



CP2P

User Guide

Chat Peer to Peer
End-User Manual

Version 2.2.000

Languages: 24 (beta translation)

Devices: PC · Smartphone · Tablet (PWA-ready)

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Key terms explained

1. Introduction

1.1 What is CP2P?

A chat that spreads the spirit of gratitude — “thank you” — from Japan to the world, working toward a world without war.

CP2P (Chat Peer to Peer) was born from a simple belief: if there were a social platform that conveyed feelings of gratitude (“thank you”) and appreciation (👍 Like) to the people around us and built relationships full of smiles, it might help solve the problem of online slander and abuse that troubles society today. Our goal is not the capitalist world where “if we fight over things, there is never enough,” but to spread a world of giving and love where **“if we share, there is always plenty.”**

CP2P is a **decentralized communication service** that runs in your browser alone. Participants exchange messages directly via **P2P (peer-to-peer)**; when the other party is offline, messages are delivered safely through an **encrypted server relay**. Every time you send or receive, you earn “Thanks Points,” which you can also send to others to express your gratitude.

In a nutshell

“A safe chat that connects you directly, without going through a server — with ‘Thanks Points’ that make mutual gratitude visible.”

1.2 Key Features


Direct Communication (P2P)

Messages are, in principle, sent directly between participants' browsers via WebRTC. Ordinary messages are not stored on the server.

Strong Encryption

Server-relayed messages use ECDH P-256 + AES-256-GCM; transactions are digitally signed with ECDSA P-256.

Thanks Points

Earn +1 pt each time you send/receive a message or receive a . Recorded in a signed ledger so tampering is detectable.

File Transfer

Send and receive files up to 100 MB directly via P2P. Images show as thumbnails; received files are auto-managed.

Referral Campaign

Invite friends with an invite code and both sides earn Thanks Points (plus a bonus on identity verification).

24 Languages

Both UI and message translation support 24 languages (NLLB-200 / LibreTranslate). Beta translation feature.

PWA-Ready

Add to your home screen to use it like an app. Push notifications supported (including iOS).

Five Room Types

Password / Open / Friends-Only / Identity-Verified / Verified-Friends rooms, used to fit your purpose.

1.3 Use Cases

- **Close communities** — safe communication among family, friends, and clubs
- **Small businesses** — customer contact and support (entry-fee rooms help maintain quality)
- **A culture of encouragement** — healthy communication mediated by Thanks Points
- **Multilingual spaces** — converse with people overseas in real time with automatic translation

2. Requirements & Setup

2.1 Supported Devices & Browsers

CP2P uses modern web technologies (WebRTC, Web Crypto API, Service Worker). The following environments are recommended.

| Category | Recommended | Notes |
|---------------|---------------------------------------------|------------------------------------------------|
| PC | Latest Chrome / Edge / Firefox / Safari 16+ | Calls available with camera/mic permission |
| Android phone | Latest Chrome | Add to home screen for notifications |
| iPhone (iOS) | Safari 16.4+ | Home-screen install required for notifications |
| Tablet | iPadOS / Android tablet | Adapts automatically to landscape layout |

2.2 Installing as a PWA

CP2P supports PWA (Progressive Web App). Adding it from your browser lets you use it like a native app.

- Launch from the home screen with one tap
- Receive push notifications (required on iOS in particular)
- Comfortable full-screen display

Add to Home Screen on iOS Safari

① Open CP2P in Safari → ② tap the **Share** button (square with an up arrow) → ③ choose “Add to Home Screen” → ④ confirm the name and tap “Add” → ⑤ launch from the home-screen icon to run in PWA mode.

Add to Home Screen on Android Chrome

① Open CP2P in Chrome → ② tap the **:** menu (top right) → ③ choose “Add to Home screen” or “Install app” → ④ tap “Add” to confirm.

2.3 About Your Network

Because CP2P establishes P2P connections via WebRTC, connectivity may drop in the following situations.

When connecting may be difficult

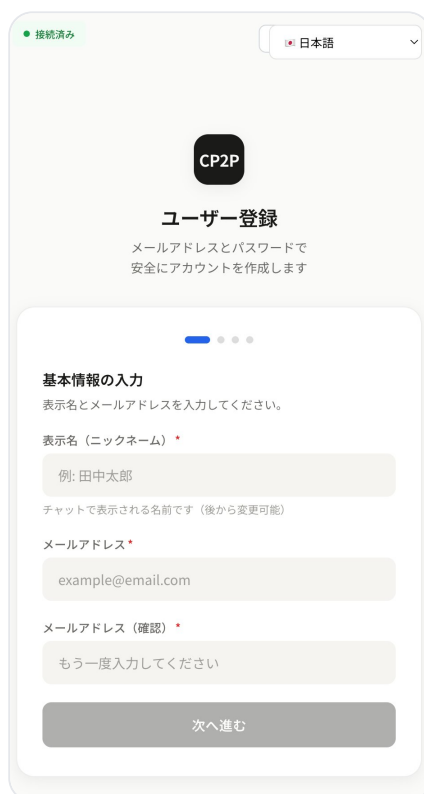
- Behind strict firewalls (e.g., corporate networks)
- Symmetric NAT environments (e.g., older home routers)
- Unstable mobile lines (areas with weak signal)

In such cases, traffic is automatically relayed via a **TURN server**, so you can usually keep using CP2P as is. If it still won't connect, you can use **Server-Relay sending** (costs 1 pt).

3. Account Registration & Login

3.1 New User Registration (4 Steps)

To get started, register an account with your email address and a password. Registration completes in four steps.



Step 1: Enter basic information

Step 1: Basic information

① Enter your **display name (nickname)** (changeable later) → ② enter your **email address** and re-enter it to confirm → ③ tap “Next.”

Step 2: Email verification

A **6-digit verification code** is sent to your email. Enter the code to verify.

If the code doesn't arrive

Check your spam folder. If it still doesn't arrive, tap “Resend” (60-second cool-down applies).

