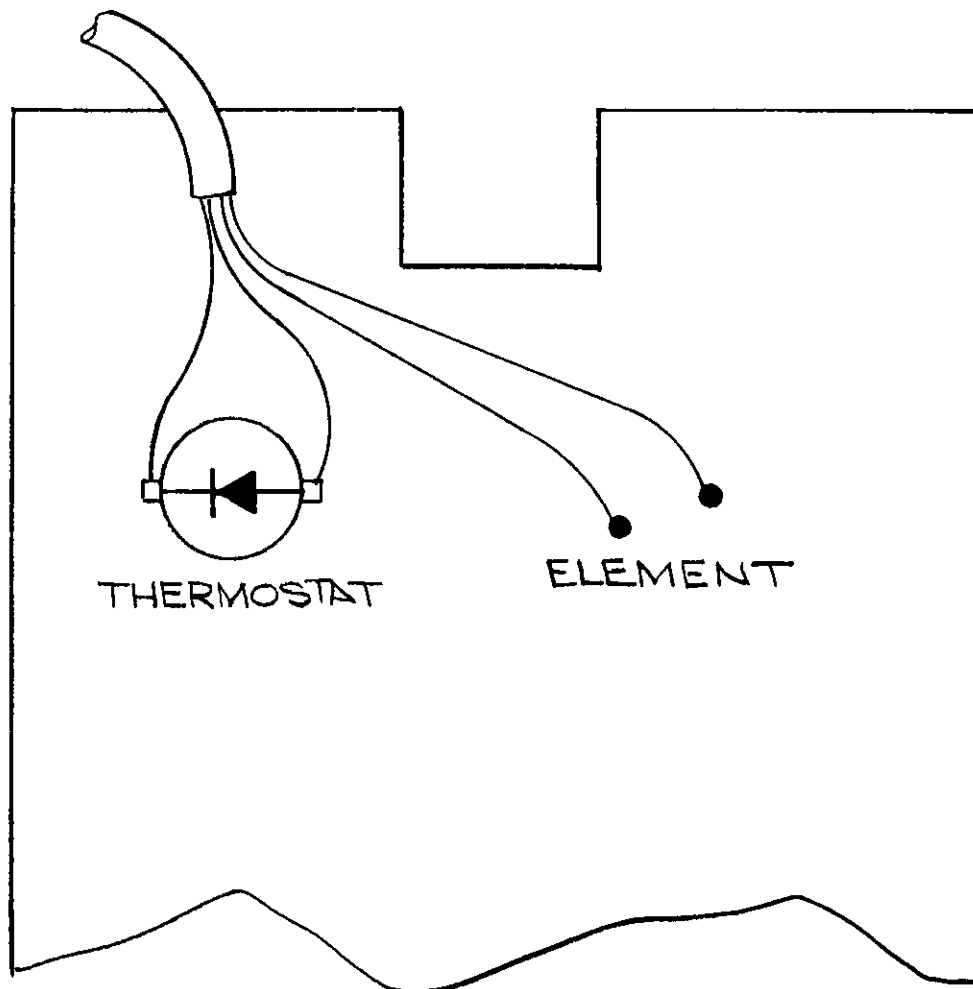
- A. Buy new hood assembly
- B. Rewire hood to Figure B. Take 3 wires from element and find 18 ohm combination (2 wires will go together). third will be used by itself.
- C. Put connector into Proportional Control replacing old connector. Leave the two black wires off. Remove R28 10 ohm resistor from P.C. Board (See Figure F).
- D. Drill hole in bar 2 11/16 inches down from bottom of original hole and 1 5/16 inches in from the sided drill size 5/16 of an inch hole. See Figure E. Remove bar from new hood first.

<u>Qty</u>	<u>Parts Required</u>	<u>Number</u>
1	Hood Assembly	D26200184-01

A	07000043	B
B-D ELECTRODYNE		SHT. 5

FIGURE A

WARMER BEFORE UPDATE



A

07000043

REV.

