Use and disclosure is subject to the restrictions on the title page of this CPI document.
NOTE 1: J4 connects to J5 on the 23 x 56 and the 31 x 42 cm console, and to J2 on the touch screen console. J16 connects to J6 on the RAD-only console.

NOTE 2: J17 connects to an external emergency power-off switch and also supplies power for an installer-supplied power distribution relay. Refer to MD-0788 sheet 4, MD-0762 sheet 1, and to Chapter 2 of the service manual for details.

NOTE 3: J7 and J8 are ABS inputs. Refer to MD-0758 and to Chapter 3E of the service manual for details.
Refer to page 5 for logic levels, notes, etc., referenced by hexagonal symbol: 

3 phase AC mains input

Use and disclosure is subject to the restrictions on the title page of this CPI document.
**T1 / T2 MUST BE TAPPED IN ACCORDANCE WITH THE NOMINAL AC MAINS VOLTAGE. REFER TO CHAPTER 2 OF THE GENERATOR SERVICE MANUAL.**

Use and disclosure is subject to the restrictions on the title page of this CPI document.
CONSOLE CPU BOARD (23 x 56 CM CONSOLE)

REMOTE FLUORO CONTROL BOARD

REMOTE FLUORO DISPLAY BOARD

THESE ITEMS ARE USED ON THE 23 X 56 CM CONSOLE ONLY.

FROM GENERATOR INTERFACE BOARD (PAGE 4)

THESE ITEMS ARE USED ON THE "RAD-ONLY" CONSOLE ONLY.

FROM GENERATOR INTERFACE BOARD (PAGE 4)

REMOTE FLUORO CONTROL OPTIONAL WITH INDICO 100 RAF GENERATORS
**NOTE**

1. This voltage will be approximately 0 VDC when the DC bus capacitors are not charged. This will rise to approximately 6 VDC when the DC bus capacitors are fully charged.

2. The DC bus capacitors must charge within approximately 0.25 seconds of the generator being switched on. If the DC bus capacitors do not charge normally, the **SOFT START OK PROTECTION CIRCUIT** energizes relay K1 (See # 4) and inhibits operation of the **SOFT START DRIVER CIRCUIT** (See # 3).

3. "LOW" (approximately 0 VDC) commands the main contactor K5 on the power input board to close. "HIGH" (approximately 12 VDC) = contactor open. This output will not switch "LOW" if the DC bus capacitors are not charged (See # 1 & 2).

4. K1 remains de-energized (contacts as shown) if no soft-start fault is detected, therefore, K1 and K2 on the power input board will energize when the generator is switched on. A soft-start fault energizes K1 on the auxiliary board, de-energizing K1 on the power input board. This will inhibit further DC bus charging.

5. "LOW" (approximately 0 VDC) = tube 2 selected. "HIGH" (approximately 12 VDC) = tube 1 selected.

6. "LOW" (approximately 0 VDC) = Fluoro FAN(S) on. "HIGH" (approximately 12 VDC) = Fluoro FAN(S) off. Fan(S) are switched on during pulsed or continuous fluoro operation, and remain on for approximately 20 minutes after switching to RAD mode.

7. "LOW" indicates **CONTACTOR CLOSED** (See # 3). The **CONTACTOR CLOSED** signal occurs approximately 10 seconds after initial generator turn-on, assuming normal DC bus charging.

8. "HIGH" (approximately 12 VDC) = RAD / PULSED FLUORO MODE. "LOW" (approximately 0 VDC) = CONTINUOUS FLUORO MODE. Used on R&F generators only.

9. "HIGH" (approximately 12 VDC) = PULSED FLUORO / LOW POWER MODE. "LOW" (approximately 0 VDC) = HIGH POWER RAD MODE. NOT USED ON ALL MODELS, REFER TO MD-0786 FOR DETAILS.

10. 24 VDC (approximately) energizes K1 and/or K2 on the power input board, initiating the power-on sequence. See # 4.

11. "HIGH" (approximately 5 VDC) = TUBE 2 SELECTED. "LOW" (approximately 0 VDC) = TUBE 1 SELECTED.

12. "HIGH" (approximately 5 VDC) = RAD / PULSED FLUORO MODE. "LOW" (approximately 0 VDC) = CONTINUOUS FLUORO MODE. Used on R&F generators only.

13. "HIGH" (approximately 5 VDC) = PULSED FLUORO MODE. "LOW" (approximately 0 VDC) = HIGH POWER RAD MODE. NOT USED ON ALL MODELS, REFER TO MD-0786 FOR DETAILS.

14. DS9 LIT = CONTACTOR CLOSED. DS10 LIT = CONTACTOR NOT CLOSED.

15. DS34 LIT = GENERATOR ON COMMAND ISSUED (console passed all self tests). DS35 LIT = GENERATOR ON COMMAND NOT ISSUED (during console self tests, or if self tests failed).

16. DS22 LIT = FLUORO SELECTED. DS23 LIT = RAD SELECTED.

17. DS2 LIT = PULSED FLUORO / LOW POWER MODE. DS4 LIT = HIGH POWER RAD MODE. See # 13.

18. D1 LIT INDICATES + OR - 12 VDC FAULT, OR SOFT START FAULT.

19. The voltage waveform at this test point is depicted in Figure 1 below.

---

**Figure 1**

- **4 V**
- **-8 V**
- **18 μs**

---

Use and disclosure is subject to the restrictions on the title page of this CPI document.
TO ENERGIZE K1 ONLY WHEN THE CONSOLE IS SWITCHED ON
JUMPER JW1 PINS 1-2
TO ENERGIZE K1 AT ALL TIMES THAT THE GENERATOR AC MAINS IS ON
JUMPER JW1 PINS 2-3
(K1 SWITCHES THE 110 & 220 VAC SUPPLIES TO THE ROOM INTERFACE BOARD)