Step 3: Set a password

When registration completes, an **18-character Personal ID** (format `XXXXXX-XXXXXX-XXXXXX`) is generated automatically. Then set a password (8+ characters; strength meter shown; “Generate strong password” is also available).

Important: the Personal ID cannot be reissued

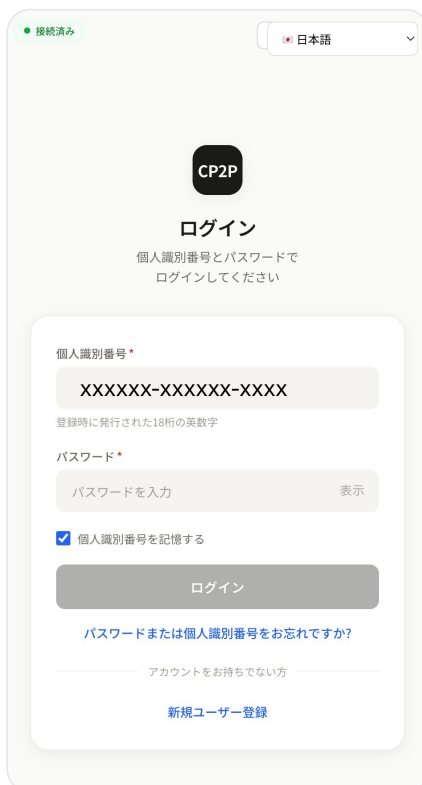
Take a screenshot or store it somewhere safe. You can change your password later, but the Personal ID cannot be changed (if forgotten, you may be able to recover it via the email confirmation in 3.4).

Step 4: Registration complete

The completion screen shows your Personal ID, display name, and email. Tap “Go to login” to proceed.

3.2 Logging In

① Enter your Personal ID (`XXXXXX-XXXXXX-XXXXXX`) → ② your password → ③ optionally check “Remember Personal ID” → ④ tap “Login.”



Login screen (use “Forgot your password or Personal ID?” for reset / recovery)

3.3 Logging In From a New Device

When you log in from a browser/device for the first time, **email verification** is required for security. ① Log in with your Personal ID and password → ② a “New device verification” screen appears → ③ enter the 6-digit code sent to your email → ④ that device is then allowed. From the second time onward, the same browser does not need email verification (unless removed in Device Management).

3.4 Password Reset & Personal ID Recovery

Use the “**Forgot your password or Personal ID?**” link at the bottom of the login screen.

1. Enter your registered **email address or Personal ID**
2. An email with a **password-reset link and a Personal-ID confirmation link** is sent to your registered address
3. Use the links to set a new password / confirm your Personal ID



“Password Reset & Personal ID Confirmation” screen





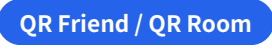


Changed since the previous guide (v1.4.007): Personal ID can now be confirmed by email

Previously, recovering a forgotten Personal ID was limited; now you can have a **confirmation link sent to your registered email** from this screen (the ID itself still cannot be “reissued”).





4. The Main Screen

After login, the main screen has three areas: the **header** at the top, the **message list** in the center, and the **input field** at the bottom.

4.1 Header

| Item / Button | Meaning / Function |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| CP2P (logo) | Service logo. Tap to reload the Thanks Points display |
|  | Switch to chat mode (initial screen) |
|  | Show the friend list and friends' open chats |
| Total Supply | Total Thanks Points issued across this entire server |
|  PO | Point Economy Dashboard (total supply, burn, treasury balance, etc.; Ch.8) |
|  TH | Transaction History (point send/receive history; ledger view; Ch.8) |
|  | Show/scan QR codes for adding friends / joining rooms |
| [Display name] | Tap to open Edit User Info (profile) |
|  | Returns to the login screen after confirmation |
|  (gear) | Opens Display Settings (4.6) |

4.2 Connection Status

-  **P2P Connected** — directly connected to other participants
-  **Signaling** — connected to the server, awaiting a P2P connection
-  **Reconnecting** — temporarily disconnected and retrying
-  **Disconnected** — cannot connect due to a network or other issue


4.3 Participant Details

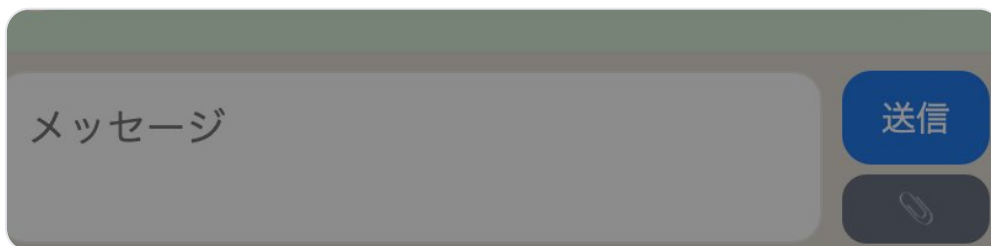
Tap the “Participant details” text to show all members of the current room and their P2P connection status. Tap a member’s icon to **add them as a friend**.

4.4 Message Area

The central scroll area shows past messages in chronological order. Up to **100 messages per room** are stored on your browser; older ones are auto-deleted. Above incoming messages, the **sender’s name and time** (`Name /HH:MM`) are shown (6.3).

4.5 Message Input

Type into the “Message” field and tap the blue **“Send”** button. In reply mode, “Reply to: ...” appears above the field. Use the  (**clip**) button at the bottom right to attach a file (6.9).

