

## General project information

Project-Name:

Roco X2800

Version-No.:

1

Project-No.:

11402

Item-No.:

Order-No.:

Customer:

Roco Modellspielwaren GmbH  
Rifer Hauptstrasse 21  
A-5400 Hallein

Contact person:

Detlef Bräuniger

Tel.-No.:

Email:

d.braeuniger@roco.cc

Project start:

06-04-28

Project status:

Active

Date of approval:

OEM-Manual required ☐

## Sound recording documentation

Origin of the sound:

ESU X2800 Recording, Besancon

Recording date:

06-04-28

Comments:

## Decoder information

Decodertype:

LokSound V3.5 8MBit

Loudspeaker:

40mm x 20mm

Configuration:

1 Speaker

Firmware-Version:

0.0.5968

## Decoder Setup

Address:

3

max. speed:

32

Protocols:

DC ☒  
AC ☒  
DCC ☒Motorola ☒  
mfx ☐  
Selectrix ☐

Break sections:

DCC ☒  
Märklin ☒

Prime mover sound description:

idle + 6 drivesteps; dieselsound

## Function keys:

|     |                          |
|-----|--------------------------|
| F0  | Light on/off             |
| F1  | Sound on/off             |
| F2  | Airhorn 1 (high pitched) |
| F3  | Airhorn 2 (low pitched)  |
| F4  | Compressor               |
| F5  | Conductor's Signal       |
| F6  | Shunting Mode            |
| F7  | Diesel Notch Up          |
| F8  | Diesel Notch Down        |
| F9  | Tachograph               |
| F10 | Horn-Signal 1            |
| F11 | Horn Signal 2            |
| F12 | Airhron 1 Short          |
| F13 | Airhron 2 Short          |
| F14 | Brake set                |
| F15 | Brake release            |
| F16 |                          |
| F17 |                          |
| F18 |                          |
| F19 |                          |
| F20 |                          |