* TO CONNECT AN EMERGENCY-OFF SWITCH, REMOVE JUMPER FROM J17-1 TO J17-2. THEN CONNECT THE EMERGENCY OFF SWITCH TO J17-1 AND J17-2.
<table>
<thead>
<tr>
<th>NOTE REFERENCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Momentarily pressing <strong>ON</strong> connects this line to &quot;24 VDC RETURN&quot;. This latches relay drivers on the generator interface board, energizing K2 and K3, and possibly K1 (depending on JW1 setting). See note adjacent to JW1 on this document.</td>
</tr>
<tr>
<td>2</td>
<td>Momentarily pressing <strong>OFF</strong> connects this line to &quot;24 VDC RETURN&quot;. This unlatches relay drivers on the generator interface board, de-energizing K2 and K3, and possibly K1 (depending on JW1 setting).</td>
</tr>
<tr>
<td>3</td>
<td>DS1 lit indicates the presence of the 24 VDC supply shown. This 24 VDC supply will be present if the generator is connected to a live AC mains supply.</td>
</tr>
</tbody>
</table>
NOTE * 24 VDC EXTERNAL INPUT POSITION FOR JW2, JW3, JW6, JW7, JW8, JW9, JW10, JW14, JW15 SHOWN. JUMPER CONNECTS PINS 1-2 AND 3-4; AN EXTERNAL DRY CONTACT CLOSURE ACTIVATES THE INPUT(S) BY ENERGIZING THE APPROPRIATE OPTO-COUPLER.

** ADDITIONAL CIRCUITS ARE USED IN THE AREAS INDICATED **. THESE CIRCUITS ARE NOT RELEVANT TO THIS ROOM INTERFACE DIAGRAM, HOWEVER, THEY ARE PART OF THE X-RAY EXPOSURE FUNCTION AND ARE SHOWN ON MD-0761.

*** REFER TO "ROOM DOOR INTERLOCKS" ON SHEET 3.

Use and disclosure is subject to the restrictions on the title page of this CPI document.
This page shows the room interface outputs. Room interface inputs are shown on page 1.
<table>
<thead>
<tr>
<th>INPUT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPARE / TABLE STEPPER INPUT</td>
<td>When used with the <strong>table stepper / kV-mAs reduction for peripheral angiography</strong> option (used for peripheral runoff studies), this input tells the generator to advance to the next kV/mAs step. When the above option is not enabled, this input may be programmed as a spare input.</td>
</tr>
<tr>
<td>BUCKY CONTACTS</td>
<td>This indicates that the Bucky is ready for an exposure (the grid is moving). The outputs of all Buckys must be connected in parallel to this single input.</td>
</tr>
<tr>
<td>COLLIMATOR INTERLOCK</td>
<td>This is the input for the collimator interlock. This input may be programmed to inhibit exposures if this input is not active.</td>
</tr>
<tr>
<td>REMOTE TOMO SELECT</td>
<td>This input, when active, remotely selects tomography.</td>
</tr>
<tr>
<td>TOMO EXPOSURE</td>
<td>Requests a tomographic exposure when this input is active. The exposure starts when the input is activated, and stops when the input is deactivated.</td>
</tr>
<tr>
<td>ROOM DOOR INTERLOCK</td>
<td>This is the interlock for the X-ray room door. If programmed, will inhibit an exposure when this input is not active.</td>
</tr>
<tr>
<td>THERMAL SWITCH 2</td>
<td>Input for the tube 2 thermal switch. Exposures are inhibited when this input is not active. The power supply is also turned off to prevent rotor operation.</td>
</tr>
<tr>
<td>THERMAL SWITCH 1</td>
<td>Input for the tube 1 thermal switch. Exposures are inhibited when this input is not active. The power supply is also turned off to prevent rotor operation.</td>
</tr>
<tr>
<td>MULTIPLE SPOT EXPOSURE</td>
<td>Enables density compensation when doing multiple exposures on a single film. In this mode of operation, the X-ray field is usually coned down to a small area. Due to the resulting AEC field cutoff, an AEC density offset may be required. This is designated multiple spot compensation. The function <strong>MULT. SPOT COMP</strong> in the AEC calibration menus applies the required compensation.</td>
</tr>
<tr>
<td>I.I SAFETY / REMOTE HLF SELECT</td>
<td>Refer to chapter 3B: On applicable units, if the HLF SELECT input is CONSOLE, this will be the input for the image intensifier position interlock. If the HLF SELECT input is REMOTE, this will be the high-level fluoro select input.</td>
</tr>
<tr>
<td>REMOTE FLUORO EXPOSURE</td>
<td>Fluoro foot switch input. Fluoro exposures are requested when this input is active.</td>
</tr>
<tr>
<td>REMOTE PREP</td>
<td>External PREP request, typically generated by room equipment.</td>
</tr>
<tr>
<td>REMOTE EXPOSURE</td>
<td>External X-ray EXPOSE command from room equipment (i.e. table or digital imaging system).</td>
</tr>
</tbody>
</table>

Certain inputs will only be active if enabled in programming (per chapter 3C), and / or the generator includes the corresponding option.

**ROOM DOOR INTERLOCKS**

**Configuration A**

Inhibits new exposures if the room door is open. Does not interrupt exposures in process when the door is opened.

**Configuration B**

Inhibits new exposures if the room door is open. Stops fluoro exposures if the room door is opened during a fluoro exposure.

**NOTE:** For this configuration, the room door interlock switch must be a double-pole type (one pole for the room door interlock, with the second pole in series with the fluoro foot switch).

REFER TO PAGE 4 FOR LOGIC LEVELS, NOTES, ETC., REFERENCED BY HEXAGONAL SYMBOL: ○

THE CONSOLE BOARD & KEYBOARD ASSEMBLY SHOWN ON THIS PAGE IS USED ON THE 31 X 42 CM CONSOLE ONLY. REFER TO PAGE 3 FOR THE 23 X 56 CM CONSOLE AND THE RAD-ONLY CONSOLE, AND PAGE 4 FOR THE TOUCH SCREEN CONSOLE.

Use and disclosure is subject to the restrictions on the title page of this CPI document.
Use and disclosure is subject to the restrictions on the title page of this CPI document.
"LOW" (APPROXIMATELY 1 VDC) AT THESE POINTS INDICATES FOOT SWITCH INPUT CLOSED, PREP SWITCH PRESSED, OR X-RAY SWITCH PRESSED RESPECTIVELY. "HIGH" (APPROXIMATELY 24 VDC) = OPEN CIRCUIT (I.E. NOT PRESSED) FOOT SWITCH, OR PREP SWITCH, OR X-RAY SWITCH. FOR RAD-ONLY CONSOLE, "LOW" INDICATES PREP SWITCH PRESSED, OR X-RAY SWITCH PRESSED, RESPECTIVELY.

