



Control Organization of Bangladesh Railways



**MD. MIAJAHAN
COPS, EAST
BANGLADESH RAILWAY-DECEMBER 2017**

The Control Organization of Bangladesh Railways is the nerve centre of train operations. It controls the asset management of the Railways, in a dynamic situation, round the clock always moving trains on its entire network.

It has come a long way from being an exclusively telephone based system emerging in the form of an Information Technology enabled organization. This basic structure of Operating Control on Bangladesh Railways exists at the Divisional Level, which has also been extended to Area Control levels.

In addition, Central Control Office is situated in the Zonal Headquarters office and one at with DG/Rly, Rail Bhaban .

The area spread of a division is divided into control sections, normally two more track sections, each section having a given number of stations. The two-way telephone system, also called an omnibus circuit, permits all stations to have direct communication with Section Controller, who is responsible for train regulation in his area.

The section Controller can speak to all stations at the same time or to one station selectively, using individual numbers/buttons. Movement of trains is plotted on a time distance graph to record their actual progress. These records, called control charts, are analyzed later. There are shift Deputy Chief Controllers to guide and assist the section controller.

All technical disciplines always communicate with the Control office to provide the required support to Train movement from their departments. These include Locomotive foreman Signaling and Tele-Communication ,Commercial ,Security, C& W , Permanent way Inspector, Electric foreman etc. From Transportation and Loco side Chief Train Controller(CTNL), Chief Power Controller(CPNL) is responsible for run the control office. The entire organization works round the clock, all days of the year, without any interruption to monitor actual movement of trains on the entire rail network. The detailed organization of the control selected and duties assigned to employees depends on the demands of the transport task appropriate to each grade of employee or to diversity in the transport task. The Chief Controller is the head of Divisional Control Organization.

Basic Functions of Control

1. **Train Control:** Supervising & regulating movement of trains from station to station on the section to avoid delay to trains and to maximize utilisation of the capacity of the section by: -
 - (a) Monitoring movement of trains from station to station and recording paths and detention on charts.
 - (b) Arranging crossing and precedence of trains judiciously.
 - (c) Arranging working of departmental and material trains.
 - (d) Giving time signal to all stations on the section daily at appointed time
 - (e) Fulfilling interchange

- (e) Fulfilling interchange commitment.
- (f) Arranging proper movement of assisting/banking/light engines.
- (g) Clearance of sick wagons from Roadside stations.
- (h) Arrangement of relief for 8 hrs duty staff.
- (i) Incident management on the rail network & at stations
- (j) Arranging Engineering and/or power blocks in such a way as to involve minimum disturbance to train running.
- (k) Maintaining fluidity of yards by controlling the flow of stock in and out of yards.
- (l) Arranging Speedy relief in case of accidents.

2. Traffic Control: is the general and over-riding control for supervision of the movement of goods and coaching traffic on the section. It is exercised by :

(a) Collecting information from the various stations on the section in respect of –

(i) Registration of wagons outstanding at stations and arrangements for supply of wagons.

(ii) (ii) Number of wagons loaded and empty wagons/rakes awaiting dispatch.

(b) Arranging running, regulation, putting back and cancellation of trains (both freight & coaching).

(c) Ensuring maximum loads for trains.

(d) Collecting stock position from the different stations, marshalling and terminal yards.

- (e) Arrangement of Crew & Guards for freight trains
- (f) To keep liaison with adjoining Railways and Divisions for interchange commitments
- (g) Monitoring and coordinating working of yards, goods sheds, sidings, loco-shed, TXR depots etc.
- (h) Supervising stock control.
- (i) Arranging supply of wagons against pending registration.
- j) Ensuring optimum utilisation of stock, with minimum detention.
- k) To ensure optimum utilisation of loco and staff.
- l) To arrange ART & Crane from adjoining Railway/Division in case of accidents and other coordination.

3. Power Control - is responsible for provision of motive power to all trains by maintaining position of locomotives and :

- (a) Requisitioning engines from loco sheds for all operating requirements, i.e. Train working, Shunting and Banking.
- (b) Ensuring most economical use of engines by close supervision both in Traffic Yards and sheds.
- (c) Ensuring the return of engines to “Home Sheds” at regular intervals for servicing and maintenance.
- (d) Ensuring an even balance of engines and crews between running sheds for meeting demands of traffic,
- (e) Ensuring that light engine kilometers is kept to the minimum.
- (f) Providing guidance to running staff for troubleshooting.

4. Carriage and Wagon Control - is responsible for assisting the train and traffic control and :

- (a) Ensuring timely examination and fitness of all trains.
- (b) Keeping a watch over the detachment of sick wagons/coaches and arranging for their early repair and fitness.
- (c) Keeping a watch over availability of vital C&W components, like Air Hoses, Washers, Clamps etc.. and efficient working of equipments & machines in the C&W depot to avoid detention to trains.
- (d) Keeping a watch over placement of wagons/coaches in sick line and their release.
- (e) Keeping account of detention to trains on C&W account and taking remedial action.
- (f) Providing guidance to running staff for trouble shooting
- (g) Monitoring the movement of POH due stock to workshops

5. Control assists the Traffic and Train Control :

- (a) To expeditiously dispose off unclaimed and unconnected wagons, parcel consignments.
- (b) To keep a watch on detention to trains on Commercial account like Alarm Chain Pulling. Parcel working etc., and take remedial measures.
- (c) To ensure quick transshipment of sick wagons by arranging matching stock and labour.
- (d) To carry out any other job entrusted by DRM, DCO.
- (e) Guiding running/ station staff in trouble shooting.

