

PANEL OPERATION AT 59TH JUNCTION

The automatic interlocking at 59th Junction routes regularly scheduled SOUTHBOUND trains through the interlocking in an alternating Englewood-Jackson Park sequence. All NORTHBOUND trains are routed through the plant on a first come-first served basis. The interlocking can also be operated by the Towerman at 61st. He takes control when a southbound work train or train out of sequence interrupts the normal Englewood-Jackson Park sequencing, or to route a train through the cross-over.

However, if for any reason the Towerman cannot control the interlocking from the 61st panel, the interlocking must be operated locally at 59th junction from a control panel or, under extreme conditions, it may be thrown by hand and flagged.

This pamphlet contains a description of the 59th junction control panel and instructions for its use.

METROPOLITAN



TRANSIT

CONTROL PANEL DESCRIPTION

The control panel is reached by means of a foot walk leading from the structure to the 59th junction relay house. The panel is in a metal cabinet recessed into the wall at the left of the relay house door. The cabinet is unlocked with a switch key.

The 59th junction control panel contains the following items:

TRACK DIAGRAM

The track diagram shows the location of switches, signals and the crossover in the interlocking. It also indicates track occupancy and the condition of signals and trips in the following manner:

- Track occupancy is indicated by the illumination of amber indicator lights (designated Ⓐ on diagram).
- The condition of signals and trips is indicated by red signal indicator lights (designated Ⓡ on diagram).
 1. A steady red light indicates that the associated signal is displaying the "Stop" indication.
 2. A red light "out" indicates that the associated signal is clear.
 3. A flashing red light indicates that the associated signal is
 - a. Displaying the "Stop" indication but the trip is not in the tripping position, or
 - b. Displaying the "call-on" indication but the track trip manual release has not yet been operated.

ROUTE SELECTION BUTTONS

There are two groups of route selection buttons. The group on the left controls northbound moves, and the group on the right controls southbound moves.

Each group consists of three buttons. The button marked "A" in each group controls the "A" route for that direction; the button marked "B" in each group controls the "B" route; and the other button controls special moves.

Route selection buttons are push-pull type buttons. Pushing a button establishes a route, while pulling a button cancels a route.

"LAST TRAIN" INDICATING LIGHTS

Two lights, one amber and one green are located with each group of route selection buttons. Amber lights indicate Englewood; green lights indicate Jackson Park.

A steady light indicates the last train. A flashing light indicates which route is established.

MASTER CONTROL LEVER AND LIGHTS

The master control lever has two-positions, remote and local. It is used in conjunction with the "unlock" button to take local control or to return the plant to remote control.

There are two lights associated with the lever, a green light above the remote position and a red light above the local position. The light which is "on" indicates the control location for 59th junction.

"UNLOCK" BUTTON

The "unlock" button is a push-type button which is operated in conjunction with the master control lever to transfer control of 59th junction to the panel at 59th.

SWITCH LEVERS AND LIGHTS

Three switch levers marked 1, 3 and 5 control the movement of their associated track switches. Each lever has three positions, C (center), N (normal) and R (reverse).

Each switch lever has three associated lights, a red light above the center position and two amber lights, one above the normal position and one above the reverse position.

The amber light which is "on" indicates the position of the associated switch.

When a red light is "on," it indicates that the associated switch is locked in position and cannot be moved without using the emergency switch release. A red light "off" indicates that the associated switch can be moved by normal manipulation of the switch lever.

EMERGENCY SWITCH RELEASE BUTTONS AND LIGHTS

The emergency switch release buttons have been provided to permit operation of track switches when there has been a track circuit failure.

There are three push-pull type emergency switch release buttons, one for each track switch. Each button has an associated red light below it. The switch release buttons have seals which must be broken to operate them. Whenever a seal is broken, the signal maintainer must be notified so the seal can be renewed.

The procedure for operating the emergency switch release buttons is outlined under "Procedure in the Event of Track Circuit Failure."

SIGNAL LEVER

A signal lever marked 6 controls signals 6A, B and C. The lever has two positions, N (normal) and R (reverse).

CONTROL PANEL OPERATION

With the master control lever in the "local" position, control of all switches, signals, and trips in the interlocking is transferred to their respective buttons and levers on the panel. The person operating the panel is then responsible for setting up all routes. As soon as the reason for taking panel control has been cleared up, the interlocking must be restored to remote control.

PROCEDURE FOR TAKING LOCAL CONTROL

1. Pull out each route selection button.
2. Check that switch levers are in C(center) position.
3. Check that signal lever is in N (normal) position.
4. Depress and hold "unlock" button while moving master lever to "local" position. Continue holding "unlock" button until red indicator light above "local" position comes "on."

