The SmarTek Video Detection System (SVS-1)
User Guide-Part E
Using a Mouse and Monitor to Setup the SVS-1

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Setting up the SVS-1 using a Mouse and Video Monitor (No PC Required) Overview.

The SVS-1 processor cards may be setup using only an NTSC video monitor connected to the "Out" BNC jack and a mouse connected to the USB port or the serial RJ-45 jack. This section describes the setup procedure using only a video monitor and mouse. The following steps outline the setup procedure which are illustrated on the following pages:

1) Connect a video monitor to the Video Out jack of the SVS-1 and connect a mouse to the serial or USB port of the SVS-1 card, to begin the setup process. Top Level navigation buttons appear.

2) Click the "Camera" button (for two channel cards) to select the camera channel to be set up. For single channel and two channel cards proceed to the Main Setup display by clicking the **Setup** button.

3) The Main Setup display has several options. For initial SVS-1 setup, first click the **Draw LZs** button to proceed to the Draw Line Zones display to draw each detection line zone (create multiple line zones for each lane) and then assign or group line zones to an intersection phase. After all desired detection line zones have been drawn and grouped in phases, return to the Main Setup display.

4) From the Main Setup display, proceed to the Set Line Zone Parameters display by clicking the **Set LZ Pars** button to set performance/sensitivity parameters for each line zone or for all line zones. Typically, predetermined (default) parameters are used for most applications. After setting parameters, return to the Main Setup display.

5) From the Main Setup display, proceed to the Set Output display by clicking the **Set Output** button to specify the detector interface type, combine phases into vehicle presence relays, and then route them to output detector channels. After setting the output relay signals, return to the Main Setup display.

6) From the Main Setup display, proceed to the Set Video Out Text display by clicking the **Set Display** button to specify the video monitor text and to specify it's position in the output video image. After setting the output video text, return to the Main Setup display.

7) After the SVS-1 setup is complete, click the **Save & Exit** button to exit Setup and return to the Top Level Display. At the Top Level display, disconnect the mouse.

Important Note: The setup procedure uses familiar mouse "point and click" techniques. For most displays and buttons, clicking in the **upper/lower** portion of the button field will **increment/decrement** the selected detection zone, the parameter to be changed, the phase to be assigned, or the parameter value being set.

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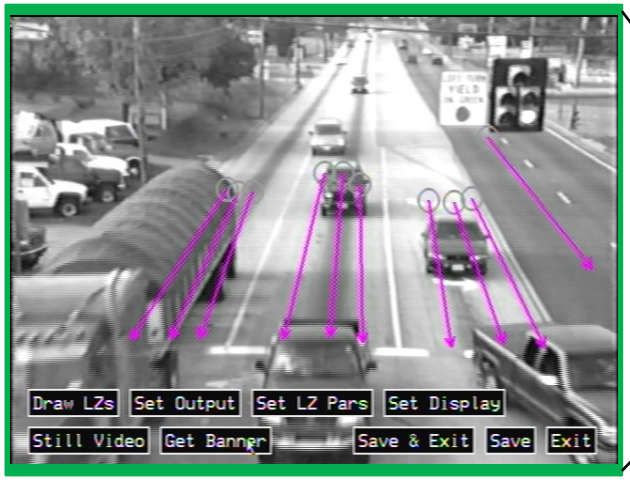
Mouse and Monitor SVS-1 Setup (No PC Required)

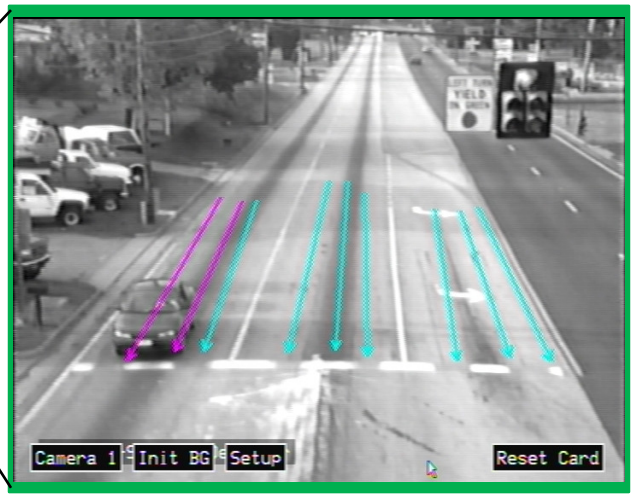
Plug Mouse into Serial or USB Port

Top Level
Video Out Display



Click Setup

Main Setup
Display



- Click Init BG to Initialize All LZ Backgrounds
- Click Reset Card to Reset the SVS-1 Processor

Click Draw LZs

Draw Line Zones
Display

- Draw LZs
- Group LZs into Phases (1L, 6T, etc.)
- Set Display LZs on Output Video Switches

Click Set Output

Set Output
Display

- Specify Detector Interface
- Specify # Relays/Card Used
- Specify RI Slot Position
- Specify Detection Extension
- Specify Detection Delay
- Specify Combination and Routing to Detector Channels

Click Set LZ Pars

Set Line Zone
Parameters Display

- Specify Shadow Rejection
- Specify Key LZ Parameters
- Set All Parameters to Default Values

Click Set Display

Set Video Out Text
Display

- Specify Descriptive Text for Output Video
- Specify Text Position
- Set Display Text on Output Video Switch

Click Get Banner

Banner Display

- Show HW and SW Version Numbers

Important Note: The setup procedure uses familiar mouse "point and click" techniques. For most displays and buttons, clicking in the **upper/lower** portion of the button field will **increment/decrement** the selected detection zone, the parameter to be changed, the phase to be assigned, or the parameter value being set.

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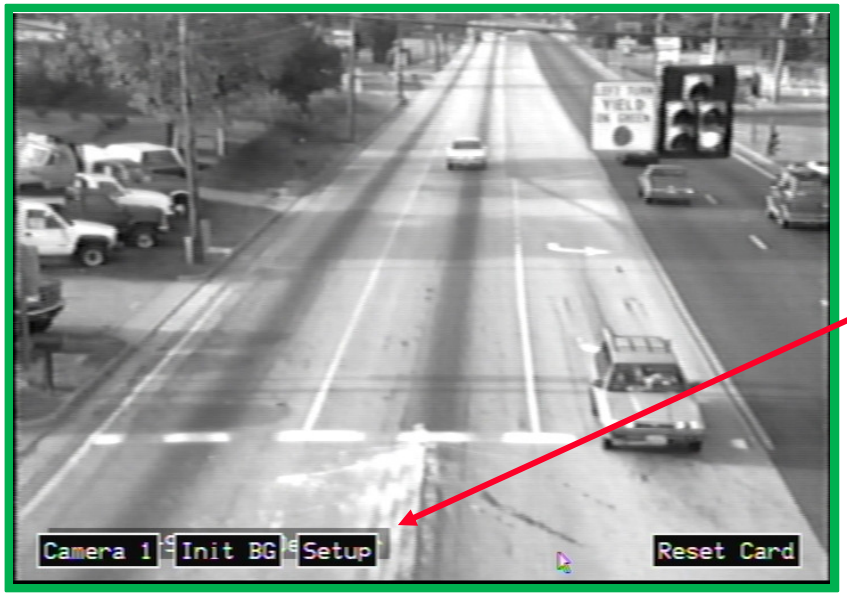
Top Level and Main Setup Displays



After connecting the mouse, the Top Level navigation buttons appear on the output video image. From the display, the user may manually initialize line zone backgrounds if line zones have already been setup or the user may reset the processor, or the user may proceed to the main setup display by clicking the **Setup** button. If an SVS-1 multi-camera channel processor is being used, clicking the Camera button will select the camera channel to be set up.

After clicking the **Setup** button, the Main Setup navigation buttons appear on the output video image. Before proceeding to other setup displays, the user may choose to select a still video image by clicking the "Still Video" button. Using a still video image for setup may be less distracting than motion video. When setting up an SVS-1 camera channel for detection, the user should proceed by first **Drawing Line Zones**, then **Setting LZ Parameters**, then **Setting Detector Output**, and finally **Setting the descriptive text for the Output Video Display**.

Click **Draw LZs** button.

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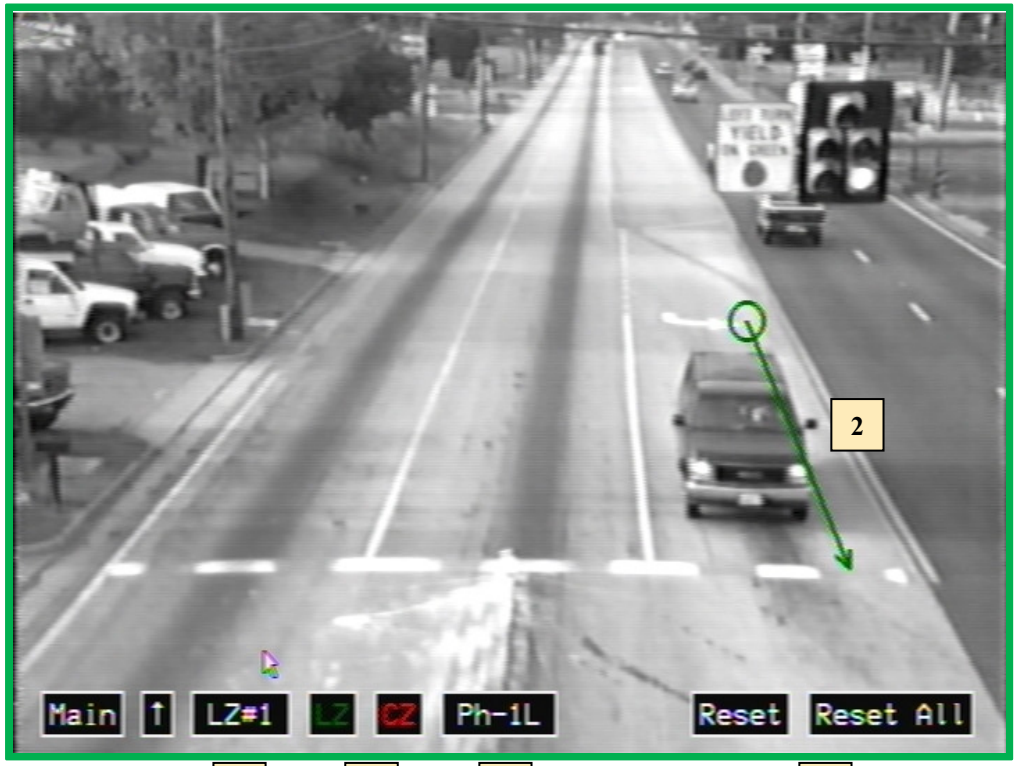
Draw Line Zones



Set Line Zone Position, Size and Phase Group:

1) Click the **LZ#** button to select the line zone to draw. If the previous line zone has been assigned a phase, right clicking anywhere on the display will assign that phase to the currently selected line zone.
2) Draw the Line Zone position by left clicking (hold down left button) at the down road end of the Line Zone and drawing the Line Zone to the up road end (at this end, release the left button).
3) Click the **LZ** and **CZ** buttons to show (**green**) or not show (**red**) the line zone and/or the circle zone in the output video monitor signal.
4) Click the **Ph-** to assign the selected line zone to a specific phase (i.e. LZs 1, 2, and 3 may be assigned to phase 1L if they are in the Left Turn lane).
5) Repeat steps 1 thru 4 to set as many zones as is needed. Each lane should have multiple Line/Circle Zones.
6) To reset the selected line zone or all line zones, click the **Reset** or **Reset All** button respectively.

Steps 1 thru 4 may be repeated as many times as necessary until the position, size, and assignments are satisfactory.

Phase assignment Codes:

Ph-1L	Ph-5L	Ph-9L	Ph-13L	**L designates Left Turn Lane**
Ph-6T	Ph-2T	Ph-14T	Ph-10T	**T designates Thru Lane**
Ph-6R	Ph-2R	Ph-14R	Ph-10R	**R designates Right Turn Lane**
Ph-3L	Ph-7L	Ph-11L	Ph-15L	**Note:** The "T" and "R" designation allows for later applying detection delay and/or extension to the right turn and/or thru lanes before combining them into one relay.
Ph-8T	Ph-4T	Ph-16T	Ph-12T	
Ph-8R	Ph-4R	Ph-16R	Ph-12R	

Clicking in the upper/lower part of the button field will increment/decrement the value or the selection.