"LOW" (APPROXIMATELY 1 VDC) = AN X-RAY EXPOSURE HAS BEEN REQUESTED VIA ONE OF SEVERAL EXPOSURE INPUTS. "HIGH" (APPROXIMATELY 24 VDC) = NO X-RAY EXPOSURE HAS BEEN REQUESTED.

EXPOSURE ENABLE LINE. "LOW" (APPROXIMATELY 0 VDC) INDICATES AN X-RAY EXPOSURE REQUEST; "HIGH" (APPROXIMATELY 5 VDC) = NO X-RAY EXPOSURE HAS BEEN REQUESTED.

THE CATHODE OF THE ASSOCIATED LED IS HELD "LOW" UNDER CPU CONTROL DURING AN X-RAY EXPOSURE REQUEST ONLY. NO MEANINGFUL MEASUREMENTS CAN BE MADE ON THIS LINE AS THIS IS A DATA LINE. THE REQUIRED DATA IS LATCHED BY THE REGISTER CIRCUIT(S) AT THE APPROPRIATE TIME.

THE OUTPUT OF THE ASSOCIATED LED IS LATCHED BY A REGISTER. THIS IS THEN READ BY THE DATA BUS AT THE APPROPRIATE TIME. AS THIS IS A DATA LINE, NO MEANINGFUL MEASUREMENTS CAN BE MADE AT THIS CONNECTION.

DS30 LIT = KV ENABLE REQUEST SENT. THIS IS NECESSARY TO MAKE AN X-RAY EXPOSURE. DS31 LIT = KV ENABLE NOT REQUESTED.

DS27 LIT = PREP REQUEST SENT. DS28 LIT = PREP NOT REQUESTED.

DS26 LIT = X-RAY EXPOSURE IN PROCESS.

"HIGH" (APPROXIMATELY 5 VDC) = KV ENABLED, "LOW" (APPROXIMATELY 0 VDC) = KV NOT ENABLED.

"HIGH" (APPROXIMATELY 5 VDC) = PREP REQUESTED. "LOW" (APPROXIMATELY 0 VDC) = PREP NOT REQUESTED.

"HIGH" (APPROXIMATELY 5 VDC) = X-RAY REQUESTED. "LOW" (APPROXIMATELY 0 VDC) = X-RAY NOT REQUESTED.

"LOW" = X-RAY EXPOSURE REQUESTED AS PER # 3. THIS LINE MUST BE "LOW" IN ORDER FOR THE X-RAY EXPOSURE LED'S ON THE CONTROL BOARD TO BE ENERGIZED (SEE # 16).

"LOW" = (APPROXIMATELY 0 VDC) = TUBE 1 / TUBE 2 MISMATCH OR THERMOSTAT OPEN FAULT. "HIGH" (APPROXIMATELY 12 VDC) = NO FAULT.

"HIGH" (APPROXIMATELY 12 VDC) = KV ENABLED, "LOW" (APPROXIMATELY 0 VDC) = KV NOT ENABLED.

"HIGH" (APPROXIMATELY 12 VDC) = PREP REQUESTED, "LOW" (APPROXIMATELY 0 VDC) = PREP NOT REQUESTED.

"HIGH" (APPROXIMATELY 12 VDC) = X-RAY REQUESTED, "LOW" (APPROXIMATELY 0 VDC) = X-RAY NOT REQUESTED.

"HIGH" (APPROXIMATELY 5 VDC) = OUTPUT DRIVE ENABLED, "LOW" (APPROXIMATELY 0 VDC) = OUTPUT DRIVE DISABLED.

ALL INPUTS TO THE "GENERATOR READY DETECTOR CIRCUIT" MUST BE AT THE CORRECT LOGIC LEVEL IN ORDER TO BE ABLE TO MAKE AN X-RAY EXPOSURE. THIS MEANS ALL FOUR FAULT INPUTS SHOWN MUST BE CLEARED, AND THE KV ENABLE AND PREP COMMANDS MUST BE PRESENT.

DS17 LIT INDICATES GENERATOR READY TO MAKE AN EXPOSURE. THIS REQUIRES THAT ALL CONDITIONS PER # 18 BE SATISFIED. DS18 LIT INDICATES A "GENERATOR READY DETECTOR CIRCUIT" INPUT IS NOT SATISFIED TO ENABLE AN X-RAY EXPOSURE.
Indico 100 generators use one, two, or three inverter modules depending on generator output power.

Gate drive circuit for MOSFET inverter (includes Q19 to Q26)

Drive pulses from Page 1

Refer to MD-0786 for K1 drive circuits

H.T. primary current continued on Page 3

INVERTER BOARD #1

INVERTER BOARD #2

INVERTER BOARD #3

Resonant board

Use and disclosure is subject to the restrictions on the title page of this CPI document.
** ONE TUBE H.T. OUTPUTS ARE SHOWN. TWO TUBE TANKS WILL HAVE A SECOND PAIR OF H.T. OUTPUTS
<table>
<thead>
<tr>
<th>NOTE REFERENCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>kV REFERENCE OUTPUT, GENERATED BY THE CPU. SCALING IS 1 VOLT OUT = 15 kV OF GENERATOR OUTPUT.</td>
</tr>
<tr>
<td>2</td>
<td>kV FEEDBACK TO THE CPU. SCALING IS 1V = 20 KV OF GENERATOR OUTPUT.</td>
</tr>
<tr>
<td>3</td>
<td>HV ON SIGNAL. THIS IS &quot;HIGH&quot; (APPROXIMATELY 5 VDC) WHEN HIGH VOLTAGE IS ON, &quot;LOW&quot; (APPROXIMATELY 0 VDC) WHEN HIGH VOLTAGE IS OFF.</td>
</tr>
<tr>
<td>4</td>
<td>THE VOLTAGE AT TP17 AND TP19 SHOULD BE A 50% DUTY CYCLE SQUARE WAVE, RANGING IN FREQUENCY FROM APPROXIMATELY 80 kHz TO APPROXIMATELY 250 kHz, DEPENDING ON GENERATOR OUTPUT POWER. SEE FIGURE 1.</td>
</tr>
</tbody>
</table>

![Diagram of 12 VDC and 0 VDC](Figure 1)
INDICO 100 GENERATORS WITH OPTIONAL TWO FILAMENT BOARDS (TYPICALLY USED IN R&F GENERATORS) USE THE FILAMENT BOARD CONFIGURATION SHOWN ABOVE.

