

HHTX-103

MICREL-POWERED HANDHELD TRANSMITTER

PRELIMINARY

DATA SHEET

Radios, Inc.

February 20, 2006 Preliminary Data Sheet

HHTX-103

MICREL-POWERED HANDHELD TRANSMITTER

Description:

The HHTX-103 is an on-off key (OOK) high performance, long-range transmitter operating at 915 MHz. This keyfop transmitter is primarily intended for use in Part 15.231 systems. The transmitter is synthesized and ideal for high volume OEM applications. It requires one 12 volt battery. The HHTX-103 is a well designed transmitter that is suitable for a variety of RF applications.



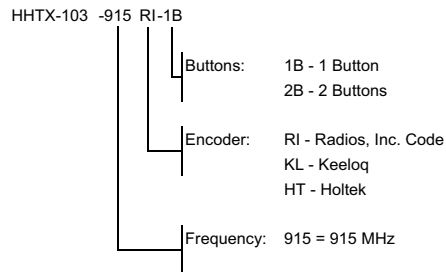
Typical Applications:

- Remote controls
- Garage openers / Gate controls
- Keyless entry
- Home / Industrial automation
- Remote access
- Domestic / Commercial security
- Automated resource management
- Fire / Security alarms
- Long-range RFID
- General wire elimination

Key Features:

- Low cost
- Low power consumption
- Rugged construction
- Synthesized
- Small size
- Range up to 2000 ft.
- No production tuning

Product Ordering:



Contact Information

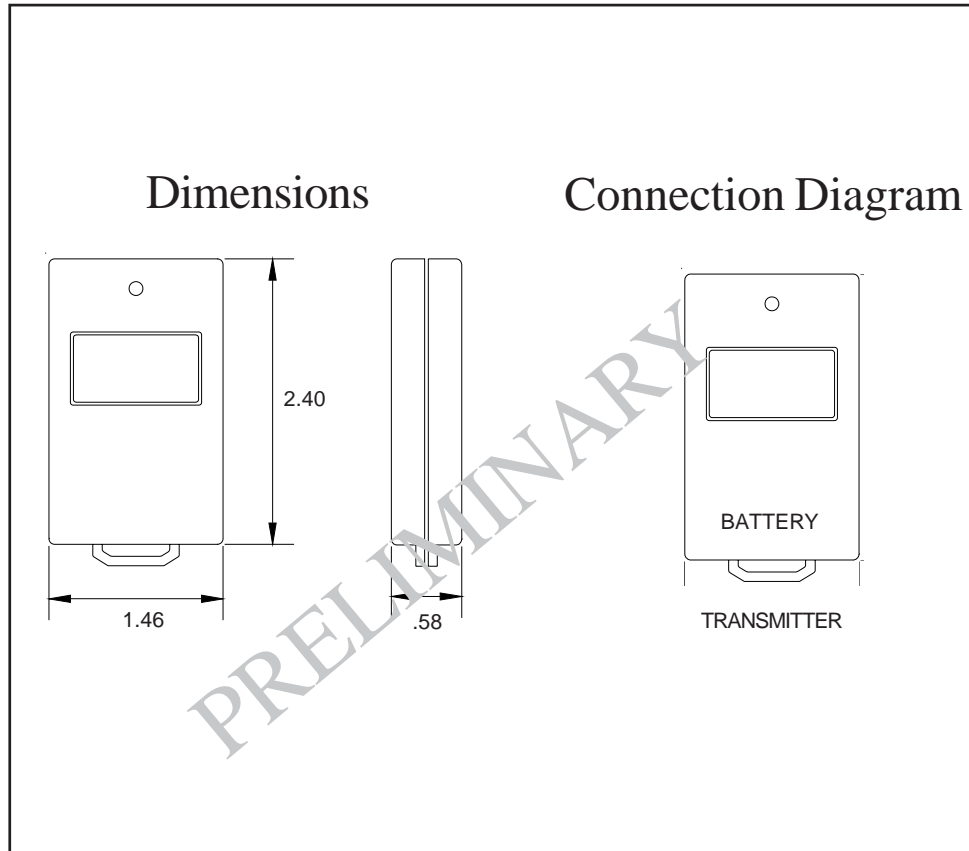
Radios, Inc.
1408 Center Avenue
Oostburg, WI 53070

Phone: 920-564-6622
Fax: 920-564-6630
Email: sales@radiosinc.com

HHTX-103

MICREL-POWERED HANDHELD TRANSMITTER

Mechanical and Pin Diagram



HHTX-103

MICREL-POWERED HANDHELD TRANSMITTER

Electrical Limits

Sym	Parameters	Min	Typ	Max	Unit	Notes
	DC Voltage V_{DC}	12	12	12	V	
	Operating temperature	-20		65	°C	
	Storage temperature	-45		85	°C	

Electrical Characteristics

This device is ESD sensitive. Do not operate or store near strong electrostatic fields. Use appropriate ESD precautions.

