

Module 4 Controls and Indicators

<p><b>M04.3</b></p>	<p><b>ECU Exterior Controls and Indicators</b></p>	<p>Click any of the highlighted areas to learn about the functions of the ECU exterior controls and indicators, or click the Run button to watch a presentation of the function information</p> <p><b>[First item in presentation OR if user clicks area 1]</b> The AA NORMAL HEATER FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when the AA normal heating element overheats.</p> <p><b>[Second item in presentation OR if user clicks area 2]</b> The AA AUXILIARY HEATER FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when the AA auxiliary heating element overheats.</p> <p><b>[Third item in presentation OR if user clicks area 3]</b> The PA HEATER FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when the PA heating element overheats.</p> <p><b>[Fourth item in presentation OR if user clicks area 4]</b> The MAIN DISCONNECT ON/OFF switch is a 2 Position Lever Actuated Switch. It turns MIRCS main power on and off.</p> <p><b>[Fifth item in presentation OR if user clicks area 5]</b> The VENTILATION FANS ON/OFF switch is a 2 Position Toggle Switch. It turns the ventilation fans on and off.</p>
<p><b>M04.4</b></p>	<p><b>ECU Exterior Controls and Indicators</b></p>	<p><b>[if user clicks area 6]</b> The EXHAUST AIR FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when a low</p>

		<p>exhaust air pressure is detected.</p> <p><b>[if user clicks area 7]</b> The REFRIGERANT PRESSURE FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when the compressor high pressure switch detects a high-pressure condition.</p> <p><b>[if user clicks area 8]</b> The COMPRESSOR OVERLOAD lamp is a Press-To-Test Indicator. It illuminates yellow when the refrigeration compressor overload relay detects an current overload.</p> <p><b>[if user clicks area 9]</b> The RE-CIRCULATING AIR FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when a low re-circulating air pressure is detected.</p> <p><b>[if user clicks area 10]</b> The AUXILIARY HEAT ON/OFF switch is a 2 Position Toggle Switch. It turns the ECU auxiliary heating circuit on and off.</p> <p><b>[if user clicks area 11]</b> The OUTSIDE AIR FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when a low outside air pressure is detected.</p>
<p><b>M04.5</b></p>	<p><b>ECU Enclosure Interior Controls</b></p>	<p><b>[if user clicks area 1]</b> CB310 is a 40 AMP circuit breaker. It protects the RU standby motor and wiring. The circuit breaker is lever actuated. The lever is ON in the up the position for this and every other circuit breaker used on the MIRCS.</p> <p><b>[if user clicks area 2]</b> CB510 is a 20 AMP circuit breaker. It protects wiring and components in the MA enclosure and water system junction box.</p> <p><b>[if user clicks area 3]</b> CB110 is a 30 AMP circuit breaker. It protects the AA heating element</p>

		<p>circuits (normal and auxiliary).  <b>[if user clicks area 4]</b> CB120 is an 8 AMP circuit breaker. It protects the PA heating element circuits.  <b>[if user clicks area 5]</b> CB130 is a 20 AMP circuit breaker. It protects the refrigeration compressor circuits.</p>
<b>M04.6</b>	<b>ECU Enclosure Interior Controls</b>	<p><b>[if user clicks area 6]</b> CB140 is a 4 AMP circuit breaker. It protects the re-circulating, outside air, and exhaust blower circuits.  <b>[if user clicks area 7]</b> CB150 is a 15 AMP circuit breaker. It protects the ECU enclosure GFCI receptacle circuit.  <b>[if user clicks area 8]</b> CB160 is an 8 AMP circuit breaker. It protects both condenser fan circuits.  <b>[if user clicks area 9]</b> CB170 is a 6 AMP circuit breaker. It protects wiring and components in the ECU control circuits.  <b>[if user clicks area 10]</b> CB180 is a 5 AMP circuit breaker. It protects drain and water piping heater circuits. There is a label inside of the door that lists the circuit breakers and their location, function, and rating.  <b>[if user clicks area 11]</b> The COMPRESSOR OVERLOAD RELAY OL130 is a 16 AMP, Push-To-Reset circuit protection device.<b>[Show video of user clicking the Reset button]</b> It protects the refrigeration compressor circuit. It has a yellow indicator flag that pops up when it is tripped. <b>[show photos contrasting tripped and untripped circuits]</b></p>
<b>M04.7</b>	<b>ECU Thermostat</b>	<p>The temperature display is an analog scale that indicates the air temperature returning to the ECU re-circulating filter in the</p>