6. Engineering Control : Monitors –

- (a) imposition & cancellation of Engineering Restrictions
- (b) working of track machines
- (c) integrated maintenance blocks.
- (d) Co-ordinates works during maintenance blocks and monitors Running of Material trains.

7. Signal Dept. assists Train Control and is responsible :

- a) To keep a watch over the S&T failures and take remedial action.
- b) To ensure efficient working of communication channels

The main functions of Traffic Control

The main functions of Traffic Control are:

- a) Continuous supervision of the movement of all traffic in the controlled area with a view to achieve the maximum possible operating efficiency.
- b) Systematic maintenance of accurate charts of train movements and the arrangements of crossing and precedence to the greatest advantage.
- c) Analysis of detentions to trains.

- . d) Planning, ordering and running of goods trains to the best possible paths.
- e) Maintaining the fluidity of marshalling yards/freight terminals.
- f) Taking remedial action in the event of yard/terminal congestion.
- g) Elimination of avoidable detentions to goods stock at loading and unloading points and at transshipment stations.
- h) Allotment and distribution of goods stock to stations,
- i) Supply of information to adjoining controls, terminals and engine changing stations regarding the movements of trains to enable adequate timely arrangements for their reception and onward despatch.
- j) Arranging of engineering and other departmental blocks with minimum detention to traffic.

- k) Running of material trains and other track machines, tower wagons etc.
- l) Arranging relief for engine crew and Guards.
- m) Ensuring maximum utilisation of locomotives.
- n) Issuing instructions for train working in case of equipment failures and whenever abnormal methods of working have to be resorted to.
- o) Speedy arrangements for relief, rescue and restoration in the event of accident.
- p) To assist in the realistic planning of time tables and punctual running of passenger trains in coordination with various departments, other divisions and other railways.
- q) To keep a watch over damaged stock at road side stations, yards and sick lines and to ensure that they are promptly attended to rectify immediately.

Telecommunication Facilities in Control :

An extensive, efficient and reliable communication network is necessary for the efficient functioning of the Control organisation. The following telecommunication network is available in control offices between :

- (a) Headquarter and Divisions
- (b) (b) Adjoining Divisions and Railways
- (c) In addition, intercom facility has been provided to various Officers and other functionaries concerned with the control.
- (d) They are also connected with important work centers with Digital Phone or Cellular Phone & Internet.

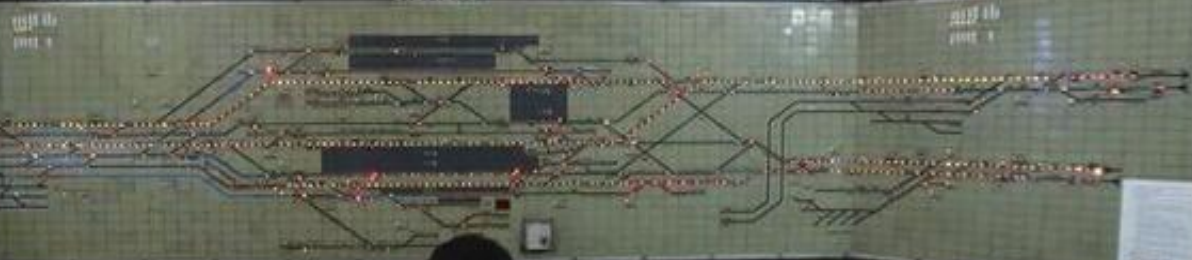
Section Control Board :

The Section Controller of each section is provided with a control board, with Telecommunication facilities for stations, certain important cabins, big freight terminals, loco shed etc. over a section.

For the guidance of section controller, the lay out of all the stations and sidings is painted on a large board. The station lay out diagram is also provided with details of holding capacity of each of the running & non-running lines, gradients and signals. This depicts elementary sections in different colours & other details of sectioning post and Sub-sectioning post.

12:06:26

SIGNAL



12:06:26
SIGNAL

12:06:26
SIGNAL



Graphs and Plotting :

i) Trains are plotted on control graphs which consist of horizontal and vertical lines, representing distance and time, respectively. Along side the vertical lines, stations are spaced to a uniform scale. Each one hour is first divided into 6 units of 10 minutes each units

