

CHAPTER II

DESCRIPTION OF BELL CODES

2.1 Bell Code (GR 14.05): -

For signaling of train the prescribed code of bell signals as detailed below shall be used and a copy of the same shall be exhibited in each block station near the place of operation of Block Instrument.

Sl. No.	Indication	Code	How signalled	How acknowledged
1	Call Attention or Attend Telephone	O	One Stroke or beat	One Stroke or beat
2	Is Line Clear or Line clear enquiry	OO	Two	Two
3	Train Entering Block Section	OOO	Three	Three
4	(a) Train out of Block Section. (b) Obstruction removed	OOOO	Four	Four
5	(a) Cancel Last Signal. (b) Signal given in error	OOOOO	Five	Five
6	(a) Obstruction danger Signal (General).	OOOOOO	Six	Six
	(b) Stop and Examine Train.	OOOOOO - O	Six pause one.	Six pause one.
	(c) Train passed without Tail Lamp or Tail Board.	OOOOOO - OO	Six pause two.	Six pause two.
	(d) Train divided	OOOOOO - OOO	Six pause three	Six pause three
	(e) Vehicle running away in wrong direction on Double line or into the Block Section on Single Line.	OOOOOO – OOOO	Six pause four.	Six pause four.
	(f) Vehicle running away in right direction on Double Line.	OOOOOO – OOOOO	Six pause five.	Six pause five.
7	Testing	OOOOOOOOOOO OOOOOO	Sixteen	Sixteen

Note:(1) 'O' Indicates stroke or a beat and '- indicates a Pause.

- (2) Each signal shall be given slowly and distinctly.
- (3) Exchange of bell code under reference No. 3 & 4 are not required in a section provided with tokenless block instruments or block proving axle counter and track circuiting in station yard including non running lines on either end.

2.2 Acknowledgement of Bell Signals. -(G.R 14.06).

- (1) Each signal received shall be acknowledged by sending its authorized acknowledgement.
- (2) No signal shall be acknowledged until it is clearly understood.
- (3) A signal shall not be deemed to be complete until it is acknowledged.
- (4) If the station to which a signal is sent does not reply, the signal shall be repeated at intervals of not less than 20 seconds until reply is received.

2.3 The "Call Attention "signal:-

- 1) This signal shall be given when it is necessary to attract the attention of the Station Master at the other end of the Block Section to the Block Instrument. This signal shall be given by a single beat.
- 2) In order to ascertain that only the correct block station is in contact and then convey the description and train number for which Line Clear is required as well as to ascertain whether the block station in advance is in a position to accept the 'is line clear' signal, the 'Call Attention' signal shall be sent to the block station in advance.
- 3) 'X' shall call "Y's" Attention by a single beat until "Y's" attention is obtained. 'Y' shall signify his attention by acknowledging with single beat.

2.4 The "Is line clear" signal: -

(i) when to be sent:-

- (a) The "Is Line Clear" signal shall be sent only after it has been ascertained that the Block Section is clear by reference to records and oral communication with the other end.

- (b) On Single Line the “Is line clear” signal shall be given only after receipt /dispatch and acknowledgement of the Train out of Block Section signal for the previous train.

(ii) when to be asked-

- (a) At train starting station, Line Clear shall be asked 5 minutes before the booked departure of train.
- (b) At intermediate stations, Line Clear shall be asked when a train is sighted in the case of trains stopping for 5 minutes or more.
- (c) In the case of run through trains, where the running time from the block station in rear is 7 minutes or more, Line Clear shall be asked 7 minutes before the train is to pass through the station and in the case of run through trains with a running time of less than 7 minutes immediately on receipt of the “Train Entering Block Section” signal from the block station in the rear.

Note: For Superfast/notified train Line Clear may be taken in advance as specified in the special instructions.

2.5 Acceptance of the “Is line clear” signal and sending of “Line clear” signal .

- (i) If , on the receipt of an “Is Line Clear” signal, the conditions under which Line Clear can be given are complied with, the block station in advance shall accept the signal by sending the prescribed signal to indicate “Line Clear” on the particular Block Instrument in use.
- (ii) Except in case of failure of the Block Instruments, a train shall not be allowed to leave a block station unless the concerned Block Instrument is set to “Line clear” / “Train Going To” condition.
- (iii) After the instrument is set to “Line clear” / “Train Going To” condition the Last Stop Signal wherever provided shall be taken “OFF”.

2.6 Refusal of the “Is Line Clear” signal and sending of the “Obstruction Danger” signal.-

If, for any reason, the station in advance is unable to accept the “Is line clear” signal, such station shall refuse it by sending the “Obstruction Danger” signal.

2.7 The “Train Entering Block Section” signal :-

On the entry of train into the Block Section, the “Train Entering Block Section” signal shall be sent to the block station in advance and shall be duly acknowledged. This is in addition to “Train On Line” indication appearing in the Tokenless Block Instruments with an audible warning bell.

2.8 The “Train out of Block Section” or “Obstruction Removed” signal. (G.R. 14.10)

- (i) When the Block Section has been cleared by the complete arrival of the train or by the removal of the cause of blocking the “Train out of Block Section or Obstruction Removed” signal shall be given by the block station in advance.
- (ii) Before the ‘Train out of Block Section’ Signal is given, the Station Master shall satisfy himself that –
 - (a) The train has arrived complete and
 - (b) The conditions under which Line Clear may be given are complied with.
 - (c) The provisions of clause (b) of sub rule (ii) above may be relaxed at Class ‘A’ Single Line crossing stations. In such cases, the train is standing at its Starter, clear of the line on which the second train is to run.

2.9 The “Cancelling” signal :-

- (i) The “Cancelling” signal is given to cancel the last signal given from the block station from which it is sent.
- (ii) Where an “Is Line Clear” signal has been sent and it is afterwards found that the train to which it is referred has to be detained for shunting or other purposes or has returned to the block station from which that signal was sent, the canceling last signal shall be sent to the block station in advance, so that the previous signal may be cancelled.
- (iii) Whenever line clear is cancelled the Station Master shall enter the reason for doing so in the ‘Remarks’ column of the Train Signal Register.
- (iv) In the cancelling operations of Block Instruments on Single Line the deflection of the Galvanometer needle at ‘Y’ shall be watched while receiving the “Cancel Last Signal” from “X” the signal shall be acknowledged by ‘Y’ only if the deflection of the needle is

correct as detailed for each instrument. If the correct deflection is not obtained, 'Y' shall not acknowledge the "Cancel Last Signal" but call 'X' on the telephone and point out the irregularity. If even with further correct operation, the deflection of the needle is not correct, Block working shall be suspended.

- (v) If Line Clear has been obtained by 'X' from 'Y' for a certain train, and it is afterwards found necessary to pass another train over the Block Section instead of the train for which "Is Line Clear" was originally asked, Line Clear shall be cancelled and a fresh Line Clear shall be obtained. If the Line Clear has been obtained with incorrect description and number, this should be cancelled and fresh Line Clear shall be obtained. If the mistake is noticed after the departure of the train, this shall immediately be notified over the phone to the station ahead to enable the latter to arrange for correct train reception and handling.

2.10 The "Testing" signal:

The "Testing" signal shall be used only for the purpose of testing the Block Instruments.
