

Heizmatten Regelgerät

RGT HC

Heat Mat Controller

RGT HC

**Handbuch
Manual**

**Ausgabe 04/2013
Edition 04/2013**



Artikel-Nr. /Item No.: 19170039



Artikel-Nr. /Item No.: 19170038

Rall Guitars & Tools (Owner Andreas Rall)

Hauptstrasse 63, 82380 Peissenberg, Germany

Tel +49 (0) 8803-488 56 56; Fax +49 (0) 8803-488 56 57; www.rall-online.net

Die hier teilweise benutzten Bezeichnungen wie Telecaster, Stratocaster, McCarty, Les Paul, Gibson etc. sind geschützte Handelsbezeichnungen und werden hier nur zum besseren Verständnis aufgeführt – auch wenn sie nicht als solche speziell gekennzeichnet sein sollten. Rall Guitars & Tools ist in keiner Weise mit diesen Firmen verbunden oder es wird gesondert darauf hingewiesen.

(Weitergabe sowie Vervielfältigung dieser Unterlage, Verwertung und Mitteilung ihres Inhalts sind nicht gestattet, soweit nicht ausdrücklich zugestanden.

Zuwiderhandlungen verpflichten zu Schadenersatz. Alle Rechte vorbehalten, insbesondere für den Fall der Patenterteilung oder GM-Eintragung.)

Wir haben den Inhalt der Druckschrift auf Übereinstimmung mit der beschriebenen Produkt geprüft. Dennoch können Abweichungen nicht ausgeschlossen werden, so dass wir für die vollständige Übereinstimmung keine Gewähr übernehmen.

Die Angaben in dieser Druckschrift werden jedoch regelmäßig überprüft und notwendige Korrekturen sind in den nachfolgenden Auflagen enthalten. Für Verbesserungsvorschläge sind wir dankbar.

Some special names mentioned here like Telecaster, Stratocaster, McCarty, Les Paul, Gibson etc. are registered trademarks also if they may not be marked as such. They appear for identification purposes only. Rall Guitars is not affiliated in any way with these companies or products if not otherwise stated.

The reproduction, transmission or use of this document or its contents is not permitted without written authority.

Offenders will be liable for damages. All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

We have checked the contents of the printed document to ensure that it is in agreement with the product described therein. However, since discrepancies cannot be ruled out, we cannot assume responsibility for complete agreement.

The information given in this printed document is however regularly reviewed and necessary corrections included in subsequent editions. We would appreciate any suggestions for improvements.

Table of contents

	Page
GENERAL INFORMATION	4
Introduction	4
Overall Impression	6
Impression	7
Using the operating instructions	8
Photos	9
Correct usage	12
Guarantee and liability	14
SAFETY	15
Analyse of dangers	15
Safety instructions	17
TRANSPORT UNTIL IN FULL USE	19
Assembly / Installation	20
USING THE CONTROLLER	23
Descriptions of functions	24
Changing the parameters	28
Temperature controller parameters list	29
Setup the controller mode	30
Setting the temperature	32
Setting the timer	33
Temperature limit, alarm	34
Temperature calibration	34
When in use	35
Maintenance	36
Shutting down/disposal	37
Technical specification	38
Attachments / Spare parts	39
Instruction for bending wooden sides with the Heat Mat controller on a Fox style bender.	40
DECLARATION OF CONFORMITY	43

General Information

Introduction

Dear customer,

We are pleased that you have chosen this professional guitar making appliance.

Side (rib) bending equipment is essential for every guitar workshop. The manual bending with an iron works on the principle that a heating cartridge with a thermostat is heated sufficiently in order to bend the thin wood enough by hand. The instrument maker in a combination of experience and skill is able to bring the iron to the optimal bending temperature.

Modern bending procedure with the bending press created after the example “Fox Benders” with a silicon heating mat distributes the heat evenly over a large area and therefore speeds up and simplifies the bending process. The controller must respond quickly and intelligently. A simple on/off switch on a thermostat is not enough. It is possible today to manufacture a complicated algorithm controller formerly only offered in the industrial production reasonably priced and in small quantities.

The advantage of the electronic controller (PID Controller) as against the on/off switch of the thermostat is that of efficiency and speed.

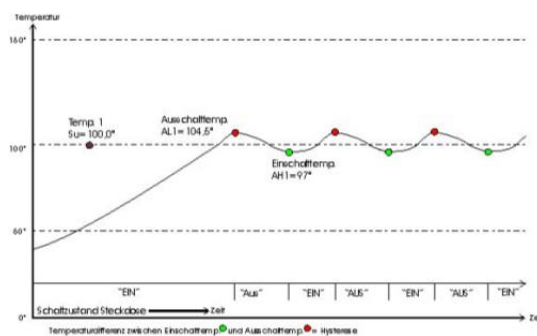


Illustration 1: Example of the two point controller

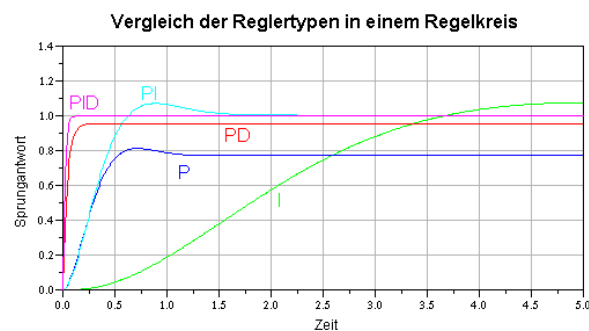


Illustration 2: Comparison of the two types. The RGT HC Controller rules with PID regulations. .¹

The described equipment is part of a module for the instrument maker. It is possible to heat different sized pieces with an inter-changeable controller.

Please consider that the controller is part of an arrangement of working pieces for a serial production and that this manual is only for the controller.

¹ <http://www.rn-wissen.de/index.php/Regelungstechnik#PID-Regler>

The bending piece and the components can legally speaking be seen as a machine and therefore the producer or distributor should declare the CE-conformity and also install the risk analysis safety measures before putting the machine into use. The operation of the controller with the heating elements and all the other things required is equivalent to a class of risks that is not analysed or described here.

Please consider carefully the risk of fire, burns, electrical or crushing dangers etc.

This document should help you to efficiently and safely use the RGT HC.

Please read the instructions carefully and familiarize yourself with any rules regarding the use of your own system before using the controller. This will help to avoid any accidents or damages. Please read the instructions and warnings on the machine.

This product is only for use when in compliance with the health safety laws of the country in use (in Germany: e.g. BGV and BGR). The person using the machine is required to use the utmost safety measures to reduce any risks.

USE YOUR OWN BRAIN – THIS MACHINE DOESN'T HAVE ONE!

The manufacturer does not accept liability if these rules and regulations are willfully ignored.

A legal responsibility cannot be accepted.