Maximum 8 Units (16 Lanes) per circuit

Isolating Transformer (Hard Wired)

Circuit 1 7/067 Cable

Power +12VDC

Camera Video

Keyboard Line
CarolDC0890

Circuit 2 7/067 Cable

Main Switch
Circuit 1
Circuit 2

Office Printer

8KA/16A Miniature Circuit Breaker

Network Line CarolDC0890 Communication Cable

LPT 1

Computer Score Single Computer Layout

Main Computer

CarolDC0890

Control Terminal

4 Port Serial Card

Scoresheet Printer

CarolDC0890

Receipt Printer

Cash Drawer

Existing VCR and PAS System

Beldon 9259 RG-59/U 75 Ohm Co-Axial Cable

Power Filter

Power +12VDC

Mains Power

Network Line CarolDC0890 Communication Cable

Computer Score Single Computer Layout
Computer Score Dual Computer Layout
COMPUTER SCORE  POWER & INTERFACE PCB
MACHINE WIRING DIAGRAM

Even Lane Start
Odd Lane Start
Even Lane Cycle
Odd Lane Cycle
Diagram

For more detail
see lane connection diagram

Note!
Isolating Transformer is essential!
### Left or Right Machine Interface Plug

<table>
<thead>
<tr>
<th>Pin</th>
<th>Name</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trigger</td>
<td>Not Connected</td>
</tr>
<tr>
<td>2</td>
<td>Trigger</td>
<td>Not Connected</td>
</tr>
<tr>
<td>3</td>
<td>Foul</td>
<td>Foul input contact +</td>
</tr>
<tr>
<td>4</td>
<td>Foul</td>
<td>Foul input contact -</td>
</tr>
<tr>
<td>5</td>
<td>NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>6</td>
<td>NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>7</td>
<td>Ball Detect</td>
<td>Ball Detector NO Contact</td>
</tr>
<tr>
<td>8</td>
<td>Ball Detect</td>
<td>Ball Detector COM Contact</td>
</tr>
</tbody>
</table>

Note! Pinsensor is Triggered by Sweep reflection Tile

---

### AMF Interface Lane Connection

**Keyboard/Sensor Cable**

**Control Cables**

**Scoring Display Unit**

**Manager's Control**

**Left and Right Machine Interface Plugs**

**Keyboard/Sensor Cable (Cont.)**

**Keyboard Console**

**Foul Unit**

**AMC Box**

**Masking Unit**

**Power In**

**Pin Sensor**

**Ball Detector**

**Ball Detector Settings**

**Communication Port**

**Trigger Port**

**Left Same as Right**

**AMF Interface Lane Connection**
**ODD LANE**

Sweep Arm

Note!
Overhang always
the Ball chute
Not the pins

**EVEN LANE**

Sweep Arm

Note!
Overhang always
the Ball chute
Not the pins

---

**BALL CHUTE**

Approx. Height
of Pin necks

---

**PINS**

Sweep Reflection
Tile

---

**PINS**

Sweep Reflection
Tile

---

**Sweep Reflection**

Tile Placement
The Network cable connects the Host Computer to the Scoring Display Units. The one cable travels from the computer into the first unit then out again and onto the next unit. The cable is terminated with 100R resistors at the last Scoring Display Unit.

**Network Connections**

- The network cable connects the Host Computer to the Scoring Display Units.
- One cable travels from the computer into the first unit then out again and onto the next unit.
- The cable is terminated with 100R resistors at the last Scoring Display Unit.

<table>
<thead>
<tr>
<th>Pin</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red from both cables</td>
</tr>
<tr>
<td>2</td>
<td>White from both cables</td>
</tr>
<tr>
<td>3</td>
<td>Green from both cables</td>
</tr>
<tr>
<td>9</td>
<td>Black from both cables</td>
</tr>
</tbody>
</table>

**Host Computer Network Expansion Connector**

- Located at the Computer

**Note!** Termination resistors are necessary.

**Between Display Consoles**

- Note the cable shields are soldered together but are not connected to the DB15 plug.
The Keyboard/Sensor Cable is responsible for transmitting Power and Communication to and from the Upper Scoring Display Units to the Pinsensor at the Cappings and the Keyboard at the Lower Console.