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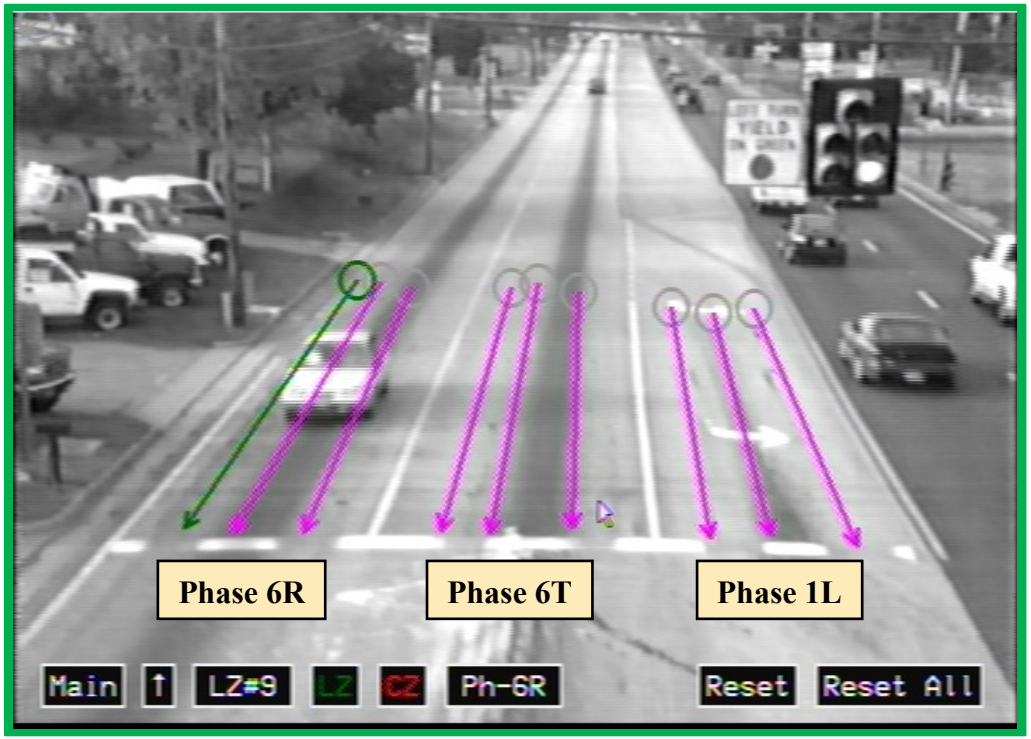
Draw Line Zones



SVS-1 detection is directional, hence be sure the direction arrow on each line zone is pointed in the correct direction of travel.

The "Up" arrow beside the "Main" button provides for moving the setup buttons to the top of the image if they are in in the way of drawing line zones. After moving the setup buttons to the top, the "Up" arrow becomes a "Down" arrow.

The selected line zone is shown in green, all others are shown in magenta (show in output video) or gray (not show in output video).

After drawing all line zones and grouping by phase, click the "Main" button to return to the Main Setup Display.

Phase assignment Codes:

Ph-1L	Ph-5L	Ph-9L	Ph-13L	**L designates Left Turn Lane**
Ph-6T	Ph-2T	Ph-14T	Ph-10T	**T designates Thru Lane**
Ph-6R	Ph-2R	Ph-14R	Ph-10R	**R designates Right Turn Lane**
Ph-3L	Ph-7L	Ph-11L	Ph-15L	**Note:** The "T" and "R" designation allows for later applying detection delay and/or extension to the right turn and/or thru lanes before combining them into one relay.
Ph-8T	Ph-4T	Ph-16T	Ph-12T	
Ph-8R	Ph-4R	Ph-16R	Ph-12R	

Clicking in the upper/lower part of the button field will increment/decrement the value or the selection.

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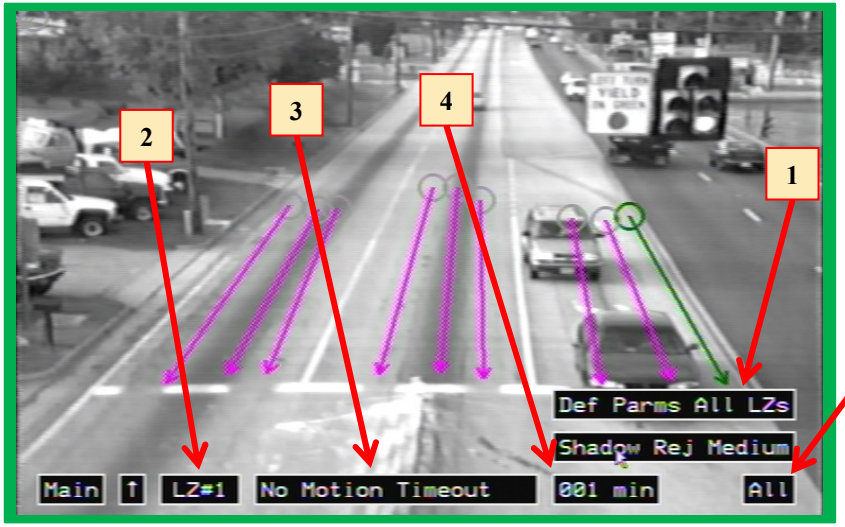
Set Line Zone Parameters



No Motion Timeout (default=2 min) – This should be set as close to the light cycle time as possible Rural intersections might be 1 min while urban intersections might be as long as 3 or 4 minutes.
Detection Threshold (default=8) – Increasing this threshold decreases detection sensitivity, while decreasing this threshold increases sensitivity. Values range from 5 to 12.
BG Select En Har Thr (default=20 for LZ in left turn lane, 10 for other LZs) – This parameter should not be changed except under guidance from SmarTek Systems.
BG Match Threshold (default=5.0) - This parameter should not be changed except under guidance from SmarTek Systems.
No Motion Threshold (default=3.0) - This parameter should not be changed except under guidance from SmarTek Systems.

Set Line Zone Parameters:
1) For most installations using the Default parameters results in excellent performance. To set all line zone parameters to default values, click the **Def Parms All LZs** button. Note that lines zones that have been assigned to a Left Turn phase (**1L, 3L, 5L, etc.)** may have some parameters with different default values compared to parameters for line zones assigned to Thru or Right Turn phases (**6T, 6R, 8T, 8R, etc**.).
2) To set specific parameters for selected line zones to different values first click the **LZ=** button to select a line zone. The selected line zone turns green. All others are magenta.
3) Click the **Parameter Name** button to select a specific parameter to change the value. The parameter value shows up in the next button to the right.
4) Next click the **Parameter Value** button to change the value of the parameter. If it is desired to set the selected parameter value for all line zones, click the **All** button next to the parameter value.

Steps 2 thru 4 may be repeated as many times as necessary until the parameter values are satisfactory.
After completing the parameter setup, click the Main button to return to the Main Setup display.

For cameras with high contrast settings, it may be necessary to set the shadow rejection to **Low, Medium,** or **High** depending on contrast settings. The **Shadow Rejection** setting is for all line zones and the default setting is **None**. To change shadow rejection, click the **Shadow Rej** button until it reads the setting desired. Note that shadow rejection processing is enabled even if the rejection setting is set to None.

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Setting Output - Example Scenario Summary

From the Main Setup display, proceed to the Set Output display by clicking the **Set Output** button. This display is used to specify the detector interface type , combine phases into vehicle presence relays, and then route them to output detector channels. After setting up the output relay signals, return to the Main Setup display by clicking the **Main** button.

The following list provides a summary of several SVS-1 Output setup examples which are shown in the slides that follow.

1) **Type-170** Detector/Controller Interface with **4 Relays** per SVS-1 card and 3 Phases (Line Zone Groups)
   Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**
   Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**
   Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**

   Note: This scenario would be a typical dual camera input to a 2 camera SVS-1 Card.

2) **Type-170** Detector/Controller Interface with **2 Relays** per SVS-1 card and 3 Phases (Line Zone Groups)
   Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**
   Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**
   Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**

   Note: This scenario would be a typical single camera input to a 1 camera SVS-1 Card.

3) **BIU #1 Card file** Detector/Controller Interface with **4 Relays** per SVS-1 card, **Slot 2 used**, and 3 Phases (Line Zone Groups)
   Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**
   Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**
   Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**

   Note: This scenario would be a typical dual camera input to a 2 camera SVS-1 Card.

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Setting Output Example Scenario Summary (Continued)

4) **BIU #1 Card file** Detector/Controller Interface with **4 Relays** per SVS-1 card, **Slot 4 used**, and 3 Phases (Line Zone Groups)
   Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D5**
   Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D6**
   Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D6**

   Note: This scenario would be a typical dual camera input to a 2 camera SVS-1 Card.

5) **BIU #1 Card file** Detector/Controller Interface with **2 Relays** per SVS-1 card, **Slot 2 used**, and 3 Phases (Line Zone Groups)
   Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**
   Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**
   Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**

   Note: This scenario would be a typical single camera input to a 1 camera SVS-1 Card.

6) **BIU #1 SDLC** Detector/Controller Interface with 3 Phases (Line Zone Groups)
   Phase **5L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D7**
   Phase **2T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D8**
   Phase **2R**, Detection Delay=2 sec, Detection Extension=0, Route to Detector Channel **D8**

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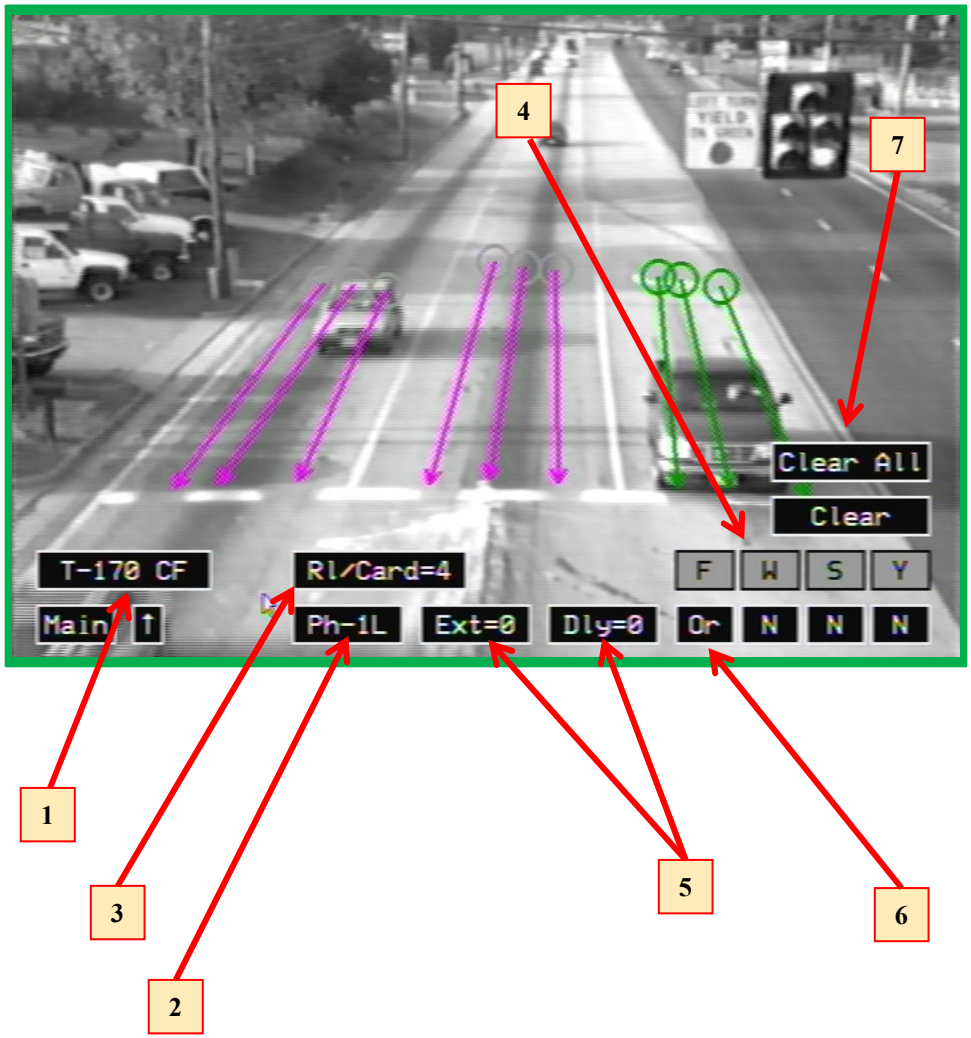
Scenario 1 Set 4 Output Relays For a Type 170/2070 Card File Interface

Type-170 Detector/Controller Interface with **4 Relays** per SVS-1 card and 3 Phases (Line Zone Groups)

Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**

Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**

Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (**Type-170**).

