



Editor Notes

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Send articles and information to editor@larks-rc.com

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Upcoming Notable Events

- *There are no club events planned for April.*
- *April 30th 2026 Club Meeting, Tavares Civic Center, 6:30 pm.*

EdgeTX v2.12.0 Release Candidate 4

Released: 24 February 2025

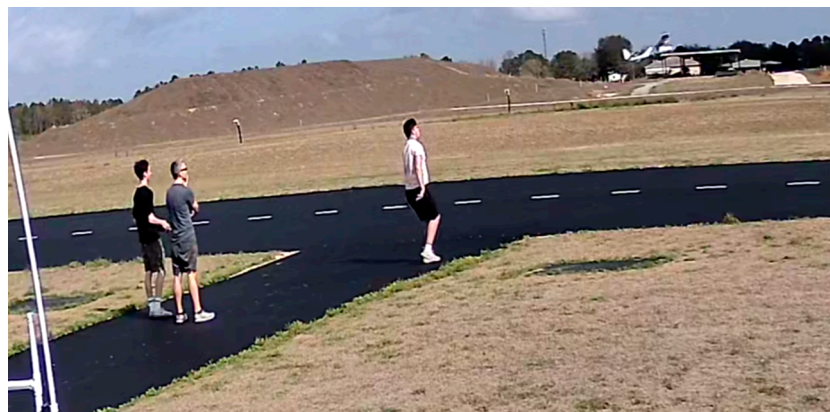
This is the fourth and most likely final release candidate for what will become EdgeTX 2.12.0. It brings with it several fixes for companion and fixes several issues with UI and Lua on color screen radios, as well as several other fixes and changes that affect all radios. Recommended for everyone with a H7 radio, if you want the latest and greatest, or have a second radio you want to try it out on. Please note that due to some not yet resolved gremlins for the Flysky PA01, you may find 2.11 is still the best firmware series to use for now - it will work, but may decide to randomly assault your hearing if you use the trims, or freeze up if you press the power button when in USB Storage mode, for example.

⚠ Before installing: This is a release candidate. Please backup your radio and model settings, and thoroughly bench test all models before flying. Better still, if you have a spare radio, or a radio with a removable SD card, try it out on that, as the more feedback and testing we get, the quicker we can move to a stable release that is ready for everyone to use.

Monday March 2 2026, the field was busy with flyers testing out their finds from the Perry Annual Swap Meet.



MARCH 3 2026, THE FLYING FIELD WAS CLOSED TO OPEN FLYING. THE AERONAUTICAL SOCIETY OF THE UNIVERSITY OF MARIBOR WERE ON SITE TESTING EXPERIMENTAL AIRPLANE MODELS. THIS EVENT WAS OPEN TO SPECTATORS.



First flight of the day, went well. The craft took its maiden voyage and returned to the ground in one piece.

Another successful take off. This craft was equipped with vertical take off capabilities.



Alarms, Voice Alerts, Announcements - Good or Bad

Most of the modern day transmitters we use have the ability to use speech files to announce conditions to the radio user, (and others within ear shot)

I remember flying with this gentleman in Paducah Kentucky who's radio started talking from the moment he turned on the radio and the plane, took off and landed, then turned off the plane and the radio. Constant chatter all the time he was flying. All this information, or information overload was so annoying I asked him what was the purpose. He let me know, that the information he was receiving was very important to his flight. Seemed to me to be too much information coming in at a constant rate to make any decision relevant to flying. But as the saying goes, to each his own.

So, what do you need to know when flying? This is a question that only you can answer. So how do you get to the answer. Ask yourself, what matters? When I flip this switch, or if an alarm happens, do I need to know, in a voice command, what is happening.

Some of the common commands and or voice prompts are:
Throttle enabled / disabled, or throttle on, or throttle cut
Gear Up, Gear Down, Flaps Up, Flaps Down
Timer commands, High rates, Low rates active.

Each and every model of radio has a different way of making this happen and has there own speech files available to the user. Check your user manual to find out what files are available and how to make them active and assign them to actions.

