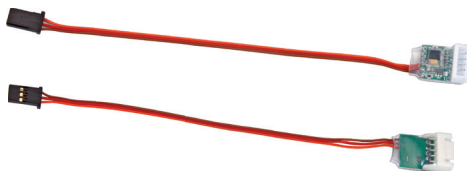


Manual

33630 Voltage Module 2 - 4 S, EH

33631 Voltage Module 2 - 4 S, XH



CONTENTS:

1.	Description	02
2.	Inbetriebnahme	02
3.	Operation	03
3.1	Programming.....	03
4.	Telemetry display	05
5.	Warranty.....	07

THANK YOU

for purchasing the Voltage Module 2-4S for Graupner HoTT.

Intended use

If you do not have the Graupner HoTT 2.4 radio system this product will not work. This product is not compatible with any other 2.4GHz radio system.

Please read through this entire manual before you attempt the installation and usage of your Graupner HoTT SMART-BOX!

These operating instructions are part of this product. They contain important notes to the operation and handling. Please take this into consideration when you pass on the product to third parties. Neglect of the operating instructions and the safety instructions lead to expiring the warranty.

Graupner constantly work on the advancement of all remote control systems; changes of the scope of delivery in form, technology and equipment we must reserve ourselves therefore. Please have understanding for the fact that from data and illustrations of this operating instructions no requirements can be derived.

Please keep these instructions for further reference!

1. DESCRIPTION

The Voltage Module 2-4 S is used for simple monitoring a 2-4 cell (7.4 - 14.8 V DC) LiXX battery by the HoTT telemetry. The battery is connected via the balancer connector with the module. The cell voltage is continuously monitored and audible by the programmable voltage alarm the user receives a reliable warning of low voltage.

Informations available - settings:

- Battery voltage (total - individual cells)
- Minimum cell voltage (adjustable)
- Voltage (can be calibrated)
- Warning time (adjustable)

Since the Voltage Module can be updated, you always have the latest software and can utilize future functions or languages. The programs and files required for this are available from www.graupner.de in the Download area for the corresponding products.

2. STARTING UP

Attach the Voltage Module to a suitable place in the model, protected from vibration. Then connect it with the 3-pin cable to the telemetry port on your receiver. The connector system is polarised, look for the small camfer on the edges. Never use force - the plug should engage easily and fully. The sockets are labeled accordingly: black wire (-), red wire (+) and orange wire (S) - Fig. 1.

Subsequently, the balancer of the battery is connected to the module. Also look here to the correct polarity - Fig.2.

33630: the negative terminal of the EH-balancer connector is always plugged in right-aligned (irrespective of the number of cells), so that the voltage is displayed correctly (Fig. 1, top)

33631: the XH-connector of the module is to connect a 4S battery. If a 2 or 3S battery is used, the nose placed on the positive terminal of the balancer connector must be truncated (Fig. 3 and 4). Here too, the negative terminal of the balancer connector be plugged right aligned (Fig. 1, bottom).

Alternatively, you may just connect the positive terminal of the battery with the corresponding pin of the module (eg a 3S battery pin 4), then not the individual cell voltage is monitored, but usually the total voltage monitoring is sufficient - and the permanent plug in/unplug of the balancer cable can be omitted.

Fig. 1

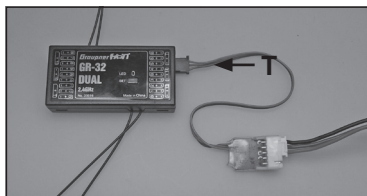
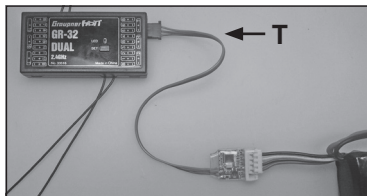