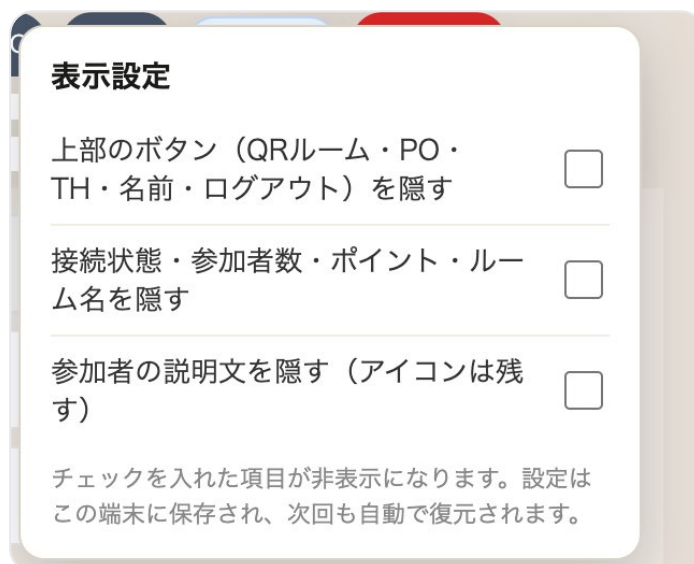


Input field, Send button, and  attach button

4.6 Display Settings (gear ⚙)

Open “Display Settings” from the **gear (⚙)** at the top right. To declutter the screen, you can individually hide:

- The top buttons (QR Room, PO, TH, name, Logout)
- Connection status, participant count, points, and room name
- Participant descriptions (icons remain)



Display Settings (gear) panel

 **Settings are saved on this device**

Checked items are hidden. Settings are **saved on this device** and restored automatically next time.

5. Rooms

5.1 The Five Room Types

CP2P offers **five room types** to suit your purpose.

| Room type | How to join | Use |
|-------------------------------|----------------------------------|-------------------------------------------|
| Password Chat | Room name + password | Private conversations among acquaintances |
| Open Chat | Room name only (anyone can join) | Public communities / hobby gatherings |
| Friends-Only Chat | Creator's friends only | Closed conversations limited to friends |
| Identity-Verified Chat | Identity-verified users only | A space only for verified people |
| Verified-Friends Chat | Both verified and a friend | The most limited, highest-trust space |

Entry fee

When creating a room you can set an **entry fee (Thanks Points)**. Joining such a room consumes the set points (you can't join with insufficient balance).

5.2 Joining a Room

There are three ways to enter a room.

- **A: Enter a room name** — type the “Room name” (and “Room password” for password rooms), confirm your display name, and tap “Join.”
- **B: From favorites / chat list** — join previously saved rooms or your own dedicated rooms with one tap.
- **C: Scan a QR code** — use “QR Room” → “QR Camera” to auto-fill the room info.



Chat list (your dedicated rooms, favorites, friends' open chats)

5.3 Creating a Dedicated Room

Open your own room from the “Create Dedicated Room” button.

1. Choose the room type (Password / Open / Friends-Only / Identity-Verified / Verified-Friends)
2. Enter a **room name** (for password rooms, enter **Password 1 & 2**; they must match. “Generate strong password” is available)
3. Set the options below and the **entry fee** as needed, then tap “Register”

専用ルーム制作

ルーム名とパスワードを入力して専用ルームを登録します。パスワード1と2が一致しないと登録できません。

現在の作成数: 4 / 5

パスワードチャット

ルーム名

ルームパスワード1

ルームパスワード2

パスワード表示

強力パスワード自動生成

チャット一覧に表示
ONにすると 10 pt/日 (100% 燃焼)

オフライン コメント・ファイル配送機能
ONにすると 10pt/日 (20% 燃焼 80% 財団)

入室時にありがとうポイント (0 = 無料)

1以上を設定すると、入室前にポイント支払いの確認が表示されます。

読み込みました

[このルーム名を削除](#) [閉じる](#) [登録する](#)

Create Dedicated Room (creation limit and options)

| Option | Description |
|---------------------------------|------------------------------------------------------------------------------|
| Creation limit | Up to 5 rooms per account (“Current count X / 5” is shown) |
| Show in chat list | List it for other users. 10 pt/day (100% burned) |
| Offline comment & file delivery | Deliver to offline members too. 10 pt/day (20% burned + 80% treasury) |
| Entry fee | 0 = free. 1 or more shows a payment confirmation before entry |

⚠ Copy the password before registering

Passwords generated/set at creation cannot be shown again afterward. Be sure to copy them in advance.

5.4 QR Code Features

- **QR Room** — show a registration QR for a room you created. Scanning adds it to the other person's favorites.
- **QR Friend** — show your own friend-registration QR (see Ch.7).

- **QR Camera** — open the camera to scan a room/friend QR (camera permission required).



Room registration QR code

⚠️ QR codes contain the password

Take care not to let others see your screen.

5.5 Favorites

Add a room to favorites with the ★ button on the join screen. Save rooms you use often to join with one tap. Favorites are kept on the server and visible from other devices.

5.6 Password Vault (🔑)

Rooms you have successfully joined with a password have that password saved in **that browser's local storage**, and it is auto-filled the next time you enter.

🔒 Never sent to the server

Saved passwords are stored **only on this device** and are never sent to the server. You can review, delete individually, or clear all from the “Saved Room Passwords” screen.

6. Chat Features

6.1 Sending Messages

Type into the “Message” field and tap the blue “Send” button.

- URLs in a message are automatically turned into **links**
- YouTube URLs are embedded as a **video player**
- Image URLs are shown as **inline images**

6.2 Reply

The “Reply” button on each message enters reply mode. “Reply to: ...” appears above the input field, and your message includes the quoted text of the reply target. Tap “Cancel” next to it to exit.

6.3 Timestamps

Above incoming messages, the **sender's name and time** are shown as **Name /HH:MM** . For older history without time data, only the name is shown (no layout issues). The **exact time to the second** is available via the “Details” button.

6.4 Likes (👍) and the List

Send a like with the 👍 button. The number after 👍 is the count of people who liked it; tap again to remove. The “List” button shows who liked it.

♥ Likes earn points

Both the person who gives a 👍 and the one who receives it earn +1 pt (no duplicate awards for the same relationship).