		<p>vestibule area.</p> <p>The temperature control switch <b>[callout]</b> is knob controlled potentiometer used to select the desired heating or cooling setting.</p> <p>The HEAT/OFF/COOL switch <b>[callout]</b> is a 3-position rotary switch set to place ECU in cooling, heat, or off mode.</p>
<p><b>M04.8</b></p>	<p><b>MA Controls and Indicators</b></p>	<p><b>[if user clicks area 1]</b> The AA LIGHTS ON/OFF switch is a 2-position toggle used to turn the administrative area working lights on or off.</p> <p><b>[if user clicks area 2]</b> The ECU MASTER FAULT lamp is a Press-To-Test Indicator. It illuminates yellow when an ECU fault has been detected. The illumination of this lamp will always be accompanied by an fault light at the ECU enclosure.</p> <p><b>[if user clicks area 3]</b> The LOW FUEL LEVEL lamp is a Press-To-Test Indicator. It illuminates red when the fuel tank level drops to 1/8th full.</p> <p><b>[if user clicks area 4]</b> The BLACKOUT MODE ON/OFF switch is a 2-position toggle used to turn the blackout lights and place unit in blackout mode.</p> <p><b>[if user clicks area 5]</b> The SA LIGHTS ON/OFF switch is a 2-position toggle used to turn the supply area working lights on or off.</p> <p><b>[if user clicks area 6]</b> The PA LIGHTS ON/OFF switch is a 2-position toggle used to turn the processing area working lights on or off.</p> <p><b>[if user clicks area 7]</b> The VESTIBULE LIGHT ON/OFF switch is a 2-position toggle used to turn the vestibule working light</p>

		on or off.
<b>M04.9a</b>	<b>RU Control Enclosure Controls and Indicators</b>	<p>Click any of the highlighted areas to learn about the functions of the RU Control enclosure controls and indicators, or click the Run button to watch a presentation of the function information.</p> <p>[if user clicks area 1] The LOW FUEL LEVEL lamp is a Press-To-Test Indicator that illuminates red when the fuel tank level drops to 1/8-full.</p> <p>[if user clicks area 2] The RU STARTING lamp is a Press-To-Test Indicator that illuminates yellow when the RU is about to start.</p> <p>[if user clicks area 3] The WORK LIGHTS ON switch is a 2 Position, Momentary Toggle Switch that turns on the work lights above RSU doors when lifted.</p> <p>[if user clicks area 4] The FUEL LEVEL ON/OFF switch is a 2 Position Toggle Switch that turns the fuel tank level sensing circuit on and off.</p> <p>[if user clicks area 5] The fuel gauge indicates the tank fuel level in 1/8-increments.</p>
<b>M04.9</b>	<b>RU Control Panel Controls and Indicators</b>	<p><b>[if user clicks area 1]</b> The control panel display indicates the RU air temperature set point, RSU temperature, and RU operating mode (heating or cooling). The display also shows alarm code and unit data information when selected.</p> <p><b>[if user clicks area 2]</b> The ALARM/FAULT LED indicator is an LED that illuminates red when an RU fault occurs in conjunction with a displayed message.</p> <p><b>[if user clicks area 3]</b> The UNIT DATA key is used to enable</p>

		<p>display of RU operating data in conjunction with the ARROW keys.</p> <p><b>[if user clicks area 4]</b> The AUTO START/STOP key is not used for the MIRCS.</p> <p><b>[if user clicks area 5]</b> The PRETRIP key is not used for the MIRCS.</p> <p><b>[if user clicks area 6]</b> The STANDBY key is used to select standby (electric) RU operation.</p> <p><b>[if user clicks area 7]</b> The BUZZER OFF key is not used for the MIRCS.</p>
<p><b>M04.10</b></p>	<p><b>RU Control Panel Controls and Indicators</b></p>	<p><b>[if user clicks area 8]</b> The ENTER key is used to accept changes to unit data or function settings.</p> <p><b>[if user clicks area 9]</b> The MAN DEFROST key is used to start a manual defrost cycle (the RSU must be above 34°F for at least 45 minutes before this function will work).</p> <p><b>[if user clicks area 10]</b> The DOWN ARROW key is used to select previous unit data and function settings.</p> <p><b>[if user clicks area 11]</b> The CITY SPEED key is used to select RU low-speed engine operation.</p> <p><b>[if user clicks area 12]</b> The UP ARROW key is used to select next unit data and function settings.</p> <p><b>[if user clicks area 13]</b> The ROAD key is used to select RU high-speed engine operation.</p> <p><b>[if user clicks area 14]</b> The I/O switch is a 2-position rocker switch that is used to turn the RU on and off.</p> <p><b>[if user clicks area 15]</b> The FUNCTION key is used to enable display of function codes in conjunction with the ARROW keys.</p>