PROCEDURE FOR MAKING TRAIN MOVES AFTER ASSUMING LOCAL CONTROL

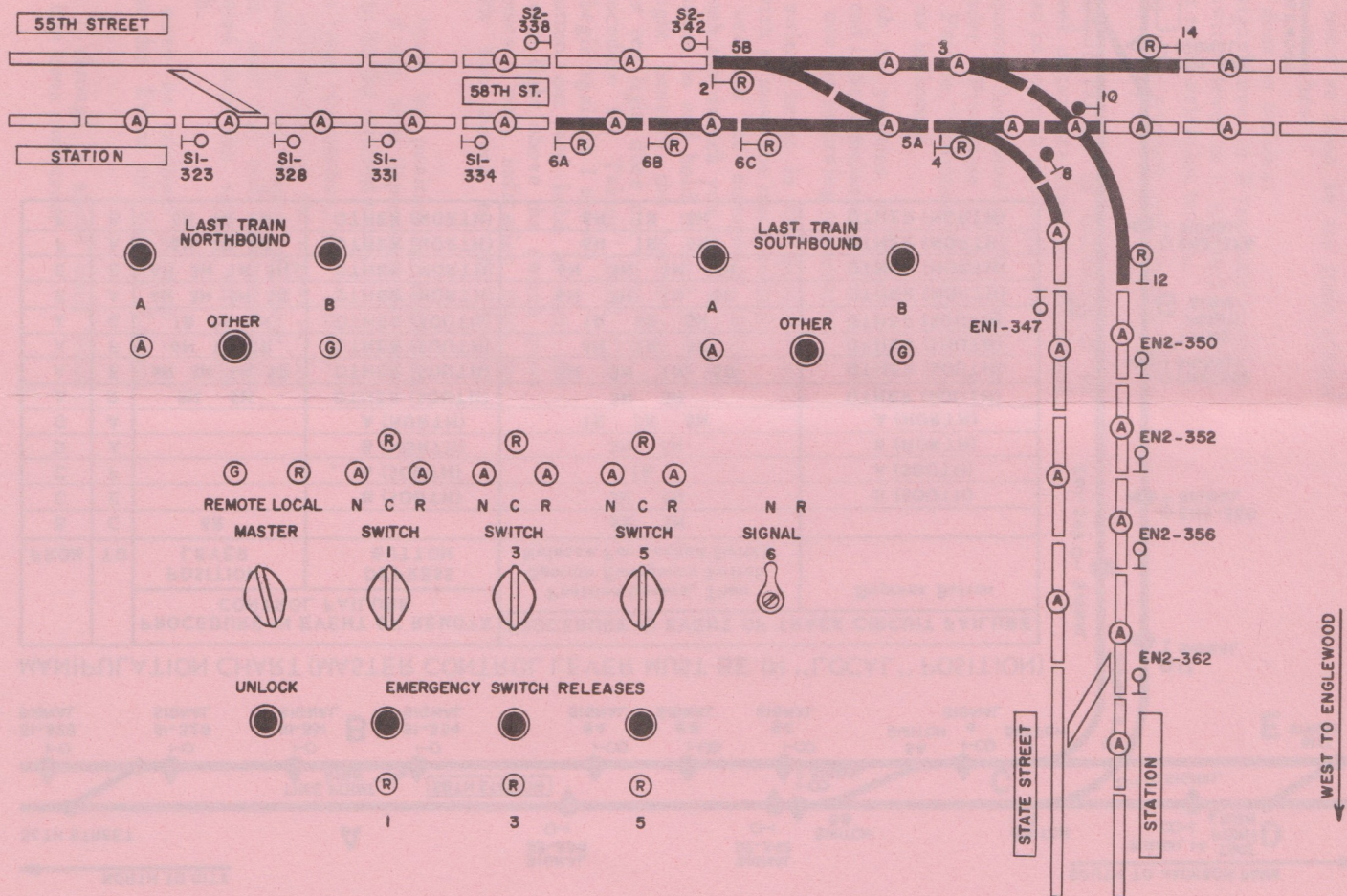
A. PROCEDURE IN THE EVENT OF REMOTE CONTROL FAILURE

1. Set up desired route as shown in Manipulation Chart under "Procedure in Event of Remote Control Failure."
2. Follow each move by
 - a. Cancelling each switch and signal lever that was used to set up the route immediately after the train has passed the corresponding switch or signal, and
 - b. By cancelling the route selection button

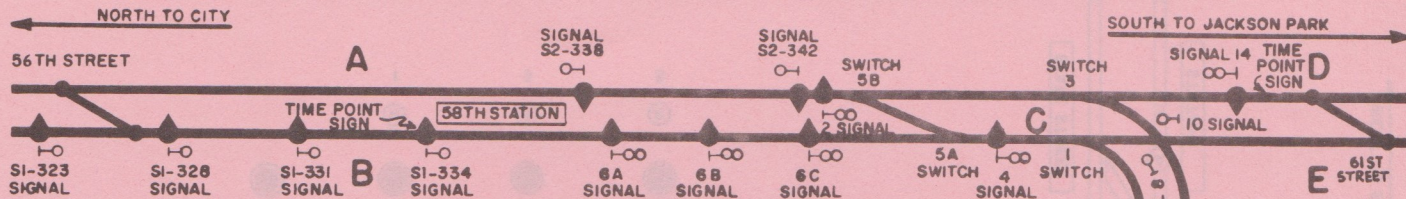
59TH JUNCTION CONTROL BOARD

NORTH TO CITY

SOUTH TO JACKSON PARK



59TH JUNCTION CONTROL PANEL TRACK DIAGRAM



MANIPULATION CHART (MASTER CONTROL LEVER MUST BE IN "LOCAL" POSITION)

