INSTRUKCJA OBSŁUGI

PRW4

Sterownik do zastosowań grzewczych, wędzarniczych i pomiarowych

KLUCZOWE KORZYŚCI

PRECYZJA
Dokładna kontrola procesów i pomiarów

BEZPIECZEŃSTWO
Zabezpieczenia na najwyższym poziomie

NIEZAWODNOŚĆ
Stabilne i pewne działanie

AKTUALIZACJE
Ciągłe udoskonalanie i nowe funkcje

W NINIEJSZEJ INSTRUKCJI

- Informacje o urządzeniu i bezpieczeństwie
- Instalacja i podłączenie
- Konfiguracja i obsługa
- Funkcje i ustawienia
- Rozwiązywanie problemów
- Aktualizacje i serwis

DOKUMENTACJA I WSPARCIE

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PRW4 - Version 0.8 Support

Software User Manual • Release 28/10/2026

The PRW4 conducts the smoking process according to preset stages. It measures the temperature of the chamber and up to three product probes. At each stage, it controls the heating power, fan, and smoke output according to the settings.

26 standard programs + 10 banks CLOUD/Custom + separate KASKADA. Selecting or uploading a recipe does not start the process. START is a separate step.

This manual describes the use of software version 0.8 on a device already properly connected. It does not replace the installation documentation, output loads, or warranty terms for a specific device.

Some of the functions described may be test-based, optional, or dependent on the software and hardware version. Not all functions may be present in every controller.

The OTA version 0.8 installation was tested on the controller. Program selection, power setting, and the START lock were also checked without a chamber probe. Actual heating was not tested.

Quick Access: exercises PAMEL EDU • Product Center and Help.

Before starting

DANGER: do not open the case or change electrical connections with the power supply connected. Use the power supply and load parameters provided for your device.

1. Check the CHAMBER probe and MEAT probes used by the selected program. The readings must correspond to their positions.
2. Select a program and check the active stages, temperatures, time, fan, smoke, and end condition.
3. Check the power limit. Pmax = 0% prevents heating; MANUAL mode requires special operator control.
4. Prepare the device and product. If a message appears about preparing dehumidification or heating, perform the indicated actions before clicking OK.
5. Press START. Monitor the temperatures and actual device status. STOP disables process control.

Standard programs are a starting point. They do not confirm the correct preparation of a specific product. Adjust the time, temperature, and end condition to suit your process technology.

Do not use I/O tests or autotuning as a regular workflow. These functions may activate outputs. Do not leave them unattended.

Touchscreen - where to press

Element	Operation
CHAMBER / MEAT 1–3	Current reading and target. Touching opens the setting change; SAVE confirms, CANCEL returns. The standard program requires a prior backup to the bank.
MENU → PROGRAM	Program selection, shortcuts 26 STANDARD, 10 BANKS / COPY, and KASKADA.
MENU → STAGES or CHANGE for STOP	Review and edit stages. The arrows scroll through the list of three items at a time.
MENU → POWER	Power regulation and limitation mode.
MENU → PROBE / NETWORK	Probe readings and assignments; network status, and IP address.
START / NEXT / RESUME	Start, confirm the next step, or resume the interrupted operation—depending on the status.
STOP	Stops the process; if a restart is pending, discards the save.

The status field displays the program, stage, time, power, fan, and smoke. While waiting for NEXT, the process outputs are disabled.

The MENU also includes INFO, SERVICE, and I/O TEST. Advanced settings and process conditions are available on the local WWW.

26 standard programs - 1/2

MENU → PROGRAM → 26 STANDARD. Select an item and check the settings before using START. Factory programs are protected from editing.