What ever you choose to do, make sure the commands and voice prompts are connected appropriate and make sense. You don't want a voice command that says "flaps down" when you flip the high rate switch. Keep things simple. KISS applies.

Alarms and Announcements

Once again, you must ask yourself, what do I need to know. You may want things like RSSI signal strength to announce a low level, indicating the radio and receiver are or may be in trouble and not communicating correctly. On electric powered aircraft, you may want to have an alarm announce when the main battery pack has low voltage. I know timers work well, but with low voltage alarms active, you may get longer flight times, or find out your timer is set too long and your battery is low before the time is active.

How do you set alarms? Each radio manufacturer has there own way of performing this task. Most alarms usually operate when a condition value, falls outside a given parameter, initiating an action. Let me explain. Electric power airplane with a 3S battery and some telemetry. Your radio may be able to generate an alarm when the voltage of the flight pack drops below a specific value. Therefore a specific condition, a set of parameters, generates an action. In this case, the action is a spoken text file, a vibration, a series of vibrations etc. This action will be based on the radio you are using and its capabilities. Consult your transmitter, receiver product manual to understand the capabilities and how to set alarms.

To continue with this article, and present a few examples. I will be working with a Radio Master TX16S MK2 and Edge TX 2.12 as the radio operating system. For those of you using Edge TX already have some idea of the capabilities of these radios when it comes to generating alarms, setting conditions, programming actions etc. The options for these and other actions are limitless. With that said, it is very easy to get into some trouble unless you understand how to use the logic switches, and special functions.

The Edge TX User Manual available on line is a great resource for understanding the functions and capabilities of this software.

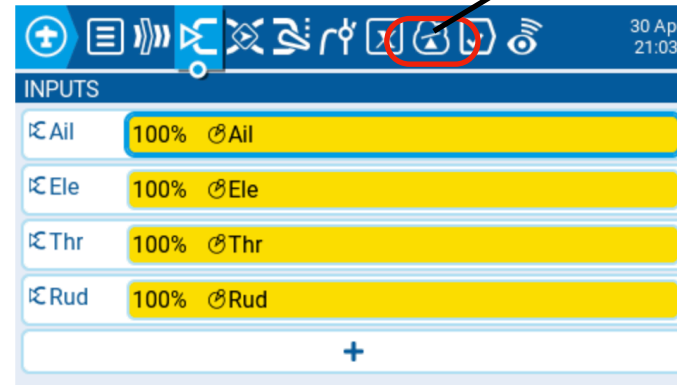
<https://manual.edgetx.org/>

Logical Switch Functions

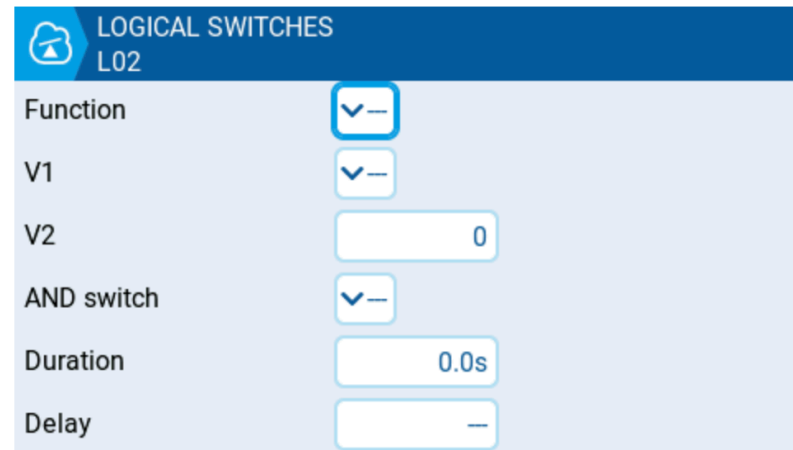
In the expression, a and b represent sources (sticks, switches, etc.), and x represents the constant (values) to be compared.

