Alltrax XCT Function Knob Boxes: FN-KS for XCT REGEN Motor Controllers

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XCT MODELS: **ALLTRAX PN: FN-KS, SURFACE mount box**
ALLTRAX PN: FN-DM-KS, DASH mount panel

The **XCT** motor controllers have "User Inputs" or commonly called Personality Switches that allow for preset user profiles or interactive adjustments of Speed or Regen while driving. **XCT** Controllers PRIOR to AUGUST 2016 may not have the FN 3-pin integrated connector in J4-J5-J6 connector well (See WEB SITE for serial number cutoff). An adapter kit for all older controllers taps into the carts wire harness.

Use TOOLKIT software (Version 3.0 or above) to enable the new Function Control features. Newer XCT controllers built ON or AFTER August 2016 includes a 3-pin connector plug for FN into the XCT controller J4-J5-J6.

FN-KS with Mode Switch + Regen knob. The MODE switch can select between three preset user profiles or personality modes.

N = Normal Profile DEFAULT (Street/Speed)
1 = User 1 profile (Performance / Buggy mode)
2 = User 2 profile (Tractor mode)

The Mode selects user profiles set up in the Alltrax Toolkit Version 3.0 (or higher) saved into memory.

The REGEN knob is adjusted based on your profile from mild to wild affecting both regen and speed.
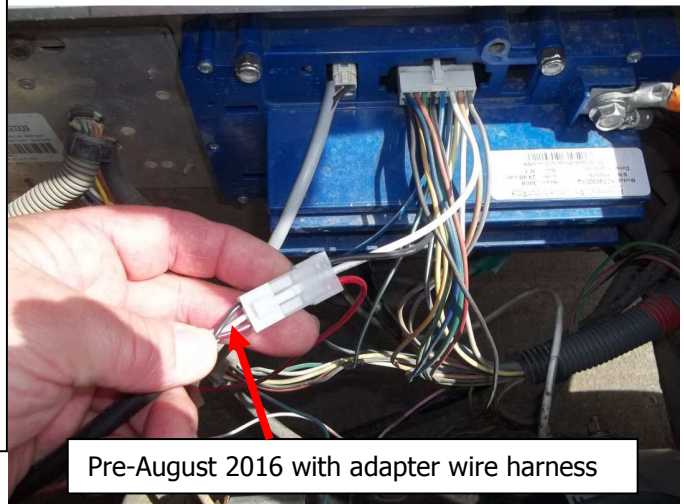
Pre-August 2016 with adapter wire harness
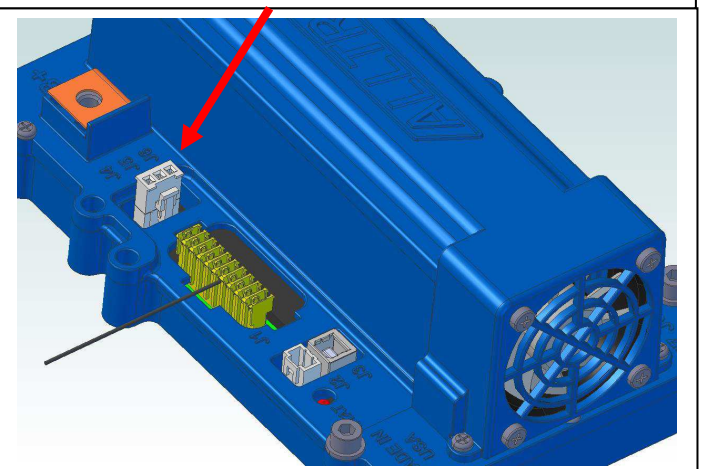
One Potentiometer & One 3-position rotary switch

FN-KS

After-August 2016 with Integrated J4-J5-J6 Connector

FN-DM-KS (Shown for reference only)

SOFTWARE:

Download the latest Alltrax TOOLKIT Version 3.0 (or above) from the Alltrax web site: www.alltraxinc.com. Using toolkit, the function box "MODE knob" selects the THREE user profiles, Normal, User 1, and User 2. Each "profile" is set up for a mode you wish to select such as:

Most people use these settings:	**Have kids? Use these settings:**
N = Normal profile (Street Speed mode)	N = Normal profile (CHILD Slow mode)
1 = User 1 profile (Hunting Buggy mode)	1 = User 1 profile (Performance mode)
2 = User 2 profile (Tractor mode mode)	2 = User 2 profile (Street Speed mode)

The reason to set **NORM** as the SLOW speed is if you have kids, kids are smart. The NORM mode is the DEFAULT mode when the FN control is unplugged. So kids "Google® it" and unplug the FN cable to make the cart go fast – but since the "NORM mode" is set up as CHILD mode and SLOW them down, no matter if the cable is unplugged.

For Regen you can set the Minimum and max values in EACH profile that correlate to the full left of the knob (CCW) and the max value slider for the full right knob (CW)

Click the **1-SWITCH, 1-ANALOG** Input radio button to activate the FN-KEY and FN-DM-KEY controllers.
The following examples show SPEED settings for NORMAL top speed and mild regen.