2) Click the **Ph-** button to select Phase group **1L**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = **4** .

4) After selecting the **RI/Card=4**, the number card edge relays (F, W, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Card Edge Relays.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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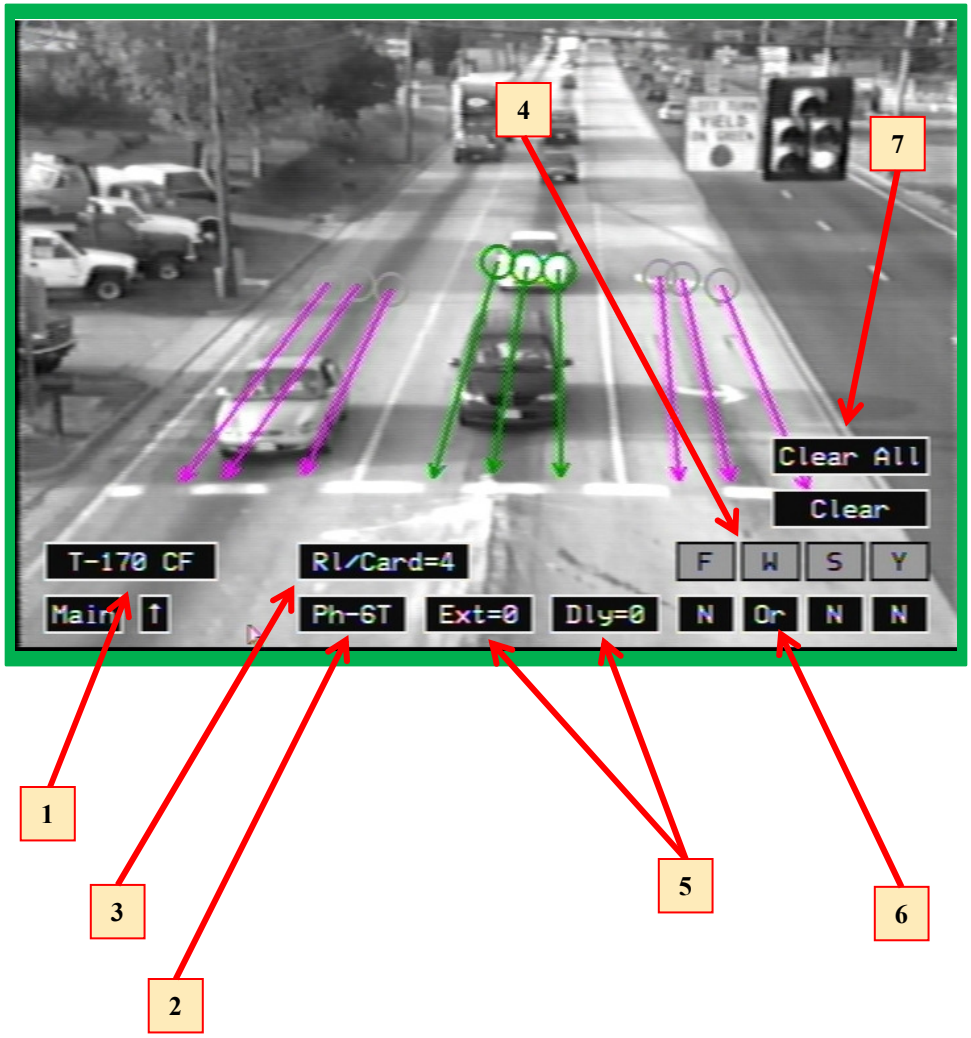
Scenario 1 (Con't) Set 4 Output Relays For a Type 170/2070 Card File Interface

Type-170 Detector/Controller Interface with **4 Relays** per SVS-1 card and 3 Phases (Line Zone Groups)

Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**

Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**

Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (Type-170).

2) Click the **Ph-** button to select Phase group **6T**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 .

4) After selecting the RI/Card=4, the number card edge relays (F, W, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Card Edge Relays.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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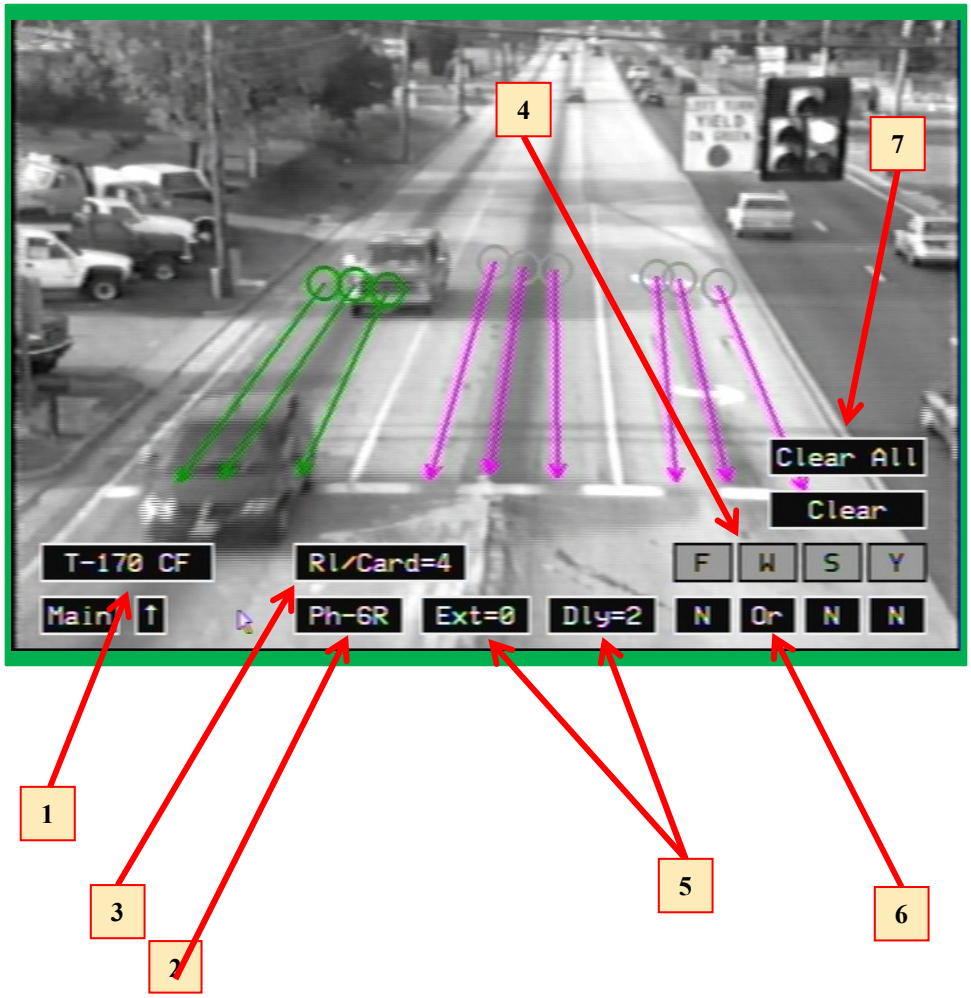
Scenario 1 (Con't) Set 4 Output Relays For a Type 170 Card File Interface

Type-170 Detector/Controller Interface with **4 Relays** per SVS-1 card and 3 Phases (Line Zone Groups)

Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**

Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**

Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (Type-170).

2) Click the **Ph-** button to select Phase group **6R**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 .

4) After selecting the RI/Card=4, the number card edge relays (F, W, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Card Edge Relays.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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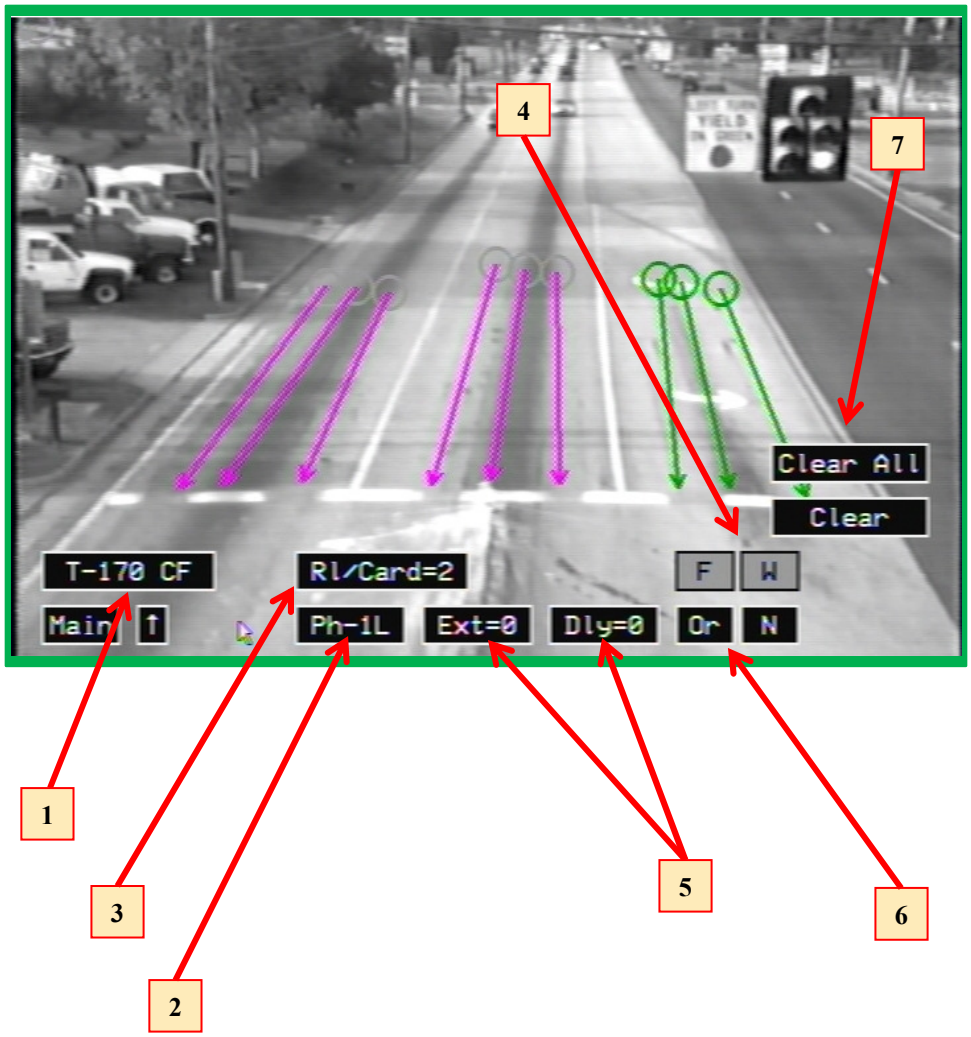
Scenario 2 Set 2 Output Relays per Card for a 170/2070 Controller

Type-170 Detector/Controller Interface with **2 Relays** per SVS-1 card and 3 Phases (Line Zone Groups)

Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**

Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**

Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (Type-170).

2) Click the **Ph-** button to select Phase group **1L**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 2 .