| Expression | Description |
|---------------|---|
| $a=x$ | True when the source V1 is exactly the same as the constant V2. |
| $a\sim x$ | True when the source V1 is about the same as the constant V2. |
| $a>x$ | True when the source V1 is greater than the constant V2. |
| $a<x$ | True when the source V1 is less than the constant V2. |
| $ a >x$ | True when the absolute value of the source V1 is greater than the constant V2. |
| $ a <x$ | True when the absolute value of the source V1 is less than the constant V2. |
| AND | True when both sources V1 and V2 are TRUE. |
| OR | True when either source V1 or V2 is TRUE. |
| XOR | True when the source V1 and V2 positions do not match. |
| Edge | Momentarily true when the source V1 has been active for the defined period of time and then deactivated. The first time field (T1) under V1 is the minimum active duration required for source V1 to activate the logical switch. The second time (T2) is the maximum time allowed for the source V1 to be active for the logic switch to be activated. When T2 is set to --, the logical switch will be true regardless of how long V1 has been active. When T2 is set to 3, if V1 is active for more than 3 seconds, the logical switch will not be set to true when the source is deactivated. When T2 is set to <<, the logical switch will be true when the time conditions in T1 are met without source V1 being deactivated. |
| $a=b$ | True when source V1 is the same as source V2. |
| $a>b$ | True if source V1 is greater than source V2. |
| $a<b$ | True if source V1 is less than source V2. |
| $\Delta>x$ | Momentarily true every time the source V1 changes by more than the amount indicated by the constant V2. |
| $ \Delta >x$ | Momentarily true every time the absolute value of the source V1 changes by more than the amount indicated by the constant V2. |
| Timer | Momentarily true every xxx seconds. Argument V1 is the duration that the logical switch is true (active). Argument V2 is the time between logical switch activations. Repeats timer cycle as long as the defined switch is active. |
| Stky (Sticky) | "Sticks" true after switch V1 is active (true) and stays active (true) regardless of V1 position until switch V2 is activated (true) and "unsticks" or deactivates (false) the logical switch. Has Persistence option that allows the value of the logical switch to be preserved across power cycles or when switching away from and back to the model. |

Opening and configuring logic switches. To access the logic switch configuration page, open the model setting page and then select the logic switch configuration page.



From the logic switch function page, click the + button to open a new logic switches configuration page.



Let's take a look at the fields and their uses. Note that some are drop down selectable, and some are direct input.

Function = an expression where you define how the logic switch will be triggered. Refer to the Logic Function chart above.

V1 = The variable to be examined, most likely a telemetry value, but can be any value available from the drop down menu.

V2 = The value at which you would like the logic switch to become active or later considered the set point.

AND Switch = The position of a switch. Not necessary for the logic switch to operate, but available if you would like to add it to the conditions.

Duration = Is an input chosen by you of a value that you would like the condition to remain active before making a decision.

Delay = Is an input chosen by you of a value that you would like to cause a delay in the action being taken.

Let's take a closer look at the Duration and Delay value as they seem to be the most confusing.

The duration is the time that the condition must be active and remain active thru the entire duration. We use this in the conditions to weed out momentary and or false conditions. Let's say, you have a condition to trigger "on" when the battery voltage falls below a given value. If the duration is set to zero, each time the value drops below the set point, the switch will trigger on. Consider, flight pack batteries have a voltage sag when operating, it may not be good to have this condition acting each time you push the throttle to full during a maneuver.

Let's take a closer look at the Delay value. The delay is a value at which the logic switch is true but no action is taken until the delay value is met. In other words, the delay is a time in which you know something is true, but wait to say anything.

Both of these variables added to a condition can assist in weeding out the false or unwanted alarm states from continual activation.

Time to build an alarm. BATTERY PACK LOW VOLTAGE

Function = $a < x$, True when the source value V1 is less than the constant value V2.

V1 = Real value of the battery pack generated from the telemetry of the receiver or attached voltage sensing module.

V2 = Set point value at which you want the condition to come true. This value is based on your battery, and at what voltage level you choose. Ex. If you have telemetry of cell voltages of the battery, you may want this value set a 3.7 volts, your choice.

AND Switch - Not necessary, but an added condition if you like. Ex. Add in the throttle cut switch, so that the condition only comes true if the throttle cut switch is in a certain position and cannot come true if in the other position.

