

ERL MAINTENANCE SUPPORT SDN BHD

Co. Reg. No. 199901023674 (498574-T)





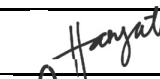




OPERATIONS DEPARTMENT

**ABBREVIATIONS & GLOSSARY
(OPERATIONS)**

Ref. No. G00.OMO.M15110.NA.1003.C

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 2 of 11	Abbreviations & Glossary (Operations)

Release

Released:	Thomas G. Baake	Chief Executive Officer	02.10.23	f 
Checked:	Sukhbir Singh	Safety & Security	02.10.23	
Checked:	Haryati Khalil	CEO Office	27.09.2023	
Checked:	Muhammad Azim	CEO Office	26.09.2023	
Checked:	Omar Zakir Ibrahim	Operations	21.09.23	
Checked:	James Boudville	Operations	20.9.23	
Author:	Norhandee	Operations	20.09.2023	
	Name	Department	Date	Signature

Amendments or additions to this procedure must be indicated with a vertical black line in the adjacent left margin.

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 3 of 11	Abbreviations & Glossary (Operations)

Change Record and Configuration Control

C	21.07.2023	Revision to reflect Company Registration Number Co. Reg. No. 199901023674 (498574-T) and the change of name for KLIA Terminals. Minor amendment and correction on the grammar/sentence structure.	Norhandee
B	26.02.2019	Revised to update changes to reflect ISO9001:2015 and ISO14001:2015 new requirements.	Norhandee
A	07.02.14	This procedure is treated as a new procedure and supersedes all previous versions of Abbreviations (Operations) - G00.OMO.M11150.CZ.0001.A and Glossary (Operations) - G00.OMO.M11150.CZ.0002.B. Both procedures have been combined and changing of document number & coding system.	Norhandee
Revision	Date	Modification	Name

Planning Of Changes Reference For Revision: G00.OMO.M15110.NA.1003.C					
Issues To Consider	Checked (Please mark X)				Remarks
1) Are there any negative impact?	YES		NO	X	
2) Will the integrity of QEMS be affected?	YES		NO	X	
3) Resources available?	YES	X	NO		Adequate
4) Allocation or relocation of responsibilities and authorities required?	YES		NO	X	

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 4 of 11	Abbreviations & Glossary (Operations)

TABLE OF CONTENTS**Page**

1	Purpose	5
2	Scope, Distribution & Access	5
3	Definitions and References	5
3.1	Abbreviations	5
3.2	Glossary	6

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 5 of 11	Abbreviations & Glossary (Operations)

1 Purpose

This document gives an overview of terms and the description used in all Operations documents.

2 Scope, Distribution & Access

Distribution and access are given to all E-MAS Operations. Employees without EDMS access can retrieve this procedure via E-MAS Operations Department portal.

3 Definitions and References

3.1 Abbreviations

Abbreviation	Description
AFC	Automatic Fare Collection
ACG	Automatic Control Gate
ARS	Automatic Route Setting
ASD	Automatic Sliding Door
ATP	Automatic Train Protection
ATR	Automatic Through Routing
BOMBA	Jabatan Bomba dan Penyelamat
BTS	Bandar Tasik Selatan Station
CCTV	Closed Circuit Television
CEO	Chief Executive Officer
COCC	Chief of Control Centre (HOD of Operations Control Centre)
CRS	Commuter Rail Service
CSM	Customer Service Manager
DC	Depot Controller
DCU	Door Control Unit
DOE	Department of Environment
DOSH	Department of Safety and Health
EC	Engineering Controller
EDMS	Electronic Document Management System
E-MAS	ERL Maintenance Support Sdn. Bhd. Reg. No. 199901023674 (498574-T)
ERLSB	Express Rail Link Sdn. Bhd. Reg. No.199601003493 (375839-H)
ERP	Emergency Response Plan
ERT	Emergency Response Team
E.P.	Electro Pneumatic
FCC	Fire Control Center
HOD	Head of Department
ICS	Incident Command System
IXL	Interlocking
KLIA T1	Kuala Lumpur International Airport Terminal 1
KLIA T2	Kuala Lumpur International Airport Terminal 2
KLS	Kuala Lumpur Sentral Station
LC	Line Controller
MMI	Man-Machine Interface
MWS	Main Workshop
OC	Operations Chief

Location	Reference	Rev.	Date	Page No.	Document Title
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 6 of 11	Abbreviations & Glossary (Operations)