B

B-D ELECTRODYNE

SHT. 6

FIGURE B
WARMER AFTER UPDATE

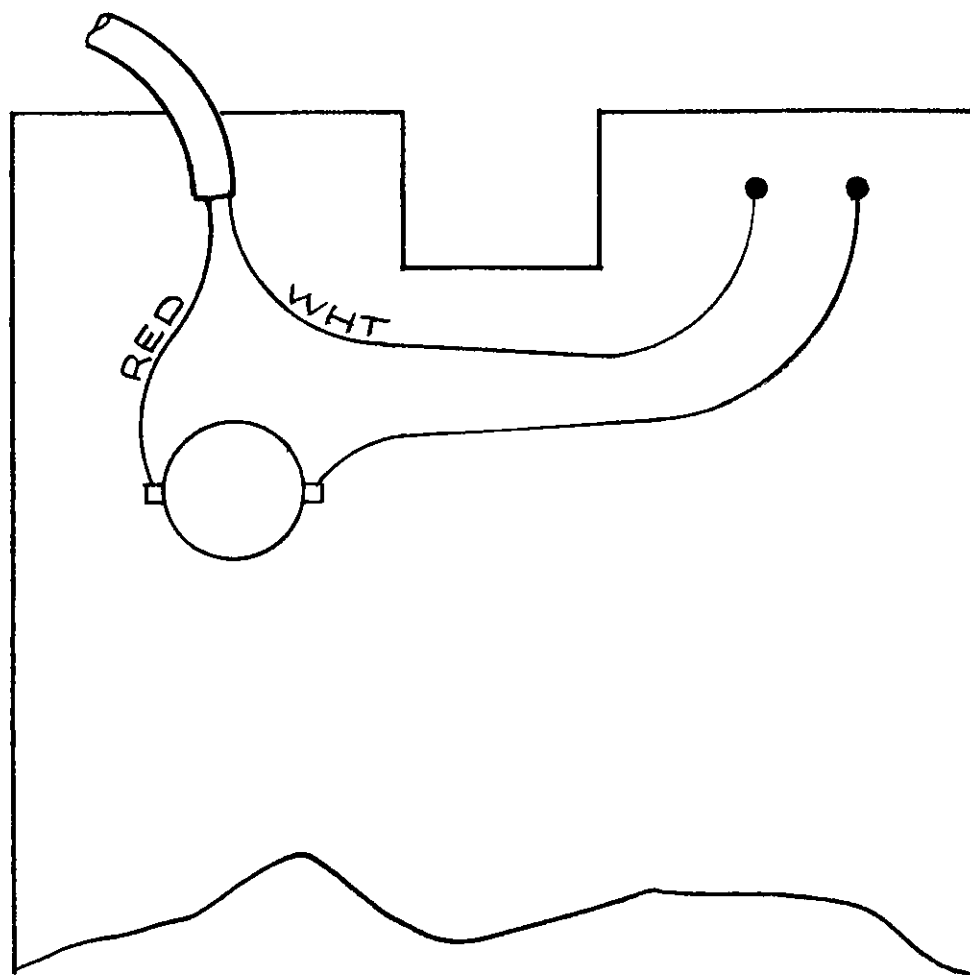


FIGURE C

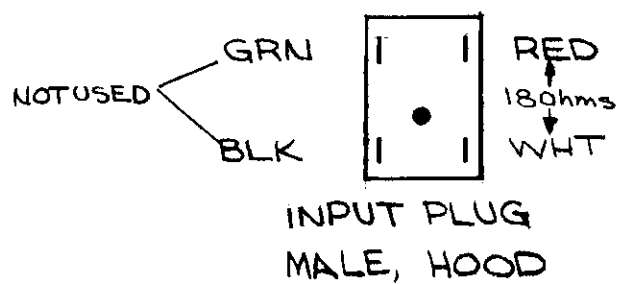
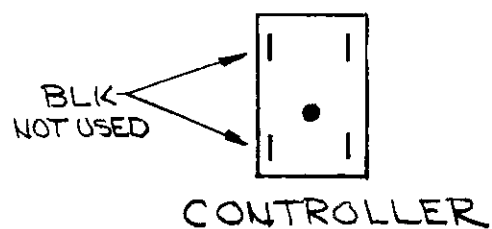