Duration = Chosen value of how long you want the condition to be active. 1.0 - 2.0 seconds or more, your choice.

Delay = How long to wait when the condition is true. 0.5 seconds, or more, again your choice.

With all of the above values set and the radio on, and the plane battery plugged in, the radio and receiver communicating and the telemetry active. Below are the conditions and expectations.

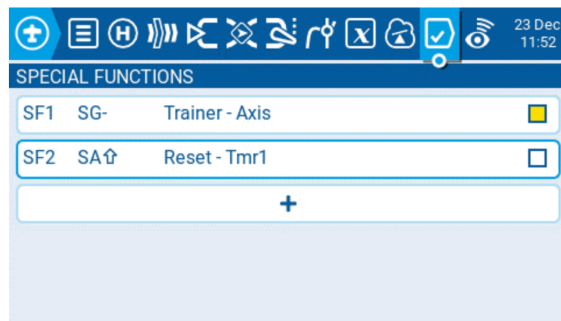
1. The throttle cut switch is in the active state.
2. The aircraft battery is fully charged and the craft is ready to fly.
3. Take off, flying
4. Battery voltage dropping.
5. Flying time counting down, battery voltage drops below 3.7 volts per cell.
6. Duration is set to 2.0 seconds. Battery voltage remains below 3.7 for greater than 2.0 seconds.
7. L02 waits to become active, but until the Delay has timed out.
8. Delay times out, L02 now active

YEA our logic switch works as expected. Now What?

A logic switch is just that a switch that comes active when a condition or set of conditions are met. So how does this condition become an audible alarm.

SPECIAL FUNCTIONS.

On the model set up screen you select the special functions tab. This is where you set the software to do something when a condition is met, a switch is activated, when a button is pushed and so on. SF's have endless capabilities.



Special Functions

The Special Functions section of Model Setup, as the name implies, is where you can configure the special functions that are included in EdgeTX. These special functions add additional functionality beyond normal model controls such as enabling trainer mode, playing a sound, adjusting the radio backlight, adjusting radio volume, etc. On the special functions screen you will see all configured special functions as well as some of the configured options such as function name, activation switch, if the function is enabled, and other configuration options.

The first time you look at the special functions tab and configuration page, you may be a bit overwhelmed at the features that are available. For now, let's continue to configure the Low Battery Alarm.

On the SF screen, click the + button. A new SF configuration screen will open. This is the screen you will use to configure what happens when the alarm is active.

Let's review our Logic Switch settings.

Function where "a" is less than "x"

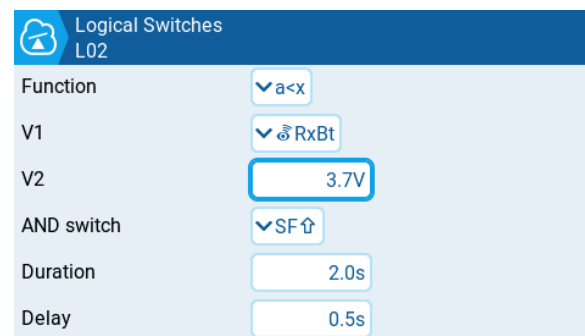
V1 is the value of the RX bat from the telemetry

V2 is our chosen set point

AND Switch SF forward (throttle enabled)

Duration is 2.0 seconds

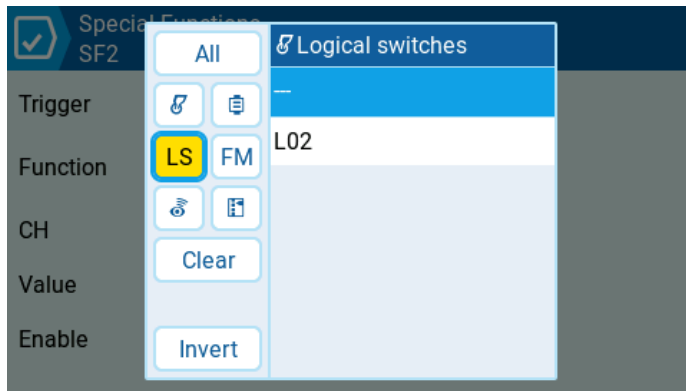
Delay is .5 seconds



Time to configure the special Function. From the model menu, select the special functions and then + button to open the special function configuration screen.

