ZIMO Input Mapping
Assignment of function keys to decoder functions – Now easy to change!

Which DCC driver has not become angry at the fact that it is so complicated to change which key operates which function in a loco. After a few years and using decoders from several manufuacturers, we sometimes lose track of the assignments. Meanwhile, we now have up to 28 function keys, but the NMRA standard does not foresee a decoder output beyond 12. For example, the ouptut function 8 cannot be associated with function key 1, so the anger mounts. The users of ZIMO decoders gave feedback and ZIMO has taken this seriously and acted.

In an easy-to-use (simple for the user), the so-called "Input mapping" by CV's 400 .. 428, alow each function key to be assigned to complex functions as programmed by sound designers on the entire sound project. Desired function kes are "remapped". The function outputs and the 4 servo outputs can be assigned to each function key number.

As of firmware version 30.6, all ZIMO sound decoder support this input mapping and this can also be retro-fitted to any existing structure, and which will change which function key is assigned to a function . The ZIMO decoders have become the most flexible and easiest decoders to customize.

The procedure is really quite trivial. The CV 400-428 correspond to the "internal" functions 0 through 28, which by the "normal" function mapping CVs and other functional outputs and sound effects are assigned to these numbers. The default value of these CVs is 0, which makes sure that sounds continue to function without changing existing projects. This means that the "Internal" function 1 is assigned to the "external" function key 1, ie F1, function 2 to F2, etc. If one replaces the value 0 with the number of the function key you want to use, the entire function including anything programmed via other CVs and sounds are assigned to the appropriate function key. An anomaly in this intuitive logic is that you have to use the value 29 in order to assign an "internal" function to function fey 0. This is the price to pay, so that the many existing sound projects do not have to be revised.

If, for example, in the the loaded sound project the whistle is defined on function 2, but the user wants it to be operated by the function key 4, simply program the value 4 into CV 402. You can assign more than one "internal" function to a single function key. Therefore, first write down what needs to be where, before making any changes. If a key already has a function assigned, and this function is now needed for something else, then park this function high among the F key numbers (above 20 for example, using an F Key which is not used in most sound projects), until the needed F key is free.

The keys can also be inverted – so the function is on when the key is not pressed and the function is switched off when the key is pressed. Why do you need something like this? You can switch between two functions, or you can fix wiring errors in the loco. The RhB Gem 4/4, for example as supplied by Kiss, switches on (without any key) the red tail light for engine journeys always which is correct for light engine moves, but must be switched off and the normal white Swiss Locomotive taillight must be turned on when working a train, and this is inconvenient when 2 function keys are used. The inversion of the rear red light function onto the same key as the rear white light is a more elegant way to change lights and always show the correct rear light. In order to assign an inverted function just follow the instructons above but add 100 to the desired function key. The ZIMO decoder manual for the sound decoder also shows also how a function key can be set according to the direction of travel.

All in all, this is an extremely practical upgrade which solves an age-old desire of the DCC user to easily change function key assignments.