FIGURE D



A

070000043

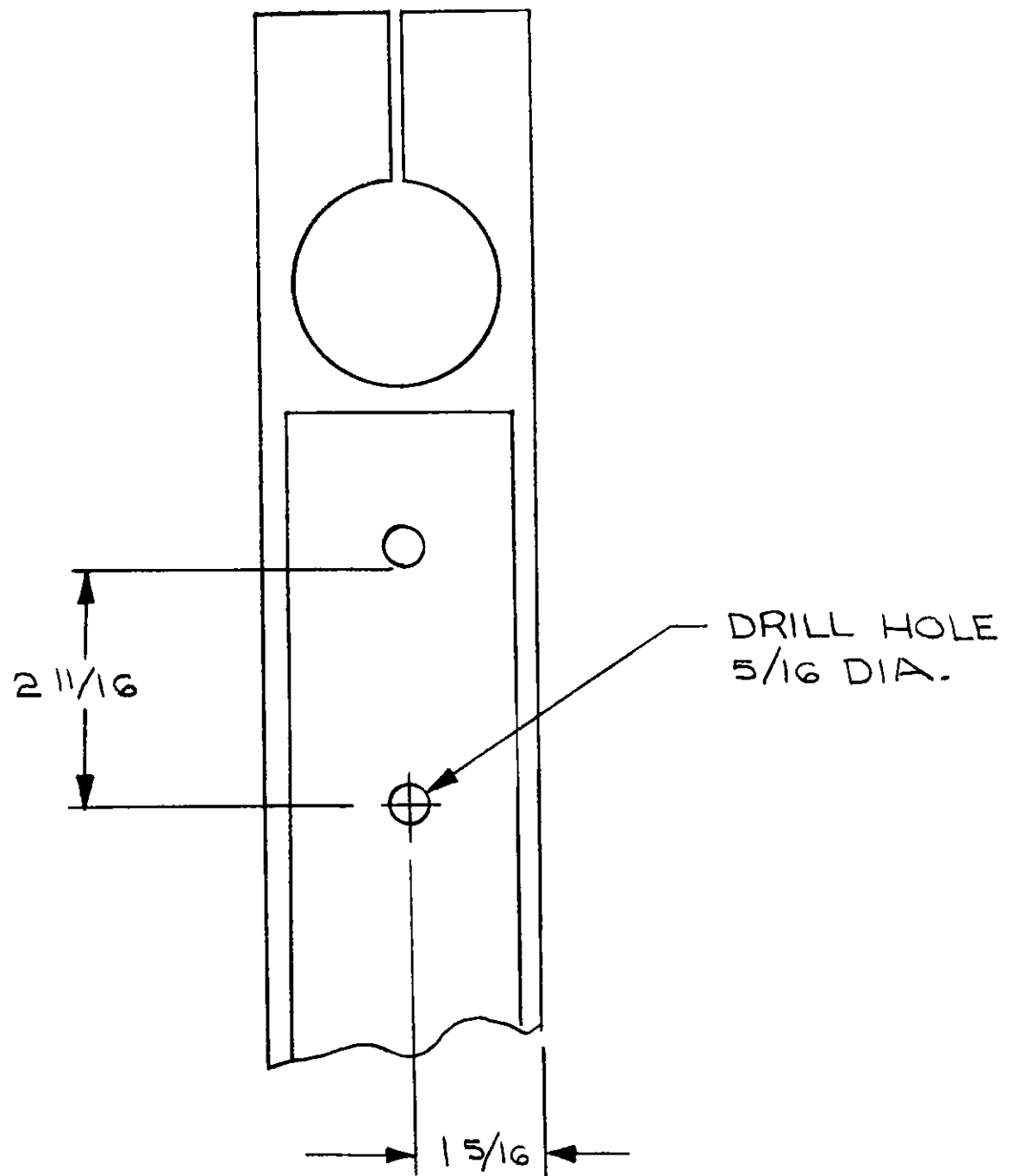
REV.