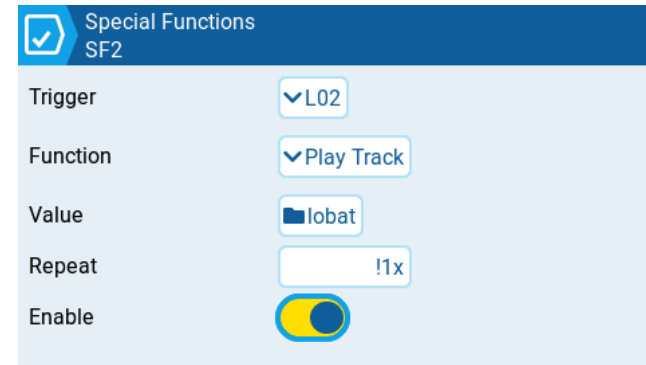


Next we will assign the Trigger, our logic switch L02



Next we will select the Play Track Function and from the Value screen, select the lobat track.

On the Repeat value, I like to select the !1x. This command ensures the track will play when the LS is active, but will not play on radio start up or model selection. When setting up alarms, it becomes very annoying when all configured alarms and functions play during radio startup. Too much information.



Lastly, we need to enable the Special Function. That's it, complete, sort of, all but the testing.


Battery Voltage = 3.6 for longer than 2.0 seconds. After a delay of 0.5 seconds, the track Low Battery is played.

Always test any condition you may have set in the transmitter to ensure the operation is as expected.


Always test all functions on all models when you have completed a major upgrade to the firmware on your radio or your receivers.

Although the developers do their best to test firmware prior to release, they also warn to do your diligence and bench test prior to flight.


A failure of a bench test is so much better than a failure of the system when the aircraft is flying, and so much cheaper.


Spektrum RC transmitters feature comprehensive alert systems, including customizable voice, vibration, and tone alarms for battery voltage, signal strength, timers, and telemetry data. Key safety functions include throttle position warnings at startup and low-voltage alerts for both the transmitter and receiver packs to ensure safe operation. 

Key Alarm Functions


- **Battery Warnings:** Configurable alerts for low transmitter battery voltage (e.g., 4.3V for NiMH, 6.4V for LiPo) and Smart Battery telemetry alerts.
- **Timer Alerts:** Alerts can be set for countdown timers (e.g., every minute, 30/20/10 seconds, or expiration).
- **Telemetry Alerts (AirWare/Voice):** On advanced models (NX, DX9), voice alerts can report real-time data like speed, altitude, temperature, or signal strength (*RSSI*).
- **Safety/Startup Alarms:**
 - **Throttle Position:** Warns if the throttle is not at the lowest position when powering on.
 - **Switch Position:** Warns if flight mode or gear switches are in unsafe positions.
- **System/Safety Warnings:**
 - **Signal Strength:** Alerts when signal strength becomes low.
 - **Inactivity Alarm:** Sounds if the transmitter is left on without input for a set period.
- **Alert Customization:** Users can choose between tone, vibration, voice, or a combination of these for each alarm type. 

Common Alarm Settings


- **Low Voltage Warning:** [Set to 6.4V for 2S LiPo on many models.](#)
- **Timer Settings:** Configurable in the "Timer" menu for minutes/seconds.
- **Voice/Sound Menu:** [Configurable under System Setup on the NX/DX9 series.](#) 

Futaba RC transmitter alarm settings, such as for the T16SZ or 14SG, are accessed via the "Timer" menu (T1/T2) to configure countdowns, or the "Telemetry" menu for battery/signal alerts. Users can set audible, voice, or vibration alarms, and map them to switches (like SH) or throttle positions (J3). 