6.5 Details

The “Details” button expands a message's details:

- Sent time (**YYYY/MM/DD HH:MM:SS** , to the second)
- Sending device info (OS, browser, etc.)

- Sent / received status
- For point transfers, balance before/after and a transaction ID

6.6 Media (YouTube & Images)

YouTube URLs in a message (youtube.com / youtu.be) are automatically embedded as a video player (various URL formats supported). Image URLs ([jpg/png/gif/webp](#)) are auto-previewed.

6.7 Translation (Beta)

Translate a received message into your own language with one tap (24 languages). Tap the translate button (🌐) at the top right of a message to show the translation under the original; tap again to hide.

🌐 UI localization is progressing too

Translation uses the high-quality **NLLB-200** model first, falling back to **LibreTranslate** if unavailable. UI localization is nearly complete for major languages and can be switched via “Display language” in Edit User Info (the translation feature is in beta).



Multilingual UI example (Korean display; chat text is translated via the translate button)

6.8 Server-Relay Sending (Encrypted Relay)


Normally messages go directly via P2P, but when **the other party is offline**, “Server-Relay sending” has the server temporarily hold an encrypted message and deliver it once they come online.

| Item | Details |
|---------------------|--------------------------------------------------------|
| Encryption | ECDH P-256 + AES-256-GCM (end-to-end) |
| Operating fee | 1 pt (sent to the operator account) |
| With point transfer | “1 pt + N pt transfer” can be sent together |
| Stored on server | Ciphertext only. The server cannot decrypt the content |
| After delivery | The ciphertext on the server is promptly deleted |

Steps: ① “Reply” on the recipient's message → ② switch the send mode to “Server-Relay” → ③ type → ④ “Send” → ⑤ confirm to execute (1 pt). Not available if your balance is below 1 pt.

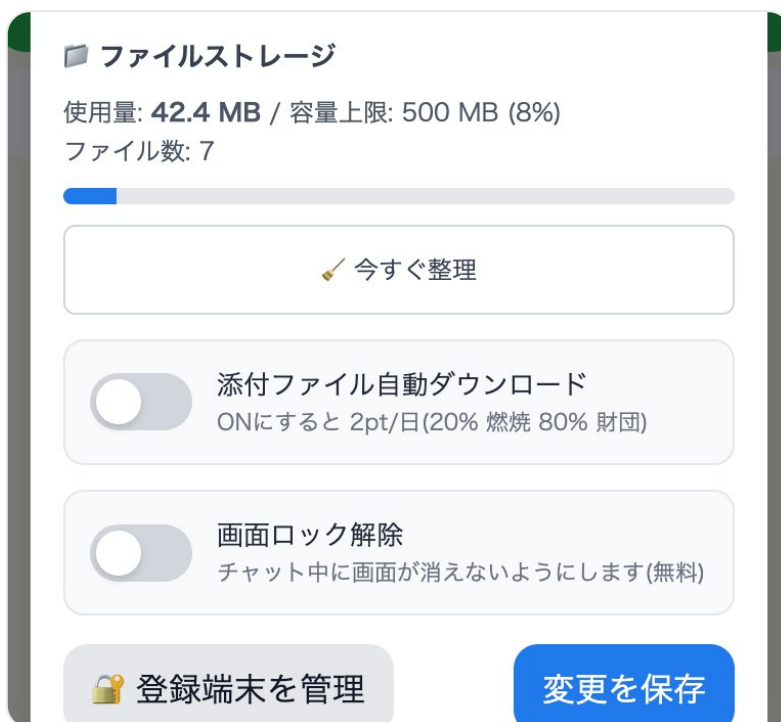
6.9 File Transfer

You can send and receive files in chat. Use the  **(clip) button** at the bottom right of the input field to pick a file and send it. Transfer is done **directly via P2P**, and images are shown as thumbnails.

| Item | Details |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum size | 100 MB per file (a confirmation dialog appears above 10 MB) |
| Receiving | “↓ Download” / “  Save.” Empty files cannot be attached |
| Auto-deletion (retention) | Received files = 30 days (from last access) / files you sent = 90 days . A warning appears on the bubble at 3 days left |
| Storage limit | 500 MB per device (excess is auto-tidied) |

File storage management (inside the gear ⚙)

Via the gear (⚙) → “File Storage,” you can check usage, the storage limit, and file count. “Clean up now” tidies manually, and each toggle changes behavior.



File Storage (usage, cleanup, auto-download, keep screen on)

💡 Paid options (consume points)

Auto-download attachments = 2 pt/day when ON (20% burned + 80% treasury). **Keep screen on** (prevent the screen from sleeping during chat) = free. Note that **file delivery to offline members** is enabled via the room's “Offline comment & file delivery” option (5.3).

7. Friends

7.1 How to Add Friends

You can register others as “friends.” Doing so brings these benefits:

- View the friend's **open chat rooms** from your friend list
- Join “Friends-Only Chat” rooms
- Easier to reach offline friends via **Server-Relay sending**

A: Tap a participant's icon — tap the other person's icon in chat → “Yes” to add to your friend list.

B: Scan a QR Friend code — show each other's QR to register in person or online.

Condition for adding friends

You can add friends only while connected to the signaling server (i.e., online).



Your friend-registration QR code (scanning adds you to the other person's friend list)

7.2 Friend List

Open the friend list from the “Friends” button in the header. For each friend, the following are shown:

- **Display name** and **category** (Friend / Identity-verified / General participant, etc.)

- The **open chat rooms** the friend is currently in
- **Call** / **Video** / **Message** buttons (Message starts a reply to that friend)
- A **Remove friend** button



Friend list (category, open chats, call/video/message; names are masked)

7.3 Peeking Into Friends' Open Chats

Beneath a friend's name, the **open chat room names** they are currently in are shown. Tap one to join that room directly (no password needed for open chats).