B

B-D ELECTRODYNE

SHT. 7

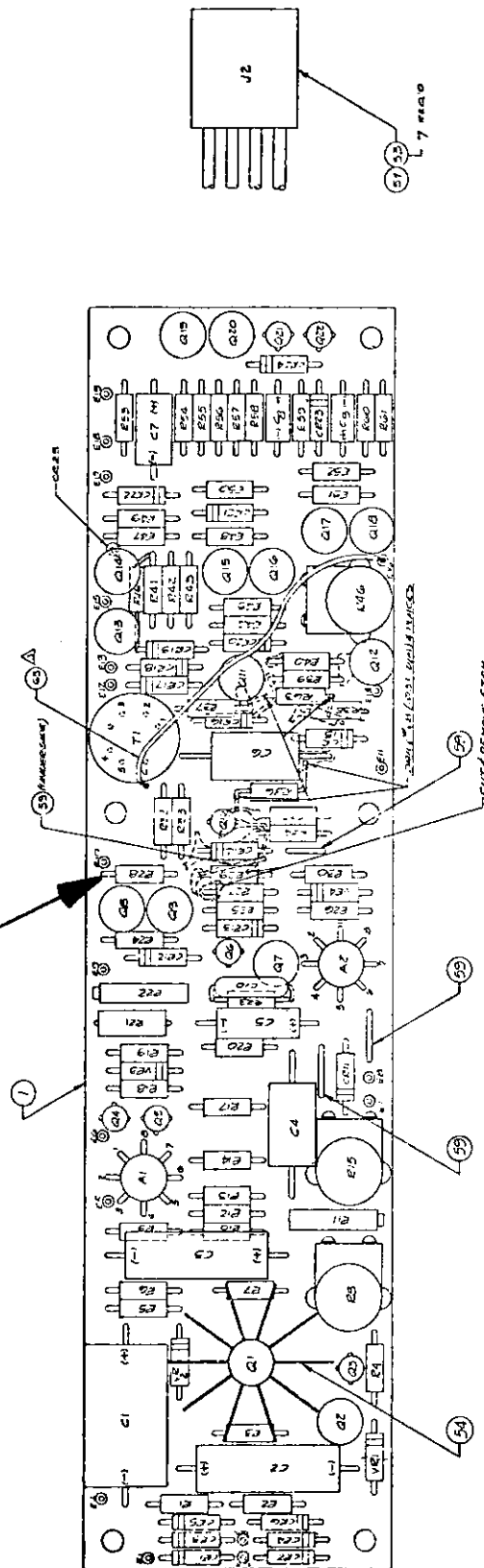
FIGURE E



A	070000043	REV. B
B-D ELECTRODYNE	SHT. 8	

FIGURE F

REMOVE R28



REV	TO	CHANGE	REASON	DATE	BY
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9
10	10	10	10	10	10

ITEM NO.	QUANTITY	DESCRIPTION	PART NO.	REMARKS	REV
1	1	PRINTED CIRCUIT BOARD			
2	1	ASSEMBLY			
3	1	INFLAT			
4	1	2300-412-00			
5	1	2300-412-00			
6	1	2300-412-00			
7	1	2300-412-00			
8	1	2300-412-00			
9	1	2300-412-00			
10	1	2300-412-00			

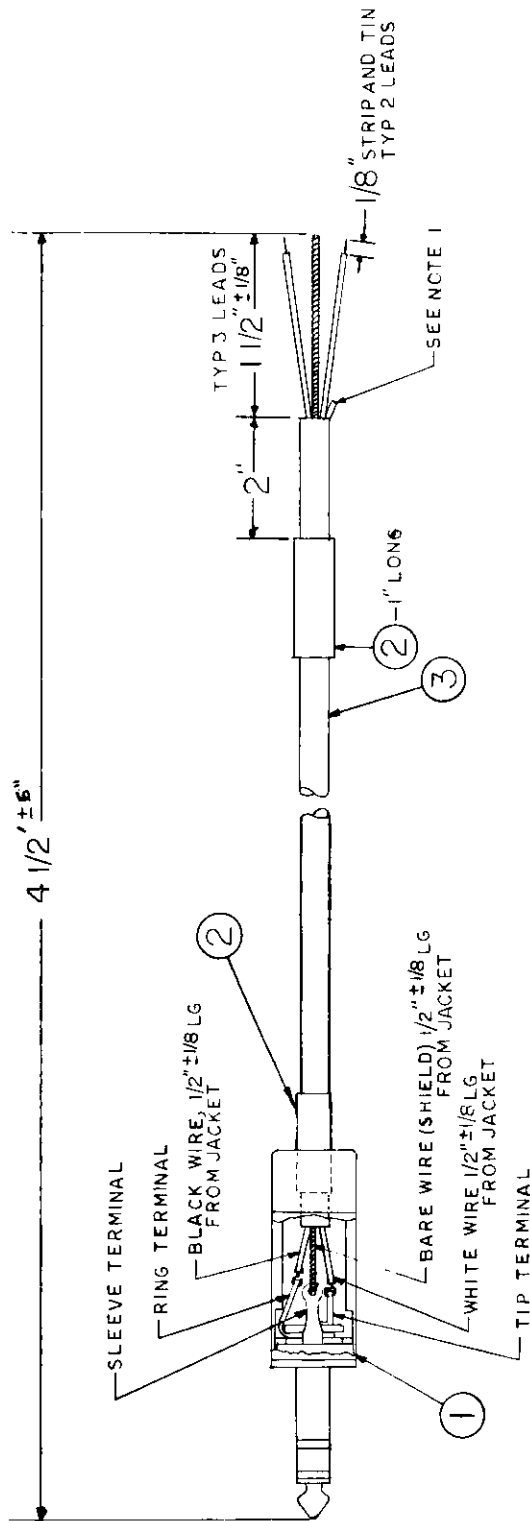
A	070000043	REV B
B-D ELECTRODYNE		SHT. 9

"C" SIZE ASSY

[illegible]

5 4 3 2 1

REVISIONS			
ZONE LTR	DESCRIPTION	DATE	APPROVED
A	RELEASED TO PROD. ER-3827	1944/11/15	ES



NOTE:

