



Hamtek

HF Choke Balun

Installation and Operating Instructions

Model: BLN-CHK-0001

HPN: 0903-0003



Installation and Operating Instructions: HPN 0501-0003

Issue 1.0

7th November 2025

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Safety Information

EN

This product must be installed and operated according to the user instructions.
Do not operate the product outside of the allowed specifications.
Do not operate the product with any visible damage to the enclosure.

FR

Ce produit doit être installé et utilisé conformément aux instructions d'utilisation.
N'utilisez pas le produit en dehors des spécifications autorisées.
N'utilisez pas le produit si le boîtier est visiblement endommagé.

NL

Dit product moet worden geïnstalleerd en bediend volgens de gebruikersinstructies.
Gebruik het product niet buiten de toegestane specificaties.
Gebruik het product niet als er zichtbare schade aan de behuizing is.

DE

Dieses Produkt muss gemäß den Benutzeranweisungen installiert und betrieben werden.
Betreiben Sie das Produkt nicht außerhalb der zulässigen Spezifikationen.
Betreiben Sie das Produkt nicht, wenn das Gehäuse sichtbare Schäden aufweist.

IT

Questo prodotto deve essere installato e utilizzato secondo le istruzioni per l'utente.
Non utilizzare il prodotto al di fuori delle specifiche consentite.
Non utilizzare il prodotto con danni visibili alla custodia.

ES

Este producto debe instalarse y operarse de acuerdo con las instrucciones del usuario.
No opere el producto fuera de las especificaciones permitidas.
No opere el producto si hay algún daño visible en la carcasa.

PT

Este produto deve ser instalado e operado de acordo com as instruções do usuário.
Não opere o produto fora das especificações permitidas.
Não opere o produto com qualquer dano visível no gabinete.

PO

Ten produkt należy zainstalować i obsługiwać zgodnie z instrukcją użytkownika.
Nie używaj produktu poza dozwolonymi specyfikacjami.
Nie należy używać produktu z widocznymi uszkodzeniami obudowy.

Unpacking

Package Contents

1 x 0903-0003 BLN-CHK-0001 HF Choke Balun
1 x 0508-0004 BLN-CHK-0001 Quick Start Guide

Product Description



Product Overview

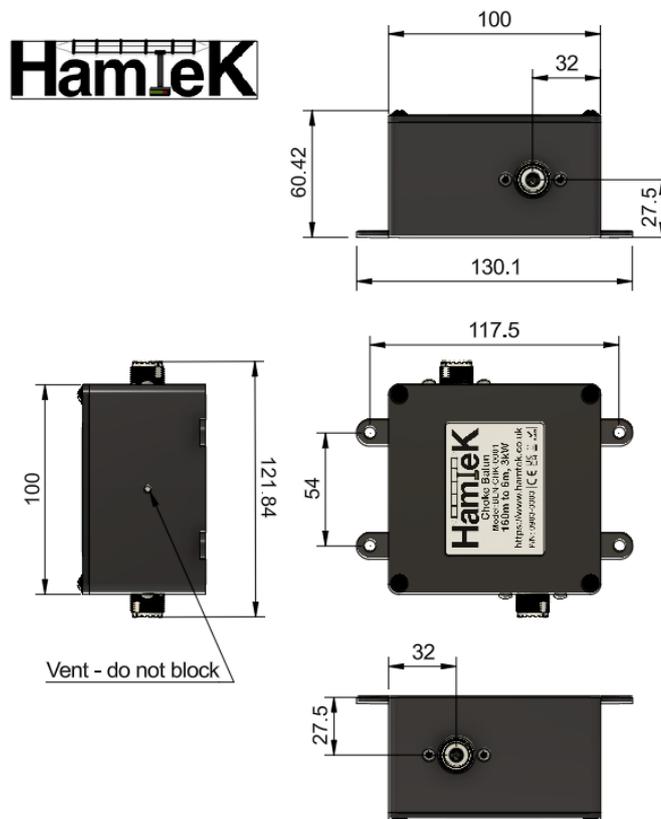
The HamTEK BLN-CHK-0001 HF Choke Balun suppresses unwanted common-mode currents on your antenna feedline to reduce received noise and help prevent RF in the shack.