**Sensor Interface**
At Scoring Display Units

**Sensor Communications Port**
At Pin Sensor

**Keyboard/Sensor Cable**

**Male1 DB9**
1. RED-BOX
2. GREEN-BOX
3. SHIELD
4. BLACK
5. WHITE

**Male2 DB9**
1. RED-KEY
2. GREEN-KEY
3. SHIELD
4. BLACK
5. WHITE

**Male3 DB9**

**Key Male Interface**
At Lower Keyboard Console

---

**Sensor Interface Connector**
DB 9 Male Connector
(Mates with Female Plug located in the Scoring Display Consoles on the Enhanced Colour Terminal PCB - Plug marked SERIAL)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Connection from Pin Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 RXD</td>
<td>Red</td>
</tr>
<tr>
<td>2 TXD</td>
<td>Green</td>
</tr>
<tr>
<td>3 -12VDC</td>
<td>Black</td>
</tr>
<tr>
<td>4 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>5 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>6 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>7 GND</td>
<td>Shield (uncovered wire)</td>
</tr>
<tr>
<td>8 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>9 +12VDC</td>
<td>White</td>
</tr>
</tbody>
</table>

**Sensor Communications Port**
DB 9 Male Connector
(Mates with Female Plug located on the Pin Sensor)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Connection from Pin Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TXD</td>
<td>Red from Scoring Display</td>
</tr>
<tr>
<td>2 /RXD</td>
<td>Green from Scoring Display</td>
</tr>
<tr>
<td>3 -12VDC</td>
<td>Black of both cables</td>
</tr>
<tr>
<td>4 RXD</td>
<td>Red from Keyboard console</td>
</tr>
<tr>
<td>5 /RXD</td>
<td>Green from Keyboard console</td>
</tr>
<tr>
<td>6 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>7 GND</td>
<td>Shield both cables</td>
</tr>
<tr>
<td>8 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>9 +12VDC</td>
<td>White both cables</td>
</tr>
</tbody>
</table>

**Keyboard Port**
DB 9 Male Connector
(Mates with Female Plug located on the Keyboard PCB in the Lower Console)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Connection from Pin Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 TXD</td>
<td>Red</td>
</tr>
<tr>
<td>2 /TXD</td>
<td>Green</td>
</tr>
<tr>
<td>3 -12VDC</td>
<td>Black</td>
</tr>
<tr>
<td>4 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>5 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>6 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>7 GND</td>
<td>Shield both cables</td>
</tr>
<tr>
<td>8 NC</td>
<td>Not Connected</td>
</tr>
<tr>
<td>9 +12VDC</td>
<td>White both cables</td>
</tr>
</tbody>
</table>
Control Terminal
Cable Connections

WYSE 120

WYSE Terminal

RS-232C
DB25 Male

Receipt Printer
& Cash Drawer

Male

Drawer
Com# 5
(Cash Drawer 1)

Drawer
DB9 Male

Multi-1
DB25 Female

Female

Multiport-2

POS Printer

Serial Printer

MULTI-3
DB25 Female

Female

Multi-user Terminal

Setup Parameters
38400 Baud
8/1 No Parity
DTR/DSR

Multi-port-3
(Computer End)

Setup POS
Printer 5

9600 Baud
8/1 No Parity
DTR/DSR

Drawer Com# 5

Carol CO890

Carol CO890

8/1 No Parity
CASH DRAWER
CABLE CONNECTIONS

Host Computer
38400 Baud
8/1 No Parity
DTR/DSR

Slave Computer
38400 Baud
8/1 No Parity
DTR/DSR

Inter-Computer Connection
CASH DRAWER
CABLE CONNECTIONS

FEMALE DB9

MALE DB15

ground Shroud

12 Cond. Shielded

LCD Sensor Display
Cable

MAL2 DB15

WEIGHT 1
LIGHT BLUE 2
YELLOW 10
ORANGE 7
PURPLE 11
RED 1
BLUE 1
ESTAMP 13
GREEN 2
BLACK 15
SHIELD 8

COMPUTER SCORE WIRING DIAGRAMS

G2 6

GD.CARLIN
Serial Printer Cable (DB 9 Type)