Program	Compartment °C	Meat °C	Time
MEAT / PORK NECK	75	62	12 h 00 min
MEAT / PORK NECK	72	62	11 h 00 min
MEAT / TENDERLOIN	72	62	7 h 00 min
MEAT / BACON	70	60	10 h 00 min
MEAT / BELLY	52	41	12 h 00 min
MEAT / COLD	25	90	60 h 00 min
COLD CUTS / TRADITIONAL	78	72	3 h 00 min
COLD CUTS / SAUSAGE	78	72	3 h 00 min
COLD CUTS / GAME	78	72	7 h 00 min
COLD CUTS / POULTRY	65	58	6 h 00 min
COLD CUTS / PORK	75	68	7 h 00 min
COLD CUTS / COLD CUTS	25	90	25 h 00 min
FISH / EEL	70	72	5 h 00 min

Each standard has one active SMOKING stage, fan 4/10, and smoke 10/20. Dehumidification, ignition, and finishing are disabled. Default condition: time or any active probe; all three meat thresholds have the same value.

A timeout in the SMOKING step leads to a wait for NEXT; if there is no next step, NEXT terminates the program. Reaching the threshold by an active, working probe terminates the program early.

26 standard programs - 2/2

MENU → PROGRAM → 26 STANDARD. Select an item and check the settings before using START. Factory programs are protected from editing.

Program	Compartment °C	Meat °C	Time
FISH / SALMON	70	72	6 h 00 min
FISH / CARP	70	72	6 h 00 min
FISH / MACKEREL	70	58	5 h 00 min
FISH / TROUT	70	68	5 h 00 min
FISH / COLD	25	90	14 h 00 min
CHEESES / HOT	80	90	4 h 00 min
CHEESE / COLD	25	90	5 h 00 min
POULTRY / CHICKEN	75	65	6 h 00 min
POULTRY / TURKEY	75	65	7 h 00 min
POULTRY / DUCK	75	60	6 h 00 min
POULTRY / CHICKEN BREAST	75	65	6 h 00 min
POULTRY / TURKEY BREAST	75	65	7 h 00 min
POULTRY / DUCK BREAST	75	65	6 h 00 min

Each standard has one active SMOKING stage, fan 4/10, and smoke 10/20. Dehumidification, ignition, and finishing are disabled. Default condition: time or any active probe; all three meat thresholds have the same value.

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10 banks CLOUD / Custom

A bank is a separate location for your own recipe. Occupying a bank does not change any of the 26 standard programs. KASKADA also has a separate location outside of the banks.

1. Select the program you want to copy. Stop the process.
2. On the LCD: MENU → PROGRAM → 10 BANK / COPY.
3. For the target bank, tap SAVE HERE. Check the bank name in the save prompt and confirm with OK. The occupied bank will be overwritten.
4. Touching the bank name selects its contents. Edit the copy via MENU → STAGES.
5. In the local WWW program, open PROGRAM / STAGES, select the target bank, and use SAVE CURRENT AS…. The name field and RENAME / FAVORITES are used to designate the bank.

To return to the factory program, select it again from the directory. Your copy remains in the bank.

After the update, the previous nine sets of custom settings are transferred to banks B1–B9; B10 remains free. Do not assume that all banks are empty.

KASKADA - five automatic steps

On the LCD: MENU → PROGRAM → KASKADA. On the WWW: PROGRAM / STEPS → KASKADA — 5 AUTOMATIC STEPS. This is a separate program, in addition to the 26 standard and 10 banks.

1. Open STAGES. Enable the necessary SMOKING steps 1–5 and set the chamber temperature, time, fan, and smoke for each.
2. Set the meat threshold separately for each step. 0 means this condition is disabled. You can specify the selected probe in the WWW process conditions.
3. Save steps. Check that at least one step is active and has a time greater than zero.
4. Press START. The controller skips disabled steps and proceeds automatically after a timeout or when the meat threshold for the current step is reached.
5. After the last active step, the process ends and the outputs are disabled. There is no need to press NEXT between steps.

Initially, all five steps are disabled. Initial step values: 75°C, 1 min, fan 4/10, smoke 10/20, meat threshold 0. Enter your own settings before use.

KASKADA does not use dehumidification, preheating, or baking. You can save a copy in the CLOUD/Custom bank.