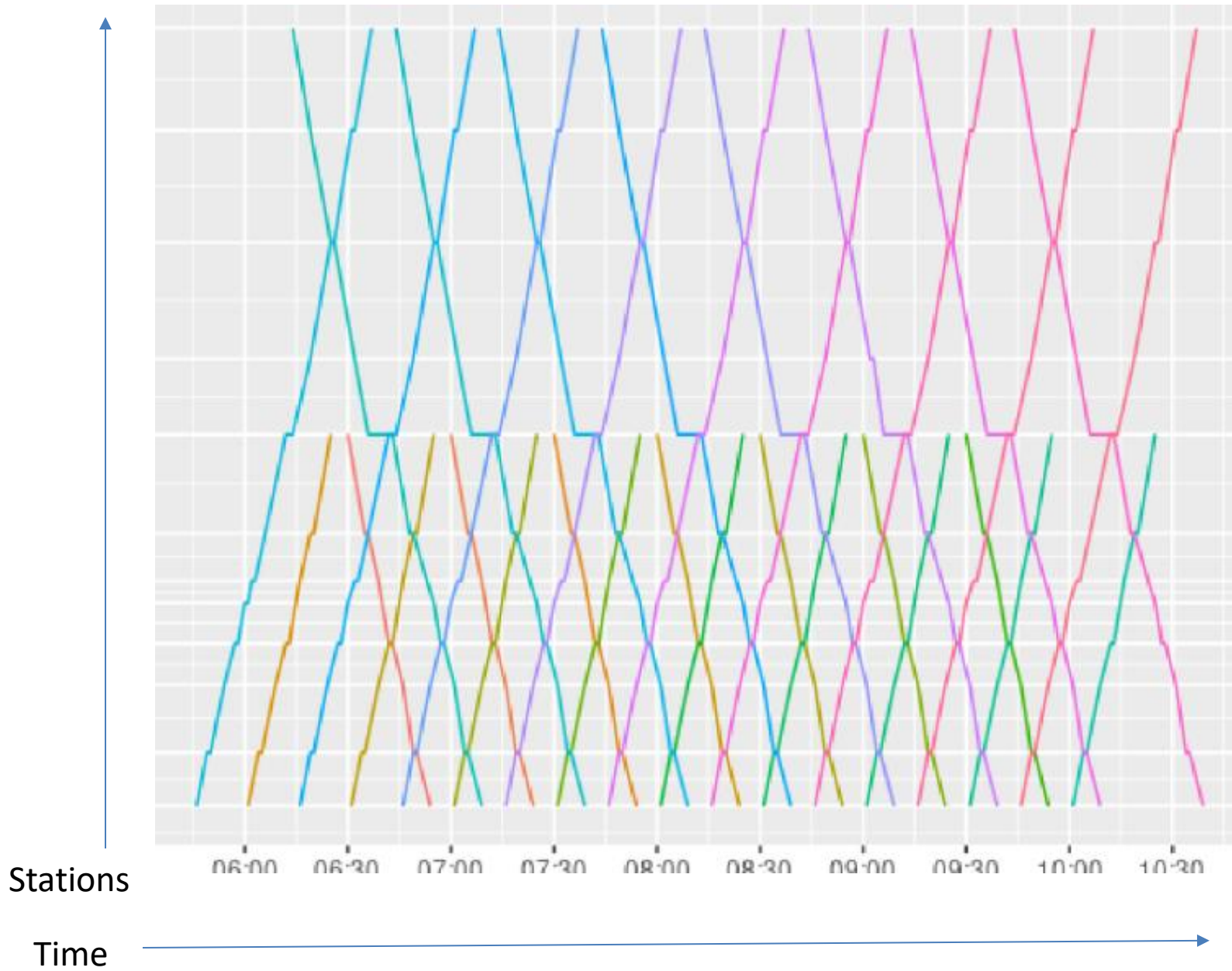
ii) Each control graph at the end of the shift may have the following information on it:

- (a) Name and total distance of the section in Kilometres.
- (b) Distance in Kms. between each station on the section.
- (c) State of weather in each shift.
- (d) Engineering restrictions on the section.
- (e) Code names of each station of the section.
- (f) Time lost by each train on loco, traffic or engineering account at or between stations.
- (g) Section Controller's remarks against item

(h) Time made up by each train on loco, traffic or engineering account. (i) Guard's record of time lost on loco, traffic or engineering account at or between stations and remarks. (j) General remarks. (k) Signal failures

iii) In plotting various types of trains, coloured pencils shall be used as per extant convention as below :-