OCC	Operations Control Centre
OCL	Overhead Catenary Line
OCS	Operations Control Centre Supervisor
OMO	Operations Manager (HOD of Operations)
OSS	Operations Station Supervisor
OTD	Operations Train Driver
OTN	Open Transportation Network
OTS	Operations Shift Supervisor
PA	Public Address
PABX	Private Automatic Branch Exchange
PICOP	Person In Charge Of Possession
PIDS	Passenger Information Display System
PCS	Putrajaya Cyberjaya Station
PPE	Personal Protective Equipment
PSD	Platform Screen Doors
RST	Rolling Stock Department
SAP	System Application Product
SCADA	Supervisory Control And Data Acquisition
SIG	Signaling Department
SOO	Station Operations Office
SPYTL	Syarikat Pembinaan Yeoh Tiong Lay Sdn. Bhd.
STS	Salak Tinggi Station
TMS	Traffic Management System
TPSS	Traction Power Sub Station
TVM	Ticket Vending Machine
TWP	Train Washing Plant
UFWL	Under Floor Wheel Lathe
UPS	Uninterrupted Power Supply

3.2 Glossary

Term	Description
Accident	An unintended event or subsequence of events that cause death, injury, material or environmental damages.
Approval To Proceed	Authority for a Driver to proceed. This may be given via a fixed signal or verbal instruction from the OCC.
ATP Antenna	Two antennas are located on each A-Car and B-Car respectively. It is located, above the railhead and in front of the first axle. Used to receive ATP telegrams from the ATP Trackside Unit.
ATP Cab Panel	Train borne display, located in each driver’s cab. Used to view dynamic ATP information and for input of ATP Trackside Unit.
ATP Telegram	This is the method by which ATP Trackside Unit and ATP Trainborne unit communicate. Telegram data is transmitted via ATP cable in the middle of the track and received by the trainborne antenna.
Authorised Person	A person authorized by the Management to carry out an activity or particular task.
Authorised Staff	An employee of E-MAS permitted to undertake a particular activity.
Automatic Route Setting (ARS)	TMS system will set routes automatically for trains according to the train data. ARS maybe configured on as per signal or per interlocking area basis.
Automatic Block	A block section, in which operation of the signals is fully controlled by axle counters.

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 7 of 11	Abbreviations & Glossary (Operations)

Automatic Block Signal	A signal controlling the entrance to an automatic block.
Automatic Train Protection (ATP)	A safety system fitted to both trains and track to automatically stop a train that had either exceeded the maximum allowable speed for a particular section of track or to prevent a train to passed a signal in Danger/STOP Aspect.
Axle Counters	A device fitted at the track used for detecting of any trains or vehicles with a metal wheel.
Ballast	Granite chippings to provide a stable base and water flow for the track.
Ballast Shoulder	The raised edge of the ballast.
Bi-directional Movement	Train or vehicle movements of both directions between the defined locations on a single track.
Braking Distance	Distance required by train to come to a full stop.
Buffer Stops	A stopping device located at the end of a head shunt and the end of a track.
Call-on Signal	Signal to indicate that a Driver may pass a signal at Danger Aspect into an occupied block.
Cancelled Trip	A cancelled trip is a revenue trip which did not depart from a terminal station or complete it's trip.
Catenary	The part of the overhead wire, which hangs between the supporting masts and from which the dropper wires are hung.
Clearance Gauge	The area outside the structural gauge up to the fence or any other limit to the railway corridor.
Coasting	Train movement without applying power to the traction motors.
Competent Person	A Qualified person who has passed all the requirement and required knowledge and skills to carry out a particular task or activity.
Concourse Level	The level of a station that provided access and egress to the System via the unpaid and paid areas by barrier lines and accommodates various facilities including Ticket Offices and Ticket Vending Machines.
Contact Wire	Part of the Overhead Catenary Line (OCL) that the pantograph of the trains makes contact.
Control Train	A train authorized by the OCC to observe for any irregularities that may affect train service i.e. (track irregularities, reset of axle counter).
Coupler	A device fitted at the front of a train and shunting loco, which is used to hold two trains together.
Crank Handles (SIG)	A device used to operate/move the blades of a turnout from one position to another position manually. Used when turnouts are not moveable electrically.
Crossover	A combination of two inter-connecting turnouts, which allows a train or vehicle to cross from one track to another track.
Dark Signal	A signal with no aspect (color indication) displayed.
Dead-man Control Device	A control device on electric train and shunting loco, which supervises the conscious state of the driver. It must be press and release within the programmed interval (30 sec)
De-energised	The condition when the OCL is switched "OFF".