4) After selecting the RI/Card=4, the number card edge relays (F, W, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Card Edge Relays.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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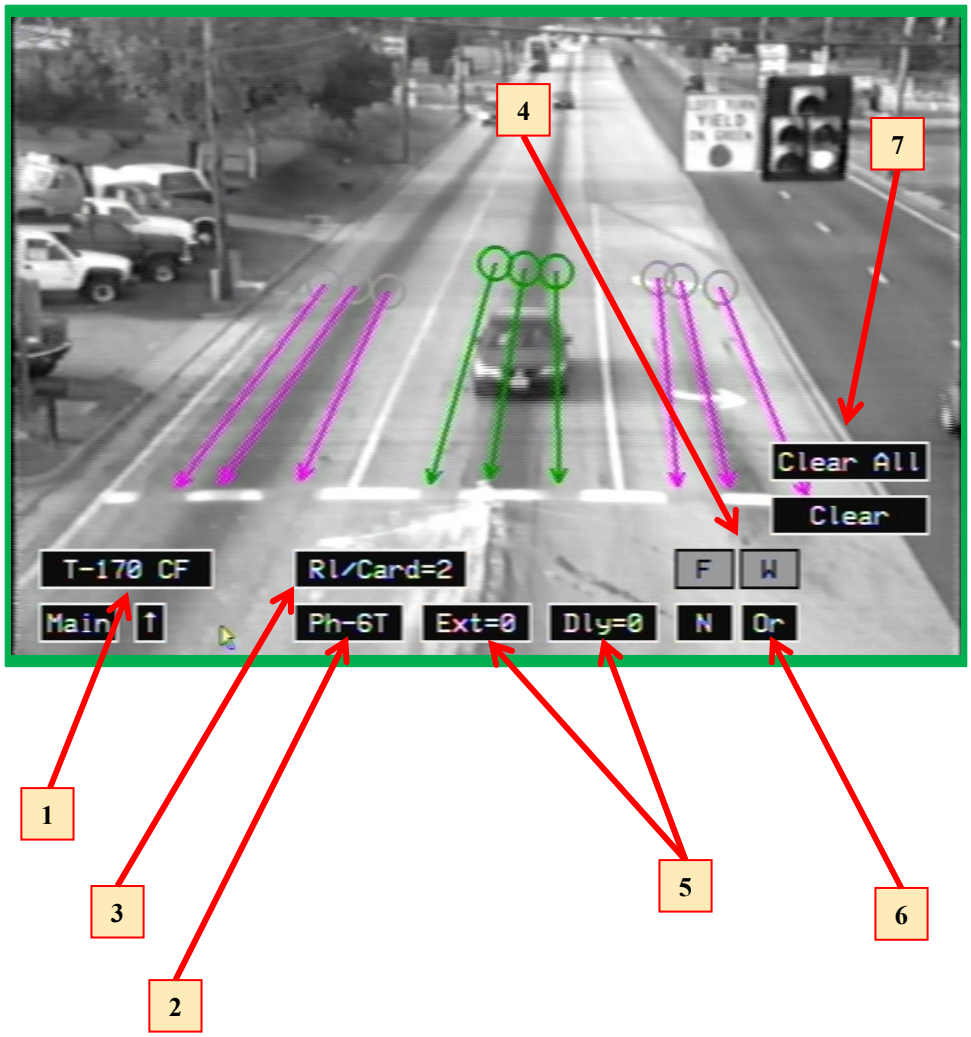
Scenario 2 (Con't) Set 2 Output Relays per Card for a 170/2070 Controller

Type-170 Detector/Controller Interface with 2 Relays per SVS-1 card and 3 Phases (Line Zone Groups)

Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**

Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**

Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (Type-170).

2) Click the **Ph-** button to select Phase group **6T**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 2 .

4) After selecting the RI/Card=4, the number card edge relays (F, W, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Card Edge Relays.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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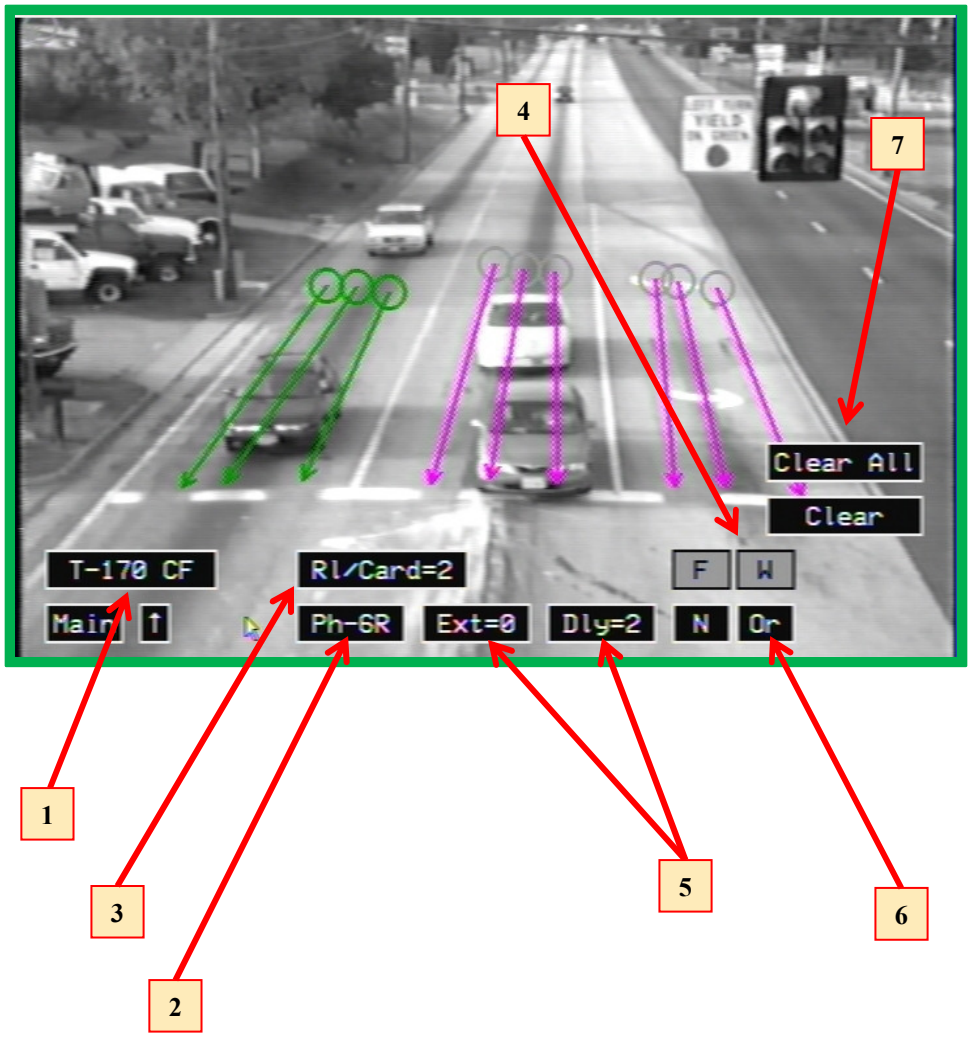
Scenario 2 (Con't) Set 2 Output Relays per Card for a 170/2070 Controller

Type-170 Detector/Controller Interface with 2 Relays per SVS-1 card and 3 Phases (Line Zone Groups)

Phase **1L**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **F**

Phase **6T**, Detection Delay=0 sec, Detection Extension=0, Route to Card Edge **W**

Phase **6R**, Detection Delay=2 sec, Detection Extension=0, Route to Card Edge **W**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (Type-170).

2) Click the **Ph-** button to select Phase group **6R**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 2 .

4) After selecting the RI/Card=4, the number card edge relays (F, W, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Card Edge Relays.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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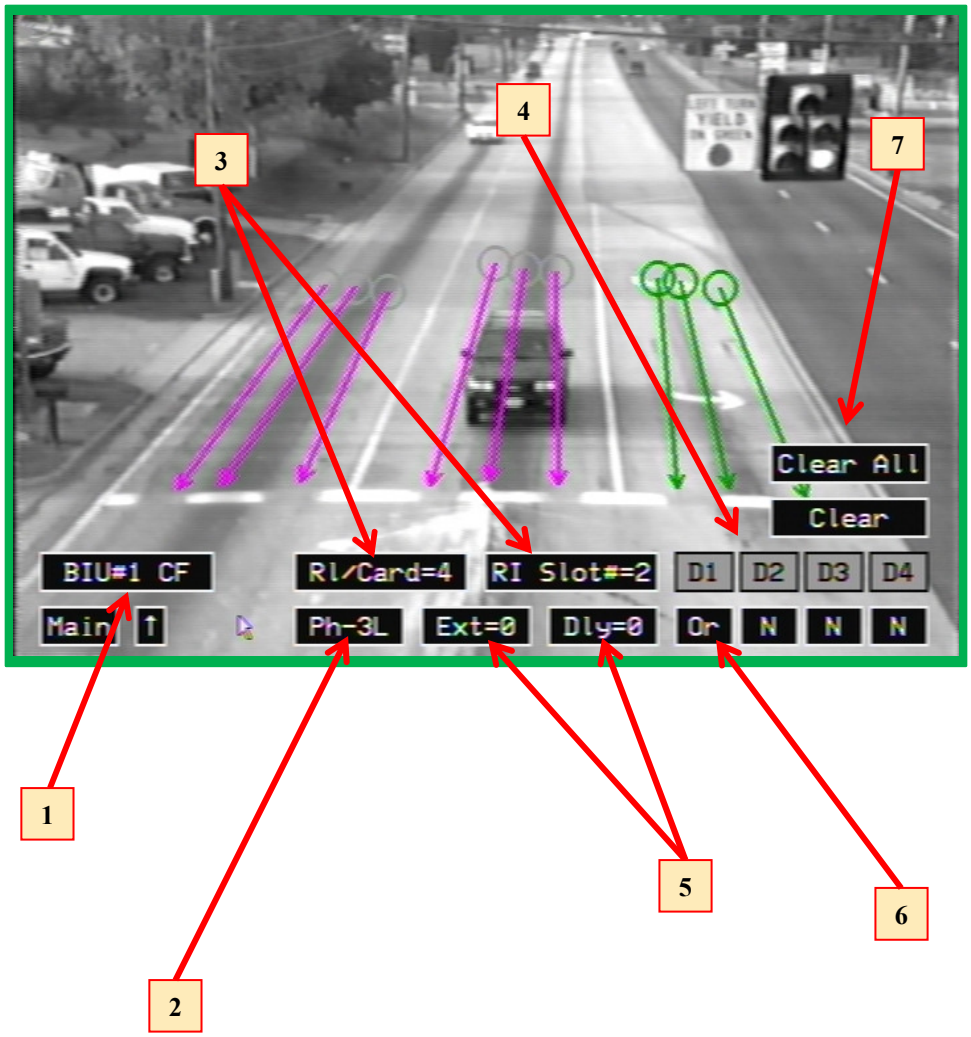
Scenario 3 Set 4 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with **4 Relays** per SVS-1 card, **Slot 2** used, and 3 Phases (Line Zone Groups)

Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**
Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**
Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **3L**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 . Click the **RI Slot=** to select the card file slot used= 2.

