



Doehler & Haass

## Outputs

**Headlights (F0)** are on output LV (FL) white cable for front light and LR (RL) yellow cable for rear light, both on the 8-pin plug.

Intensity can be set by CV 52 from 0 to 31 (for both in common).

CV 33 for FL: value 1 = only forward, value 3 = both forward & reverse

CV 34 for RL: value 2 = only in reverse, value 3 = both forward & reverse

**Aux1 and Aux 2** are just **simple on-off** outputs with neither flickering effect nor seuthe presetting because it is technically not possible.

This is sufficient for most customers.

**Aux 1 (as well as Aux 3 flickering, see below)** is always assigned directly to the **coal shovelling sound**. Aux 1 is the green cable on the 8-pin plug.

For flickering on Aux 1 you will have to use a self-flickering LED (about £ 0.50).

Intensity can be set by CV 54 from 0 to 31.

**Aux 2 (as well as Aux 4 Seuthe, see below)** is assigned to **F 20**. Aux 2 can be found on the soldering side just beside where the green cable is soldered on (green is Aux1).

Only the decoder version without the 8-pin plug (harness only) has the violet cable soldered on.

Intensity can be set by CV 55 from 0 to 31.

**Aux 3 and 4** are for people with more experience and who are willing to read the instructions because soldering on the decoder board is required

**Aux 3** gives you the **firebox flicker effect** but you have to solder directly on the decoder. If you don't want this, you instead can connect to Aux 1 a self-flickering LED (about £ 0.50).

Intensity can be set by CV 461 from 0 to 255 (default 255).

Always use a resistor when connecting an LED to the decoder.

**Aux 4** gives you a **Seuthe control** which is a little "dynamic" depending on stop / acceleration / constant speed / coasting, means the intensity of smoke is slightly changing, but don't expect a pulse or even perfection from this feature because of the sluggishness of the Seuthe smoker.

Intensity can be set by CV 463 from 0 to 255 (default 255).

Depending on the Seuthe unit you might have to set the value down in order to recognize differences in intensity.

*NOTE: this feature is not officially advertised because it is a first attempt.*

**Aux 3 & 4** are not on the soldering side of the board.

You can find them in the german D&H manual here:

[https://doehler-haass.de/cms/media/pdf3/SD18A\\_SD21A.pdf](https://doehler-haass.de/cms/media/pdf3/SD18A_SD21A.pdf)

Please go to page 7. You will find the respective solder pads at the bottom side of the decoder.