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 8 of 11	Abbreviations & Glossary (Operations)

Degraded Operation	Degraded Operations considers all circumstances which affect ERL-CRS System (the “Service”) or require immediate unscheduled maintenance action but which are not considered life threatening to passengers or staff.
Depot	The Administration building, Workshop and Stabling yards located at Salak Tinggi.
Detail Overview – (TMS)	In this overview, detail movement of trains on the track, status and position of signals, turnouts and the status of route setting.
Detraining	A controlled transfer of passengers from a train to the station platform
Distant Signal	Subsidiary signal to the main signal for bi-directional movement.
Double Ending Relief	A situation whereby a standby driver activates the leading cab of a terminating train while the driver to be relieved switches simultaneously to enable the turnaround time to be kept to a minimum.
Drivers	Represent all track vehicle drivers i.e OTD, Shunter including SPYTL track vehicle operator.
Dropper Wire	Wires hanging from a catenary on to which the contact wire is attached.
Dwell Time	The time that a train spend at a station for passengers to board and alight.
Earthing Device	The device used to establish connection of electrical equipment to earth (OCL & Rail)
Emergency Brake – (ATP)	Any unsafe condition such as over speed or passing a stopping point will initiate an emergency brake (EB) application. If the trainborne systems initiate an EB for any reason e.g. safety loop open, The ATP will also initiate an EB. After an EB the train can only proceed with permission from OCC and after acknowledge the EB on the ATP panel.
Emergency Brake – Manual Activation	Either activating the emergency brake push button on the driver’s desk, activating the emergency brake lever in the passenger saloon or putting the Driving/Braking Lever into EB Position, can manually activate the emergency brake of the train.
Emergency Operation	Emergency Operations considers potentially life-threatening situations in which passengers or staff has to be evacuated.
Emergency Services	Rescue teams that provide emergency support such as the Police, Bomba and Ambulance, etc.
Energized	The condition when the OCL is switched “ON”.
Escape Route	An exit route provided from stations and buildings to a place of safety.
Evacuation Ramp	A portable platform used to transfer passengers from a failed train to a rescue train.
Facing Turnout	The moveable blade or sharp end of a turnout.
Flank Protection	Is provided to ensure that a train, which overruns a signal, cannot enter a running route, which is locked for another train.
Fouling Point	A marker located between two converging track which two trains/vehicles will come into contact with each other.
Gauge	The distance (gap) between a pair of running rails.
General Overview – (TMS)	In this overview, OCC can see the whole railway, all trains on the line and the alarm guidance related to the signaling system.

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 9 of 11	Abbreviations & Glossary (Operations)

General Public	All persons other than E-MAS employees, third parties, E-MAS contractor or agents.
Green Aspect	A signal colour which indicates proceed as per maximum permissible speed and track ahead is clear.
Hand Signal	A signal given manually by the use of light, flag or hands.
Head Shunt	A track provided to permit reverse shunting movements at Depot.
Headway	Time interval between two following trains.
Incident	An unplanned or unintended event.
Interlocking	Fail safe signaling system that ensures safe train movements.
Interlocking Area	Section of railway supervised by one interlocking.
Leading Cab	The occupied cab of a train or vehicle in the direction of travel.
Line Blocked	A track or a section of a track closed to train movements. This is undertaken by means of the TMS and signaling equipment and by provision of fixed indicators on the track/s. May be used to give protection to maintenance staff on the track.
Look Out Man	A qualified personnel which monitor and guide trains or vehicles movements entering/leaving workshop or appointed personnel to monitor train movement.
Manual Point Lock	A manual clamping/scotching mechanism applied to a set of points to retain the point blades in a fixed position.
Normal Operation	Normal Operation is when the scheduled ERL-CRS System (the "Service") is possible with no risk to passengers or staff.
On-Call Duty	Staff members with additional duties outside of normal working hours to respond to incidents or emergencies. Staff members are rostered on call duties.
Revenue Service	The time when the railway is available for revenue operations.
Pantograph	A device fitted on the roof of an electric train, which is sprung upwards to make electrical contact with OCL.
Peak Hours	The times when a more intense service is operated for increased passenger demand.
Person In Charge Of Possession (PICOP)	Authorised person on site to liaise with the Line or Depot Controller. Responsible for the safety of work at site and all arrangement within the track possession area.
Platform Level	The level that provides access to the train doors and vice versa.
Points	The point on the rail where the track diverges.
Pre-Service Train (Inspection Train)	First train routed out before revenue service to check and report for any irregularities that may affect revenue service.
Pulling	The activity of pulling one train with another train or locomotive.
Pushing	The activity of pushing one train with another train or locomotive.

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 10 of 11	Abbreviations & Glossary (Operations)

Red Aspect	A signal color, which indicates Danger.
Rescue Team	Any internal or external services for emergency support.
Revenue Line	All those tracks upon which trains carrying paid passengers normally operate.
Revenue Service	Operation of the System, or any portion thereof, as a means of transport for paid passengers.
Reversing Track	Tracks designed for reversing of trains mainly at the end of the track.
Round Trip	A journey where trains start and terminate at the originating station.
Route Indicator	Indication showing the route or track that is set for the train movement.
Route Release	Once a route has been set and locked and a proceed aspect displayed, the route can only be released again under the following circumstances. Immediately, if the route is not approach locked or after a 180 second time delay, if the route is approach locked.
Running Time	The time taken for a train to travel from one station/location to another station/location
Safe Distance	A minimum separation required to maintain safety. Applies to electric wire and running lines.
Shunting Movements	Movements of trains and vehicles in the Depot and Reversing Tracks area except for minor movements on single track
Signal Aspect	Indication displayed by a signal.
Shuttle Service	A train run over a track section between defined stations.
Sleeve	SCADA and TMS system lock command to protect against any intended and/or unintended command by the OCC.
Sleeved Signal	A signal sleeved against operation will always exhibit a Red Aspect.
Sleeve Text	SCADA and TMS System Lock command messages.
Stabling Area	Tracks in the Depot where trains are stabled when not in service.
Stopping Point	The exact location on stations platform where the driver must stop the train.
Structural Gauge	The perimeter line, 2.5 meters from the center of the track outward or approximately up to the ballast toe, which comprises the static car gauge, the dynamic deflection (or the kinematic envelope), the Construction and Maintenance tolerances and additional safety margins, which must be kept clear of personnel, tools and obstructions.
Terminal Station	Station at the physical end of the line where trains reverse.
Third Parties	Contractors and other organizations which provide a service to E-MAS/ERLSB.
Timetable	A list of train schedule arrived and depart from a specific station during revenue service.
Track Section	Part of the track between two signals.

<i>Location</i>	<i>Reference</i>	<i>Rev.</i>	<i>Date</i>	<i>Page No.</i>	<i>Document Title</i>
E-MAS Offices	G00.OMO.M15110.NA.1003	C	21.07.2023	Page 11 of 11	Abbreviations & Glossary (Operations)

Train Driver	A Qualified Employee authorized and responsible for the operation of a train or shunting locomotive.
Train Number	A number given to each train run for identification on the line within the TMS system. The number is consisting of 5 digits.
Train Run	The movement of a train within the System. The train run is made in accordance with the unique Train Number assigned to the train. During normal operations, train runs are in accordance with a pre-determined timetable.
Traffic Management System (TMS)	System that used in the OCC to monitor and control train movement.
Trespasser	Person who enters the ERL-CRS system without valid authorization.
Turnaround Time	Time take by a train after depart from terminal station until returning back to the same point including time for reversing and train stops.
Turnout	A mechanical device that is used to guide trains from one rail track to another.
Traction Current	The electricity required by an electric train for movement.
Vehicle Number	A number given to a train from the manufacturer aka. trainbody i.e. X for Ekspres and T for Transit.
Voice Recorder	A telecommunication facility, which records all communication made and received by OCC via the radio and telephone system.
Washing of Train	External cleaning of train, carried out in the train washing Plant.
White Aspect	A signal colour, which indicates proceed/line clear for limited speed movement at the train washing plant.
Wheel Slip	Phenomenon caused on a train or shunting locomotive by an over application of power to the drive system relatively to the available adhesion.
Washing Plant	A specific track/area for exterior train washing activity (track 04 depot).
Workshop	The building where Maintenance Tasks carried out.
Yellow Aspect	A signal colour which indicates proceeds under caution; prepare to stop at next signal.