4) After selecting the RI/Card=4 and the RI Slot=2, the number detector channels (D1, D2, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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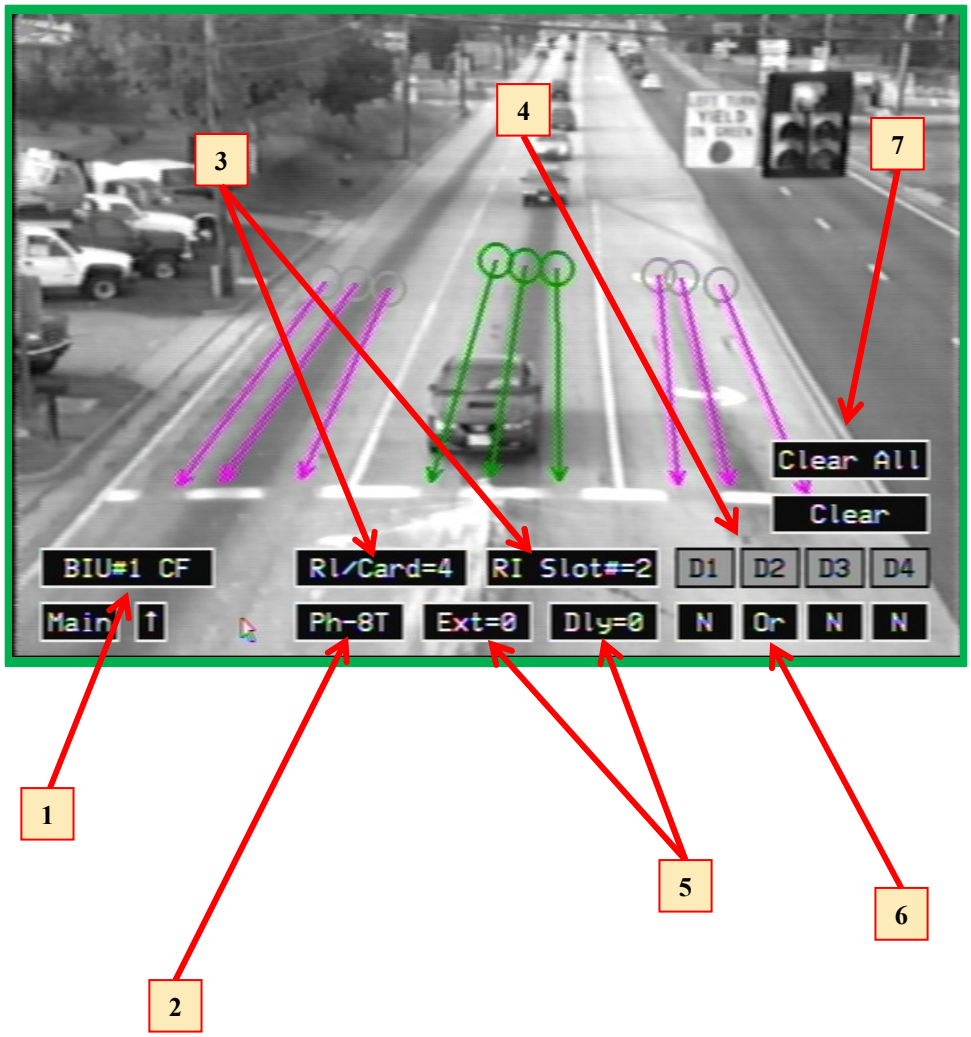
Scenario 3 (Con't) Set 4 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with 4 Relays per SVS-1 card, Slot 2 used, and 3 Phases (Line Zone Groups)

Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**

Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**

Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **8T**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 . Click the **RI Slot=** to select the card file slot used= 2.

4) After selecting the RI/Card=4 and the RI Slot=2, the number detector channels (D1, D2, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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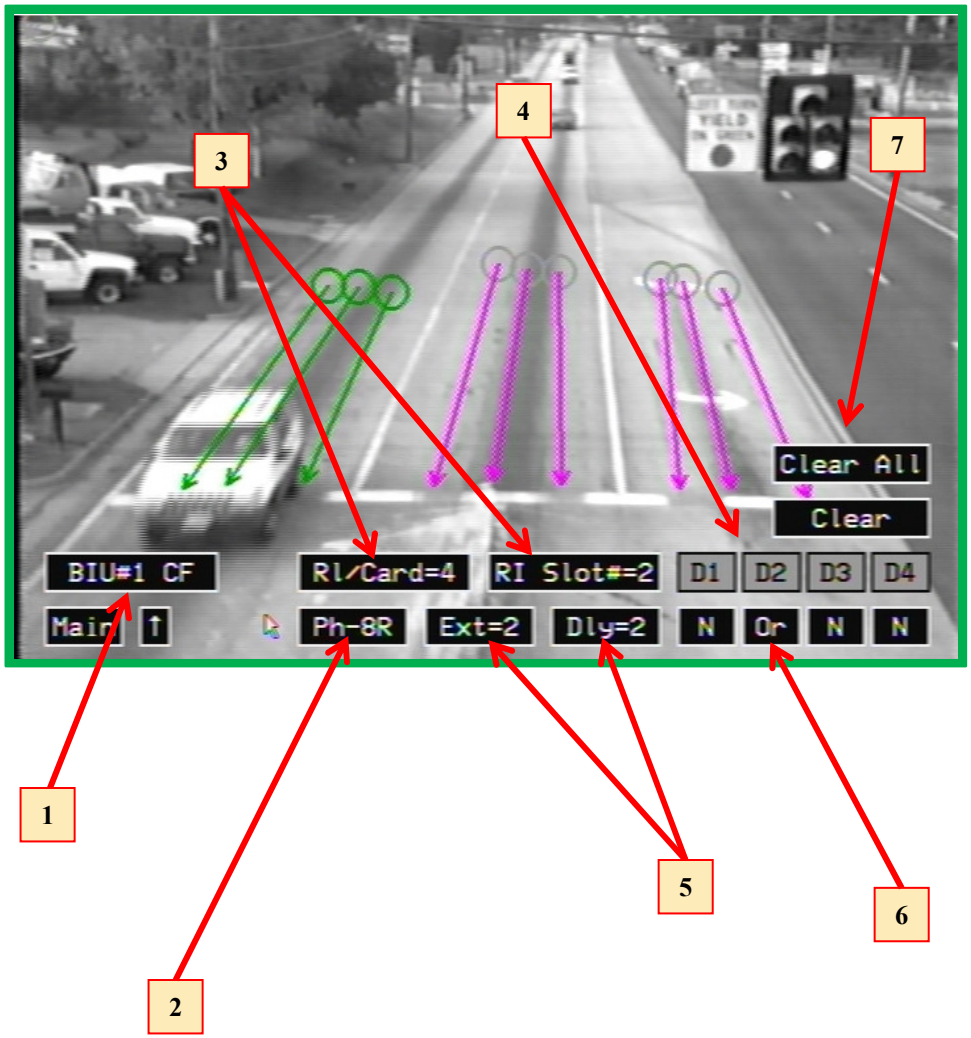
Scenario 3 (Con't) Set 4 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with 4 Relays per SVS-1 card, Slot 2 used, and 3 Phases (Line Zone Groups)
Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**
Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**
Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **8R**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 . Click the **RI Slot=** to select the card file slot used= 2.

4) After selecting the RI/Card=4 and the RI Slot=2, the number detector channels (D1, D2, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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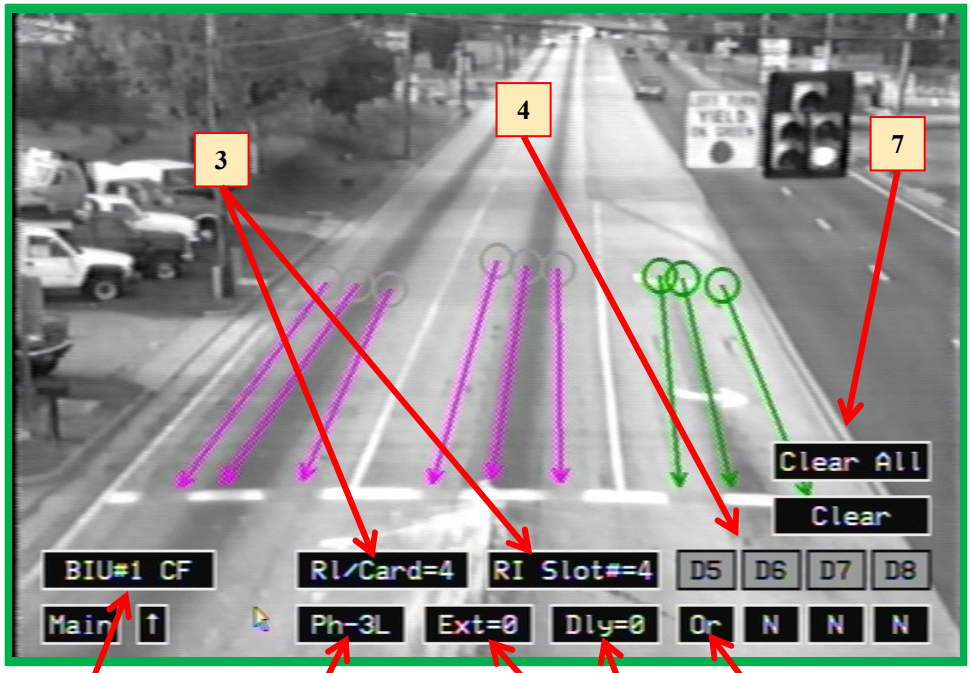
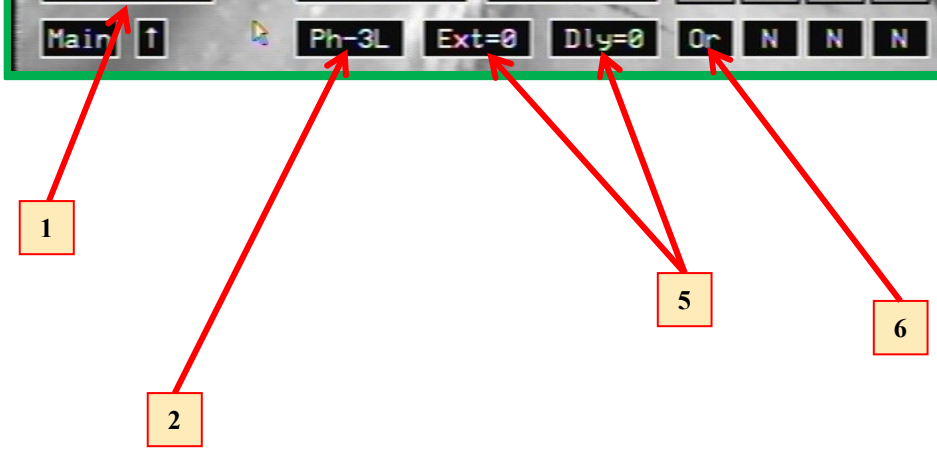
Scenario 4 Set 4 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with **4 Relays** per SVS-1 card, **Slot 4** used, and 3 Phases (Line Zone Groups)
Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D5**
Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D6**
Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D6**





Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **3L**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 . Click the **RI Slot=** to select the card file slot used= 4.

4) After selecting the RI/Card=4 and the RI Slot=4, the number detector channels (D5, D6, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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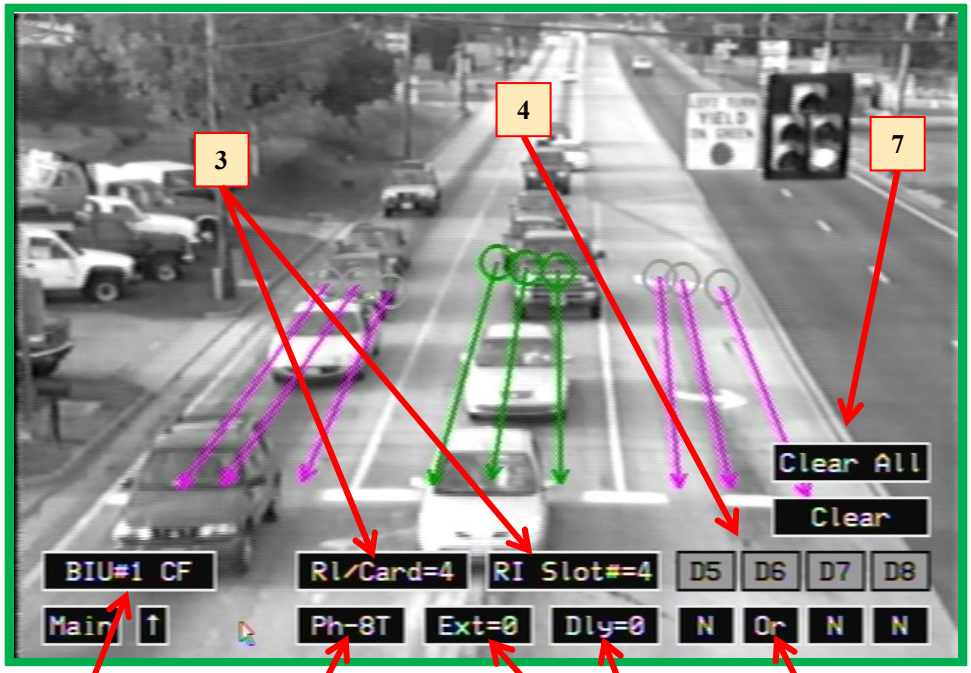
Scenario 4 (Con't) Set 4 Output Relays to BIU #1 Card File

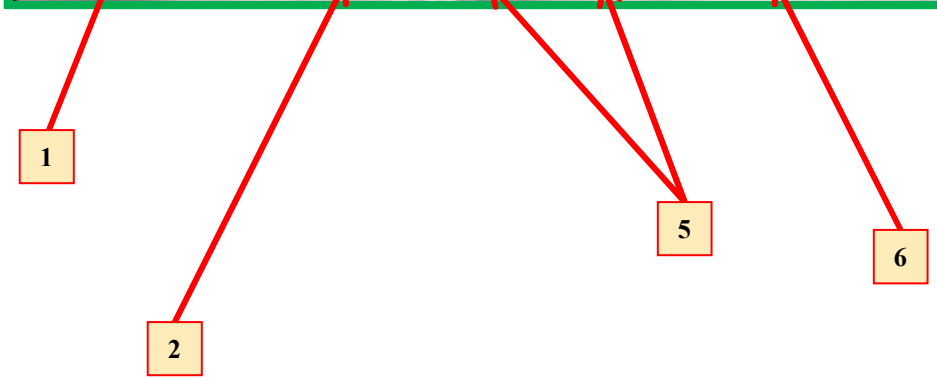
BIU #1 Card file Detector/Controller Interface with 4 Relays per SVS-1 card, Slot 4 used, and 3 Phases (Line Zone Groups)

Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D5**

Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D6**

Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D6**





Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **8T**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 . Click the **RI Slot=** to select the card file slot used= 4.

4) After selecting the RI/Card=4 and the RI Slot=4, the number detector channels (D5, D6, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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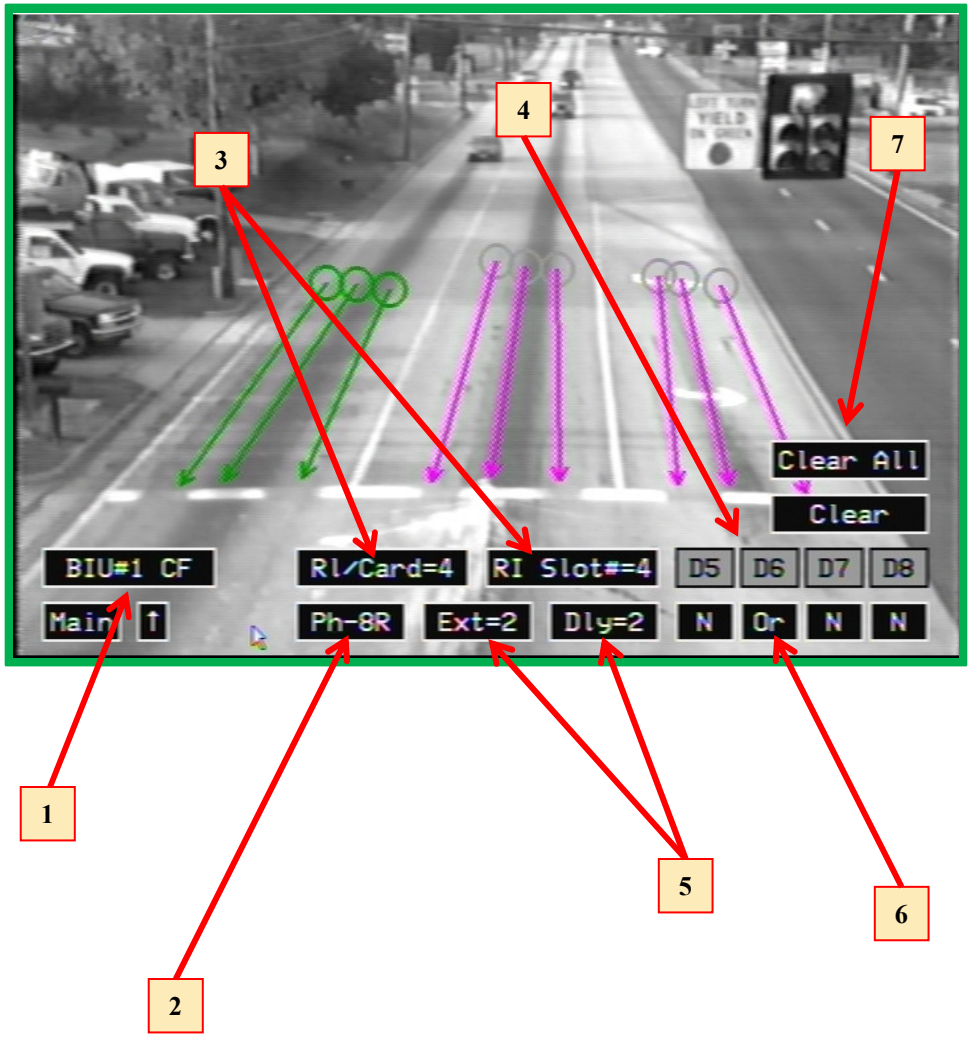
Scenario 4 (Con't) Set 4 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with 4 Relays per SVS-1 card, Slot 4 used, and 3 Phases (Line Zone Groups)
Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D5**
Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D6**
Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D6**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **8R**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 4 . Click the **RI Slot=** to select the card file slot used= 4.

4) After selecting the RI/Card=4 and the RI Slot=4, the number detector channels (D5, D6, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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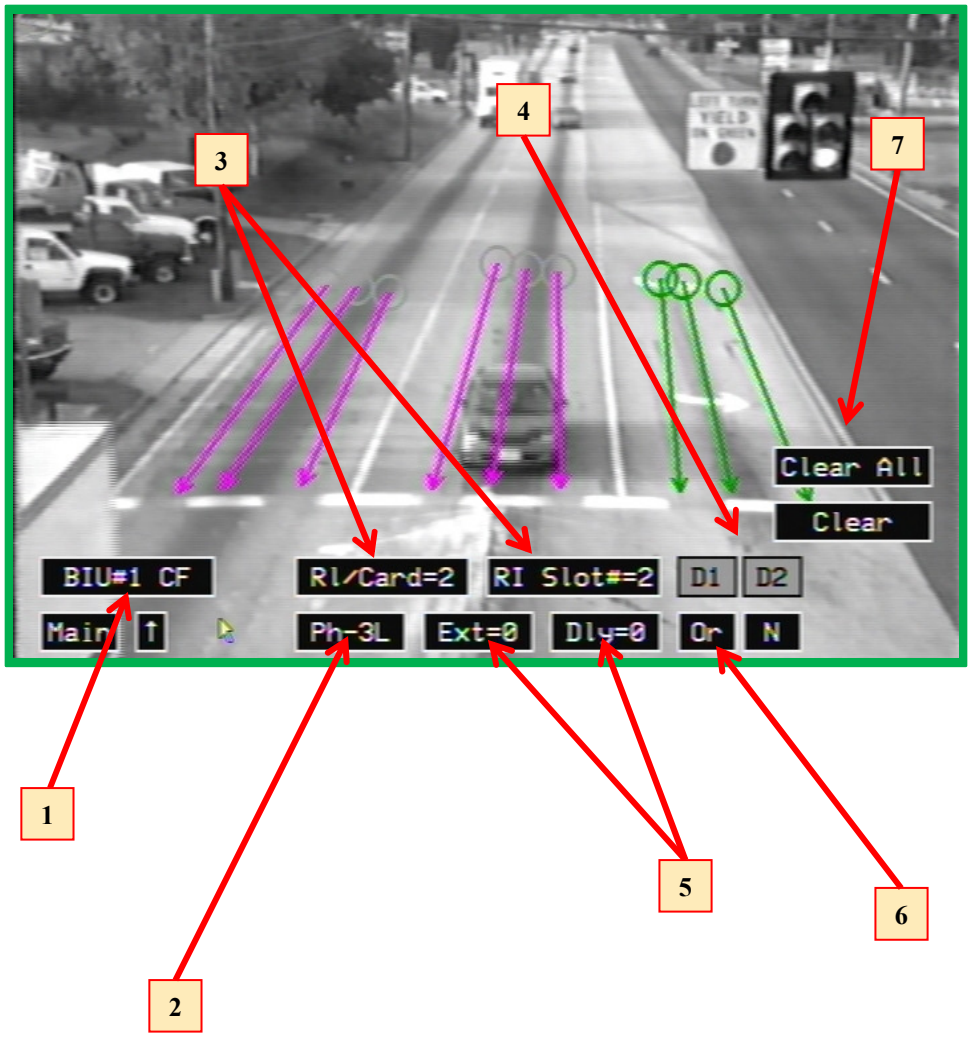
Scenario 5 Set 2 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with **2 Relays** per SVS-1 card, **Slot 2** used, and 3 Phases (Line Zone Groups)

Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**

Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**

Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **3L**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 2 . Click the **RI Slot=** to select the card file slot used= 2.

4) After selecting the RI/Card=2 and the RI Slot=2, the number detector channels (D1, D2, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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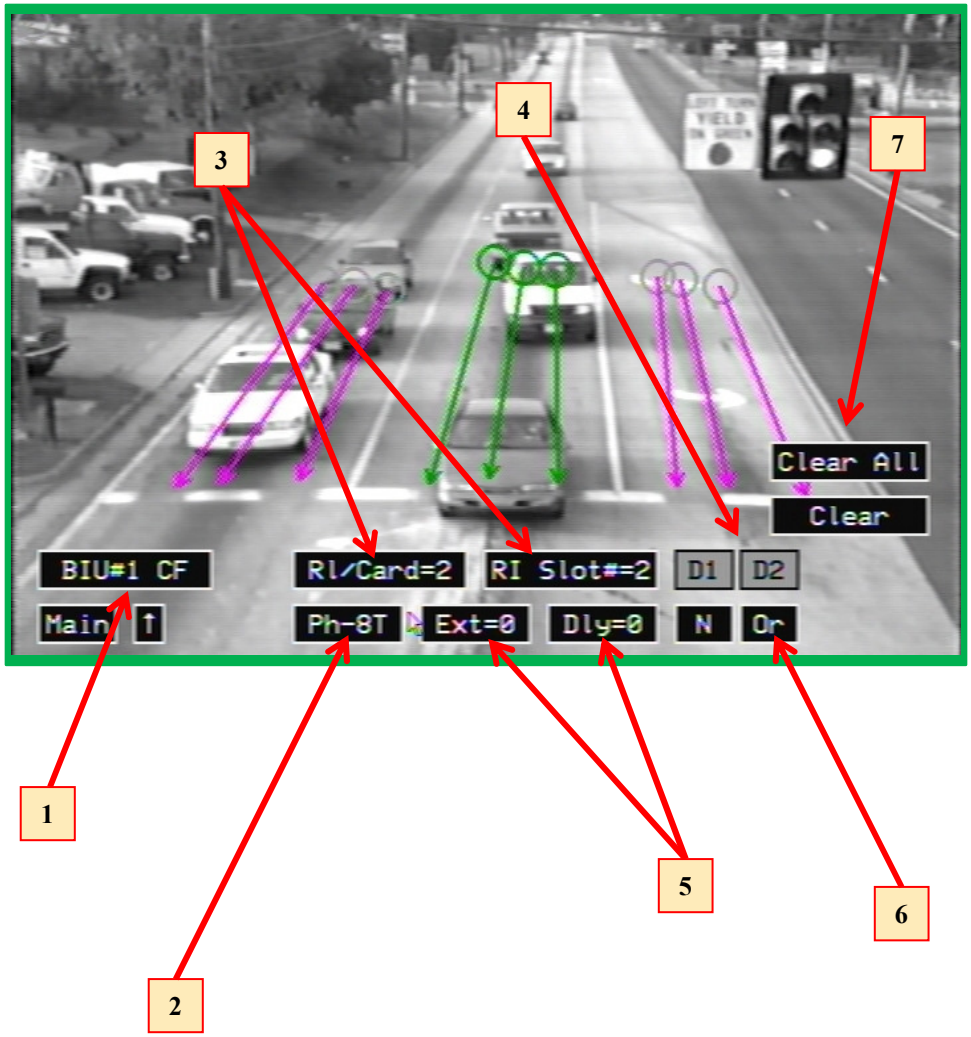
Scenario 5 (Con't) Set 2 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with **2 Relays** per SVS-1 card, **Slot 2** used, and 3 Phases (Line Zone Groups)
Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**
Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**
Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **8T**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 2 . Click the **RI Slot=** to select the card file slot used= 2.