8. Thanks Points

8.1 What Are Thanks Points?

“Thanks Points” are CP2P's unique **measure of gratitude**. They accumulate naturally as you exchange messages or receive 👍, and can be used to express “thanks” to others or to use Server-Relay and other features. Every transaction is recorded on the server as a **signed ledger**, so tampering is detectable.

💡 Points circulate through “burn” and “treasury”

When you spend points on paid features, part or all is either **“burned”** (destroyed and removed from total supply) or sent to the **“treasury”** (the CP2P Foundation's balance). The treasury funds things like referral-campaign bonuses. Circulating supply, burn, and treasury balance are visible on the **Point Economy Dashboard** (8.6).

8.2 Earning Points

| Event | Sender | Receiver | Notes |
|-----------------------------|--------|----------|-------------------------------------------------------|
| Sending/receiving a message | +1 pt | +1 pt | On send-complete and receive-confirm (message-reward) |
| Receiving a 👍 (Like) | +1 pt | +1 pt | Awarded to both giver and receiver (like-reward) |
| Receiving a point transfer | -N pt | +N pt | Any amount N can be sent |

💡 No duplicate rewards

Logic prevents duplicates: once per message, once per 👍 relationship.

8.3 Sending Points

Send points to express gratitude. ① “Reply” on the recipient's message → ② enter the amount in the “Thanks Points” field above the input → ③ add a message if you like → ④ “Send” → ⑤ confirm. The recipient sees an automatic “thank-you reply.”

🚫 Restrictions on sending

- You cannot send to yourself
- You cannot send with insufficient balance
- Excessively large transfers (over 1,000,000 pt) are rejected

8.4 Transaction History (Ledger)

From the “📄 TH” (Transaction History) button in the header, you can review every transaction you've been part of. Each entry shows:

- Type: **Send/Receive bonus / 👍 bonus / Point transfer / Receipt record**
- Parties: **sender** → **receiver** / quantity
- **The change for that transaction:** **pt: sender ±qty / receiver +qty**
- The transaction hash (**hash: ...**) and timestamp

🔄 Changed since the previous guide (v1.4.007): balance → “change (±pt)” display

The old “balance (sender X / receiver Y)” display was removed to avoid **letting others infer participants' holdings**; now the **change (±)** for that transaction is shown. E.g., send/receive and 👍 bonuses are +1 for both; a point transfer is -qty for the sender and +qty for the receiver.

取引履歴
閉じる

ルーム: room1 / 件数: 120

数量: 1
pt: 送付側 +1/受取側+1
hash: a74f3fffd64073d8...
2026/05/23 19:49:56

ポイント送付

数量: 2
pt: 送付側 -2/受取側+2
hash: d687a862cbe6d5bf...
2026/05/23 19:49:56

👍ボーナス

数量: 1
pt: 送付側 +1/受取側+1
hash: da75c9100c01522d...
2026/05/23 19:49:35

送受信ボーナス

数量: 1
pt: 送付側 +1/受取側+1
hash: a66b1e6487b82263...
2026/05/23 19:49:31

👍ボーナス

数量: 1
pt: 送付側 +1/受取側+1

Transaction History: type, parties, pt change, hash, time (names are masked)

Ledger integrity

Each transaction is digitally signed with **ECDSA P-256** and appended to a server-side **hash-chain ledger**. Because each block includes the previous block's hash, tampering with a past transaction makes everything after it inconsistent and detectable.

8.5 Spending Points (Paid Features & Burn/Treasury)


Points are mainly used for the following. The cost breakdown (burn / treasury) also appears in the confirmation dialog at the time of use.

| Feature | Cost | Breakdown |
|----------------------------------------|----------------|---------------------------------------------|
| Server-Relay sending (encrypted relay) | 1 pt / time | Consumed as an operating fee (Ch. 6) |
| List a room in the chat list | 10 pt / day | 100% burned |
| Offline comment & file delivery | 10 pt / day | 20% burned (2 pt) + 80% treasury (8 pt) |
| Auto-download attachments | 2 pt / day | 20% burned (0.4 pt) + 80% treasury (1.6 pt) |
| Deleting a message | 2 pt / time | 100% burned (cannot be undone) |
| Room entry fee (set by creator) | Set by creator | Follows the rules in Ch.5 |

The difference between “burn” and “treasury”

Burn = points are destroyed and permanently removed from total supply. **Treasury** = points go to the CP2P Foundation's balance and are reused for referral bonuses, etc. Daily paid features renew automatically every 24 hours and are unavailable if your balance is insufficient.

8.6 Point Economy Dashboard

From the “ PO” button in the header, you can view the overall state of the point economy (visible to general users too).

| Metric | Meaning |
|----------|------------------------------------------------------|
| Hard cap | The maximum number of points that can ever be issued |

| Metric | Meaning |
|------------------|---------------------------------------------------|
| Total supply | Total points issued so far |
| Circulating | Points currently held and circulating among users |
| Total burned | Cumulative points burned (destroyed) so far |
| Treasury balance | Points held by the CP2P Foundation |
| Burned today | Points burned on the day |

It also shows a “**Daily Burn (last 30 days)**” chart and a per-feature “**Service Activity**” breakdown (message relay, calls, translation, room listing/hosting, identity verification, etc.).



Point Economy Dashboard (metric cards and daily-burn chart)

9. Referral Campaign

9.1 What Is the Referral Campaign?

When friends invite each other, **both the inviter and the invitee earn “Thanks Points”** in the “Referral Campaign.” There are two reward stages, and an extra bonus is added when the invitee completes identity verification. Check the status on the **campaign banner** at the bottom of the main screen.

The banner shows the status

The “Invite Campaign Active” banner shows current reward amounts and the **remaining slots** (“current / limit” for Step 2 / Step 3). Whether a campaign runs and its limits are set on the server side; once it ends, the banner shows that it has ended.