- Rear View DB9Female
- At Computer
- At Printer

Serial Printer Cable (DB 25 Type)

- Rear View DB25 Female
- At Computer
- At Printer

---

1. N/C
2. TXD (Red)
3. RXD (Green)
4. 4,5 & 6 Linked
5. DSR (Black)
6. GND (Shield)
7. N/C
8. N/C
9. N/C
10. N/C
11. N/C
12. N/C
13. N/C
14. N/C
15. N/C
16. N/C
17. N/C
18. N/C
19. N/C
20. DTR (Black)
21. N/C
22. N/C
23. N/C
24. N/C
25. N/C
ECT Model Lane Cabling

RearView DB9Male

1. RX (Red)
2. #RX (Green)
3. N/C
4. TX (White)
5. #TX (Black)
6. N/C
7. GND (Black)
8. Frame GND (Shield)
9. +12VDC (White)

At LaneCapping

RearView DB9Female

1. N/C
2. #TX (Green)
3. TX (Red)
4. GND (Black)
5. +12VDC (White)

At CurtainWall

Keyboard/Machine Interface Cable (CO-890 shielded 2xpair)

At DisplayUnit

RearView DB9Male

1. RX (Red)
2. #RX (Green)
3. N/C
4. TX (White)
5. #TX (Black)
6. N/C
7. GND (Black)
8. Frame GND (Shield)
9. +12VDC (n/c)

At Main Computer

RearView DB9Male

1. Black
2. White
3. Shield
4. Red
5. Green
6. N/C
7. 100 Ohm
8. 100 Ohm

At Main Computer

Network Cable (CO-890 shielded 2xpair)

At Display Units

RearView DB15 Male

1. Red
2. White
9. Green

At Last Display Unit

1. Red
2. White
9. Green

Shield Not Connected

At Last Unit

Keyboard Cable (CO-890 shielded 2xpair)

At Lane Capping

Lane Scoring Camera Video Cable (RG-59 Coax)

At Display Unit

Note: Shield of both cables joined in the backshell.

BNC Male

Mating Plug on Route Board

+12VDC (Red)
GND (Red)
Frame GND (Shield)

At Power Routing Board (Display Unit)

At Curtain Wall

At Lane Capping

At Lane Capping
# COMPUTER SCORE DIP SWITCH SETTINGS FOR ENHANCED COLOR TERMINAL CARD (ECT)

<table>
<thead>
<tr>
<th>LANES</th>
<th>SW 1</th>
<th>SW 2</th>
<th>SW 3</th>
<th>SW 4</th>
<th>SW 5</th>
<th>SW 6</th>
<th>SW 7</th>
<th>SW 8</th>
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<tbody>
<tr>
<td>1&amp;2</td>
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<td>OFF</td>
<td>ON</td>
<td>ON</td>
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<td>ON</td>
</tr>
<tr>
<td>3&amp;4</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
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</tr>
<tr>
<td>5&amp;6</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
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</tr>
<tr>
<td>7&amp;8</td>
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<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
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<td>9&amp;10</td>
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<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>11&amp;12</td>
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<td>OFF</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
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<td>13&amp;14</td>
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<td>OFF</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
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<td>15&amp;16</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
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<td>17&amp;18</td>
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<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
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<td>19&amp;20</td>
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<td>OFF</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>21&amp;22</td>
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<td>ON</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
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<td>23&amp;24</td>
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<td>OFF</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>25&amp;26</td>
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<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>27&amp;28</td>
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<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>29&amp;30</td>
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<td>OFF</td>
<td>OFF</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>31&amp;32</td>
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<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
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</tr>
<tr>
<td>33&amp;34</td>
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<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>35&amp;36</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>37&amp;38</td>
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<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
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<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
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<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>43&amp;44</td>
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<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>45&amp;46</td>
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<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>47&amp;48</td>
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<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>49&amp;50</td>
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<td>OFF</td>
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<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>51&amp;52</td>
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<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>53&amp;54</td>
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<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
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<td>55&amp;56</td>
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<td>OFF</td>
<td>OFF</td>
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<td>OFF</td>
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<td>OFF</td>
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<td>59&amp;60</td>
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<td>OFF</td>
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</table>