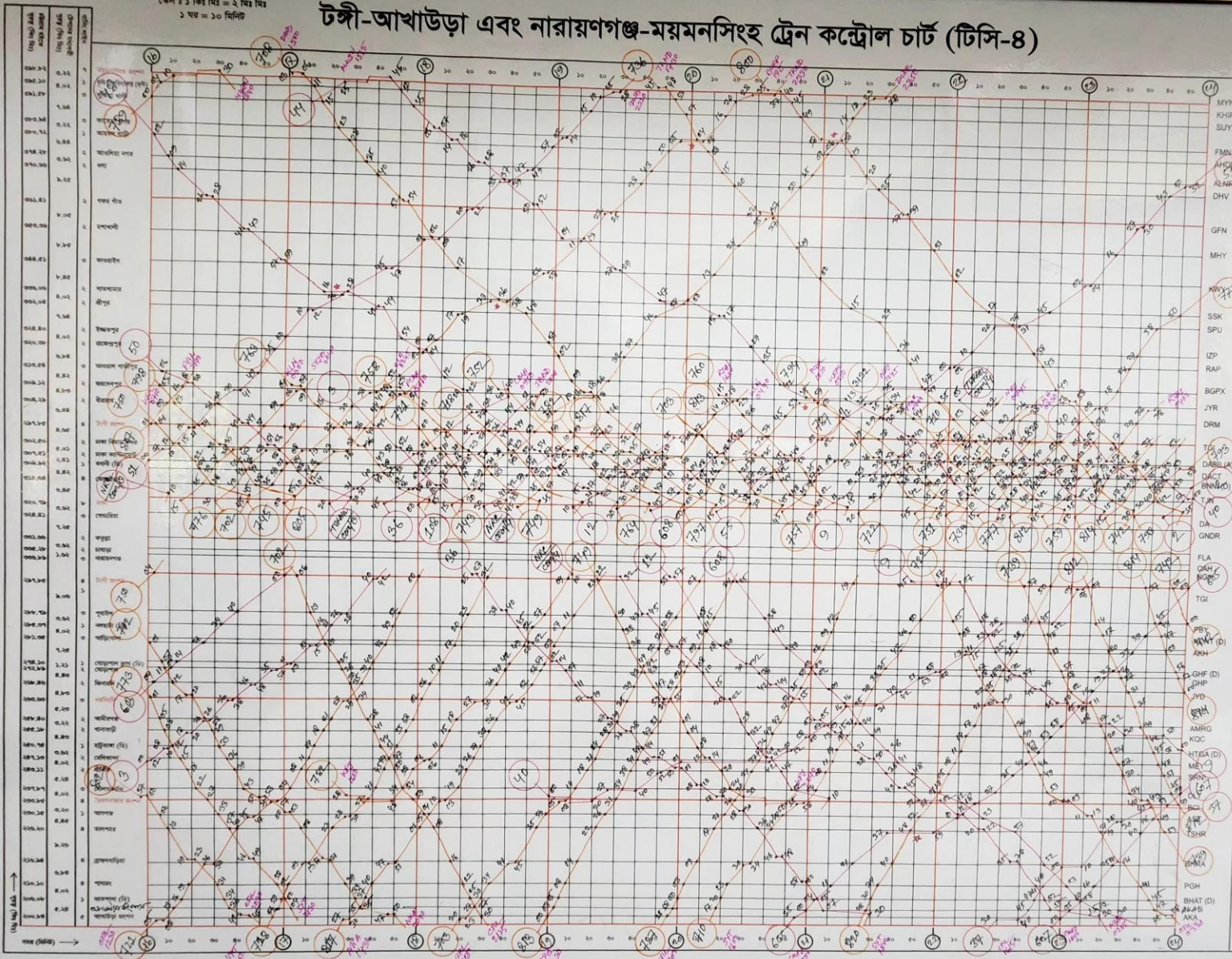
- (a) Chocolate – Local Trains
- (b) Red-Mail, Express, and other trains requiring top priority, as well as Military special during emergency.
- (c) Black- Light Engine, M/Trolley, Tower Wagon, Pilots etc.
- (d) Green-Military specials in normal course, Fast Express Goods, and any other important Goods trains, Shunting train.
- (e) Yellow double color- Intercity Trains.



কেন্দ্র ১ কিমি বি = ২ মি বি
 ১ ঘর = ১০ মিনিট

টঙ্গী-আখাউড়া এবং নারায়ণগঞ্জ-ময়মনসিংহ ট্রেন কন্ট্রোল চার্ট (টিসি-৪)

বি আর ও সিটি-২৪০/১৫
 (সংশোধিত)



তারিখ _____
 মন্তব্য _____

- MYN
- KHP (HALT)
- SUY
- FMN
- MHD (D)
- 52
- ALBN
- DHV
- GFN
- MHY
- MW
- SSK
- SPU
- IZP
- RAP
- BGPX
- JYR
- DRM
- TG
- DASULA
- DACT
- BNN (D)
- FAN
- UP
- DA
- GNDR
- FLA
- GNY
- NGR
- TGI
- PBY
- MNY (D)
- ANH
- GHF (D)
- FHP
- FPD
- AMRG
- KQC
- HTSA (D)
- MEY (C)
- SGR
- SC
- TSNR
- BMAA
- PGH
- BHAT (D)
- AKA

সময়
 বিকল্প বিস্তারিত
 ট্রেন বিস্তারিত নাম
 পাঠ্য বিস্তারিত নাম
 সময়
 বিকল্প বিস্তারিত
 ট্রেন বিস্তারিত নাম
 পাঠ্য বিস্তারিত নাম