Stages and countdown

Standard program: DEHUMIDIFICATION → IGNITION → SMOKING 1–5 → FINISHING. Active stages with positive times are executed. Disabled stages are skipped.

Parameter	Scope and meaning
Chamber Temperature	20–120°C; LCD changes by 0.5 or 5°C.
Stage time	Up to 300,000 s, or 83 h 20 min; the LCD displays the minutes. Time 0 disables the step.
Fan / Smoke	Fan 0–10; Smoke 0–20. Values apply to the current stage.
Countdown	From the start of the stage or after the first time the chamber temperature target is reached. A subsequent decrease does not reset the counter.
Max heating	1–360 min, default 60 min. Applies to the temperature waiting period; exceeding it stops the process with an alarm.

Countdown settings: local WWW → PROGRAM / STAGES → PROGRAM STAGES → SAVE PROCESS CONDITIONS. Save the settings for a standard stage using its save button.

After the time, the standard program waits for NEXT with the outputs disabled. FINISHING in Time or Time mode, or any active probe, ends after the time without any additional transition.

When the program ends

WWW → PROGRAM / STAGES → Process conditions: select End and Selected probe. Set the thresholds and probe activity in END FROM TEMPERATURE and confirm with SAVE THRESHOLD.

Mode	Behavior
Time or any active probe	From the SMOKING stage, reaching the threshold by any active, working probe terminates the entire program. Time limits also apply.
Time	The program does not end at meat temperature. Stages progress according to time and NEXT confirmations.
Selected probe	Ends when the specified probe reaches its threshold, MEAT 1, 2, or 3. This probe must be operational.
All active probes	Ends when each active probe reaches its threshold. Enable at least one; required probes must be operational.

Standard program thresholds: 20–100°C. The product temperature condition is checked during SMOKING and BAKED.

In the Selected Probe and All Active Probes modes, the timeout does not extend the heating indefinitely: the controller turns off the outputs and waits for the operator's decision. Losing a required probe stops the process with an alarm.

In CASCADE, there is a separate threshold for each step; reaching it switches the step instead of immediately terminating the entire program.

Power and autotuning

Mode	What is it used for?
MANUAL	Fixed setpoint power percentage. Chamber temperature does not automatically regulate power.
AUTO P	Adjustment based on the difference between the set and measured temperatures; Kp parameter.
AUTO PI	Adjustment with an integral term; Kp and Ki parameters.
AUTO PID	Kp, Ki, and Kd adjustment. Settings depend on the heating system.

Local WWW → POWER. Manual power and Pmin/Pmax limits: 0–100%. SAVE POWER confirms settings. When using STOP and waiting for NEXT, process outputs remain off regardless of the mode.

1. Run autotuning on a STOP, with a functional KOMOR probe and a temperature at least 3°C below the test target.
2. In POWER → AUTOTUNING P / PI / PID, set the test temperature to 35–110°C, the power limit to 20–100%, and the profile to MILD or FAST.
3. START AUTO-TUNING starts the heating test. Do not change the conditions or open the smoker during the test. ABORT stops the test.
4. After successful completion, use SAVE RESULT. RESTORE PREVIOUS restores the previous settings.

A no-heat warning indicates a lack of 1°C rise for 10 minutes at at least 20% power and a temperature more than 3°C below target. The warning itself is not an emergency.

Local Wi-Fi and web panel

1. Connect your phone or computer to the PRW4_PAMEL network. The emergency access point has no password.
2. Open http://192.168.4.1 in your browser. If your phone reports no internet, leave it connected to that network.
3. In NETWORK, select SCAN NETWORKS, select the router, enter the password, and use CONNECT AND SAVE.
4. After connecting, read the IP address from MENU → NETWORK. Connect your phone to the same router and open this address. The address may be different after a router change.

