In-Flight Setting of a Multi-Point Trim Curve for Crow Brakes

A Lua app for JETI transmitters inspired by Mike Shellim's recent RCSD article.

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The JETI DS-24. (image: JETI model s.r.o.)

In the April 2021 issue of the NEW RC Soaring Digest, I was delighted to see the article *I've Got the Power: OpenTX* by Mike Shellim (see *Resources*, below) in which he describes his crow aware trim Lua application. At the time, Dave McQueeney and I were finishing the development of a Lua app for JETI transmitters which was inspired by Mike's work. We published it on May 22nd, 2021 along with a YouTube training video. The app will do the setting for you of a multi-point curve of elevator trim compensation for crow

brake/flaps/spoilers, whilst in flight, without you needing to take your eyes off the model or your fingers off the sticks. This saves you from the many iterations of fly, land, adjust, fly, land, adjust, to set a trim compensation.

The app takes Mike Shellim's wonderful idea and develops it further, so that instead of taking your fingers off the sticks to press the trim button, it uses the movement of the elevator stick itself to adjust the relevant point on a trim compensation curve. JETI users will be familiar with this concept, from the *Auto-Trim* feature. The result is that all you need to do is slowly open the crow brake/flaps/spoilers, just keep flying the model to the attitude that you want, and keep going until you have the brakes fully open. As you do this the app chooses the correct point along the trim compensation curve, and the elevator stick moves that point to the required up or down trim. Within one or two flypasts you can get a perfect trim over the entire movement of the brake. You can do it on a maiden flight so that your first landing does not suffer from wild pitching up and down as you operate the brakes or flaps.

Photo 2 shows a graph of a seven point curve created by the app on the transmitter home screen, demonstrating the non-linear nature of the elevator trim compensation required with crow brakes.



Photo 2: A seven point curve created by the app.

Photo 3 shows the choices available in the app settings menu.

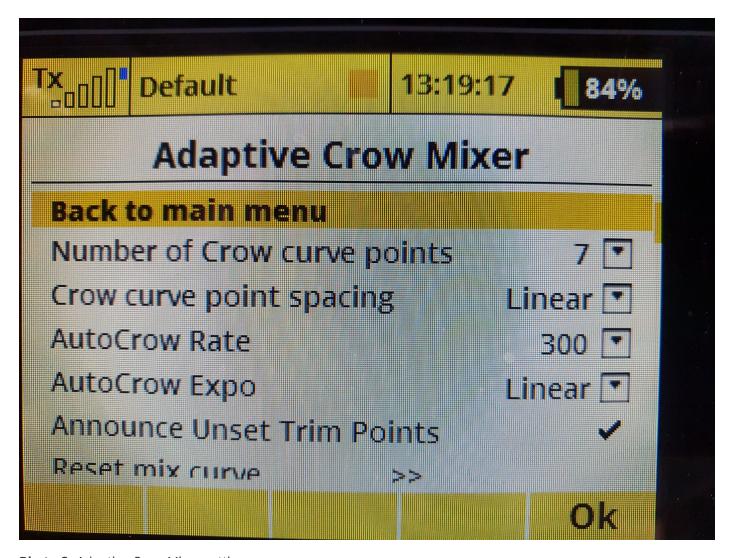
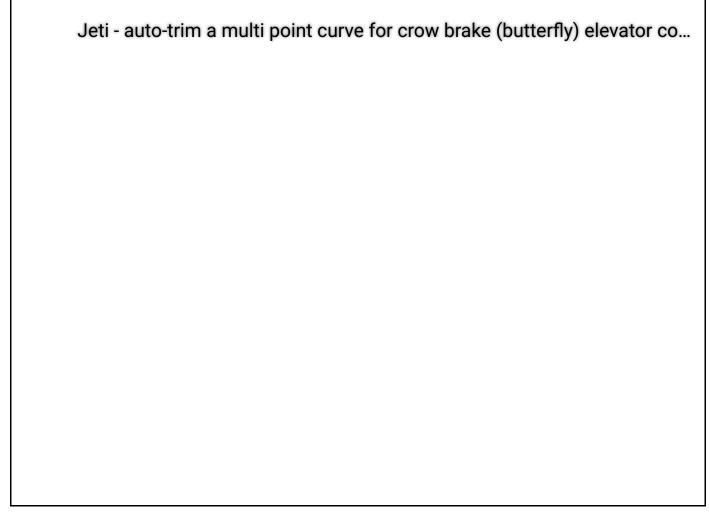


Photo 3: Adaptive Crow Mixer settings menu.

The app, which works on all the JETI transmitters, is available from JETI Studio but you will need to watch the training video to see how to enable that feature in Studio.



Video 4: JETI — Auto-Trim a Multi Point Curve for Crow Brake.

Note that the video above is in English, but if you switch on subtitles and then use options you can select it to auto-translate the subtitles into most languages.

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Resources

- <u>I've Got the Power: OpenTX</u> (article by Mike Shellim)
- JETI for Gliders (video series)
- <u>Lua Programming Language</u> (Wikipedia article)

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