4) After selecting the RI/Card=2 and the RI Slot=2, the number detector channels (D1, D2, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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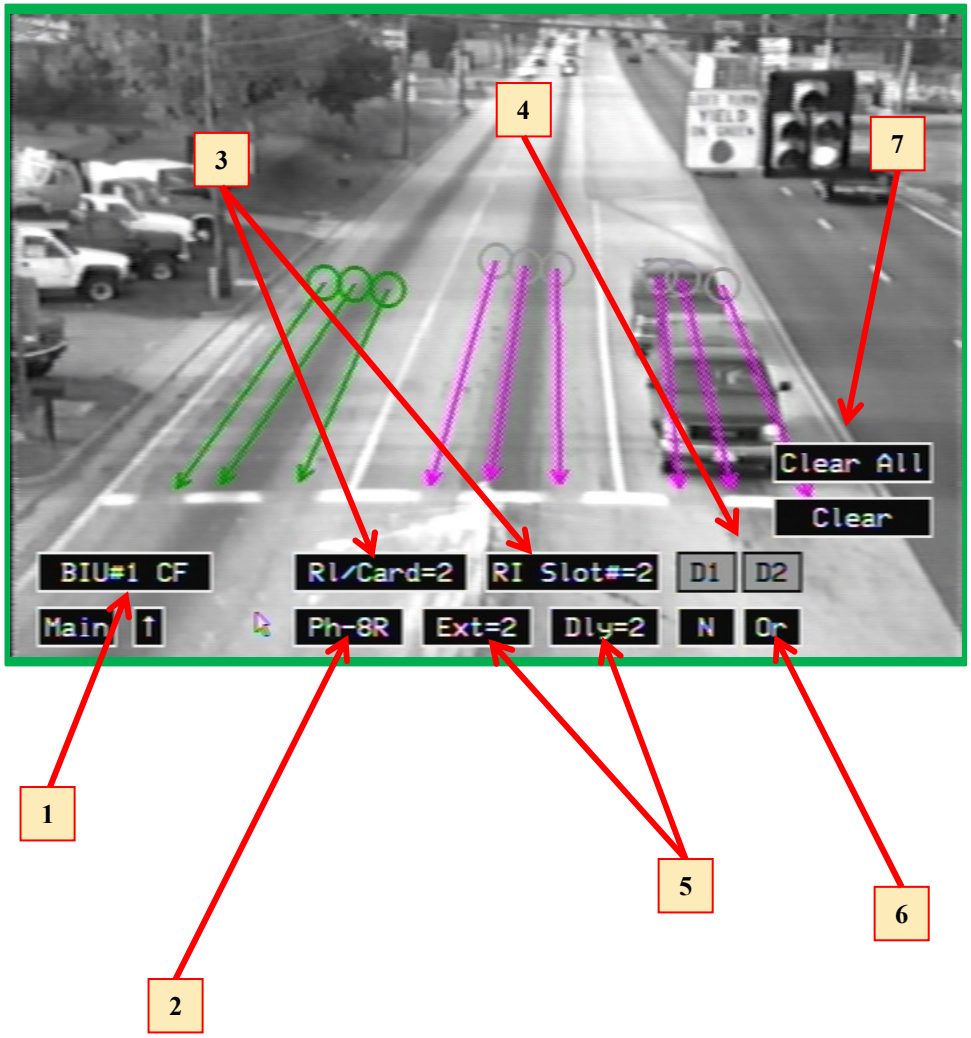
Scenario 5 (Con't) Set 2 Output Relays to BIU #1 Card File

BIU #1 Card file Detector/Controller Interface with 2 Relays per SVS-1 card, Slot 2 used, and 3 Phases (Line Zone Groups)

Phase **3L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D1**

Phase **8T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D2**

Phase **8R**, Detection Delay=2 sec, Detection Extension=2, Route to Detector Channel **D2**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 Card File).

2) Click the **Ph-** button to select Phase group **8R**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **RI/Card=** button to select the number of relays per card = 2 . Click the **RI Slot=** to select the card file slot used= 2.

4) After selecting the RI/Card=2 and the RI Slot=2, the number detector channels (D1, D2, etc.) that are shown changes corresponding to this selection.

5) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

6) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

7) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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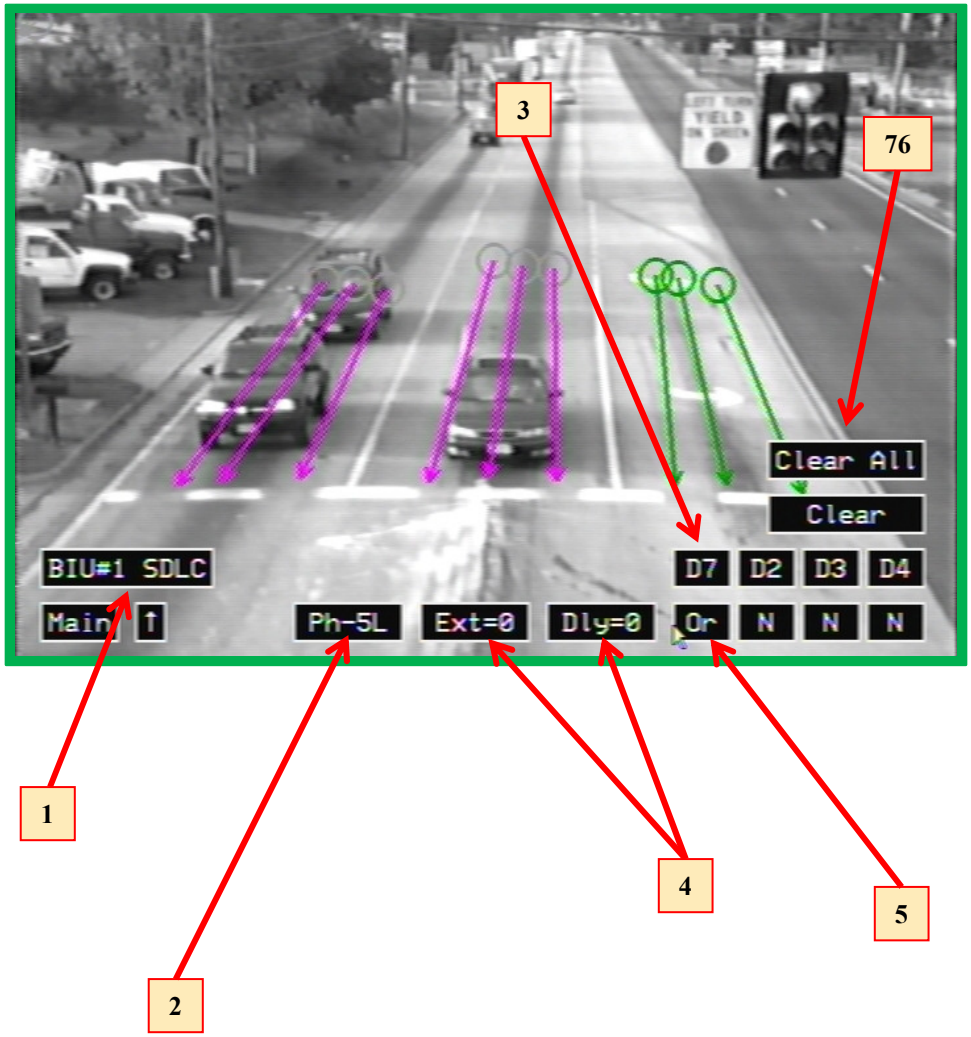
Scenario 6 Set Output Relays For SDLC output from BIU#1

BIU #1 SDLC Detector/Controller Interface with 3 Phases (Line Zone Groups)

Phase **5L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D7**
Phase **2T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D8**
Phase **2R**, Detection Delay=2 sec, Detection Extension=0, Route to Detector Channel **D8**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 SDLC).
2) Click the **Ph-** button to select Phase group **5L**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.
3) Click the **D** button to select the detector channel (D7) this phase is routed to in the SDLC message.
4) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.
5) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.
6) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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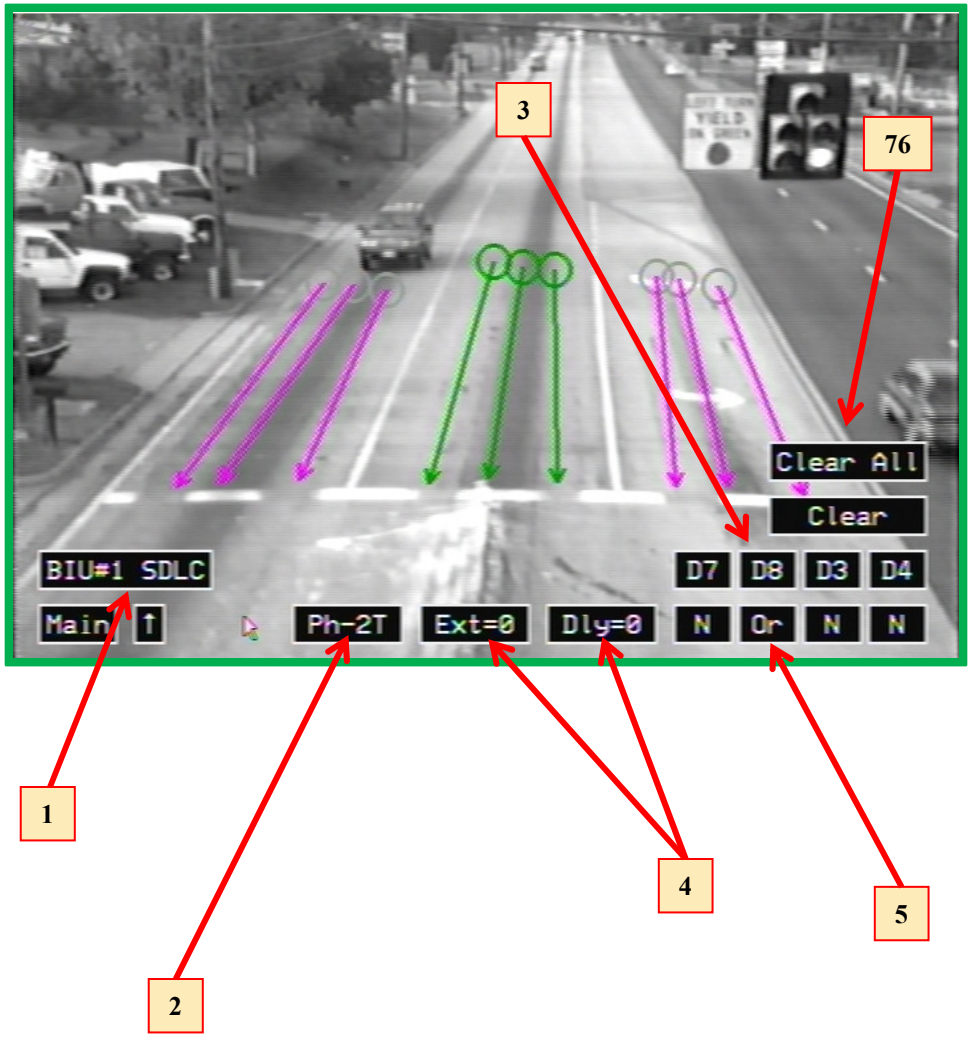
Scenario 6 (Con't) Set Output Relays For SDLC output from BIU#1

BIU #1 SDLC Detector/Controller Interface with 3 Phases (Line Zone Groups)

Phase **5L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D7**

Phase **2T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D8**

Phase **2R**, Detection Delay=2 sec, Detection Extension=0, Route to Detector Channel **D8**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 SDLC).