9.2 How Rewards Work (Step 2 / Step 3)

Rewards have two stages. In both, **both the inviter and the invitee** receive them.

| Stage | Condition | Reward (to both) |
|------------------------------|---------------------------------------------|----------------------------------------------|
| Step 2 (invite) | Sign up using an invite code | +10 pt (immediately) |
| Step 3 (verification) | The invitee completes identity verification | By tier, in order of achievement (see below) |

Step 3 tiers (identity-verification bonus)

| Tier | Range (by order) | To both |
|--------|----------------------|-----------------------|
| Tier 1 | 1st – 1,000th | +5,000 pt each |
| Tier 2 | 1,001st – 10,000th | +500 pt each |
| Tier 3 | 10,001st – 100,000th | +50 pt each |

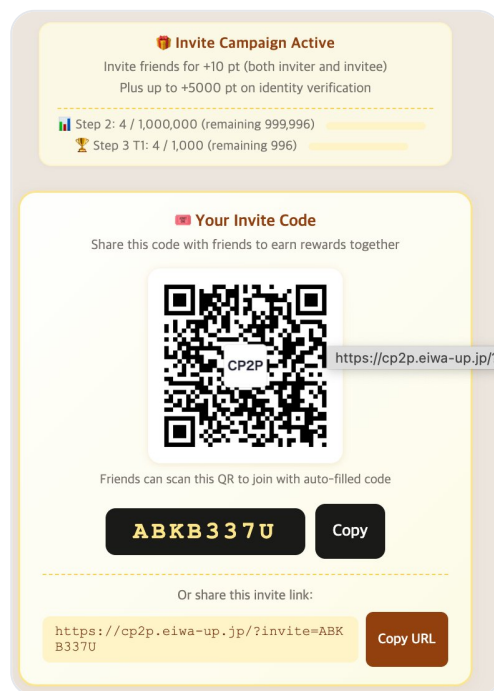
Tiers have participant limits

Each tier closes when its participant limit is reached, then moves to the next tier. Remaining slots are shown on the banner as “Step 2: current / limit” and “Step 3 T1: current / limit.” **Amounts and limits may change depending on campaign settings.**

9.3 Issuing & Sharing Your Invite Code

Identity-verified users can issue their own invite code (“Your Invite Code” on the main screen). Share it in three ways:

- **QR code** — when a friend scans it, the code is auto-filled on the sign-up screen.
- **Code string** (e.g., **ABKB337U**) — copy with “Copy.” It is 8 uppercase alphanumeric, excluding the confusing **0 · 0 · 1 · I · L**.
- **Invite link** (<https://cp2p.eiwa-up.jp/?invite=CODE>) — copy with “Copy URL.” Opening the link auto-fills the code.



“Your Invite Code” panel (QR, code, invite link)

Only identity-verified users can issue a code

Only identity-verified users can issue an invite code (Ch.11). If not verified, you'll see “Only identity-verified users can issue a code.”

9.4 Applying an Invite Code (Invitee)

1. Enter the code in the “**Referral code**” field **at sign-up** or in the “Edit User Info” screen, and tap “Apply.”
2. If you arrived via an invite link or QR, it is **auto-filled**.
3. Applying grants the bonus to both sides.

One-time, non-changeable

An invite code can be applied only once per person and cannot be changed later. **You cannot use your own code.** If already used, “Invite code applied” is shown.



“Referral code” applied indicator in Edit User Info (example: Foundation code CP2PFUND)

9.5 If You Don't Have an Invite Code (CP2P Foundation Code)

For those without an inviter nearby, the **CP2P Foundation invite code** “ **CP2PFUND** ” is provided. Entering it at sign-up grants a welcome bonus from the CP2P Foundation.

“CP2PFUND” is a shared code anyone can use

Use it when you have no personal invite code. Bonuses via the Foundation code are granted from the CP2P Foundation's account.

9.6 Limits (Summary)

- An invite code can be applied **only once per person** (non-changeable).
- **You cannot use your own code.**
- Each tier has a **participant limit** and closes when reached.
- Rewards are granted as Thanks Points and recorded with a signature in the **transaction history (ledger)** (Ch.8).

10. Voice & Video Calls

10.1 Voice & Video Calls

CP2P includes **voice/video calling** between participants. Calls connect P2P via WebRTC, and the **server does not relay audio or video**.

Steps: ① select someone from their icon or the friend list → ② tap a call button (📞 voice / 🎥 video) → ③ approve mic/camera permission the first time → ④ the call begins once they accept.

→ 📱 Incoming call notifications

With push notifications enabled, you can receive calls even when CP2P is closed (Ch.12).

10.2 Choosing the Audio Output Device

Switch among multiple audio output devices (earphones, speaker, etc.) from the “Audio output device” button on the call screen.

⚠️ Browser limitations

Some browsers (e.g., Safari) restrict switching output devices from the web, so switch via your OS settings (e.g., by connecting earphones).

11. Identity Verification

11.1 What Is Identity Verification?

Identity verification confirms your identity using a subscription contract ID and similar information. Once verified, you can join restricted rooms such as **Identity-Verified Chat** and **Verified-Friends Chat**. Issuing an **invite code** also requires being identity-verified (Ch.9).

11.2 Applying for Verification

① Tap “Apply for identity verification” on the main screen → ② enter your “subscription contract ID” → ③ tap “Apply” → ④ the system checks the ID; if registered, the **identity-verified** status is granted on the spot.

Step 3 bonus of the Referral Campaign

If you have applied an invite code and then complete identity verification, both sides receive the campaign's **Step 3 bonus** (by tier; Ch.9).