Fig. 3

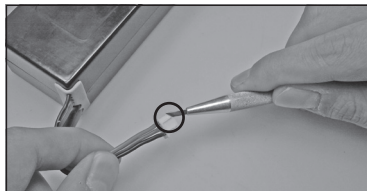


Fig. 2

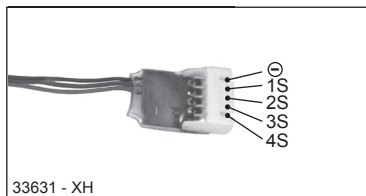
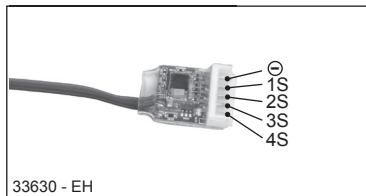
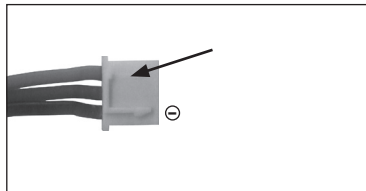


Fig. 4



3. OPERATION

The Voltage Module is operated like any other HoTT telemetry sensor by a SMART-BOX or the internal telemetry. Refer to the instructions of your transmitter or SMART-BOX.

To display the module and to program, select under TELEMETRY the menu item SENSOR SELECT. Now put a tick on GENERAL MODULE.

The Voltage Module is programmed in the menu SETTING & DATAVIEW, the graphical display is also possible.

3.1. Programming

The module can be programmed in the menu SETTING & DATAVIEW. From firmware version V4 the General-Module must be selected with the left Cap-Touch - or RECEIVE+GENERAL/GAS at the SMART-BOX.

The following display appears:

VOLTAGE MODULE	4.1	<
OVERALL VOLT:	12.1V	
> CALIBRATE	:	NO
VOLTAGE CELL:	3.1V	
WARNING	:	10 s

Display	Description	Setup
OVERALL VOLT	Current voltage of the battery connected in Volt	-
CALIBRATE	Voltage calibration	YES, NO
VOLTAGE CELL	Warning threshold at which the low voltage warning appears	2.7 – 3.9 V in 0.1 V steps, Factory settings 3.2 V
WARNING	Warning time	YES, 10 s

different options in the Settings column of the table can be adjusted using the telemetry menu of the transmitter or the SMART-BOX. If there are no options, the screen simply displays the parameter data.

Calibration (CALIBRATE): The module has been calibrated, a recalibration is usually not necessary. You can repeat the calibration, however, for this a fully charged Lipo (2 - 4S, 8.4 V - 16.8 V) or an equivalent voltage source is required. Plug the LiPo into the module and select the line CALIBRATE. Now press SET (INC + or DEC on the SMART-BOX), the field is highlighted. Now select YES and press SET again (or INC and DEC on the SMART-BOX), the display will change to DONE. Your module is now calibrated and shows under OVERALL VOLT the current voltage of the calibration source. **Note:** if a voltage source with a voltage other than 4.2 V per cell is used for calibration, the subsequent voltage measurement is not correct and the low voltage warning is triggered incorrectly. Only the channels that are supplied with voltage during calibration will be calibrated- for a 2S Lipo for example, only cell 1 and 2, cell 3 and 4 remain uncalibrated.

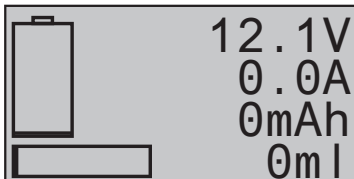
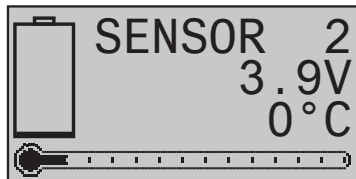
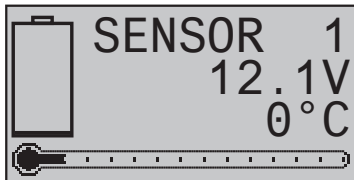
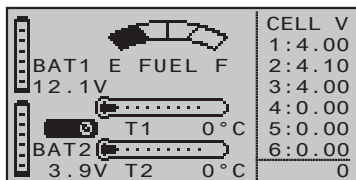
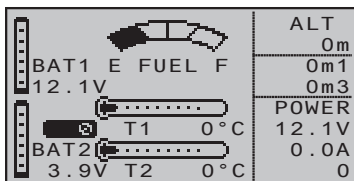
Warning level (VOLTAGE CELL): You can set the single cell voltage at below the alarm is triggered, between 2.7 - 3.9 V. If the voltage of one via the balancer connected cells is lower than the programmed threshold, the alarm will activate. Then, you hear the general warnings beep or with voice output the message „Minimum input voltage.“