Key Features

- High power handling to 3kW
- Wide frequency range of 1MHz to 60MHz
- SO-239 connectors for the RF path
- IP65 water resistant enclosure for outdoor use
- High UV resistance for years of direct sun exposure
- Pressure equalisation vent to prevent moisture being drawn into the enclosure

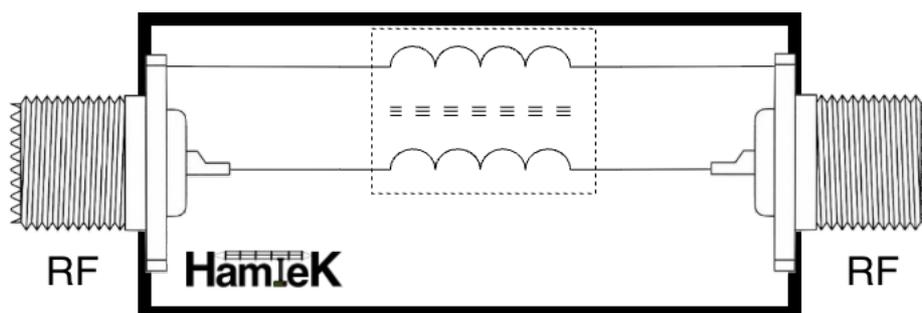
Dimensional Drawing

All dimensions in mm.



HF Choke Balun

Functional Description



HamTEK CHK-1C Block Diagram

Bifilar common-mode choke

The BLN-CHK-0001 is a bifilar (2-winding) inductor wound onto two stacked FT-240 type 31 ferrite cores that presents a low impedance to differential signals (the wanted radio signals) and high impedance to common-mode signals to prevent them from entering the shack. This helps prevent interference to equipment within the shack from strong signals on the feeder while reducing received interference from unwanted RF emissions inside and outside of the shack.

RF SO-239 (UHF) Connectors

SO-239 (UHF) connectors have been used for compatibility with most Amateur Radio HF antenna connections and coax patch leads. Contacts are silver plated and specified with 500 mating cycles. They are rated up to 500V.

Typical Characteristics

Typical insertion loss

Measured signal loss through the balun into a 50 Ohm load.