## Special features:

Doppler effect on F2 and F3

### CV-Values

| CV           | DEC      | BIN  | HEX | CV           | DEC      | BIN  | HEX | CV           | DEC      | BIN  | HEX |
|--------------|----------|------|-----|--------------|----------|------|-----|--------------|----------|------|-----|
| CV 001 = 003 | 00000011 | 0x03 |     | CV 115 = 015 | 00001111 | 0x0F |     | CV 180 = 000 | 00000000 | 0x00 |     |
| CV 002 = 003 | 00000011 | 0x03 |     | CV 116 = 015 | 00001111 | 0x0F |     | CV 181 = 003 | 00000011 | 0x03 |     |
| CV 003 = 007 | 00000111 | 0x07 |     | CV 117 = 015 | 00001111 | 0x0F |     | CV 182 = 000 | 00000000 | 0x00 |     |
| CV 004 = 008 | 00001000 | 0x08 |     | CV 118 = 015 | 00001111 | 0x0F |     | CV 183 = 064 | 01000000 | 0x40 |     |
| CV 005 = 032 | 00100000 | 0x20 |     | CV 121 = 064 | 01000000 | 0x40 |     | CV 184 = 000 | 00000000 | 0x00 |     |
| CV 006 = 016 | 00010000 | 0x10 |     | CV 122 = 064 | 01000000 | 0x40 |     | CV 185 = 000 | 00000000 | 0x00 |     |
| CV 013 = 001 | 00000001 | 0x01 |     | CV 123 = 050 | 00110010 | 0x32 |     | CV 186 = 064 | 01000000 | 0x40 |     |
| CV 014 = 003 | 00000011 | 0x03 |     | CV 124 = 006 | 00000110 | 0x06 |     | CV 187 = 000 | 00000000 | 0x00 |     |
| CV 017 = 192 | 11000000 | 0xC0 |     | CV 125 = 020 | 00010100 | 0x14 |     | CV 188 = 000 | 00000000 | 0x00 |     |
| CV 018 = 128 | 10000000 | 0x80 |     | CV 126 = 060 | 00111100 | 0x3C |     | CV 189 = 128 | 10000000 | 0x80 |     |
| CV 019 = 000 | 00000000 | 0x00 |     | CV 127 = 030 | 00011110 | 0x1E |     | CV 190 = 000 | 00000000 | 0x00 |     |
| CV 021 = 000 | 00000000 | 0x00 |     | CV 128 = 080 | 01010000 | 0x50 |     | CV 191 = 000 | 00000000 | 0x00 |     |
| CV 022 = 000 | 00000000 | 0x00 |     | CV 129 = 000 | 00000000 | 0x00 |     | CV 192 = 128 | 10000000 | 0x80 |     |
| CV 029 = 004 | 00000100 | 0x04 |     | CV 130 = 000 | 00000000 | 0x00 |     | CV 193 = 000 | 00000000 | 0x00 |     |
| CV 049 = 017 | 00010001 | 0x11 |     | CV 131 = 000 | 00000000 | 0x00 |     | CV 194 = 000 | 00000000 | 0x00 |     |
| CV 050 = 003 | 00000011 | 0x03 |     | CV 132 = 000 | 00000000 | 0x00 |     | CV 195 = 000 | 00000000 | 0x00 |     |
| CV 051 = 003 | 00000011 | 0x03 |     | CV 133 = 000 | 00000000 | 0x00 |     | CV 196 = 000 | 00000000 | 0x00 |     |
| CV 052 = 000 | 00000000 | 0x00 |     | CV 134 = 012 | 00001100 | 0x0C |     | CV 197 = 009 | 00001001 | 0x09 |     |
| CV 053 = 056 | 00111000 | 0x38 |     | CV 135 = 000 | 00000000 | 0x00 |     | CV 198 = 000 | 00000000 | 0x00 |     |
| CV 054 = 032 | 00100000 | 0x20 |     | CV 136 = 000 | 00000000 | 0x00 |     | CV 199 = 000 | 00000000 | 0x00 |     |
| CV 055 = 024 | 00011000 | 0x18 |     | CV 137 = 012 | 00001100 | 0x0C |     | CV 200 = 009 | 00001001 | 0x09 |     |
| CV 056 = 064 | 01000000 | 0x40 |     | CV 138 = 000 | 00000000 | 0x00 |     | CV 201 = 000 | 00000000 | 0x00 |     |
| CV 057 = 001 | 00000001 | 0x01 |     | CV 139 = 000 | 00000000 | 0x00 |     | CV 202 = 000 | 00000000 | 0x00 |     |
| CV 058 = 041 | 00101001 | 0x29 |     | CV 140 = 000 | 00000000 | 0x00 |     | CV 203 = 007 | 00000111 | 0x07 |     |
| CV 059 = 032 | 00100000 | 0x20 |     | CV 141 = 001 | 00000001 | 0x01 |     | CV 204 = 000 | 00000000 | 0x00 |     |
| CV 060 = 032 | 00100000 | 0x20 |     | CV 142 = 000 | 00000000 | 0x00 |     | CV 205 = 000 | 00000000 | 0x00 |     |
| CV 061 = 020 | 00010100 | 0x14 |     | CV 143 = 000 | 00000000 | 0x00 |     | CV 206 = 007 | 00000111 | 0x07 |     |
| CV 062 = 040 | 00101000 | 0x28 |     | CV 144 = 002 | 00000010 | 0x02 |     | CV 207 = 000 | 00000000 | 0x00 |     |
| CV 063 = 064 | 01000000 | 0x40 |     | CV 145 = 000 | 00000000 | 0x00 |     | CV 208 = 000 | 00000000 | 0x00 |     |
| CV 064 = 008 | 00001000 | 0x08 |     | CV 146 = 000 | 00000000 | 0x00 |     | CV 209 = 008 | 00001000 | 0x08 |     |
| CV 066 = 000 | 00000000 | 0x00 |     | CV 147 = 000 | 00000000 | 0x00 |     | CV 210 = 000 | 00000000 | 0x00 |     |
| CV 067 = 009 | 00001001 | 0x09 |     | CV 148 = 004 | 00000100 | 0x04 |     | CV 211 = 000 | 00000000 | 0x00 |     |