USER 1 example, more of a "Performance Mode" or "Hunting Buggy Mode". The speed limit RPM is increased slightly and spreads across 3500 RPM (depends on the motor RPM limits). Regen set for 89 amps up to a steep grade crawler of 250 Amps with TURBO OFF as this is for high efficiency / range of for rough terrain.

The software also has a feature to "Highlight the knob" when you hover over the slider bar with your mouse. This helps identify which slider you're affecting. In this example the mouse (red arrow) is over the REGEN slider.

Also notice the reverse speed. In this example was set to 75% of throttle. When hunting buggies get stuck you want more power in reverse. Normal reverse speed is typically 50%. Some guys running dunes or hunting buggy will run as high as 100% in reverse to get unstuck. Use CAUTION driving with setting higher than default.
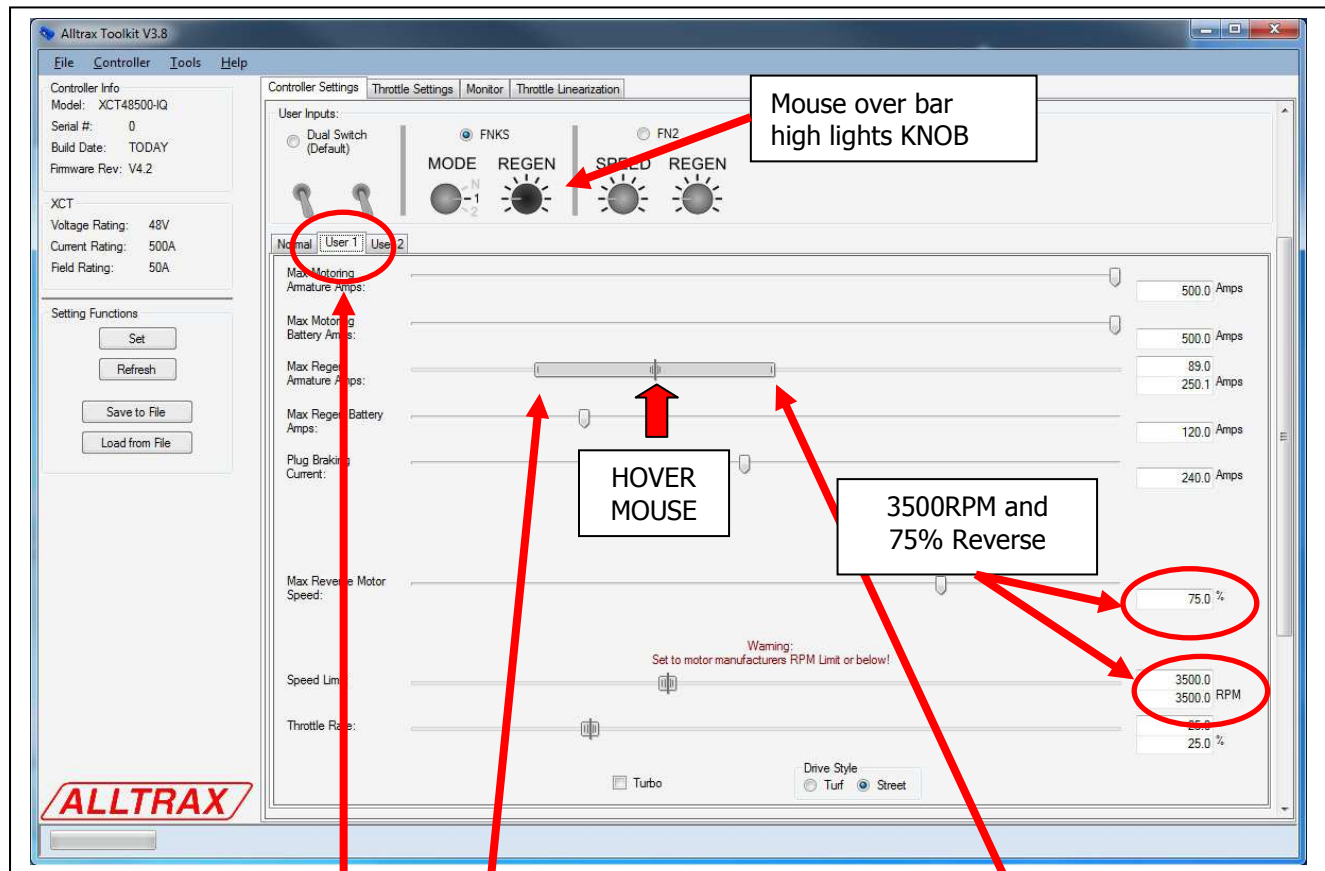
USER 2 example, more of a "TRACTOR mode" the speed limit RPM is 1500 RPM (depends on the motor RPM limits) and Regen 86 Amps up to a 250 Amps with TURBO OFF for high efficiency / range of for rough terrain. Tractor mode for excellent throttle pedal resolution! 0-7 MPH over the entire pedal for rough terrain or ramps.