INDICO 100 GENERATORS WITH STANDARD SINGLE FILAMENT BOARD (TYPICALLY USED IN RAD ONLY GENERATORS) USE THE FILAMENT BOARD CONFIGURATION SHOWN BELOW.

DUE TO SPACE restrictions, THIS PAGE SHOWS ONLY THE MAJOR FILAMENT BLOCKS. REFER TO PAGE 3 FOR A MORE DETAILED FUNCTIONAL DIAGRAM OF THE FILAMENT SUPPLY BOARD.
FILAMENT REFERENCE OUTPUTS, GENERATED BY THE CPU. SCALING IS 1 VOLT OUT = 1 AMP OF FILAMENT CURRENT.

“HIGH” (APPROXIMATELY 5 VDC) = LARGE FOCUS SELECTED, “LOW” (APPROXIMATELY 0 VDC) = SMALL FOCUS SELECTED. THIS SIGNAL IS USED IN SINGLE FILAMENT SUPPLY GENERATORS ONLY.

“HIGH” (APPROXIMATELY 12 VDC) = FILAMENT FAULT (FILAMENT CURRENT < 2 A), “LOW” (APPROXIMATELY 0 VDC) = NO FILAMENT FAULT.

“HIGH” (APPROXIMATELY 12 VDC) = LARGE FOCUS SELECTED, “LOW” (APPROXIMATELY 0 VDC) = SMALL FOCUS SELECTED.

PRIMARY FILAMENT CURRENT AT THESE POINTS MAY BE CONFIRMED USING A CURRENT PROBE ON ONE OF THE OUTPUT LEADS ON THE SMALL OR LARGE PAIR OF OUTPUTS.

THE VOLTAGE AT THESE TEST POINTS WILL BE APPROXIMATELY 1 VDC = 1 AMP OF FILAMENT CURRENT.

THESE TEST POINTS ALLOW MEASUREMENT OF A VOLTAGE PROPORTIONAL TO ANODE CURRENT. THE SCALING IS 0.4 VDC = 100 mA. SHORT EXPOSURE TIMES MUST BE CONSIDERED AND APPROPRIATE MEASUREMENT TECHNIQUES MUST BE USED.

THESE TEST POINTS ARE SCALED 1 VDC = 100 mA OF X-RAY CURRENT.

THESE TEST POINTS ARE SCALED 1 VDC = 2.5 mA OF X-RAY CURRENT (R&F GENERATORS ONLY).

FILAMENT FEEDBACK CURRENT TEST POINT. THIS IS SCALED 1 VDC = 1 AMP OF FILAMENT CURRENT.

PWM OUTPUT. THE WAVEFORM WILL BE AS PER FIGURE 1 FOR LOW AND HIGH FILAMENT CURRENT DEMAND.

FIGURE 1

+12 V

Approx 25 usec (40 kHz)

LOW FILAMENT DEMAND

0 V

+12 V

HIGH FILAMENT DEMAND

0 V
NOTE: The phase shift circuit may consist of one or more capacitor.
NOTE

REFERENCE

1. "HIGH" (APPROXIMATELY 6-11 VDC) = NO STATOR FAULT, "LOW" (APPROXIMATELY 2 VDC) = STATOR FAULT (LOW OR NO STATOR CURRENT).
2. "LOW" (APPROXIMATELY 0 VDC) = NO STATOR FAULT, "HIGH" (APPROXIMATELY 12 VDC) = STATOR FAULT (LOW OR NO STATOR CURRENT).
3. "HIGH" (APPROXIMATELY 10 VDC) = PREP REQUESTED, "LOW" (APPROXIMATELY 1 VDC) = PREP NOT REQUESTED.
4. "LOW" (APPROXIMATELY 0 VDC) = BOOST REQUESTED, "HIGH" (APPROXIMATELY 12 VDC) = BOOST NOT REQUESTED (BOOST REQUESTED FOR APPROXIMATELY 1.5 SEC AFTER PREP INITIATED).
5. "LOW" (APPROXIMATELY 0 VDC) = RUN REQUESTED, "HIGH" (APPROXIMATELY 12 VDC) = RUN NOT REQUESTED (RUN REQUESTED AFTER BOOST COMPLETE, AND FOR DURATION THAT PREP IS Pressed).
6. "HIGH" (APPROXIMATELY 12 VDC) = LOW SPEED STARTER ENABLED, "LOW" (APPROXIMATELY 0 VDC) = STARTER DISABLED (SEE #7).
7. THIS POINT MUST BE "HIGH" (AS PER # 6) TO ENABLE THE LOW SPEED STARTER. THIS REQUIRES THE ENABLE COMMAND TO BE PRESENT ("HIGH"), AND THE TUBE 1 / TUBE 2 MISMATCH & THERMOSTAT OPEN SIGNAL TO BE "HIGH". IF THE 12 VDC / SOFT START FAULT SIGNAL IS LOW (INDICATING A FAULT), J1-4 WILL NOT BE PULLED LOW DUE TO THE DIODE SHOWN CONNECTED TO THIS PIN ON PAGE 1.
8. "LOW" (APPROXIMATELY 0 VDC) ENERGIZES K1 ON THE LOW SPEED STARTER BOARD. ENABLING THE STARTER. "HIGH" (APPROXIMATELY 12 VDC) DE-ENERGIZES K1 ON THE LOW SPEED STARTER BOARD.
AS PER # 6 AND 7. NO ENABLE COMMAND, OR PRESENCE OF A TUBE 1 / TUBE 2 MISMATCH & THERMOSTAT OPEN FAULT, OR A 12 VDC / SOFT START FAULT WILL INHIBIT LOW SPEED STARTER OPERATION.
9. DS20 LIT INDICATES NORMAL STATOR CURRENTS. DS21 LIT INDICATES STATOR FAULT, OR LOW SPEED STARTER IS IN STANDBY MODE.