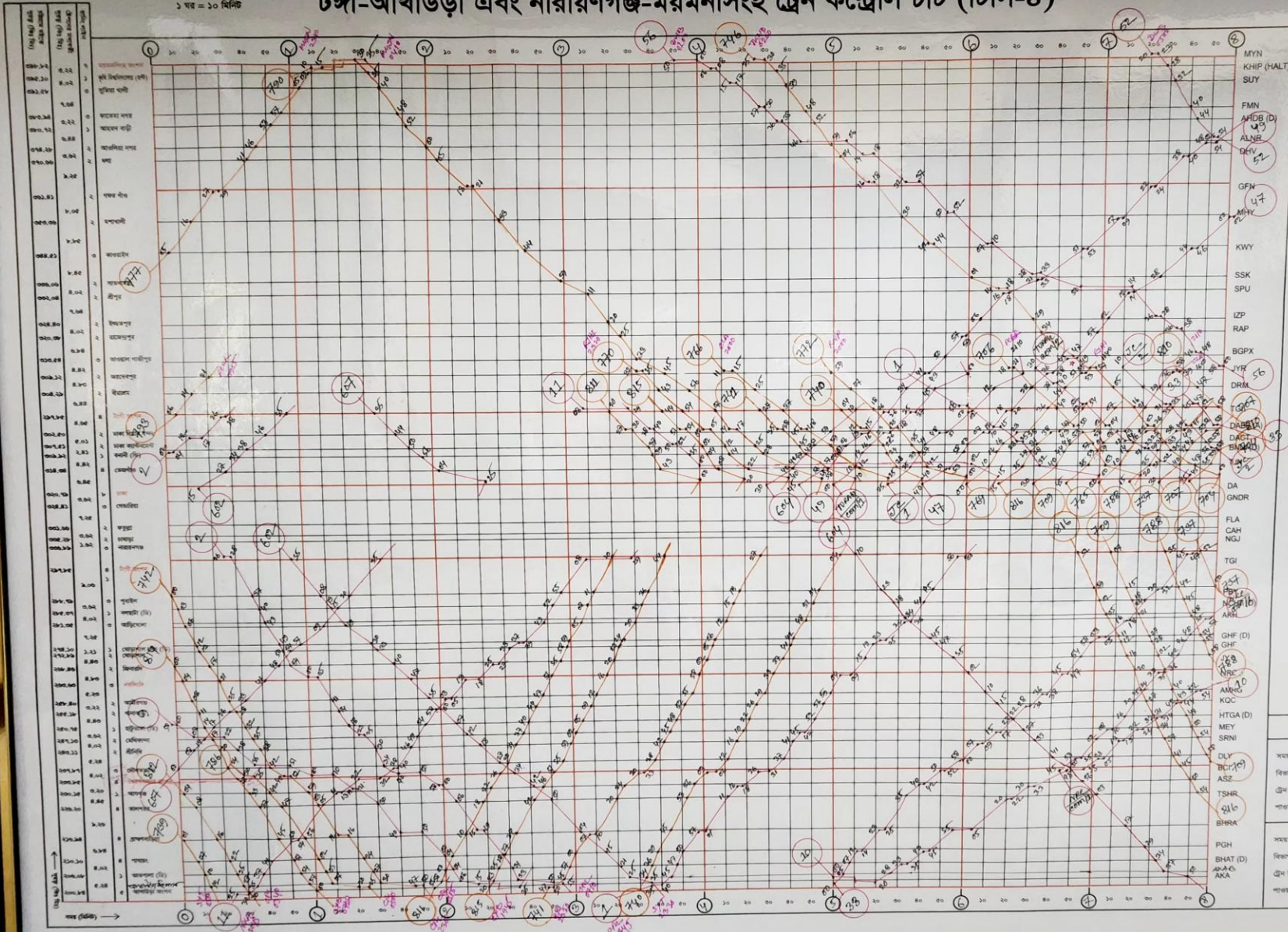
তবে ১১ মিঃ মিঃ = ২ মিঃ মিঃ
১ ঘর = ১০ মিনিট

টঙ্গী-আখাউড়া এবং নারায়ণগঞ্জ-ময়মনসিংহ ট্রেন কন্ট্রোল চার্ট (টিসি-৪)

পি আর ও পিটি-০৪/০৫
(সংশোধিত)

তারিখ

মন্তব্য



- MYN
- KHIP (HALT)
- SUY
- FMN
- AHDB (D)
- ALNE
- DKV
- GFN
- KWY
- SSK
- SPU
- IZP
- RAP
- BGPX
- JVF
- DRM
- TOGA
- DABBA
- DACT
- BAKHA
- DA
- GNDR
- FLA
- CAH
- NGJ
- TGI
- GHF (D)
- GHF
- AMR
- KOC
- HTGA (D)
- MEY
- SRNI
- DLY
- BCI
- ASZ
- TSHR
- BHAK
- PGH
- BHAT (D)
- AKA

সময়
বিকশীট নির্দেশক
ট্রেন নির্দেশকের নাম
শাখার নির্দেশকের নাম

সময়
বিকশীট নির্দেশক
ট্রেন নির্দেশকের নাম
শাখার নির্দেশকের নাম

All up trains are plotted from the bottom of the chart upwards and from the left diagonally towards the right; and all down trains are plotted from the top of the chart downwards and also diagonally from the left towards the right.

iv) For judicious crossing and precedence, it is necessary to have plotting of passenger trains at least one hour in advance depending on traffic density in easily erasable lines.

All Advance Countries Now Plotting Chart through computerized charting , this is automated. On certain countries and selected controls, this function has been automated with Train Protection System.

Master Charts :

For every section, Master Charts indicating trains run in 24 hours are prepared which show the running of each Intercity, Mail, Express or passenger train over the sections according to its scheduled running. In between the running of trains carrying passengers, paths for goods trains are worked out and plotted.

They are helpful in revision of time tables, planning the running of any extra train and for guidance of section controllers and should be displayed on the boards to which they refer.

