Re: DC Motor Control: H−Bridge +5A, 48v

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- *From*: Carl D. Smith <cdsmith69NOSPAM@xxxxxxxxxxxxx>

- *Date*: Sun, 15 May 2005 04:39:29 GMT

On Fri, 13 May 2005 23:40:12 −0400, R Adsett
<radsett@xxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

>
>We did run into an issue with plugging. It turns out that under certain
>circumstances once you start plugging it will self sustain and the only
>way to get it to stop braking is to open the direction contactors. The
>motors we first tested on actually braked very nicely in that mode.

That reminds me of another one. We sort of accidently discovered an interesting thing about our forklifts. If you got them up to full speed, and while continuing to hold the control handle forward, reached across with your left hand and hit the battery disconnect, the momentum of the forklift turning the traction motors while coasting to a stop would generate enough power to continue to power all the electronics of the forklift. The power would feed backwards right through the armature mosfets and feed back into the B+ bus. It provided enough current to sustain the field winding current and keep the generator effect going, and even power the electric steering pump motor.

If you let go of the control handle, the armature mosfets would turn off and cut the current flow to the B+ and everything would shut down pretty much instantly. And on one model that had electric brakes, the electric brakes would close and the forklift would screech to a halt. :−)

So, of course, the next "unofficial" experiment was to push one forklift with another, then have the one being pushed disconnect the battery. This worked well enough that the one being pushed could run all the functions including lifting and lowering the mast. As long as you held the control handle forward so the controller would keep the armature mosfets on, it would continue to work as a generator.

Carl Smith
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- ***Follow−Ups***:
  - ***Re: DC Motor Control: H−Bridge +5A, 48v***
    - *From:* R Adsett

- ***References***:
  - ***Re: DC Motor Control: H−Bridge +5A, 48v***
    - *From:* Winfield Hill
  - ***Re: DC Motor Control: H−Bridge +5A, 48v***
    - *From:* Ethan
  - ***Re: DC Motor Control: H−Bridge +5A, 48v***
    - *From:* Carl D . Smith
  - ***Re: DC Motor Control: H−Bridge +5A, 48v***
    - *From:* Mike
  - ***Re: DC Motor Control: H−Bridge +5A, 48v***
    - *From:* R Adsett
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- Prev by Date: ***Re: another Oscilloscope Needed Question***
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