REMARKS

NOTE

REFERENCE

1. "HIGH" (APPROXIMATELY 6-11 VDC) = NO STATOR FAULT, "LOW" (APPROXIMATELY 2 VDC) = STATOR FAULT (LOW OR NO STATOR CURRENT).
2. "LOW" (APPROXIMATELY 0 VDC) = NO STATOR FAULT, "HIGH" (APPROXIMATELY 12 VDC) = STATOR FAULT (LOW OR NO STATOR CURRENT).
3. "HIGH" (APPROXIMATELY 10 VDC) = PREP REQUESTED, "LOW" (APPROXIMATELY 1 VDC) = PREP NOT REQUESTED.
4. "LOW" (APPROXIMATELY 0 VDC) = BOOST REQUESTED, "HIGH" (APPROXIMATELY 12 VDC) = BOOST NOT REQUESTED (BOOST REQUESTED FOR APPROXIMATELY 1.5 SEC AFTER PREP INITIATED).
5. "LOW" (APPROXIMATELY 0 VDC) = RUN REQUESTED, "HIGH" (APPROXIMATELY 12 VDC) = RUN NOT REQUESTED (RUN REQUESTED AFTER BOOST COMPLETE, AND FOR DURATION THAT PREP IS Pressed).
6. "HIGH" (APPROXIMATELY 12 VDC) = LOW SPEED STARTER ENABLED, "LOW" (APPROXIMATELY 0 VDC) = STARTER DISABLED (SEE # 7).
7. THIS POINT MUST BE "HIGH" (AS PER # 6) TO ENABLE THE LOW SPEED STARTER. THIS REQUIRES THE ENABLE COMMAND TO BE PRESENT ("HIGH"), AND THE TUBE 1 / TUBE 2 MISMATCH & THERMOSTAT OPEN SIGNAL TO BE "HIGH". IF THE 12 VDC / SOFT START FAULT SIGNAL IS LOW (INDICATING A FAULT), J1-4 WILL NOT BE PULLED LOW DUE TO THE DIODE SHOWN CONNECTED TO THIS PIN ON PAGE 1.
8. "LOW" (APPROXIMATELY 0 VDC) ENERGIZES K1 ON THE LOW SPEED STARTER BOARD. ENABLING THE STARTER. "HIGH" (APPROXIMATELY 12 VDC) DE-ENERGIZES K1 ON THE LOW SPEED STARTER BOARD.
AS PER # 6 AND 7. NO ENABLE COMMAND, OR PRESENCE OF A TUBE 1 / TUBE 2 MISMATCH & THERMOSTAT OPEN FAULT, OR A 12 VDC / SOFT START FAULT WILL INHIBIT LOW SPEED STARTER OPERATION.
9. DS20 LIT INDICATES NORMAL STATOR CURRENTS. DS21 LIT INDICATES STATOR FAULT, OR LOW SPEED STARTER IS IN STANDBY MODE.
**DUAL SPEED STARTER BOARD**

* REFER TO CHAPTER 2 OF SERVICE MANUAL FOR THE PROCEDURE TO SET DIP SWITCHES SW1 AND SW2

** REFER TO SHEET 2 FOR SHIFT CAPACITOR VALUES

Use and disclosure is subject to the restrictions on the title page of this CPI document.
### DUAL SPEED STARTER ASSY

<table>
<thead>
<tr>
<th>CAPACITOR</th>
<th>VALUE</th>
<th>VALUE</th>
<th>VALUE</th>
<th>VALUE</th>
<th>VALUE</th>
<th>VALUE</th>
<th>VALUE</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>25 uF</td>
<td>40 uF</td>
<td>30 uF</td>
<td>25 uF</td>
<td>12.5 uF</td>
<td>25 uF</td>
<td>12.5 uF</td>
<td>25 uF</td>
</tr>
<tr>
<td>C2</td>
<td>N/A</td>
<td>N/A</td>
<td>30 uF</td>
<td>25 uF</td>
<td>6 uF</td>
<td>12.5 uF</td>
<td>15 uF</td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>12.5 uF</td>
<td>40 uF</td>
<td>15 uF</td>
<td>12.5 uF</td>
<td>6 uF</td>
<td>12.5 uF</td>
<td>10 uF</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>12.5 uF</td>
<td>40 uF</td>
<td>15 uF</td>
<td>12.5 uF</td>
<td>6 uF</td>
<td>12.5 uF</td>
<td>10 uF</td>
<td></td>
</tr>
<tr>
<td>C5</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>6 uF</td>
<td>12.5 uF</td>
<td>15 uF</td>
<td></td>
</tr>
<tr>
<td>C6</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>12.5 uF</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### REMARKS

1. **DS8** LIT INDICATES HIGH SPEED SELECTED, **DS7** LIT INDICATES LOW SPEED SELECTED.
2. "HIGH" (APPROXIMATELY 5 VDC) = HIGH SPEED SELECTED, "LOW" (APPROXIMATELY 0 VDC) = LOW SPEED SELECTED.
3. "LOW" (APPROXIMATELY 7 VDC) = CONTACTOR CLOSED AND PREP REQUESTED. THIS INITIATES THE BOOST CYCLE. "HIGH" (APPROXIMATELY 12 VDC) = BOOST NOT REQUESTED (PREP COMMAND NOT RECEIVED, OR CONTACTOR IS NOT CLOSED).
4. "LOW" (APPROXIMATELY 0 VDC) = TUBE 2 SELECTED, "HIGH" (APPROXIMATELY 12 VDC) = TUBE 2 DESELECTED. THIS CONDITION DEFAULTS TO TUBE 1.
5. **DS1** LIT INDICATES AN INVERTER CURRENT FAULT. POSSIBLE CAUSES INCLUDE INCORRECT DIP SWITCH SETTINGS FOR THE TUBE IN USE (SEE ** ON PAGE 1), INCORRECT STATOR IMPEDANCE, OR DEFECTIVE STATOR CABLE.
6. **K4** OPEN CIRCUITS THE STATOR COMMON LEAD AT ALL TIMES THAT THE DUAL SPEED STARTER IS IN STANDBY MODE.
7. "LOW" (APPROXIMATELY 0 VDC) = NO STATOR FAULT; "HIGH" (APPROXIMATELY 12 VDC) = STATOR FAULT (LOW OR NO STATOR CURRENT).
8. **DS20** LIT INDICATES NORMAL STATOR CURRENTS. **DS21** LIT INDICATES STATOR FAULT, OR DUAL SPEED STARTER IS IN STANDBY MODE.
Use and disclosure is subject to the restrictions on the title page of this CPI document.

**NOTE**

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D36 lit indicates rad or pulsed fluoro mode. D36 not lit indicates continuous fluoro mode.</td>
</tr>
<tr>
<td>2</td>
<td>“Low” (approximately 0 VDC) = K1 on resonant board energized in Rad / pulsed fluoro mode. “High” (approximately 12 VDC) = K1 on resonant board de-energized in continuous fluoro mode.</td>
</tr>
<tr>
<td>3</td>
<td>“Low” (approximately 0 VDC) = K1 on power mode select board energized in fluoro or low power rad mode (&lt; 20 kW approx). “High” (approximately 12 VDC) = K1 on power mode select board de-energized in high power rad mode (&gt; 20kW approx).</td>
</tr>
<tr>
<td>NOTE REFERENCE</td>
<td>REMARKS</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td>“LOW” (APPROXIMATELY 0 VDC) = TUBE 2 SELECTED. “HIGH” (APPROXIMATELY 10 VDC) = TUBE 1 SELECTED.</td>
</tr>
<tr>
<td>2</td>
<td>“LOW” (APPROXIMATELY 0 VDC) = TUBE 2 SELECTED. “HIGH” (APPROXIMATELY 12 VDC) = TUBE 1 SELECTED.</td>
</tr>
<tr>
<td>3</td>
<td>DS6 LIT INDICATES TUBE 1 SELECTED. DS5 LIT INDICATES TUBE 2 SELECTED. NEITHER LED LIT INDICATES A MISMATCH BETWEEN THE TUBE THAT HAS BEEN REQUESTED, AND THE TUBE THAT HAS ACTUALLY BEEN SELECTED (SEE # 5).</td>
</tr>
<tr>
<td>4</td>
<td>“LOW” (APPROXIMATELY 0 VDC) = INVERTER THERMAL SWITCH CLOSED (OR JUMPERED VIA JW4). “HIGH” (APPROXIMATELY 12 VDC) = INVERTER THERMAL SWITCH OPEN, OR JW4 JUMPER OMITTED ON RAD GENERATORS.</td>
</tr>
<tr>
<td>5</td>
<td>THE TUBE 1 / TUBE 2 TELLBACK LOGIC CIRCUIT ENSURES THAT THE TUBE ACTUALLY SELECTED MATCHES THE TUBE THAT WAS REQUESTED. FOR EXAMPLE, IF TUBE 2 WAS REQUESTED BY THE CONSOLE BUT TUBE 1 WAS ACTUALLY SELECTED BY THE H.T. TANK, THE LOGIC CIRCUIT WILL INDICATE A FAULT CONDITION.</td>
</tr>
</tbody>
</table>

**Diagram:**

- TUBE 1 STATOR TERMINAL BLOCK
- THERMAL SWITCH
- DS6 LIT INDICATES TUBE 1 SELECTED. DS5 LIT INDICATES TUBE 2 SELECTED. NEITHER LED LIT INDICATES A MISMATCH BETWEEN THE TUBE THAT HAS BEEN REQUESTED, AND THE TUBE THAT HAS ACTUALLY BEEN SELECTED (SEE # 5).

**Generator Interface Board:**

- TUBES THERMOSTAT TO T1 ON MD-0763, PAGE 1
- TUBES THERMOSTAT TO T2 ON MD-0763, PAGE 1

**Remarks:**

- DS6 LIT INDICATES TUBE 1 SELECTED. DS5 LIT INDICATES TUBE 2 SELECTED. NEITHER LED LIT INDICATES A MISMATCH BETWEEN THE TUBE THAT HAS BEEN REQUESTED, AND THE TUBE THAT HAS ACTUALLY BEEN SELECTED (SEE # 5).

- TUBE 1 / TUBE 2 TELLBACK LOGIC CIRCUIT ENSURES THAT THE TUBE ACTUALLY SELECTED MATCHES THE TUBE THAT WAS REQUESTED. FOR EXAMPLE, IF TUBE 2 WAS REQUESTED BY THE CONSOLE BUT TUBE 1 WAS ACTUALLY SELECTED BY THE H.T. TANK, THE LOGIC CIRCUIT WILL INDICATE A FAULT CONDITION.
DESIGNATES AN ANALOG SWITCH. THESE ARE I.C. “SWITCHES” THAT ARE SWITCHED ON / OFF BY APPLYING THE APPROPRIATE LOGIC LEVEL (0V = OFF, 5V = ON).

THIS SHEET APPLIES TO AEC BOARD ASSEMBLY 737992. THIS PAGE SHOWS THE INPUT CIRCUITS; THE SIGNAL PROCESSING CIRCUITS ARE CONTINUED ON THE NEXT PAGE.

REFER TO CHAPTER 3D FOR INSTALLATION AND CALIBRATION DETAILS.
DESIGNATES AN ANALOG SWITCH. THESE ARE I.C. “SWITCHES” THAT ARE SWITCHED ON / OFF BY APPLYING THE APPROPRIATE LOGIC LEVEL (0V = OFF, 5V = ON).
DESIGNATES AN ANALOG SWITCH. THESE ARE I.C. "SWITCHES" THAT ARE SWITCHED ON / OFF BY APPLYING THE APPROPRIATE LOGIC LEVEL.

FROM PAGE 1

THIS SHEET APPLIES TO AEC BOARD ASSEMBLY 737998

REFER TO CHAPTER 3D FOR INSTALLATION AND CALIBRATION DETAILS.

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DESIGNATES AN ANALOG SWITCH. THESE ARE I.C. "SWITCHES" THAT ARE SWITCHED ON / OFF BY APPLYING THE APPROPRIATE LOGIC LEVEL.

GENERATOR INTERFACE BOARD

AEC BOARD

THIS SHEET APPLIES TO AEC BOARD ASSEMBLY 734654, WHICH CONSISTS OF AEC INTERFACE BOARD 728399 AND AEC BOARD 734630. THE AEC BOARD CIRCUITS ARE CONTINUED ON PAGES 6 AND 8.

REFER TO CHAPTER 3D FOR INSTALLATION AND CALIBRATION DETAILS.

Use and disclosure is subject to the restrictions on the title page of this CPI document.
DESIGNATES AN ANALOG SWITCH. THESE ARE I.C. "SWITCHES" THAT ARE SWITCHED ON / OFF BY APPLYING THE APPROPRIATE LOGIC LEVEL (0V = OFF, 12V = ON).

THIS SHEET APPLIES TO AEC BOARD ASSEMBLY 734654, WHICH CONSISTS OF AEC INTERFACE BOARD 728399 AND AEC BOARD 734630. THE AEC BOARD CIRCUITS ARE CONTINUED ON PAGES 8 AND 9. REFER TO CHAPTER 3D FOR INSTALLATION AND CALIBRATION DETAILS.
GENERATOR INTERFACE BOARD

DESIGNATES AN ANALOG SWITCH. THESE ARE I.C. "SWITCHES" THAT ARE SWITCHED ON / OFF BY APPLYING THE APPROPRIATE LOGIC LEVEL.

REFER TO CHAPTER 3D FOR INSTALLATION AND CALIBRATION DETAILS.

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<tbody>
<tr>
<td>1</td>
<td>“HIGH” (APPROXIMATELY 5 VDC) = NO PTSTOP (PHOTOTIMER STOP) SIGNAL RECEIVED FROM AEC BOARD. “LOW” (APPROXIMATELY 0 VDC) = PTSTOP SIGNAL RECEIVED FROM AEC BOARD.</td>
</tr>
<tr>
<td>2</td>
<td>AEC RAMP. THIS IS A SIGNAL RAMPING FROM 0 TOWARD +10 VDC. THE ACTUAL MAGNITUDE WILL DEPEND ON THE AEC TECHNIQUE.</td>
</tr>
<tr>
<td>3</td>
<td>AEC REFERENCE VOLTAGE, 0 TO -10 VDC, DEPENDING ON AEC TECHNIQUE. THE LENGTH OF THE AEC EXPOSURE IS PROPORTIONAL TO THE AEC REFERENCE VOLTAGE.</td>
</tr>
<tr>
<td>4</td>
<td>“HIGH” (&gt; 10 VDC) = AEC CHANNEL DESELECTED, “LOW” (APPROXIMATELY 0 VDC) = AEC CHANNEL SELECTED.</td>
</tr>
<tr>
<td>5</td>
<td>“HIGH” (&gt; 10 VDC) = L, M, R, FIELD DESELECTED, “LOW” (APPROXIMATELY 0 VDC) = L, M, R, FIELD SELECTED.</td>
</tr>
<tr>
<td>6</td>
<td>“HIGH” (&gt; 10 VDC) = NO AEC STOP REQUEST (INSUFFICIENT RAMP TO TERMINATE AEC EXPOSURE), “LOW” (APPROXIMATELY 0 VDC) = AEC STOP REQUESTED (AEC EXPOSURE TERMINATED).</td>
</tr>
<tr>
<td>7</td>
<td>“HIGH” (&gt; 10 VDC) = AEC START NOT REQUESTED, “LOW” (APPROXIMATELY 0 VDC) = AEC START REQUESTED.</td>
</tr>
<tr>
<td>9</td>
<td>THIS WILL BE A NEGATIVE DC VOLTAGE OR RAMP, DEPENDING ON AEC CHAMBER OUTPUT. THE MAGNITUDE OF THE DC VOLTAGE OR RAMP IS DEPENDENT ON THE AEC TECHNIQUE IN USE.</td>
</tr>
<tr>
<td>10</td>
<td>THIS WILL BE A POSITIVE DC VOLTAGE OR RAMP, DEPENDING ON AEC CHAMBER OUTPUT. THE MAGNITUDE OF THE DC VOLTAGE OR RAMP IS DEPENDENT ON THE AEC TECHNIQUE IN USE.</td>
</tr>
<tr>
<td>11</td>
<td>R79 ADJUSTS THE +45V, +300V, AND +500V OUTPUTS FROM THE DC TO DC CONVERTER CIRCUIT. REFER TO CHAPTER 3D FOR DETAILS.</td>
</tr>
<tr>
<td>12</td>
<td>THE VOLTAGE AT TP22 SHOULD BE APPROXIMATELY AS SHOWN IN FIGURE 1 (BELOW). THE MAXIMUM DUTY CYCLE WILL BE APPROXIMATELY 45%, DEPENDING ON THE LOAD ON THE HV SUPPLIES.</td>
</tr>
<tr>
<td>13</td>
<td>THE VOLTAGE AT THIS TEST POINT IS THE OUTPUT OF THE AEC CHAMBER. REFER TO THE AEC CHAMBER MANUFACTURERS DOCUMENTATION FOR DETAILS.</td>
</tr>
<tr>
<td>14</td>
<td>THIS WILL BE A POSITIVE DC VOLTAGE. THE MAGNITUDE OF THE DC VOLTAGE IS DEPENDENT ON THE AEC TECHNIQUE IN USE.</td>
</tr>
<tr>
<td>15</td>
<td>THIS IS THE START SIGNAL. “HIGH” (5 VDC) = START = ANALOG SWITCHES CLOSED, “LOW” (0 VDC) = START = ANALOG SWITCHES OPEN.</td>
</tr>
<tr>
<td>16</td>
<td>THIS WILL BE A VOLTAGE BETWEEN 0 AND 5.1 V, DEPENDING ON THE SETTING OF THE ACTIVE POTENTIOMETER R10, R19, OR R24.</td>
</tr>
</tbody>
</table>

**FIGURE 1**

200 kHz

12 VDC

0 VDC
* REFER TO CHAPTER 3E OF SERVICE MANUAL TO DETERMINE REQUIRED JUMPER POSITIONS FOR THESE CONNECTORS.

1 A DC VOLTAGE WILL BE PRESENT FROM TP8 (TO TP9 OR GROUND), AND FROM TP13 TO TP15 WHEN OPERATING WITH ABS ON. THIS VOLTAGE WILL TYPICALLY RANGE FROM 0.5 TO 5 VDC, AND WILL VARY DEPENDING ON THE NOMINAL DOSE VALUE IN THE ABS SETUP MENU.
LIMITED TROUBLESHOOTING CAN BE PERFORMED ON THE REMOTE FLUORO CONTROL ASSEMBLY IN THE FIELD. THE DC RAILS CAN BE CHECKED (REFER TO MD-0788), AND THE TXD AND RXD LEDs ON THE GENERATOR CPU BOARD MAY BE OBSERVED (THESE WILL FLASH ON AND OFF TO INDICATE DATA FLOW). MEANINGFUL MEASUREMENTS CANNOT BE MADE ON COMMUNICATIONS, DATA, AND CONTROL LINES.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 733752.
REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J2, J3.

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Use and disclosure is subject to the restrictions on the title page of this CPI document.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 735921.
REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL
FOR DETAILS REGARDING THE CONNECTIONS TO J2, J3, J5.