Warning time (WARNING): sets the warning time at low voltage. YES, the warning is repeated constantly, or when only be issued periodically (every 10 s), select 10 s.

4. TELEMETRY DISPLAY

Select the Telemetry display GENERAL or when using the Smart Box MODEL SELECT and RECEIVE +GENERAL/GAS.

The following displays will appear, on the right the current cell voltages or the total voltage is displayed alternately. Under BAT1 or Sensor 1 also shows the current total voltage, BAT2 or SENSOR 2 shows the minimum cell voltage since power on for the current battery.



EG DECLARATION OF CONFORMITY:

We hereby declare that the following product:

HoTT Voltage Module order.-nr. 33630 and 33631

confirms with the essential protective requirements as laid down in the directive for harmonising the statutory directives of the member states concerning electro-magnetic interference 2004/108/EC.

This product has been tested for electro-magnetic interference in accordance with the following norms:

EN 61000-6-1

EN 61000-6-3

This declaration was produced by

Graupner/SJ GmbH

Henriettenstr. 96

73230 Kirchheim/Teck

and is valid for the manufacturer / importer of the product

73230 Kirchheim/Teck,

24.07.2013



Ralf Helbing
Managing Director

Environmental Protection Notes

When this product comes to the end of its useful life, you must not dispose of it in the ordinary domestic waste. The correct method of disposal is to take it to your local collection point for recycling electrical and electronic equipment. The symbol shown here, which may be found on the product itself, in the operating instructions or on the packaging, indicates that this is the case.



Individual markings indicate which materials can be recycled and re-used. You can make an important contribution to the protection of our common environment by re-using the product, recycling the basic materials or recycling redundant equipment in other ways.

Remove batteries from your device and dispose of them at your local collection point for batteries.

In case of R/C models, you have to remove electronic parts like servos, receiver or speed controller from the product in question, and these parts must be disposed of with a corresponding collection point for electrical scrap.

If you don't know the location of your nearest disposal centre, please enquire at your local council office.

Garantie von warrantied for garantie de **24** Monaten months mois

Die Fa. Graupner/SJ GmbH, Henriettenstrasse 96, 73230 Kirchheim/Teck gewährt ab dem Kaufdatum auf dieses Produkt eine Garantie von 24 Monaten. Die Garantie gilt nur für die bereits beim Kauf des Produktes vorhandenen Material- oder Funktionsmängel. Schäden, die auf Abnutzung, Überlastung, falsches Zubehör oder unsachgemäße Behandlung zurückzuführen sind, sind von der Garantie ausgeschlossen. Die gesetzlichen Rechte und Gewährleistungsansprüche des Verbrauchers werden durch diese Garantie nicht berührt. Bitte überprüfen Sie vor einer Reklamation oder Rücksendung das Produkt genau auf Mängel, da wir Ihnen bei Mängelfreiheit die entstandenen Unkosten in Rechnung stellen müssen.

Graupner/SJ GmbH, Henriettenstrasse 96, 73230 Kirchheim/Teck, Germany guarantees this product for a period of 24 months from date of purchase. The guarantee applies only to such material or operational defects which are present at the time of purchase of the product. Damage due to wear, overloading, incompetent handling or the use of incorrect accessories is not covered by the guarantee. The user's legal rights and claims under guarantee are not affected by this guarantee. Please check the product carefully for defects before you make a claim or send the item to us, since we are obliged to make a charge for our cost if the product is found to be free of faults.