Duties of Control Staff

The main duties of control staff are as under :

1. Duties of Controllers: These are only guidelines for their day to day working and are not exhaustive.

(a) Chief Controller (In-charge) :

The Chief controller is overall in-charge of control office and is responsible for the total transportation of the Division on day to day basis. His duties include-

- (i) A review of previous day's performance to confirm that all forecasts made have been fully met. For shortfalls, cogent reasons have to be pinpointed to prevent recurrence
- (ii) (ii) Prepare current forecast, indicating assistance needed from Headquarters, adjoining Divisions, Railways. These will generally relate to interchange, loading and locomotive utilization.

- (iii) Checking control charts and bringing to the notice of the Senior Divisional Railway Manager/Divisional Transportation Officer all avoidable detention to trains.
- (iv) Punctuality performance with particular reference to trains which lost punctuality
- (v) Maintaining statistics regarding the punctuality of passenger trains.
- (vi) Scrutiny of stock papers, monitoring interchange obligations.
- (vii) Watching detention to stock at stations and terminals
- (viii) Watching the work of marshalling yards/freight terminals.
- (ix) Maintaining liaison with neighboring Divisions
- (x) Watching the utilization of locos and their terminal detention.
- (xi) Checking duty hours of running staff and balancing of crews.
- (xii) Granting engineering blocks, power blocks etc.,
- (xiii) Attending control office in cases of accident
- (xiv) Establishment work of control office

Dy. Chief controller (Movement)/Dy. Chief Controller (Freight Operation) Shift duty :

He is responsible for:

- (i) Running of goods trains, preparing interchange forecast, and monitoring the same, loco utilisation and passenger and goods train operations in general.
- (ii) (ii) Allotting empty stock/rakes to loading stations in accordance with current priority regulations along with Dy. Chief Controller (Stock), maintaining constant touch with adjacent divisions through regular conferences to facilitate the smooth flow of traffic.
- (iii) Dealing immediately with significant detentions or transport bottlenecks and other unusual situations.
- (iv) Keeping in constant touch with the working of major terminals & Marshalling yards and taking timely action to deal with congestion.

- (v) Giving advice on serious accidents to all concerned, and taking charge of the affected sections.
- (vi) Arranging RT/RME/Crane, Loco, and Crew/Guard.
- (vii) Supervising the running of oversized consignments.
- (viii) Maintaining liaison with the Power Controller.
- (ix) Coordinating the work of various Section Controllers.
- (x) Maintaining discipline among control staff in the absence of the Chief Controller.
- (xi) Maintaining coordination and liaison with various functionaries involved in train running.

Power Controller :

- (i) Planning and directing engine movements so as to ensure efficient engine utilization and maintaining the prescribed charts, and regular statistics.
- (ii) Co-ordination with sheds and Dy. Chief Controllers (movement) for sending Incoming engines and obtaining time of engines coming out of shed.
- (iii) Making timely arrangement for the relief of crew whose duty hours are likely to be exceeded enroute
- (iv) Taking timely action to balance crew so as to prevent cancellation or putting back of trains on account of shortage of crew.
- (v) Arranging Crew and Medical Van / Accident Relief Train / Crane in case of accidents as per chapters IV of Accident Manual.

- (vi) Maintaining charts indicating engine position/utilisation.
- (vii) Rendering advice and assistance to locomotive running staff regarding trouble shooting.
- (viii) Carrying out any other duties allotted to him by the DME/Loco from time to time.
- (ix) Monitoring day-to-day stock position of diesel fuel at RDIs (Railway Diesel Installations) and watching movement of diesel fuel tank wagons (for power controllers only)

Operating Discipline :

- i) **Line Staff to obey orders of control:** Station staff, Shed staff, Crew and Guards etc must obey orders issued by the Control as long as these orders are consistent with the General and Subsidiary Rules,
- ii) **'Control order register' :** Important instructions from control will first be recorded in a register maintained in the control office and serially numbered, commencing with number 1 each Month. These will be issued as messages indicating the time of issue. All such orders received by the Station Masters or Running staff and Guards' Control should be entered in the control order register by the staff.

Each entry must be initialled with time. At the end of each turn of duty the relieved as well as the relieving Station Master/Guard's or Crew Controller must sign their name in full below the last entry in the register.. When a station Master or Crew Controller has received an order from the control and

When a station Master or Crew Controller has received an order from the control and entered it in his register, he may repeat it to the control in order to satisfy himself and the control that he has understood it correctly.

(iii) Terminal Station should not start a goods or unscheduled train or block the section without the permission of the Controller.

(iv) Every Station on the section must report the movement of every train- passenger, goods, special, departmental, light engines, TTMs, Tower Wagons, trolleys etc. to the controller.

(v) When the control is in function, Line Clear must be asked from the station ahead for every train unless orders to stop it are given by the Controller.

(vi) The Controller's permission must be obtained before stopping a train that should run through except to avert an accident or dangerous condition.

(vii) No station should allow a train, which has been stopped out of course, to proceed, without first informing the controller that the train has been so stopped and on receiving his further orders.

(viii) Station Master must advise the controller of any unauthorised or undue detention to trains at their stations with full explanation.

(ix) Whenever a train, either passenger or goods, is detained at a station for longer than the booked halt without the orders of the Controller, on its departure, the Station Master must immediately inform the brief cause of the detention to the Controller.