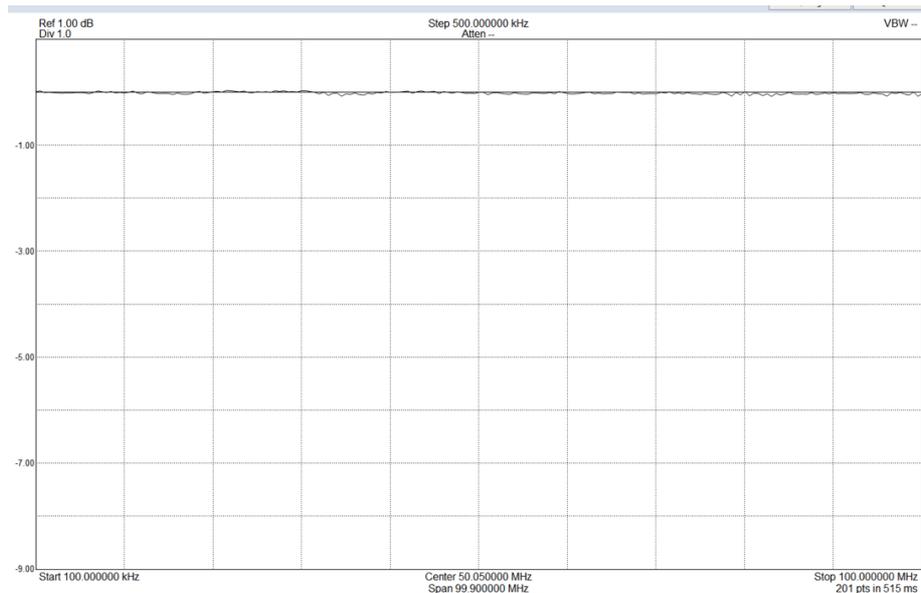
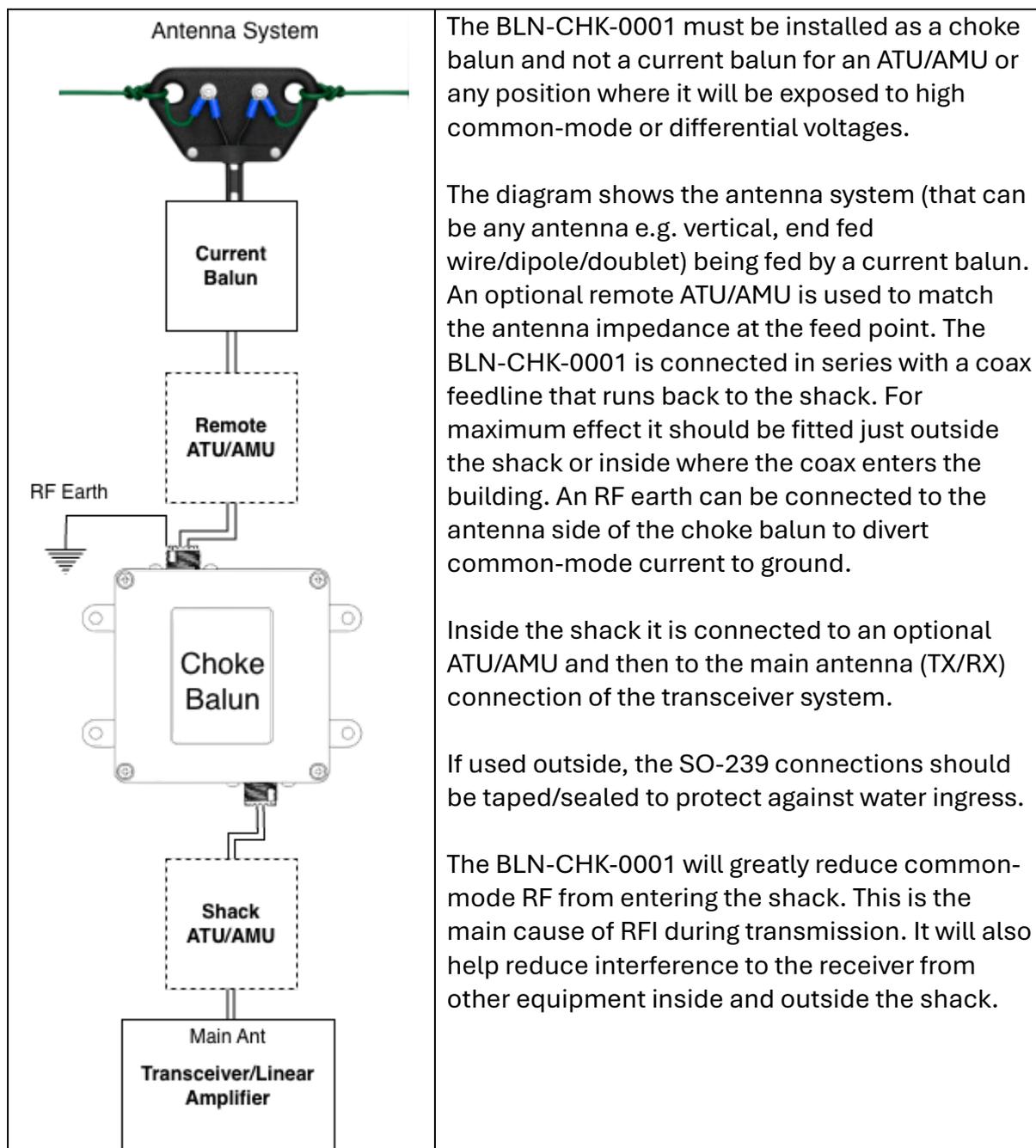


Figure 1 – Typical insertion loss from 100KHz to 100MHz

Installation

Typical installation in an Amateur Radio station



Troubleshooting

Follow the table in the order shown to determine the required action.

Fault	Cause	Action
High VSWR	Internal fault, antenna fault or bad coax connection	Check for continuity between the centre pins of the SO-239 connections
		Check for continuity between the bodies of the SO-239 connections
	Check coaxial connections and antenna	
	Internal fault	Return product for service and repair
Getting hot	Coax/connector fault	Check all connections and ensure no water has penetrated the PL-259 connections.
	Very high common-mode voltage	Check the antenna/feeder and make sure it is installed correctly where it will not be exposed to high common-mode or differential voltages (high VSWR)
	Internal fault	Return product for service and repair
RF still getting into the shack	Another external connection bypassing the choke	Ensure all electrical connections/cables going to/close to the antenna are choked or filtered.
	Direct pickup from antenna	Move the antenna away from the shack or fit RF suppression components to the effected equipment.