Key Alarm Settings in Futaba Transmitters:

- **Timer (Flight/Race Time):** Navigate to the timer menu to set up/down timers. Configure alerts for the last 1 minute and a final 30-second warning.
- **Alarm Types:** Options include buzzer, voice (announces time), and vibration.
- **Switch Assignment:** Timers can be linked to a specific switch (e.g., Switch B or SH) to start/reset, or configured to start when the throttle stick (J3) moves above idle.
- **Telemetry Alarms:** Set alerts for receiver voltage, battery, or signal strength. These can be adjusted to provide warnings based on telemetry data.
- **Safety/Fail-Safe:** Configure alarms for when the transmitter stops receiving a signal, setting it to hold or specific positions. 

Steps to Set Up Timer Alarm (T16SZ Example):

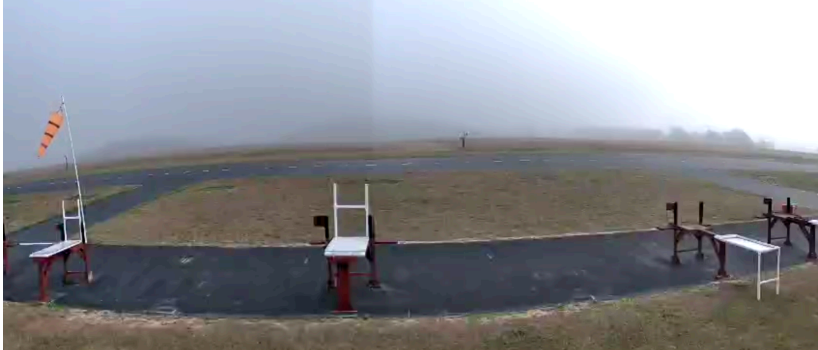
1. Navigate to the **Timer** menu.
2. Choose **T1** and set to Down/Up timer.
3. Set the desired time duration.
4. Select alarm type: Voice, Buzzer, or Vibration.
5. Assign a switch (e.g., SH) to start/reset or set it to activate at a throttle stick position (J3). 

Steps to Set Up Battery Telemetry Alarm:

1. Go to the Telemetry menu.
2. Select the **Receiver voltage** or **External voltage**.
3. Set the voltage threshold for the alarm, ensuring it is within safe operating limits. 

Refer to your radio transmitter manual for instruction on how to set up alerts and alarms on your radio model.

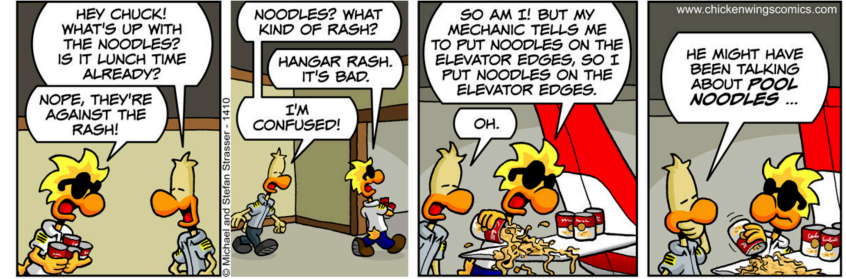
Tuesday March 4th brought a foggy start to the day. Although the weather provided for close in flying, the regular group were on site, prepared to take to the sky when the fog cleared.



The skies have cleared and the flying begins.

CHICKEN WINGS

BY MICHAEL AND STEFAN STRASSER



If you fly to close to the pilot line, you may become parts, scattered amongst the crash.

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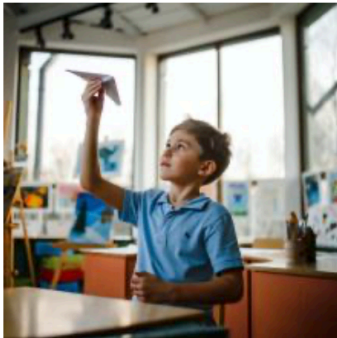
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Pre-Flight Checklists



Performing a pre-flight checklist before each flight is an important safety step. Be aware that your model aircraft may have other specific items that

Club Flight Training Manuals



Flight Training Manuals Collection This is a collection of Training Manuals we've received from several AMA clubs. These