La société Graupner/SJ GmbH, Henriettenstrasse 96, 73230 Kirchheim/Teck, Allemagne, accorde sur ce produit une garantie de 24 mois à partir de la date d'achat. La garantie prend effet uniquement sur les vices de fonctionnement et de matériel du produit acheté. Les dommages dus à de l'usure, à de la surcharge, à de mauvais accessoires ou à d'une application inadaptée, sont exclus de la garantie. Cette garantie ne remet pas en cause les droits et prétentions légaux du consommateur. Avant toute réclamation et tout retour du produit, veuillez s.v.p. contrôler et noter exactement les défauts ou vices.

Servicestellen / Service / Service après-vente

Graupner-Zentralservice

Graupner/SJ GmbH
Henriettenstrasse 96
D-73230 Kirchheim / Teck

Belgie/Niederland

Jan van Mouwerik
Silot de Houvelaan 30
NL 3155 Maasland VT
☎ (+31)10 59 13 59 4

Česká Republika/Slovenská Republika

RC Service Z. Hnizdíl
Letecká 666/22
CZ-16100 Praha 6 - Ružyně
☎ (+42) 2 33 31 30 95

Espana

Anguera Hobbies
C/Terrassa 14
E 43206 Reus (Tarragona)
☎ (+34) 97 77 55 32 0

France

Graupner Service France
Gérard Altmayer
86, rue St. Antoine
F 57601 Forbach-Oeting
☎ (+33) 3 87 85 62 12

Italia

GiMax
Via Manzoni, no. 8
I 25064 Gussago
☎ (+39) 30 25 22 73 2

Servicehotline

☎ (+49) (0)7021/722-130
Montag - Donnerstag 7:30 - 11:45
und 12:30 - 16:00 Uhr
Freitag 9:00 - 13:00 Uhr

Luxembourg

Kit Flammang
129, route d'Arlon
L 8009 Strassen
☎ (+35) 23 12 23 2

Schweiz

Graupner Service Schweiz
CD-Electronics GmbH
Kirchweg 18
CH-5614 Sarnenstorf
☎ (+41) 56 66 71 49 1

UK

Graupner Service UK
Brunel Drive
GB, NEWARK, Nottinghamshire
NG242EG
☎ (+44) 16 36 61 05 39

Garantie-Urkunde

Warranty certificate / Certificat de garantie

33630 - 33631
Voltage-Module

Übergabedatum
Date of purchase/delivery
Date de remise

Name des Käufers
Owner's name
Nom de l'acheteur

Straße, Wohnort
Complete address
Adresse complète

Firmenstempel und Unterschrift des Einzelhändlers
Stamp and signature of dealer
Cachet et signature du vendeur

Graupner SJ

Graupner/SJ GmbH
Henriettenstraße 96
D-73230 Kirchheim/Teck
Germany
www.graupner.de

Änderungen sowie Liefermöglichkeiten vorbehalten. Lieferung durch den Fachhandel.
Bezugsquellen werden nachgewiesen. Für Druckfehler kann keine Haftung übernommen
werden.

Specifications and availability subject to change. Supplied through specialist model shops
only. We will gladly inform you of your nearest supplier. We accept no liability for printing
errors.

Sous réserve de modifications et de possibilité de livraison. Livraison uniquement au
travers de magasins spécialisés en modélisme. Nous pourrions vous communiquer
l'adresse de votre revendeur le plus proche. Nous ne sommes pas responsables
d'éventuelles erreurs d'impression.

Con riserva di variazione delle specifiche e disponibilità del prodotto. Fornitura attraverso
rivenditori specializzati. Saremmo lieti di potervi indicare il punto vendita più vicino a voi.
Si declina qualsiasi responsabilità per errori di stampa.