Service and Maintenance

There are no user serviceable parts inside - no maintenance is required.
Please refer servicing and repair to a Hamtek Ltd authorised service centre.

WEEE recycling information

Electrical equipment marked with this symbol may not be disposed of in European public disposal systems. In conformity with European local and national regulations (EU Directive 2002/96/EC), European electrical equipment users must now return old or end-of-life equipment to the manufacturer for disposal at no charge to the user. Note: For return for recycling, please contact the product manufacturer or supplier for instructions on how to return end-of-life equipment for proper disposal.



Specifications

General description	
Dimensions	131 W x 61 H x 122 D mm
Weight	530g
Enclosure	Carbon fibre filled PETG
Electrical characteristics	
SO-239 RF Input/Output connections	RF Impedance: 50 Ohms Maximum RF input: 3kW Maximum voltage: 500V
Operating Frequency Range	1MHz to 60MHz
Choking impedance	>5Kohm on low HF frequencies
Insertion Loss	<0.2dB over frequency range
Operating Environment	
Ambient temperature	-18°C to 45°C
Ambient humidity	0-100% RH condensing
Ingress Protection	IP65

Warranty

Post-sale Warranty Agreement

The product is warranted by the Company (Hamtek Ltd) to be free from material defects in workmanship and/or materials at the time of delivery to the Customer and that for a period of one year (12 months) from such time the Company will repair or replace any Product which does not comply with this warranty PROVIDED ALWAYS THAT the Company's liability under this warranty shall be limited to the repair or replacement of affected Products and is conditional upon the Customer:

1. Notifying the Company promptly of any such material defect and in any event within such period of one year.
2. Returning to the Company the affected Products properly and adequately packed, carriage or post-paid, within fourteen days of such notification.
3. Having ensured that the Products have not been tampered with, repaired, modified or altered in any way; and
4. Ensuring that the Products are protected from harm or otherwise properly cared for and are retained in the possession of the Purchaser.

In the event of a failure as above the Company will:

1. At its discretion, repair or replace the faulty unit free-of-charge for a unit returned to an authorised service centre.
2. Pay all return shipment charges from the Company service centre to the customer.

Limitation of Warranty

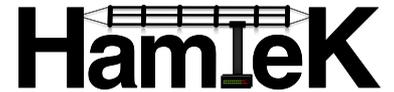
The foregoing warranty shall not apply to defects resulting from consumable or perishable items, unauthorised modification or misuse, or operation outside of the product specification. No other warranty is expressed or implied.

Whilst every care has been taken in compiling the information in this publication, the Company cannot accept legal liability for any inaccuracies contained herein. Hamtek Ltd has an intensive program of design and development and reserve the right to alter product specifications without notice and whenever necessary to ensure optimum performance from its product range. It shall be deemed to exclude all other warranties and conditions whether express or implied and whether arising by common law statute or otherwise.

Hamtek Ltd reserve the right to waive this benefit in any event where it is clear upon inspection that the cause of the failure is due to customer misuse. Hamtek Ltd will be the sole arbiter in these circumstances.

In no event will Hamtek Ltd be liable for direct, indirect, special, incidental or consequential damages arising out of the use of or inability to use the product or documentation, even if advised of the possibility of such damage.

HF Choke Balun
Model: BLN-CHK-0001
HPN: 0903-0003



UK/EU Declaration of Conformity

We, Hamtek Ltd, hereby declare under sole responsibility that the HF Choke balun model BLN-CHK-0001 (Hamtek Part Number 0903-0003) to which this declaration relates is in conformity with the following directives and standards:

Low Voltage Directive 2014/35/EU (LVD)

BS EN 62368-1:2014+A11:2017
EN 62311:2008

Packaging Directive 94/62/EC

The product packaging complies to the essential requirements in Annex II of the directive

RoHS Directive 2011/65/EU and 2015/863/EU and its amendment

EN 63000:2018 Restriction of Hazardous Substances and Technical Documentation

Signed on behalf of Hamtek Ltd

A handwritten signature in black ink that reads "Tim Keep". The signature is fluid and cursive, with a large initial "T" and a long, sweeping underline.

Tim Keep
Managing Director
November 7th 2025

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