(x) Whenever any damaged wagon is detached out of course at a station, the Station Master on duty should inform the Controller.

(xi) Station Master must promptly advise the Controller of any defects of signals, points, interlocking apparatus and line clear instruments at their stations. Information should also be given of any defects in any other station machinery such as cranes, wagon weigh bridges, turn tables, water columns, hydrants etc.

(xii) Starting stations to report particulars of outgoing train:— As soon as a train leaves a train starting station, the Station Master must intimate the following particulars to the control office:

Number and description of train,
Engine number and class,
Loco pilot's name,
Guard's name,
load of the train (vehicles),
particulars of shunting to be done on the journey,
time of departure,
brief reasons of late start, **time** of Signing "ON" of crew,
fuel balance and detail etc.

xiii) Intermediate stations to report arrival and departure time of trains:– Station Master of intermediate station must communicate to the Control as early as possible, the following information in regard to every train dealt with:

(a) In case the train has run through, the time it passed the station.

(b) If it is a stopping train, the time of arrival and departure along with the explanation for every detention beyond the scheduled stoppage.

(c) If any shunting has been performed, the number of vehicles attached and detached.

(d) If any extra time has been taken in loading and unloading of packages, the number of such packages and name of the loading station.

xiv) Terminating stations to report the particulars of incoming trains:– Station Masters of terminal and engine

xiv) Terminating stations to report the particulars of incoming trains:— Station Masters of terminal and engine changing station must, as soon as possible, after the arrival of a train, communicate to the control the time of arrival and the load of the train, particulars of loco detached/attached.

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xv) Engine Movements to and from sheds to be reported:— Loco foreman must communicate to control the time at which train engine leaves from or returns to the shed 'Bar line'. This, in no way, relieves the Station Master of the responsibility for issuing necessary 'all concerned' messages regarding engine failures and engine trouble en route.

The Controller shall record the duration of such defects in his chart, diary and registers.

xvi) Time to be checked with control:— Station Masters, Crew Controllers must check their time with control at the appointed hour.

xvii Mode of using the control phone :- The Control telephone is to be used for operational purposes. The field staff wanting to talk to control will give their identity and wait for their turn to communicate. They must then announce the name of the station, shed, or site from where they are speaking. As this network is intensively used, the conversation should be brief, meaningful and polite.

When, however, an urgent message has to be conveyed and the line happens to be engaged, the station name must be called indicating Emergency. The Controller will immediately attend to the Station having an emergency. Station Masters must attend 'Control Call' promptly.

Co-ordination between Control and Stations :

a. Asking line clear: In order to avoid the detention to passenger trains for crossing / precedence over a less important train, line clear enquiry for the less important train must not be asked until the train is ready to leave and until the Section Controller's permission has been obtained. The Station Master receiving the line clear enquiry must immediately ask the Controller's permission to give line clear before giving the reply. The Station Master on duty is entirely responsible for seeing that the necessary General and Subsidiary rules and Station Working Rules are observed before giving Line Clear.

b. When a Station Master for any reason finds it difficult to carry out Controller's arrangement to receive the train in yard/station due to yard/station constraints, he must explain his reasons clearly and fully to the Controller.

c. Work at stations: The permission of the Controller must be obtained before the performance of any shunting; Controller must be informed of the likely duration of shunting to enable him to arrange crossing and precedence of trains. In the event of Station Master being unable to start a train on receipt of line clear, he must at once report the circumstances to the Controller.

d. Control order regarding crossings etc: The Section Controller will give definite instruction for crossing or precedence and will not change them except under unavoidable circumstance because last minute change of order will result in confusion and unsafe operation. The Controller must see that sufficient time is available for the necessary operations to be carried out.

General Order of Precedence of Trains : Unless specific orders to the contrary are issued by the COPS or by those acting on his behalf, the following general orders of precedence shall be observed by control and stations :

1. RME, RT proceeding to the site of the accident.
2. President's and VVIP's specials (Unless otherwise specified in the Time Table).
3. Suburban train in peak rush direction.
4. Intercity trains like Sonarbangla, Subarna, Banalata, etc.
5. Mail/Express trains.
6. Military personnel special, if instructed by emergency control/COPS, DRM, DTO.
7. Fast Passenger train

8. Special engaged by the public. (Precedence order may be revised)
9. Passenger trains.
10. Mixed trains.
11. Military stores special.
12. Express or special goods train.
13. Through goods train.
14. Accident relief train returning from the site of accident (unless otherwise ordered).
15. Shunting and van goods train.
16. Departmental trains.
- 17 Light Engine Note:
18. Inspection Trolley etc.