FROM	TO	PROCEDURE IN EVENT OF REMOTE CONTROL FAILURE		PROCEDURE IN EVENT OF TRACK CIRCUIT FAILURE	
		POSITION LEVER	DEPRESS BUTTON	Position Levers, Then Operate Emergency Switch Release For Locked Switch	Depress Button
B	C	6R		6R 5N	
C	E		B (SOUTH)	3N 1N	B (SOUTH)
C	F		A (SOUTH)	1R	A (SOUTH)
D	A		B (NORTH)	3N 5N	B (NORTH)
G	A		A (NORTH)	1R 3R 5N	A (NORTH)
A	D	3N 5N	OTHER (SOUTH)	3N 5N	OTHER (SOUTH)
A	E	6N 3N 1N 5R	OTHER (SOUTH)	6N 3N 1N 5R	OTHER (SOUTH)
A	F	6N 1R 5R	OTHER (SOUTH)	6N 1R 5R	OTHER (SOUTH)
A	G	1R 3R 5N	OTHER (SOUTH)	1R 3R 5N	OTHER (SOUTH)
E	A	6N 3N 1N 5R	OTHER (NORTH)	6N 3N 1N 5R	OTHER (NORTH)
E	B	6N 3N 1N 5N	OTHER (NORTH)	6N 3N 1N 5N	OTHER (NORTH)
F	A	6N 1R 5R	OTHER (NORTH)	6N 1R 5R	OTHER (NORTH)
F	B	6N 1R 5N	OTHER (NORTH)	6N 1R 5N	OTHER (NORTH)

which was used as soon as the train clears the junction switches.

Cancelling is done as follows:

- (1) Place signal lever in N (normal) position.
- (2) Place switch lever in C (center) position.
- (3) Pull out route selection button.

B. PROCEDURE IN THE EVENT OF TRACK CIRCUIT FAILURE

NOTE: Track circuit failure is indicated if an amber track occupancy light is illuminated when there is no train in the circuit.

1. Using the sequence indicated in the Manipulation Chart under "Procedure in the Event of Track Circuit Failure," position the signal and switch levers as indicated.
2. When you wish to position a locked switch (indicated by red light illuminated above C [center] position), use the following procedure:
 - a. Place the switch lever in the position to which you wish to move the track switch.
 - b. Break the seal on the emergency release button beneath the switch you wish to move.
 - c. Push the button in and hold it until the red indicator light beneath the button comes "on" (if the red light does not come "on," repeat "Procedure for Taking Local Control," then begin again at 1 above).
 - d. Pull the button out and hold it until the amber indicator light above the switch lever position comes "on", indicating that the track switch has moved to the desired position.
3. Complete the route by positioning remaining switch levers, if any, then depressing the route selection button for the desired route.

NOTE: When a train approaches, the "call-on" aspect will appear on the signal in the field after a time lapse of about 15 seconds and the red indicator light associated with the signal will begin to flash.

4. Follow each move as outlined in step 2 of "Procedure in the Event of Remote Control Failure."
5. Repeat steps 1 through 4 above until track circuit failure has been corrected.

PROCEDURE FOR RETURNING INTERLOCKING TO REMOTE CONTROL

1. Call the Towerman at 61st and inform him that 59th Junction is being returned to remote control. Have him take manual control at 61st.
2. Cancel all route selection buttons, switch levers and signal lever as follows:
 - a. Pull out each route selection button.
 - b. Place all switch levers in C (center) position
NOTE: If No. 5 crossover was reversed, lever must be moved to N (normal) position, then after amber indication shows that crossover is normal, lever is placed in C (center) position.
 - c. Place signal lever in N (normal) position.
3. Move Master Control lever to "Remote" position.
4. Verify that Towerman at 61st now has control. Have him establish next S.B. move when train approaches.
5. Close and lock cabinet door.
6. Stand by until satisfied plant operation is normal.

OPERATION OF SWITCH MACHINES BY HAND CRANK

If the above listed troubles cannot be corrected by operation of the 59th control panel, it will be necessary to operate the switch machines by hand crank.

1. Using the switch key, unlock the hasp and insert the crank.
2. Position the switch by operating the crank in the desired direction (clockwise or counterclockwise) as far as it will go.
3. Check the switch points.
4. Place switch point block in the open point.
5. Flag the train.
6. Hand operation must be continued until a Signal Maintainer clears the trouble.