## Mat '64



## Prototype:

The NS Mat ' 64 or Materieel ' 64 electric multiple units were built by Werkspoor and later by Düwag and Waggonfabrik Talbot between 1961 and 1976. They are operated, in decreasing numbers, in the Netherlands by the Nederlandse Spoorwegen (NS). The class is actually called Plan T and Plan V: the Plan T is a 4-car EMU and the Plan V is a 2-car EMU.

Source Wikipdia

| function | arrangement | function output | sound-function |
| :---: | :--- | :--- | :--- |
| F0 | Light on/off | white light driver's cab 1(FAOv) and <br> red back light driver's cab 2(FA1) on <br> forward driving, <br> white light driver's cab 2(FAOr) and <br> red back light driver's cab 1(FA2) on <br> reversing |  |
| F1 |  |  | high horn |
| F2 |  |  | low horn |
| F3 |  |  | conductor's whistle |
| F4 |  |  | door opening and |
| F5 |  | door closing |  |
| F6 | half speed- and <br> deactivating momentum <br> button | light suppression <br> driver's cab side 1 | FA0v and FA2 suppressed |
| F7 |  |  |  |
| F8 | Sound on/off |  |  |
| F9 | light suppression <br> driver's cab side 2 |  |  |
| F10 |  |  |  |
| F11 |  |  |  |
| F12 |  |  |  |
| F13 |  |  |  |
| F14 | mute on/off |  |  |


| random effect | sound |
| :---: | :---: |
| $\mathrm{Z1}$ | compressor |

## Modified CVs

| CV\# $1=3$ | CV\# 105 = 161 | CV\# $292=60$ | CV\# $326=0$ |
| :---: | :---: | :---: | :---: |
| CV\# $2=4$ | CV\# 106 = 1 | CV\# 293-160 | CV\# $327=0$ |
| CV\# $4=10$ | CV\# 107 = 71 | CV\# 294 $=255$ | CV\# 328-0 |
| CV\# $5=140$ | CV\# 108 $=41$ | CV\# 295-1 | CV\# $329=0$ |
| CV\# $9=95$ | CV\# 112 $=64$ | CV\# 296-255 | CV\# 330 $=0$ |
| CV\# $13=1$ | CV\# 124 $=35$ | CV\# $297=55$ | CV\# 331 $=0$ |
| CV\# $29=14$ | CV\# 136-24 | CV\# 298 $=50$ | CV\# $332=0$ |
| CV\# $33=5$ | CV\# 144 = 128 | CV\# $299=240$ | CV\# $333=0$ |
| CV\# $34=10$ | CV\# 148 = 1 | CV\# $311=0$ | CV\# 334-0 |
| CV\# $35=0$ | CV\# 155 $=6$ | CV\# $312=0$ | CV\# $335=0$ |
| CV\# $36=0$ | CV\# 156-6 | CV\# $313=114$ | CV\# $336=0$ |
| CV\# $37=0$ | CV\# 158 $=68$ | CV\# $314=0$ | CV\# $337=0$ |
| CV\# $38=0$ | CV\# $254=46$ | CV\# $315=0$ | CV\# 338 $=0$ |
| CV\# $39=0$ | CV\# $266=54$ | CV\# $316=0$ | CV\# $344=40$ |
| CV\# 40 $=0$ | CV\# $273=10$ | CV\# $317=0$ | CV\# 351 $=0$ |
| CV\# 41 $=0$ | CV\# 274 $=0$ | CV\# 318 $=0$ | CV\# $352=0$ |
| CV\# $42=0$ | CV\# $275=50$ | CV\# $319=0$ | CV\# $357=60$ |
| CV\# 43 $=0$ | CV\# $276=50$ | CV\# $320=0$ | CV\# 358-10 |
| CV\# $44=0$ | CV\# $283=50$ | CV\# $321=0$ | CV\# $361=25$ |
| CV\# $45=0$ | CV\# $286=50$ | CV\# $322=0$ | CV\# 363 = 0 |
| CV\# $46=0$ | CV\# $287=100$ | CV\# $323=0$ | CV\# $372=200$ |
| CV\# $56=33$ | CV\# $288=30$ | CV\# $324=0$ | CV\# 373-40 |
| CV\# $61=97$ | CV\# 290 $=100$ | CV\# $325=0$ |  |