11.3 Managing Your Verified Info

After verification, the “Identity-verified user info” screen lets you review/edit:

- Customer name, address, contact (editable fields can be updated)
- Subscription contract ID, order-completed time, sales amount, recipient surname (**view only**)

個人認証済みユーザー情報

個人情報を入力・変更できます

閉じる

読み込みました

※ 定期便契約ID・顧客名(名)・商品名・注文完了日時・売上金額・お届け先姓 は閲覧のみです。メールアドレス変更は確認用メールアドレスと一致した場合のみ保存できます。

送信者ID

定期便契約ID

顧客名(名)

メールアドレス

メールアドレス確認

電話番号

Identity-verified user info (personal data masked)

⚠ Note on changing your email

To change your email, you must enter the same value in the “confirmation email” field (a both-match check).

12. Push Notifications

12.1 What Push Notifications Do

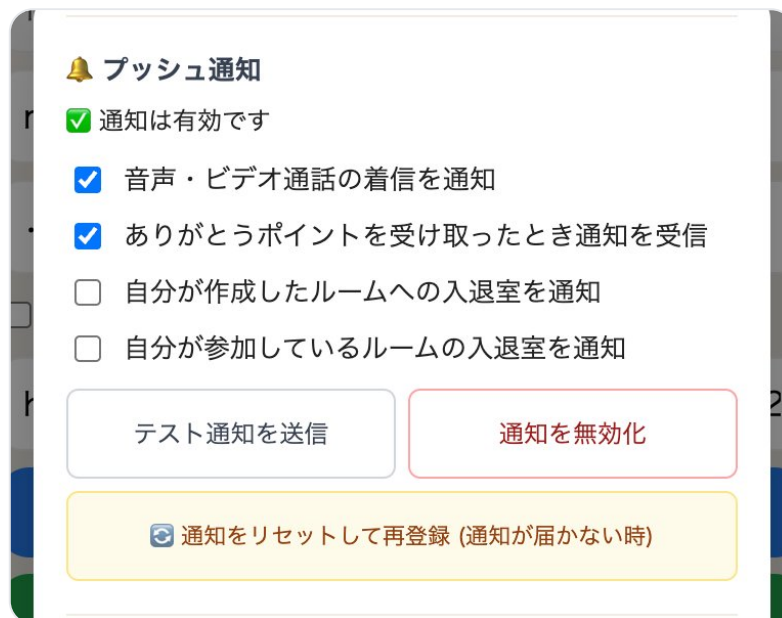
With push notifications enabled, you can receive these events even when CP2P is closed.

- 📞 Incoming voice/video calls
- ❤️ When you receive Thanks Points
- 🏠 Entries/exits to rooms you created (for operators)
- 👥 Entries/exits to rooms you've joined (for members)

12.2 Enabling Notifications


① Open “Push notifications” in the gear (⚙️) → ② “Enable notifications” → ③ tap “Allow” in the browser dialog → ④ when “ Notifications enabled” appears, you're done → ⑤ check the notification types you want ON.

You can disable anytime with “Disable notifications.” “Send test notification” lets you check it works.



Push notification settings (types, test send, reset & re-register)

🔄 If notifications don't arrive

Tap “ Reset notifications & re-register” to rebuild the subscription. Try this if notifications stop arriving.

12.3 On iOS Safari

“Add to Home Screen” is required on iOS

To receive push notifications on iOS Safari, you must **add CP2P to your home screen** and launch it from the home-screen icon. You cannot receive notifications while it is open in the Safari browser (an iOS limitation; see 2.2).

13. Device Management


13.1 Using Multiple Devices

You can log in from **multiple devices/browsers** with the same account. Internally each device is identified by a **device ID (senderId)** and establishes its own P2P connection.

Per-device point balance

Thanks Points are held **separately per device (senderId)**. Use “Consolidate points” to gather balances from other devices into your main device.

13.2 Reviewing & Removing Devices

① Gear (⚙️) → “ Manage registered devices” → ② enter your password for verification → ③ “Show list” → ④ all devices appear (★ is the one in use) → ⑤ remove unwanted devices with “Remove.”

When you remove a device...

- That browser will require **email verification again** to log back in
- The balance held by that device is lost (use “Consolidate points” first)
- The browser currently in use cannot be removed

13.3 Editing Your Profile

Tap your display name in the header to open “Edit User Info.” You can change:

- Display name (nickname)
- Password (current password required)
- Icon URL
- **Display language** (Japanese / English, etc.; Ch.6)

14. Privacy & Security

CP2P is designed with user privacy and security as the top priority (details may change as the service improves).

14.1 P2P Communication (WebRTC)

Ordinary messages are sent **directly** between participants' browsers. The server only brokers the connection (signaling); **message bodies do not pass through it**. By WebRTC's design, the P2P communication itself is also encrypted with DTLS-SRTP.

14.2 Encryption of Server-Relay & PII

| Item | Spec |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Key exchange | ECDH P-256 (Web Crypto API) |
| Body encryption | AES-256-GCM |
| Key storage | The private key is stored in IndexedDB (a deriveKey-only key) and cannot be exported from the browser |
| Signing | Transactions are signed with ECDSA P-256 |
| On the server | Ciphertext only; the server cannot decrypt |
| Personal info (PII) | Info registered for identity verification is stored as AES-256-GCM ciphertext; sensitive fields are masked/excluded in responses |

14.3 Handling of Room Passwords

- Room passwords are hashed with **bcrypt** on the server; never stored in plaintext
- The client-side password vault stays **only on that device** and is never sent to the server (5.6)

14.4 Data Retention

| Location | Stored content | Retention / capacity |
|-----------------------------|--------------------------------------|---------------------------------------------------------------|
| Each browser's localStorage | Ordinary chat messages | Up to 100 latest per room (older auto-deleted) |
| Server (encrypted relay) | Ciphertext for Server-Relay sending | Deleted after delivery (undelivered expires after a period) |
| Browser / server (files) | Sent/received files | Received 30 days, sent 90 days; up to 500 MB per device (6.9) |
| Server (transaction ledger) | Signed records of point transactions | Retained permanently for auditing |
| Server (identity info) | Encrypted PII | Kept until account deletion (administrators can delete) |

14.5 Security Features

- **HMAC senderId token:** privileged operations are authenticated by a token issued at join (anti-spoofing)
- **Rate limiting:** prevents excessive HTTP / WebSocket requests
- **CORS restriction:** only allowed origins are accepted
- **HTTPS** recommended (required in production) / security headers via **Helmet**
- **Mutex-guarded balance updates:** prevents double-spends under concurrent operations

15. Troubleshooting (FAQ)

15.1 Can't Connect / Messages Not Delivered / P2P Diagnostics

Q. It stays on “Signaling” and never becomes “P2P Connected.”

A. It's establishing a P2P connection — usually a few seconds. If it takes over 30 seconds, your network (e.g., behind a strict firewall) may be the cause. Use Server-Relay sending, or switch to a different connection.