Registers generally maintained in Control :

1. By the Section controller:

- (a) Section controller's diary and charge book.
- (b) Inward message book.
- (c) Sick wagon register.
- (d) Yard report registers.
- (e) In-coming and out-going trains RD (Running Diary)
- (f) Train Advice (T. A Book).
- (g) Caution Order Message Book Register.
- (h) Morning (6.0 clock) Position Register
- (j) Engine Book.
- (k) Interchange Register.
- (l) Load Register. (m) Incoming and Outgoing passenger Train Running Diary.
- (n) Points and S & T Failure Register.
- (o) Important Yard Balance Register. (p) Control Failure

2. By the Chief Controller (Movement),(Coaching)/Dy. Chief Controller :

- (a) Yard Running Balance Register.
- (b) Dy. Chief Controller's Diary & Charge Book.
- (c) Train Advise Book.
- (d) Forecast and Acceptance Book.
- (e) Train Ordering Book.
- (f) Punctuality Register.
- (g) Accident Register.
- (n) Emergency and General Control Office Message Register (Inward).
- (p) Emergency and General Control Office Message Register (Outward.)
- (q) Interchange Register.
- (r) Engine Balancing Register.

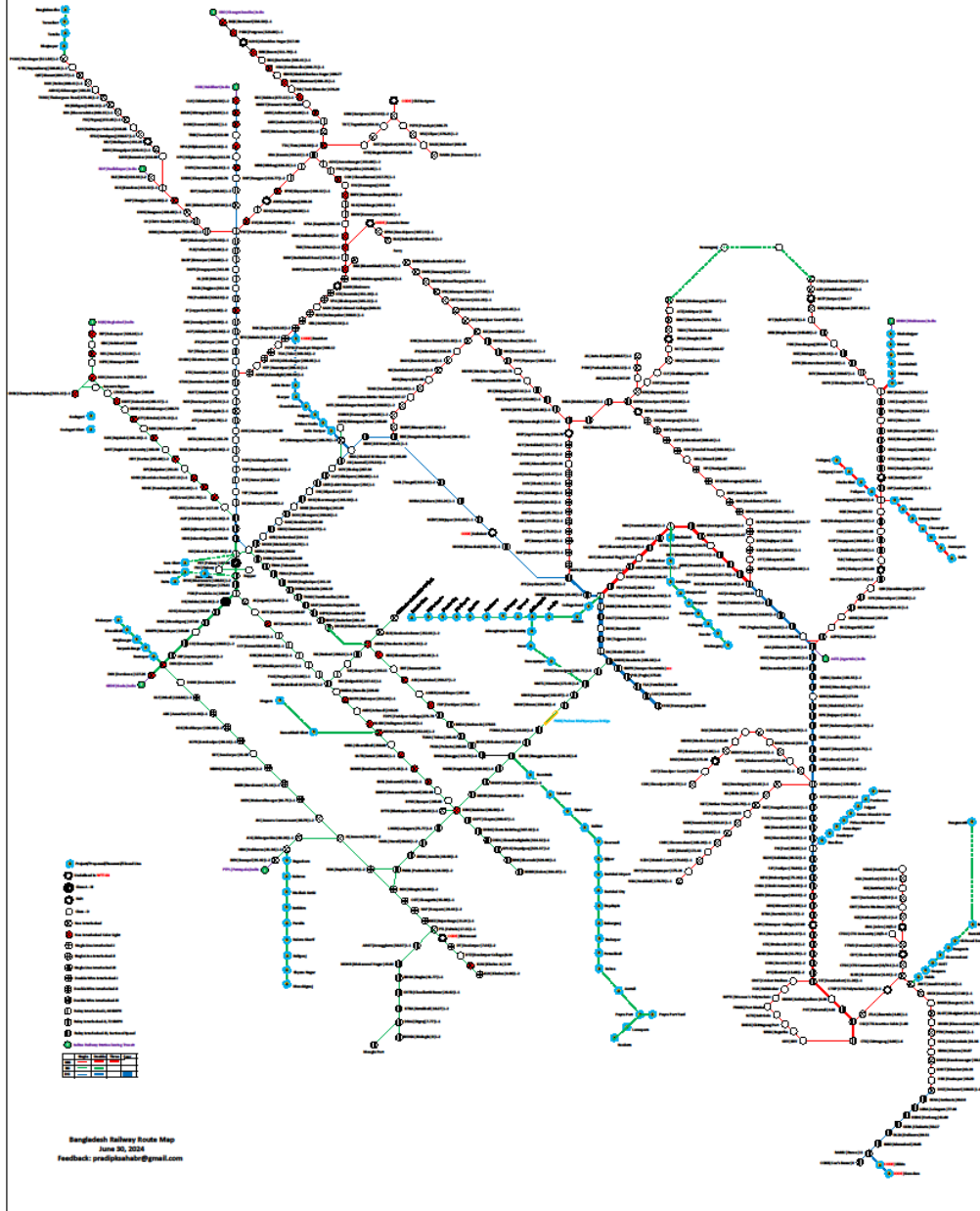
Power Controller Registers:

- (a) Power Position Book.
- (b) Out Station Loco Pilot Register.
- (c) Power Controller's Diary.
- (d) Engine Link.
- (e) Crew Link.
- (f) Crew Position Register.
- (g) Register of Movement and Diversion of departmental/Diesel/Lube oil Fuel Tank Wagons.
- (h) Register showing Undue and Abnormal Detention.
- (i) Engine Failure Register.
- (ii) (j) Fuel Balance Register.
- (k) Schedule Dates of Locos
- (l) Running Crew Report

**Train Operation is extremely dangerous ,
so Engaged competent Person for it.**



RAILWAY NETWORK OF BANGLADESH-2024



Thank
you to
all for
particip
ating
with
me.