JUMBO BLOCK ENGINEERING SUITE

JUMBO BLOCK Chat Direct

User Manual · Version 9.0.0

https://jumboblock.org

1. Overview & Ephemeral Architecture

JUMBO BLOCK® Chat Direct provides a highly secure end-to-end encrypted web chat specifically designed for exactly two participants. The system operates entirely without user accounts, phone numbers, email addresses, cookies, databases, or stored chat history.

2. Security & Cryptographic Design

- **End-to-End Encryption (AES-GCM):** Messages are encrypted directly in the browser before transmission. The secret key resides exclusively in the URL fragment (after #) and is never sent to the server.
- **Zero-Knowledge Relay:** The server (PHP relay) acts purely as an intermediary for encrypted packets stored in temporary files with no access to plaintext.
- **Exclusive Access:** The single-use invitation link is invalidated immediately upon join by the second participant, locking the room exclusively to those two browser instances.
- **Complete Erasure:** All message packets, keys, and relay files are deleted instantly and permanently when the conversation ends.

3. Usage Workflow

Step	Action & Description
1. Initiation	Opening the application automatically initializes a new chat session and generates a single-use invite link.
2. Share Invite	Send the invitation link securely to the intended recipient via a trusted channel.
3. Connection Established	Once the recipient opens the link, the status indicator turns green (Connected).
4. Message Exchange	Send real-time encrypted text messages (up to 8,000 characters per message).
5. End Conversation	Clicking "End conversation" permanently purges all messages, keys, and server relay files for both users.

4. Legal & Compliance Notes

JUMBO BLOCK® Chat Direct is a protected technology developed by ZANNI GROUP. "JUMBO BLOCK" is a registered trademark of ZANNI GROUP. This tool is built to uphold digital sovereignty and strict compliance with Privacy-by-Design principles.