Parameters	Test Conditions	Min	Typ	Max	Unit
Supply Voltage			12		VDC
Supply Current			TBD		mA
Working Frequency		800		1000	MHz
Overall Frequency Accuracy		-100		100	kHz
RF Output Power			TBD		dBm
Data Rate				115	Kbps
Operating Temperature Range		0		85	°C

Note 1: Exceeding the absolute maximum ratings may damage the device.

Note 2: The device is not guaranteed to function outside its operating ratings.

Note 3: The device uses one A23 12 volt battery.

Encoder Types:

Three encoder types are offered for the HHTX-103: RI, Keeloq, and Holtek. RI is Radios, Inc.'s proprietary code. This code sends asynchronous data packets with a header and several bytes of data.

Keeloq uses a 32-bit hopping code generated by a non-linear encryption algorithm, with a 28-bit serial number and 6 information bits to create a 66-bit transmission stream. The length of the transmission eliminates the threat of code scanning, and the code hopping mechanism makes each transmission unique, thus rendering code capture and re-send schemes useless.

Holtek uses a Holtek series encoder to securely encode the data being sent.

HHTX-103

MICREL-POWERED HANDHELD TRANSMITTER

Technical Support:

Radios, Inc. is committed to providing its customers with excellent technical support and the resources necessary to assist them with their product development. All technical support is provided free of charge. Customers have several options to obtain assistance. First, any questions or concerns can be e-mailed to Radios, Inc. at information@radiosinc.com. We monitor our e-mail daily, and will respond to all questions promptly. Additionally, to speak directly to a technical support representative, customers can call Radios, Inc. at 920-564-6622.

Compliance:

Embedded wireless modules are intended for use as component devices which require peripheral elements to operate. Radios, Inc.'s modules are intended to be used in products requiring compliance. They are, however, not pre-approved by the FCC or any other agency worldwide unless so stated. The user or customer understands that regulatory compliance may be required prior to the sale or operation of the module or development system, and agrees to abide by all laws governing the module's or development system's use in the country of operation.

The approval process of embedded wireless modules in the United States is relatively uncomplicated. The Federal Communications Commission (FCC) is the governing body in the US that specifies its requirements in the Code of Federal Regulations (CFR), Title 47. Title 47 consists of several volumes and it is necessary to first identify the correct section that applies to your application. These rules require that a device which intentionally creates RF emissions be FCC compliant; i.e., pre-tested for compliance and assigned an identification number. Radios, Inc. offers pre-screening at one of our affiliate test sites. Final certification is then accomplished by an independent test laboratory. After passing compliance testing, you will be issued a unique ID number which must be placed on each product manufactured.

Any questions dealing with interpretations of the rules relating to testing or compliance should be addressed to:

FCC
Equipment Authorization Division
Customer Service Branch, MN 1300F2
7435 Oakland Mills Road
Columbia, MD 21046

Returns:

Products may be returned directly to Radios, Inc. for evaluation. Returns, without exception, must have a valid RMA number attached. RMA numbers can be obtained by calling a customer service representative at Radios, Inc. If a product is found to be defective and is returned within 90 days

HHTX-103

MICREL-POWERED HANDHELD TRANSMITTER

of purchase, Radios, Inc. may repair or replace, at its option, said defective product. The warranty does not apply to any products which have been disassembled, modified or subjected to conditions exceeding the application specifications. Under no circumstances will Radios, Inc. be responsible for losses, financial or other, arising from the use or failure of a device in an application or for losses arising from failure to meet delivery requirements, other than the repair, replacement, or refund limited to the original product purchase price. No other warranties, express, implied, or statutory, including warranty of fitness for a particular purpose, apply.

Product Warranty and Disclaimer Information:

Radios, Inc. is dedicated to providing its customers with the best possible products, and is continually working on improving the quality and function of its entire product line. Therefore, Radios, Inc. reserves the right to make changes to the design, specifications, or manufacturing of its products without notice. The information contained in this data sheet is believed to be complete, accurate, and reliable as of the time of publication. Because product specifications are based on representative lot samples, however, values can vary from lot to lot and are not guaranteed.

Radios, Inc. does not assume any liability or responsibility arising from the application or use of any product described herein, and makes no guarantee, warranty, or representation regarding the suitability or legality of any product for use in a specific application. Radios, Inc. does not assume any liability for any infringement of patents or other rights of third parties which may result from the use of its products. No product sold by Radios, Inc. is intended for use in a life critical application, or any application where the safety of property is at risk. The user assumes full and complete responsibility for any use of Radios, Inc.'s products in an application where the safety of life or property is at stake.

Radios, Inc., its suppliers, and its licensors shall in no event be liable for any damages arising from the use of or inability to use this product. This includes business interruption, loss of business information, or other losses that may arise from the use of this product. Some devices described in this publication are patented. Under no circumstances shall any user be conveyed any license or right to the use or ownership of these patents.

Copyright:

Radios Inc. reserves the right to all proprietary or commercial information contained in this data sheet. This data sheet is protected by copyright, and any unauthorized copying, reproduction, or dissemination is strictly prohibited without the prior written approval of Radios Inc.

Editorial Information:

Last Updated (Date)
February 20, 2006 PRELIMINARY