Q. My message isn't reaching the other person.

A. They may be offline. Use “Server-Relay sending” (1 pt) and it will be delivered automatically the next time they come online.

Q. Past messages have disappeared.

A. Each room keeps up to 100 messages on the browser; older ones are auto-deleted (ordinary messages are not stored on the server). Save important info via notes or screenshots.

P2P connection diagnostics


When the connection is unstable, open “**P2P diagnostics**” from the connection-status area. You can check the signaling state and signal send/receive counts, run a  **TURN test**, and  **copy debug info**. When contacting support, attaching the copied debug info helps pinpoint the cause.

15.2 Notifications Not Arriving

Q. Push notifications don't arrive (iOS).

A. On iOS you can't receive notifications in the Safari browser. Add to the home screen and launch from the icon (2.2 / 12.3).

Q. I accidentally denied the notification permission.

A. Re-enable notification permission for the CP2P site in your browser settings, then tap “Enable notifications” again. If it doesn't improve, try “ Reset notifications & re-register.”

15.3 Point-Related Issues

Q. My balance differs from what I expected.

A. Review every transaction in “Transaction History (📄 TH)” — send/receive bonuses, 👍 bonuses, transfers/receipts in chronological order. If a discrepancy remains, contact the administrator (ledger integrity is verified automatically).

Q. My balance got split across devices.

A. Balances are independent per device (browser). Use “Manage registered devices” → “Consolidate points” to gather balances from other devices into the current one (Ch.13).

15.4 Files & Invite Codes

Q. I can't open a received file / it says “File not found.”

A. The sender may have discarded it, or the retention period (received 30 days, sent 90 days) may have passed. Ask the sender to resend (6.9).

Q. My invite code doesn't work.

A. Invite codes are 8 characters (excluding the confusing 0 · O · 1 · I · L), one-time, and you can't use your own. Also check for “Code applied” / “Campaign ended.” If you have no code, you can use the Foundation code “CP2PFUND” (Ch.9).

15.5 Login & Account

Q. I forgot my Personal ID.

A. The ID itself can't be reissued, but from “Forgot your password or Personal ID?” on the login screen, you can have a **Personal-ID confirmation link** sent to your registered email (3.4).

Q. The email verification code doesn't arrive on a new device.

A. Check your spam folder. If it still doesn't arrive, confirm your registered email is correct and try resending (60-second cool-down applies).

16. Glossary

| Term | Description |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CP2P (Chat Peer to Peer) | The name of this service. A browser-only, P2P-style chat service. |
| P2P (Peer to Peer) | A communication method where participants' browsers exchange data directly without going through a server. Uses WebRTC. |
| WebRTC | A web standard enabling real-time browser-to-browser communication of audio, video, and arbitrary data. |
| Signaling server | A server that brokers the establishment of a P2P connection; it does not handle the communication afterward. |
| TURN server | A server that relays traffic when a direct P2P connection isn't possible due to NAT or firewalls. |
| Personal ID | An 18-character alphanumeric ID issued at registration (XXXXXX-XXXXXX-XXXXXX), used to log in. Cannot be reissued (can be confirmed by email link). |
| senderId (device ID) | An ID identifying one device/browser. The same account has a different senderId per device. |
| Thanks Points | CP2P's unique gratitude measure. Earned by sending/receiving and receiving 👍; usable for transfers and features. |
| Ledger | A hash chain recording all point transactions chronologically. Signed with ECDSA P-256; tampering is detectable. |
| Burn | Points being destroyed and permanently removed from total supply. Occurs with some paid features. |
| Treasury | The CP2P Foundation's point balance. Part of paid features goes here and funds referral bonuses, etc. |
| Point Economy Dashboard | A screen showing total supply, circulating supply, burn, treasury balance, etc. (header  PO). |
| Referral Campaign | A mechanism where inviting friends with an invite code grants points to both sides. Two stages: Step 2 / Step 3. |
| Invite code | An 8-character referral code (excluding 0 · 0 · 1 · I · L). Issuable by identity-verified users; applied once. |

| Term | Description |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| CP2P Foundation code | The shared code “CP2PFUND” for people without an inviter. Entering it at sign-up grants a welcome bonus. |
| File transfer | A feature to send/receive files via P2P in chat (up to 100 MB; with auto-deletion). |
| Server-Relay sending | A mechanism where the server temporarily holds an encrypted message and delivers it while the recipient is offline. 1 pt fee. |
| Identity verification | Identity confirmation via a subscription contract ID, etc. Verified users can join verified rooms and issue invite codes. |
| PWA (Progressive Web App) | Technology that lets a website behave like an app — home-screen install, push notifications, offline support, etc. |
| NLLB-200 | The high-quality model used for translation. 24 languages; falls back to LibreTranslate when unavailable. |
| ECDH P-256 / ECDSA P-256 | Public-key cryptography. ECDH for key exchange, ECDSA for digital signatures. |
| AES-256-GCM | Symmetric-key cryptography used for Server-Relay body encryption and PII encryption. |
| bcrypt | The algorithm used to hash room passwords so plaintext is never stored. |

— CP2P User Guide v2.2.000 —

This guide is based on the features of CP2P v2.2.000 at the time of writing. Screens and features may change in future updates.

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