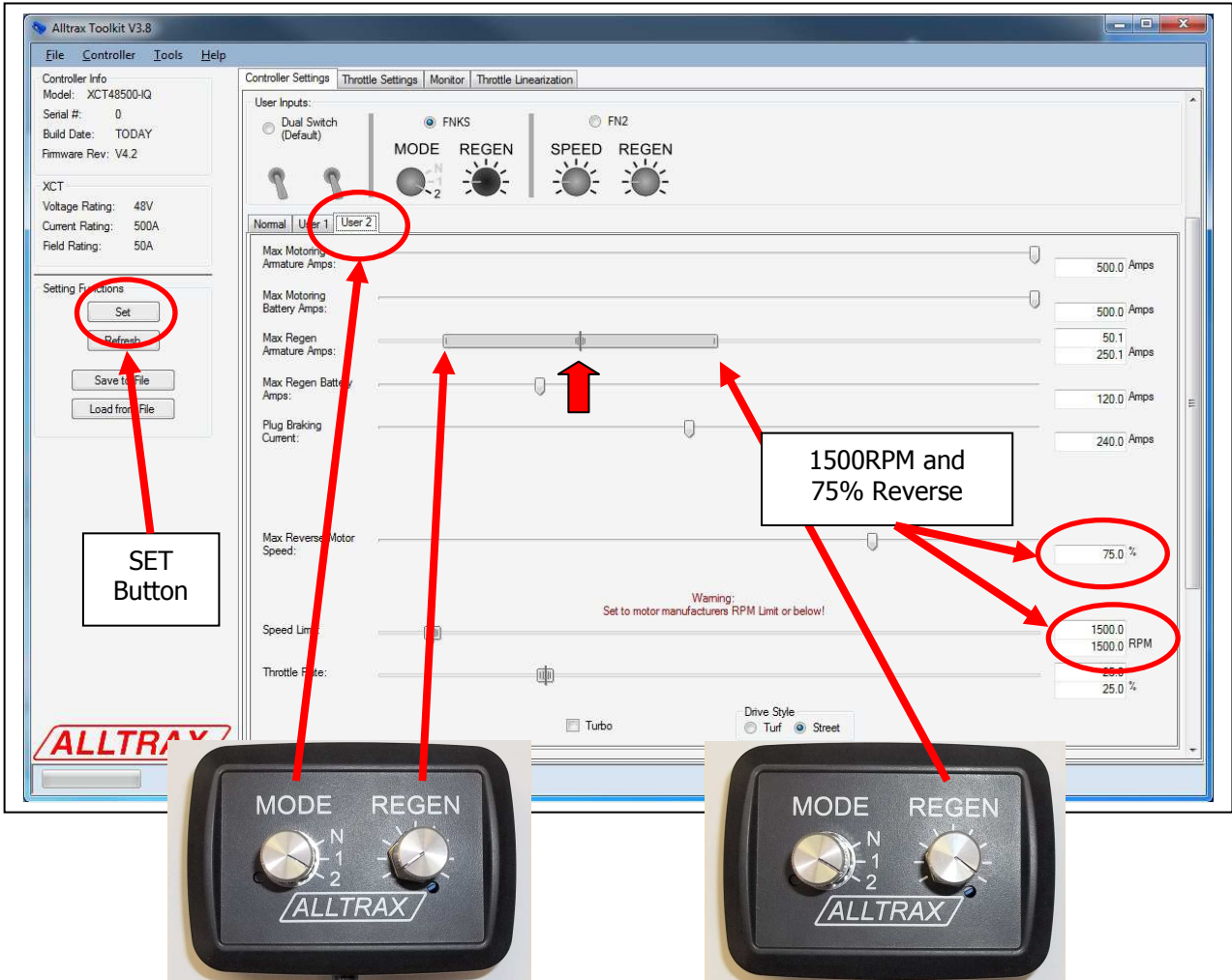
The software also has a feature to "Highlight the knob" when you hover over the slider bar with your mouse. This helps identify which slider you're affecting. In this example the mouse (red arrow) is over the REGEN slider.

Typical HUNTING BUGGY settings:
When I ride the Oregon Sand Dunes in my 2006 EZGO Electric Hybrid golf car, I have these settings,
NORM=Street-Speed 25MPH, USER1=Hunting Buggy mode 15MPH, and USER2=Tractor Mode 7MPH:

	Max Regen ARM	Max Regen BATT	Reverse	RPM Limit	Estimated MPH
NORM:	60/120A	120A	50%	6000/6000	25MPH
USER 1:	80-250A	120A	75%	3500/3500	16MPH
USER2:	80-250A	120A	75%	1500/1500	7MPH

Once you have your settings configured – **PRESS SET** to program the controller and you're all done!

If you have any feedback or comments for these instructions, please email info@alltraxinc.com as we value our customers input, we make feature rich performance products based on our customers input. Made in USA