<p><b>M04.11</b></p>	<p><b>RU Control Box Controls</b></p>	<p>The STANDBY MOTOR OVERLOAD RELAY OL1 is a 20 AMP, automatic reset, and circuit protection device. It protects the standby motor circuit.</p> <p>The RU RUN/STOP switch is a 2-position toggle used to disable RU operation during maintenance and for long term storage.</p>
<p><b>M04.12</b></p>	<p><b>Water System Junction Box Controls and Indicators</b></p>	<p>CB610 is a 15 AMP ground fault circuit breaker. It protects the AA, SA, and vestibule lighting and AA utility receptacle circuits.</p> <p>CB620 is a 15 AMP ground fault circuit breaker. It protects the PA lighting and PA utility receptacle circuits.</p> <p>CB540 is a 2 AMP circuit breaker. It protects water the system control components in the water system junction box.</p> <p>CB550 is a 15 AMP circuit breaker. It protects the water system junction box GFCI receptacle.</p> <p><b>[Show photo of label]</b> There is a label inside of the door that lists the circuit breakers and their location, function, and rating.</p>
<p><b>M04.13</b></p>	<p><b>Water System Junction Box Controls and Indicators</b></p>	<p>CB530 is an 8 AMP circuit breaker. It protects the water heater circuit.</p> <p>CB520 is an 8 AMP circuit breaker. It protects the external water pump circuit.</p> <p><b>[Show photo of label]</b> There is a label inside of the door that lists the circuit breakers and their location, function, and rating.</p> <p>Sink foot switch is a momentary pedal switch that turns on water flow to the personnel sanitization sink when</p>

		<p>depressed.</p> <p>The UTILITY HOSE switch is a pushbutton switch used to turn on water flow to the utility hose. Water flow stops automatically through a timer circuit.</p>
<b>M04.14</b>	<b>Hydraulics Controls and Indicators</b>	<p><b>[if user clicks area 1]</b> The PA PLATFORM RAISE/LOWER lever is mounted on a 3-position valve that controls the direction that LOWER/RAISE hydraulic cylinders travel. The lever is pushed rearward to the "LOWER" position to lower the platform. The lever is placed in the center "NULL" position to prevent platform movement. The lever is pulled forward to the "RAISE" position to raise the platform.</p> <p><b>[if user clicks area 2]</b> The PA PLATFORM EXTEND/RETRACT lever is mounted on a 3-position valve that controls the direction that EXTEND/RETRACT hydraulic cylinder travels. The lever is pushed rearward to the "EXTEND" position to extend the cylinder. The lever is placed in the center "NULL" position to prevent cylinder movement. The lever is pulled forward to the "RETRACT" position to retract the cylinder.</p>
<b>M04.15</b>	<b>Hydraulics Controls and Indicators</b>	<p><b>[if user clicks area 3]</b> The AA PLATFORM EXTEND/RETRACT lever is mounted on a 3-position valve that controls the direction that EXTEND/RETRACT hydraulic cylinder travels. The lever is pushed rearward to the "EXTEND" position to extend the cylinder. The lever is placed in the center "NULL" position to prevent cylinder movement. The lever is pulled forward to the "RETRACT" position to retract</p>

		<p>the cylinder.</p> <p><b>[if user clicks area 4]</b> The AA PLATFORM RAISE/LOWER lever is mounted on a 3-position valve that controls the direction that LOWER/RAISE hydraulic cylinders travel. The lever is pushed rearward to the "LOWER" position to lower the platform. The lever is placed in the center "NULL" position to prevent platform movement. The lever is pulled forward to the "RAISE" position to raise the platform.</p>
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