| CV 068 = 018 | 00010010 | 0x12 |     | CV 149 = 000 | 00000000 | 0x00 |     | CV 212 = 008 | 00001000 | 0x08 |     |
| CV 069 = 027 | 00011011 | 0x1B |     | CV 150 = 000 | 00000000 | 0x00 |     | CV 213 = 000 | 00000000 | 0x00 |     |
| CV 070 = 036 | 00100100 | 0x24 |     | CV 151 = 004 | 00000100 | 0x04 |     | CV 214 = 000 | 00000000 | 0x00 |     |
| CV 071 = 045 | 00101101 | 0x2D |     | CV 152 = 000 | 00000000 | 0x00 |     | CV 215 = 003 | 00000011 | 0x03 |     |
| CV 072 = 054 | 00110110 | 0x36 |     | CV 153 = 000 | 00000000 | 0x00 |     | CV 216 = 000 | 00000000 | 0x00 |     |
| CV 073 = 063 | 00111111 | 0x3F |     | CV 154 = 032 | 00100000 | 0x20 |     | CV 217 = 000 | 00000000 | 0x00 |     |
| CV 074 = 072 | 01001000 | 0x48 |     | CV 155 = 001 | 00000001 | 0x01 |     | CV 218 = 003 | 00000011 | 0x03 |     |
| CV 075 = 081 | 01010001 | 0x51 |     | CV 156 = 000 | 00000000 | 0x00 |     | CV 219 = 000 | 00000000 | 0x00 |     |
| CV 076 = 091 | 01011011 | 0x5B |     | CV 157 = 032 | 00100000 | 0x20 |     | CV 220 = 000 | 00000000 | 0x00 |     |
| CV 077 = 100 | 01100100 | 0x64 |     | CV 158 = 001 | 00000001 | 0x01 |     | CV 221 = 004 | 00000100 | 0x04 |     |
| CV 078 = 109 | 01101101 | 0x6D |     | CV 159 = 000 | 00000000 | 0x00 |     | CV 222 = 000 | 00000000 | 0x00 |     |
| CV 079 = 118 | 01110110 | 0x76 |     | CV 160 = 032 | 00100000 | 0x20 |     | CV 223 = 000 | 00000000 | 0x00 |     |
| CV 080 = 127 | 01111111 | 0x7F |     | CV 161 = 002 | 00000010 | 0x02 |     | CV 224 = 004 | 00000100 | 0x04 |     |
| CV 081 = 136 | 10001000 | 0x88 |     | CV 162 = 000 | 00000000 | 0x00 |     | CV 225 = 000 | 00000000 | 0x00 |     |
| CV 082 = 145 | 10010001 | 0x91 |     | CV 163 = 032 | 00100000 | 0x20 |     | CV 226 = 000 | 00000000 | 0x00 |     |
| CV 083 = 154 | 10011010 | 0x9A |     | CV 164 = 002 | 00000010 | 0x02 |     | CV 227 = 010 | 00001010 | 0x0A |     |
| CV 084 = 163 | 10100011 | 0xA3 |     | CV 165 = 000 | 00000000 | 0x00 |     | CV 228 = 000 | 00000000 | 0x00 |     |
| CV 085 = 173 | 10101101 | 0xAD |     | CV 166 = 000 | 00000000 | 0x00 |     | CV 229 = 000 | 00000000 | 0x00 |     |
| CV 086 = 182 | 10110110 | 0xB6 |     | CV 167 = 005 | 00000101 | 0x05 |     | CV 230 = 010 | 00001010 | 0x0A |     |
| CV 087 = 191 | 10111111 | 0xBF |     | CV 168 = 000 | 00000000 | 0x00 |     | CV 231 = 000 | 00000000 | 0x00 |     |
| CV 088 = 200 | 11001000 | 0xC8 |     | CV 169 = 000 | 00000000 | 0x00 |     | CV 232 = 000 | 00000000 | 0x00 |     |
| CV 089 = 209 | 11010001 | 0xD1 |     | CV 170 = 005 | 00000101 | 0x05 |     | CV 233 = 011 | 00001011 | 0x0B |     |
| CV 090 = 218 | 11011010 | 0xDA |     | CV 171 = 000 | 00000000 | 0x00 |     | CV 234 = 000 | 00000000 | 0x00 |     |
| CV 091 = 227 | 11100011 | 0xE3 |     | CV 172 = 000 | 00000000 | 0x00 |     | CV 235 = 000 | 00000000 | 0x00 |     |
| CV 092 = 236 | 11101100 | 0xEC |     | CV 173 = 013 | 00001101 | 0x0D |     | CV 236 = 011 | 00001011 | 0x0B |     |
| CV 093 = 245 | 11110101 | 0xF5 |     | CV 174 = 000 | 00000000 | 0x00 |     | CV 249 = 000 | 00000000 | 0x00 |     |
| CV 094 = 255 | 11111111 | 0xFF |     | CV 175 = 000 | 00000000 | 0x00 |     | CV 250 = 000 | 00000000 | 0x00 |     |
| CV 095 = 000 | 00000000 | 0x00 |     | CV 176 = 013 | 00001101 | 0x0D |     | CV 251 = 000 | 00000000 | 0x00 |     |
| CV 112 = 033 | 00100001 | 0x21 |     | CV 177 = 000 | 00000000 | 0x00 |     | CV 252 = 000 | 00000000 | 0x00 |     |
| CV 113 = 015 | 00001111 | 0x0F |     | CV 178 = 003 | 00000011 | 0x03 |     | CV 253 = 000 | 00000000 | 0x00 |     |
| CV 114 = 015 | 00001111 | 0x0F |     | CV 179 = 000 | 00000000 | 0x00 |     | CV 254 = 000 | 00000000 | 0x00 |     |
|              |          |      |     |              |          |      |     | CV 255 = 000 | 00000000 | 0x00 |     |

### Revision

Date issued:

Sent by:

Customer's feedback date:

06-07-26

mail

Customer's feedback (change requests):

Changes in comparison to the former version:

Approval note added ☐

Production file generated by:

Date of generating:

Manual generated by:

Manual generated from: