

CONSIST OF LIGHT EMU/DMU

Ale501 - Le220 - Ale502

Aln501 - Ln220 - Aln502



DRIVER MANUAL

WARNING

The following manual was readapted for using inside Train Simulator 2012. Do not use for learning the actual driving of the real vehicle.

1. Unified Cab FS 93





LEGEND

1. Close Battery Circuit	14. Diagnostic Monitor
2. Open Battery Circuit	15. Lightining Signals Panels
3. Engine Brake	16. Door Open Permission BM Key
4. Train Brake	17. BM Key
5. Hand Brake	18. Close IR
6. Horn	19. Open IR
7. Manual Run Mode lever (LCM)	20. Pantograph
8. Reverser (LINV)	21. Diesel Starting Consent
9. Automatic Run Mode Lever (LCA)	22. Parking
10. Target speed manipulation Lever (LCC)	23. Head Lights
11. Target Speed (* means confirmed)	24. Cab Light
12. Dynamometer	25. Wipers
13. Speedometer	26. Emergency brake

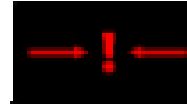
KEY MAP

R	Close Battery Circuit
SHIFT + R	Open Battery Circuit
SHIFT + F	BM Key On/Off (Unusable by mouse)
SHIFT + T	Diesel Starting Consent (Diesel model)
SHIFT + G	Pantograph Up/Down (Electric model)
Y	Close IR
SHIFT + Y	Open IR
W	LINV Lever - Increase
S	LINV Lever - Decrease
Q	Train brake - Increase
E	Train brake - Decrease
N	Engine brake - Increase
M	Engine brake - Decrease
A	LCM Lever - Increase
D	LCM Lever - Decrease
I	LCC Lever - Increase
K	LCC Lever - Decrease
J	LCA Lever - Increase
L	LCA Lever - Decrease
H	Target Speed Confirm (Unusable by mouse)
SHIFT + P	Parking
BACKSPACE	Hand brake
C/SHIFT+C	Headlight On/Off (2 clicks)
SPACE	Horn
V	Wipers
X	Cab Light
TAB	SPAD (Request Signal Pass At Danger)
T	Passengers Load/Unload

2. BM Light Signals

LEFT PANEL SIGNALS

General Fault



Boogies Braked



Handbrake On



RIGHT PANEL SIGNALS

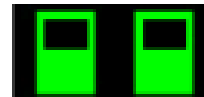
Headlights On



Wheelslip Protection System in action



Doors Closed and secured



3. Train Operations

STARTUP

-Close Battery Circuit **[R]**

-Insert BM Key **[SHIFT + F]**

-Wait 10 seconds that battery turn on systems and the “General Fault” warning disappear.

Monitors turns on and sounds a BIP.

-Pull up the pantograph (EMU version) **[SHIFT + G]**

-Press Diesel Starting Consent (DMU version) **[SHIFT + T]**

On diagnostic monitor, boxes of activated service will light up of solid green color.

-Close IR **[Y]**

On diagnostic monitor, boxes of IR service and Traction service will light up of green.

To shutdown the train, do the same sequence inverted.

MANUAL RUN MODE

It is used to execute shunt movements. It can be used alternatively to the automatic mode for the normal driving.

-Select with the LINV lever the desired direction **[W o S]**

-Move the LCM lever forward in the “Trazione” sector **[A o D]**

With LCM lever set to traction sector, speed will be automatically set to zero.

To regulate the speed during the manual run mode of the train, it will be necessary to operate on the LCM lever setting the torque output. For the dynamic braking, move the lever back to sector FE. Slowing down less than 40Km/h, you must use dynamic brake in paired with the train brake.

KEEP IN MIND THAT IN THIS CASE THE RESPECT FOR THE MAXIMUM SPEED LIMIT IS DUE TO MACHINIST LIABILITY.

AUTOMATIC RUN MODE

It is used for the normal train driving.

- Select with the LINV lever the desired direction

[W o S]

- Set with the LCC lever the target speed. **[I o K]**

- Once it is set, move LCC lever in neutral position and confirm the speed **[H]**

- Move progressively the LCA lever forward to authorize the traction.

[J o L]

If, while driving, the train speed tended to overcome the maximum speed limit, the command and control logic will reduce the traction effort till it become zero and if it won't be enough, with speeds greater than 35Km/h, will command the dynamic braking to the maximum effort that is possible.

When the dynamic braking will not be more necessary, the control and command logic will command the disconnection and will be reinsert the traction till a maximum value, dependent from the speed and the position of the LCA lever.

When the dynamic braking is insufficient to maintain the speed setting, use the train brake.

Maintaining the LCA lever out of the zero value it will be possible, with the LCC lever, change in every moment the target speed setting.

The driving speed will be automatically adapted .

During automatic run mode it is possible to temporarily brake the consist using the LCM lever, moving it in the FE sector. When the lever return to 0, system restores the train speed to the driving speed setted.

WHEN SETTING A SPEED GREATER THAN THE ACTUAL SPEED, IT'LL BE NECESSARY TO CONFIRM THE NEW VALUE. IF THIS OPERATION WON'T BE EXECUTED IN A PREDETERMINED TIME PERIOD, IT WILL RESTORE THE INFERIOR VALUE SETTED BEFORE.

RETURN TO MANUAL RUN MODE

- Move the LCA lever at 0 **[J o L]**

- Move the LCM lever in the "Trazione" sector **[A o D]**

SPEED REGULATION DURING SPEED RESTRICTIONS

Use:

- Dynamic braking moving LCM lever on Braking sector
- Train brake in case the dynamic brake only isn't enough.

Remember that the dynamic braking is can be used only over 35Km/h or up to 10Km/h if used paired to the train brake.

SPEED REGULATION FOR A STOP

Move the torque lever used (LCM or LCA) to zero and use the train brake.

4. Dynamometer

The visualization of the real torque value and the requested value take place on a double indexed dynamometer (red and white) placed on the BM.

The red index means:

- On manual run mode, the effort required depending on the LCM lever position.
- On automatic run mode the torque effort authorized by the LCA lever.
- On dynamic braking the value of braking force setted by the LCM lever

The white index means:

- The torque effort really provided by the engine.



5. Wheel slip Protection System

TRACTION

The signal “intervention of wheel slip protection system” means that the torque required is greater than the torque that could be provided in this condition of wheel/rail adherence.

In this case the control logic acts on the sander to restore the adherence.

In adherence critical conditions, reduce the traction effort to help the system to restore the optimal adherence conditions.

After, bring back slowly the required torque to the desire level.



BRAKING

The signal of “intervention of wheel slip protection system” turns on also to warn the slip of the locomotive while braking. With the LCM lever reduce the dynamic brake value required to help the control logic to restore the optimal adherence conditions

6. Parking Mode

The parking mode is a configuration that permits a machinist to change cab or perform a train parking maintaining the IR closed and the pantograph up or, on diesel consist, the engines on, at the minimum, without disable the auxiliary services.

PARKING MODE PRE-REQUISITES

- BM Key inserted
- 0 Speed
- LINV lever at zero
- LCM and LCA lever at zero
- Battery On
- Train braked

ENTER IN PARKING MODE

- Move the train brake out of the release position (> 20%)[**Q o E**]
- Release the engine brake.
- Push the parking button [**SHIFT+P**]
- Wait that the Parking button start to blink.
- Pull down pantograph/Release Diesel Starting Consent button [**SHIFT + G / SHIFT+T**]
- Remove the BM Key [**SHIFT+F**]
- Wait that the Parking button become solid yellow.
- Release the Parking button

EXIT FROM PARKING MODE

- Verify thath the consisti s in parking mode (parking button is solid yellow)
- Push the Parking Button [**SHIFT+P**]
- Insert the BM Key[**SHIFT+F**]
- Wait that the Parking button start to blink
- Raise up pantograph/Press Diesel starting Conset [**SHIFT + G/ SHIFT+T**]
- Waith that the Parking button unlit
- Release the Parking button

PARKING EXCEPTION

When the expected prerequisites at chapter point “Parking Condition” come to miss or there is an error in the sequence, the “Parking Exception” is activated and it causes the IR opening and the pantograph lowering or the shutdown of the diesel engines. In this condition the train must be returned to service before it can enter in parking mode again.

7. Driving Hits and Developer's Notes

- ✚ **Never use Cab Control to drive the train (Hud F4).** Scripts are developed to work only by keyboard or mouse and they manage themselves controls in the HUD. Using Cab Controls commands can cause wrong behavior of the c.
- ✚ **To repeat cab signals use the Track Monitor (Hud F3).** For the timetable scenery, press F1 with Cab Control activated (F4) to view arrivals and departures times.
- ✚ **In tracks with big slopes, especially downhill, the onboard system could not succeeded to sufficiently brake the train to remain in the speed limit. This is not a bug but the real train behavior. So you must help the system by using the train brake.**
- ✚ **Parking mode is not mandatory during change of cab. So well we suggest to use it to recreate a complete Minuetto driving experience.**
- ✚ **In the real train the driving confirmation is obtained by pressing LCC lever. Because of the limitations of the simulator this behavior can't be realized, so that command can be execute only by pressing H key. In addition in the real train speed is red until it is confirmed, then it becomes green color. This require large amount of textures and scripts so we decided to use an asterisk when speed is confirmed.**
- ✚ **Scenarios are designed to be executed in order to be able to develop a complete driving skill in every situation.**
- ✚ **The first time we suggest to do the Free Roam scenery in the TestTrack to try commands and take confidence with driving. Also we suggest to try both electric and diesel version because the behavior of each version during acceleration and braking is quite different, as real.**
- ✚ **While driving in most cases it is required a fast controls usage. We highly recommend first to learn driving by keyboard and after the necessary confidence, you can switch to mouse cabin control driving.**

8. Using the packet in your scenarios

The packet includes Minuetto consist in diesel and electric version of various liveries.

To use it in your own scenarios:

- From Scenery Editor add packet to library

Provider Anemone -> Product MinuettoPack

Carriages are named:

- Ale501 + [livery name] front engine of electric consist
- Ale502 + [livery name] rear engine of electric consist
- Le220 + [livery name] central wagon of electric consist
- Aln501 + [livery name] front engine of diesel consist
- Aln502 + [livery name] rear engine of diesel consist
- Ln220 + [livery name] central wagon of diesel consist

WARNING: THE LE220 WAGON CONTAINS PANTOGRAPH DESIGNED TO BE INSERTED IN A DETERMINED DIRECTION. IF DURING FORWARD DRIVING, THE FRONT PANTOGRAPH RAISE UP, ROTATE THE LE220 WAGON.

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MINUETTO PACK 1.10 PER TRAIN SIMULATOR 2012



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AmiciTreni.net and its users

For the hospitality, the support and the visibility

You

For purchasing the product

And all who have supported us in many ways!

Proudly produced in Italy in our studios of Scandicci (Florence)