THE CIRCUITS WITHIN THE DASHED LINES ARE IDENTICAL TO THOSE
ON PAGE 3. REFER TO PAGE 3 FOR THE FULL SIZED DIAGRAM

* THESE ARE SERIAL COMMUNICATION LINES. REFER TO MD-0829, SHEET 1, FOR
THE CORRESPONDING CONNECTIONS ON THE GENERATOR INTERFACE BOARD.
** REFER TO MD-0761, SHEET 1, FOR THE PREP AND X-RAY INPUTS ON THE
GENERATOR INTERFACE BOARD.
*** REFER TO MD-0762, SHEET 1, FOR THE POWER ON & OFF INPUTS ON THE
GENERATOR INTERFACE BOARD.

FROM J4 GENERATOR INTERFACE BOARD

TO X-RAY MINI-CONSOLE.

TO MINI-CONSOLE X-RAY
EXPOSURE INDICATOR.

REFER TO MD-0829, SHEET 1, FOR
THE CORRESPONDING CONNECTIONS ON THE GENERATOR INTERFACE BOARD.
REFER TO MD-0761, SHEET 1, FOR THE PREP AND X-RAY INPUTS ON THE
GENERATOR INTERFACE BOARD.
REFER TO MD-0762, SHEET 1, FOR THE POWER ON & OFF INPUTS ON THE
GENERATOR INTERFACE BOARD.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL
FOR DETAILS REGARDING THE CONNECTIONS TO J2, J3, J5.

DIGITAL INTERFACE

DIGITAL I/O BOARD
THE OPTIONAL "X-RAY MINI CONSOLE" AND OPTIONAL "MINI CONSOLE X-RAY EXPOSURE INDICATOR" ARE TYPICALLY USED WITH DIGITAL IMAGING SYSTEMS THAT HAVE INTEGRATED GENERATOR CONSOLE CONTROL FUNCTIONS.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 735406.
REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J2, J3.

Use and disclosure is subject to the restrictions on the title page of this CPI document.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 736153
REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL
FOR DETAILS REGARDING THE CONNECTIONS TO J2, J3, J4.

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Use and disclosure is subject to the restrictions on the title page of this CPI document.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 737950.
THIS SHOWS THE CONNECTIONS TO J2, J4, J5, J6 AND J7. THE
REMAINING CIRCUITS ARE SHOWN ON THE NEXT PAGE.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL
FOR DETAILS REGARDING THE CONNECTIONS TO J2, J4, J5, J6, AND J7.

* THE INPUTS / OUTPUTS MARKED "*" ARE SPARE, AND HAVE NOT BEEN ASSIGNED

Use and disclosure is subject to the restrictions on the title page of this CPI document.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 737950. THIS SHOWS THE CONNECTIONS TO J101 AND J102. THE REMAINING CIRCUITS ARE SHOWN ON THE PREVIOUS PAGE.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS J101 AND J102.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 738947. THIS SHOWS THE CONNECTIONS TO J6 AND J9; THE REMAINING CIRCUITS ARE SHOWN ON THE NEXT PAGE.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J6, J9.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 738947. THIS SHOWS THE CONNECTIONS TO J1 TO J4, J7, J10, J11, AND THE VOLTAGE REGULATOR CIRCUITS; THE REMAINING CIRCUITS ARE SHOWN ON THE PREVIOUS PAGE.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J1-J4, J7, AND J10.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 738114. THE CIRCUITS FOR THIS BOARD ARE SPLIT BETWEEN SHEETS 13, 14, AND 15.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J1, J2, J3, J4, J6, AND J7.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 738114. THE CIRCUITS FOR THIS BOARD ARE SPLIT BETWEEN SHEETS 13, 14, AND 15.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J1, J2, J3, J6, AND J7.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 738114. THE CIRCUITS FOR THIS BOARD ARE SPLIT BETWEEN SHEETS 13, 14, AND 15.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J1, J2, J3, J4, J6, AND J7.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 902724. THE CIRCUITS FOR THIS BOARD ARE SPLIT BETWEEN SHEETS 16, 17, AND 18.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J1, J2, J3, J4, J10, J11, J12, J13 AND J14.

Use and disclosure is subject to the restrictions on the title page of this CPI document.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 902724. THE CIRCUITS FOR THIS BOARD ARE SPLIT BETWEEN SHEETS 16, 17, AND 18.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J1, J2, J3, J4, J10, J11, J12, J13 AND J14.
THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 902724. THE CIRCUITS FOR THIS BOARD ARE SPLIT BETWEEN SHEETS 16, 17, AND 18.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING THE CONNECTIONS TO J1, J2, J3, J4, J10, J11, J12, J13 AND J14.
Use and disclosure is subject to the restrictions on the title page of this CPI document.

REFER TO THE DIGITAL IMAGING SUPPLEMENT IN THE SERVICE MANUAL FOR DETAILS REGARDING CONNECTIONS TO THIS BOARD.

THIS SHEET APPLIES TO DIGITAL I/O BOARD ASSEMBLY 903121.
CONSOLE BOARD (INDICO 100)

DATA BUS
D0..D7

FPGA
U18

DS45
+5V

THIS SHEET SHOWS THE CONSOLE BOARD FOR INDICO 100 GENERATORS WITH THE 31 X 42 CM CONSOLE. REFER TO PAGE 2 FOR INDICO 100 GENERATORS WITH THE 23 X 56 CM CONSOLE AND THE RAD-ONLY CONSOLE.

CONSOLE BOARD (INDICO 100)

GENERATOR INTERFACE BOARD

OPTIONAL COMMUNICATIONS PORTS ARE SHOWN ON PAGE 2

GENERATOR CPU BOARD

FOR RS-232: U1, U2, AND R16 ARE NOT FITTED. FOR RS-422: U12, RN3C, RN3D, RN3A, AND RN3B ARE NOT FITTED.

SERIAL PORT FOR REMOTE FLUORO CONTROL. REFER TO MD-0766

RS-232 (LAPTOP)
For RS-232: U6, RN4A, RN4C, RN4D and R7 are not fitted.
For RS-422: U5, U9, JP2, and R6 are not fitted.

Communications Ports shown below are optional

This area shows the console CPU board for INDICO 100 generators with Rad-only console.

This area shows the console CPU board for INDICO 100 generators with the 23 x 56 cm console.