### Engineering Revisions

<table>
<thead>
<tr>
<th>REV:</th>
<th>DESCRIPTION</th>
<th>ECR NO.</th>
<th>BY:</th>
<th>DATE:</th>
<th>APR'D:</th>
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<tbody>
<tr>
<td>06</td>
<td>ADDED WIRE HARNESS LENGTH</td>
<td>2800</td>
<td>KY</td>
<td>07/20/07</td>
<td>DB</td>
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<tr>
<td>07</td>
<td>CHANGED POS. FROM 7RT;7RB;7LT;7LB TO 7Ro;7Ru;7Lo;7Lu</td>
<td>3198</td>
<td>ND</td>
<td>05/19/08</td>
<td>DB</td>
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<tr>
<td>08</td>
<td>CHANGED WIRE COLOR MG10 TO MATCH STANDARD WIRING</td>
<td>3537</td>
<td>ND</td>
<td>05/19/08</td>
<td>DB</td>
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<tr>
<td>09</td>
<td>CHANGED HARNESS LENGTH FROM 26 TO 36&quot;</td>
<td>4294</td>
<td>KY</td>
<td>04/04/12</td>
<td>DB</td>
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<tr>
<td>10</td>
<td>CORRECTED WIRE COLORS ON MG19P, RIGHT &amp; LEFT INSTALLATION</td>
<td>01.207.105</td>
<td>KY</td>
<td>10/28/19</td>
<td>DB</td>
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</table>

#### Diagram

**Optional Rocker Switch or MG19P (Locations 1-2, 1-3, 2-4, or 3-4)**

**Wiring Harness to be 36" Long Off Handle Base**

#### Notes

- 9 Pin Joystick Connector
  - Connector: 05.325
  - Contacts: 05.412
  - Supply Loose: Contacts: 05.329, 05.522

- 12 Pin Joystick Connector
  - Connector: 05.326
  - Contacts: 05.412
  - Supply Loose: Contacts: 05.330, 05.522

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**J.R. MERRITT CONTROLS, INC.**

**HANDLE WIRING STANDARD**

**FG-3 FIGHTER GRIP HANDLE**

**DRAWN:** JH 
**DATE:** 03/27/06

**APPROVED:** GAR 
**DATE:** 03/27/06

**CUSTOMER:** J.R. MERRITT CONTROLS, INC.

**JOB NO:**

**SCALE:** N/A

**PUB NO:** WEB DOC

**DING NO:** A25.101.6681

**REV:** 10
ENGINEERING CHANGES / REVISIONS
01 11/08/06 ND 2509 UPDATED WIRING DIAG., PUSHBUTTONS TO AGREE CATALOG PAGE

WIRING HARNESS TO BE 25' LONG OFF HANDLE BASE

NOTES:
POTENTIOMETER WIRING & SPECIFICATION BULLETIN

* NOTE: Shielded cable is recommended for all signal wires.

PLUS/MINUS CONTROL
CENTER TAPPED POTENTIOMETER (4 WIRE)

Vout = +Vin/2 0 -Vin/2

Ex. Vin = 10
Vout = (NO LOAD)

for ±10V out apply 20V in (24V power supply with trim pot required)

PLUS CONTROL
CENTER TAPPED POTENTIOMETER (4 WIRE)

Vout = +Vin 0 +Vin

Ex. Vin = 10
Vout = (NO LOAD) +10 0 +10

PLUS CONTROL
STANDARD POTENTIOMETER (3 WIRE)

Vout = 0 +Vin/2 +Vin

Ex. Vin = 10
Vout = (NO LOAD) 0 +5 0 +10

POTENTIOMETER SPECIFICATIONS

<table>
<thead>
<tr>
<th>POTENTIOMETER</th>
<th>RATING</th>
<th>TYPE</th>
<th>WIPER CURRENT MIN/MAX</th>
<th>LIFE (CYCLES)</th>
<th>ELECTRICAL ANGLE (°)</th>
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<tbody>
<tr>
<td>CLAROSTAT - STANDARD</td>
<td>0.5W</td>
<td>Conductive Plastic</td>
<td>0mA/10mA</td>
<td>5 Million</td>
<td>260°</td>
</tr>
<tr>
<td>BI TECH - STANDARD</td>
<td>1W</td>
<td>Conductive Plastic</td>
<td>0mA/1mA</td>
<td>10 Million</td>
<td>300°</td>
</tr>
<tr>
<td>PW55/PD550</td>
<td>3W</td>
<td>Wire wound</td>
<td>25mA/100mA</td>
<td>10 Million</td>
<td>250°</td>
</tr>
<tr>
<td>PEC</td>
<td>2W</td>
<td>Carbon element</td>
<td>0mA/60mA</td>
<td>1 Million</td>
<td>260°</td>
</tr>
<tr>
<td>PW70</td>
<td>5W</td>
<td>Wire wound</td>
<td>25mA/120mA</td>
<td>10 Million</td>
<td>200°</td>
</tr>
<tr>
<td>DP60</td>
<td>50W</td>
<td>Wire wound</td>
<td>25mA/500mA</td>
<td>1 Million</td>
<td>270°</td>
</tr>
</tbody>
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J.R. MERRITT CONTROLS, INC.
Stratford, CT 06615

Pub. # 38.L3

REV01 - KY - 02/18/03 ADDED CLAROSTAT POT
REV02 - KY - 09/05/03 ADDED BI TECH POT; REMOVED SERVO INST. & SPECTROL POTS
**ENGINEERING REVISIONS**

<table>
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<th>REV:</th>
<th>DESCRIPTION:</th>
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<tbody>
<tr>
<td>01</td>
<td>ADDED POT TYPE DESIGNATIONS</td>
</tr>
<tr>
<td>02</td>
<td>ADDED NOTES</td>
</tr>
<tr>
<td>03</td>
<td>ADDED NOTE 3 &amp; BI CW, CCW DESIGNATIONS</td>
</tr>
</tbody>
</table>

**NOTES:**

1. ALL WIRES - 20 AWG, COLOR AS SPECIFIED.
2. WIRES TO EXTEND 6" PAST BODY OF JOYSTICK.
3. BI POTS # 04.484 & 04.500; R (CW) IS VIO WIRE; L (CCW) IS ORN WIRE.

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**JOYSTICK CONNECTOR:**

<table>
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<tr>
<th>CONNECTOR</th>
<th>CONTACTS</th>
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<tr>
<td>05.319</td>
<td>05.053</td>
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**SUPPLY LOOSE CONNECTOR:**

<table>
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<th>CONNECTOR</th>
<th>CONTACTS</th>
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<tbody>
<tr>
<td>05.323</td>
<td>05.063</td>
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</tbody>
</table>

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**4 WIRE POT**

**3 WIRE POT**

**BOARD MOUNTED POTS**

**HALL SENSOR**

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**PL310**

**BI 3 WIRE**

**BI 4 WIRE**

**CLAROSTAT 3 WIRE**

**CLAROSTAT 4 WIRE**

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**PD550**

**10 TAP**

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**J.R. MERRITT CONTROLS, INC.**

55 SPERRY AVENUE, STRATFORD, CT 06615

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**POT WIRING STANDARD**

**JOB NO:**

**CUSTOMER:** J.R. MERRITT CONTROLS, INC.

**DRAWN:**

**APPROVED:**

**DRAWN:**

**APPROVED:**

**DRAWN:**

**APPROVED:**

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**APPROVED:**

**DRAWN:**

**APPROVED:**

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**A25.101.6397**

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**WEB DOC NO:**

**DRAWN NO:**

**APPROVED NO:**

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**SCALE:** N/A

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