1. CUT OFF RED CABLE LEAD BOTH ENDS.
2. WORKMANSHIP TO BE IN ACCORDANCE WITH SPEC. 04100649.

QTY. PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REV DES	ITEM NO
PART LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		B-D ELECTRODYNE Cable Division Sharon, Massachusetts 01345 U.S.A.			
TOLERANCES		CABLE ASSEMBLY			
ANGLES $\pm$ DECIMALS		TEMPERATURE CALIB			
2 PLACE $\pm$.06		SIZE B			
3 PLACE $\pm$.006		REV A			
FINISH		SCALE 1/4"			
MATERIAL		SEE PL20300353			
NEXT ASSY		20300353			
MODEL		IM14030			
DATE		10-9-75			
CHK LETVINCHUK		APPR J. Hill 10-10-75			
DR A. DABIELS					

5 4 3 2 1

B-D

Division of Becton, Dickinson and Company
Sharon, Massachusetts 02067 U.S.A.

PL

20300217

REV.
A

USED ON IMI 4030

TITLE P.W. ASSEMBLY
TEMPERATURE CALIBRATOR

SHEET
10

DRAWN

DATE _____

CHECKED

DATE _____

APPROVED

DATE _____

h. Daniel 25 July 71

LETVINCHUK

10-9-75

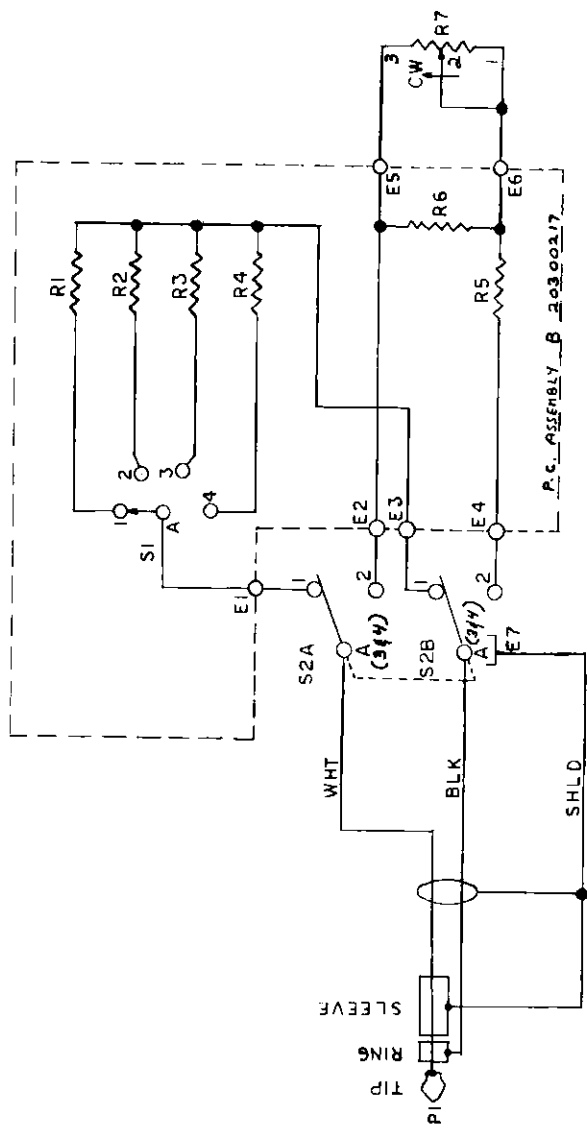
11

10-8-75

NOTES:

5 4 3 2 1

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
A		RELEASED TO PROD. EP-3827	18/4/75
			APPROVED



- R1 — 2.086K, .1%
- R2 — 1.805K, .1%
- R3 — 1.710K, .1%
- R4 — 1.598K, .1%
- R5,6 — 1.5K, 1%
- R7 — 1.0K, 10%

QTY. PER DASH NO.	PART OR IDENTIFYING NO.	ELECTRODYNE PART NO.	NOMENCLATURE OR DESCRIPTION	REF DES	ITEM NO.
			B-D ELECTRODYNE		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			DATE 23/4/75		
TOLERANCES			CHK LETVINCHUNK 10-2-75		
ANGLES ± — DECIMALS			APPR Hill 10-8-75		
2 PLACE ± —			NEXT ASSY		
3 PLACE ± —			MODEL		
FINISH			MATERIAL		
			IM 4030		
			SIZE		
			B		
			SCALE		
			SHEET 1 OF 1		

SCHEMATIC
TEMPERATURE CALIBRATOR

04300217

REV A

5 4 3 2 1