2) Click the **Ph-** button to select Phase group **2T**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **D** button to select the detector channel (D8) this phase is routed to in the SDLC message.

4) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

5) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

6) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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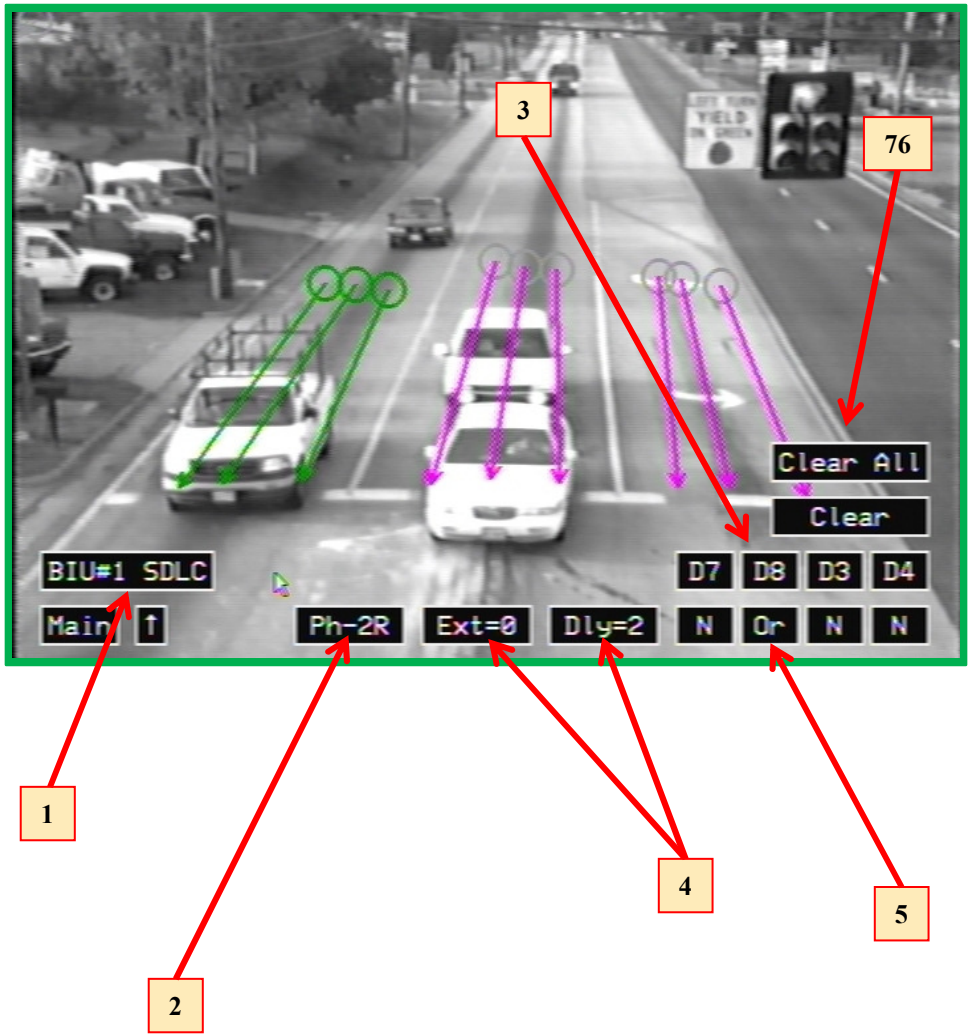
Scenario 6 (Con't) Set Output Relays For SDLC output from BIU#1

BIU #1 SDLC Detector/Controller Interface with 3 Phases (Line Zone Groups)

Phase **5L**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D7**
Phase **2T**, Detection Delay=0 sec, Detection Extension=0, Route to Detector Channel **D8**
Phase **2R**, Detection Delay=2 sec, Detection Extension=0, Route to Detector Channel **D8**



Select Detector Interface and Route Relays:

1) Click the **Detector Interface** button to select the type of detector/controller interface to be used (BIU #1 SDLC).

2) Click the **Ph-** button to select Phase group **2R**. Note that the line zones corresponding to the selected phase group turn green. All others are magenta.

3) Click the **D** button to select the detector channel (D8) this phase is routed to in the SDLC message.

4) Click the **Ext=** and the **Dly=** to select the Detection Extension in seconds and the Detection Delay in seconds.

5) Click **N, Or, And** button to select logic for combining (**N=Not Used**) Phase Groups into Detector Channels.

6) To clear the settings for the selected Phase group or for all Phase groups click the **Clear** or the **Clear All** button.

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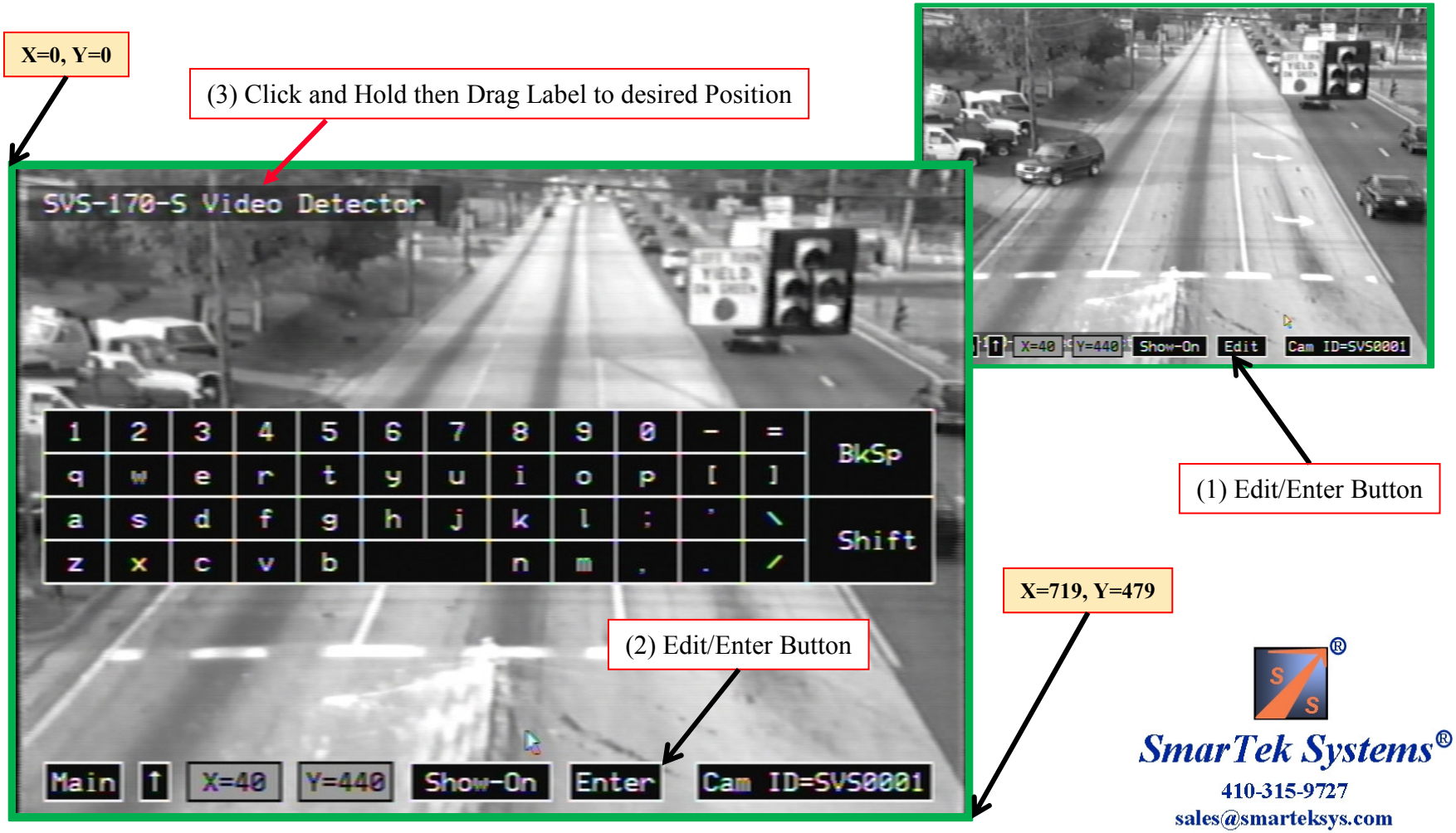
Set Output Video Text Display

This display is used to enter descriptive text which may be set to show on the output video image. Upon opening this display, click the (1) **Edit** button to show a virtual keyboard for text entry. The **Edit** button changes to **Enter**. When finished entering text, click (2) **Enter** to capture the text. Click and hold on the (3) **text label** to drag it to the desired position. The **X=** and **Y=** labels show the position in pixels. Click the **Show-** button to turn the text **On** or **Off** in the output video image. If it is desired to change the camera processing channel ID, click the **Cam ID=** button. Click the **Main** button to return to the Main Setup display.



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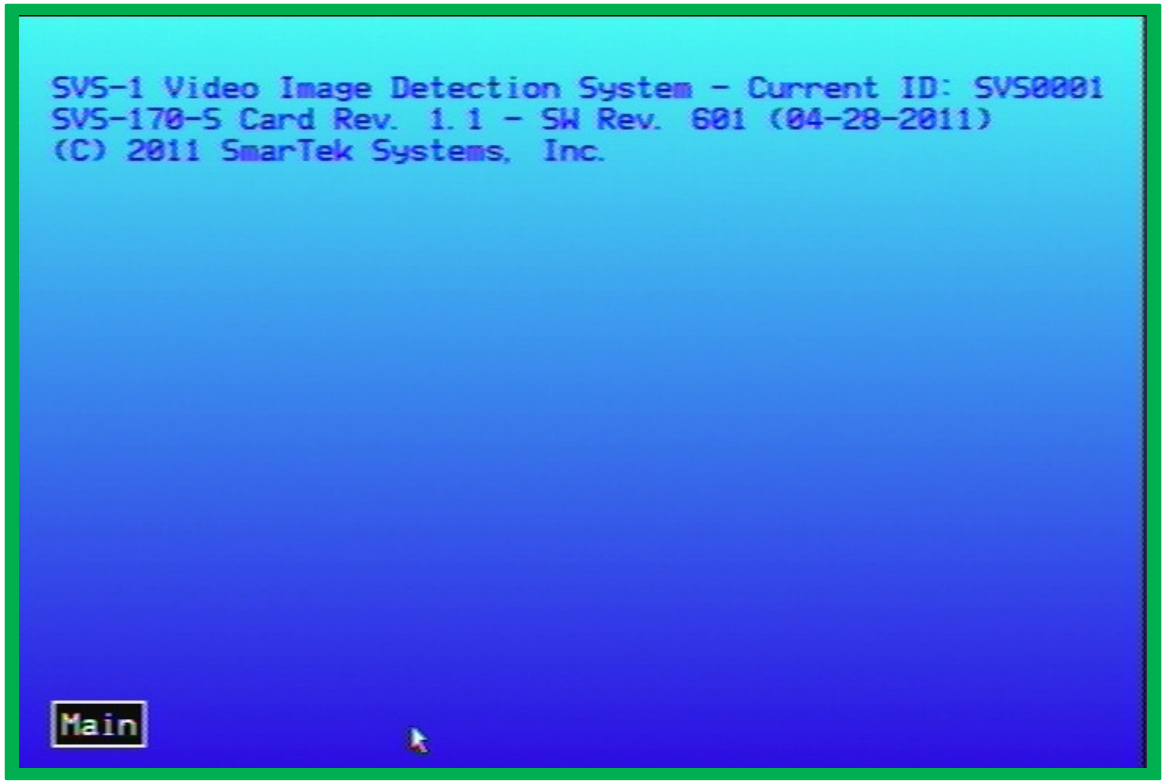
SVS-1 Banner Display



This display shows the SVS-1 Current ID, the Processing Hardware Revision Number and the current Software Version Number. Click the **Main** button to return to the Main Setup display.

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