Web tab	Contents
PREVIEW	Temperatures, stage, time, outputs, START/STOP/NEXT, and possible resumption.
PROGRAM / STAGES	Standards, banks, KASKADA, process conditions, and stage editing.
POWER / PROBES / I/O	Adjustment and autotuning; probe search and assignment; short output tests for STOP.
NETWORK / CLOUD / BUS	Wi-Fi, CLOUD status, and support for detected modules.
CHARTS / LOG	Reading flow, CSV export, events, and alarms.
OTA / SERVICE	Check update, installation, report, and service functions.

Local web access runs on the device's network or a shared router network. Internet access is provided separately. PAMEL CLOUD.

CLOUD AI — uploading the recipe to the bank

1. Connect the controller to the internet. Log in to PAMEL and select the PRW4 device assigned to you.
2. Open Library / CLOUD AI. Select a recipe or check the AI suggestion; view temperatures, times, stages, and probes.
3. Stop the process on the controller. Select one of the 10 banks. If it is busy, confirm overwriting only after checking its name.
4. Use UPLOAD and wait for controller confirmation. Simply ordering the shipment does not mean the save is complete.
5. Check the saved recipe reading: bank, name, and settings. Start the process only with a separate START.

Revision conflict: If the bank was changed after preparing the transfer, the new transfer will not automatically overwrite it. Refresh the bank status, check their contents, and prepare the transfer again.

Retrying the same request should not create another overwrite. After a loss of connection, first check the reading and status rather than assuming the write failed.

Bank backups are restored via the PRW4 panel in the CLOUD. Restoration also requires the correct bank, current state, and STOP. Backups are created from data reported by the device; don't assume that every bank already has a backup.

CLOUD does not trigger the remote START process. EDU only shows a transfer simulation.

Power Outage and Process History

After restart, the outputs remain off. If a matching record of the interrupted process exists, the controller suggests resuming it. It doesn't restart it automatically.

1. Check the status of the product, device, probes, and the reason for the interruption.
2. On the LCD, use RESUME and then confirm. On the WWW, use the resume prompt.
3. If you do not wish to continue, discard the save; The STOP is used for this on the LCD. A modified recipe may prevent resuming.

The restart point is saved approximately every minute and when steps change. It does not guarantee that the last second of operation will be restored.

Temperatures during operation are recorded every 5 minutes. The controller stores a maximum of 576 samples from the last 48 hours and 30 log events. The oldest entries are overwritten. An event does not trigger an additional temperature record. Once internet is restored, pending data is synchronized with the CLOUD. The 48-hour limit applies to history; it does not automatically stop smoking.

History memory is limited. If the memory is full or there is a write error, check the web message and your connection to CLOUD. Prolonged offline operation may leave gaps; this is not an unlimited-capacity archive.

Current CHARTS and CSV export on the local web and persistent process history in CLOUD are different views of the data. EDU only maintains the history of the current exercise.

OTA Update

Local WWW → OTA / SERVICE → CHECK. Compare the model and version. Version 0.8 has been verified with an actual OTA installation. Before updating, check the model and availability message. The installation test does not replace checking the probes, settings, and initial operation of the device.

1. Complete the process and ensure the status is STOP. Do not run I/O tests or autotuning.
2. Ensure a stable power supply and internet connection. Protect your settings from version changes.
3. Use CHECK, read the message, and select INSTALL if the update applies to the correct PRW4.
4. Do not disconnect the power supply during the write process. Wait for the device to finish and restart.
5. Check the version, banks, probe assignments, and settings. Perform the first job after the update under supervision.

During START installation, autotuning, output tests, and recipe import are blocked. A file download or check error indicates a missing confirmed update—check the message and version after restart.

Update 0.6 changes the way settings are saved. Back Up to 0.4/0.5 requires previously backed-up settings; older versions will not read the new format.

Do not consider a working button or the availability of a file as confirmation of a successful OTA test on your device. EDU does not download or install firmware.

Before calling for service

Symptom	What to check
START not working	Is there an active stage with positive time? Are the required probes operational? Is OTA, autotuning, or a controller lock in progress? Read the reason on the screen.
The program cannot be changed.	Copy the factory program to the bank. Change stages and transfers at STOP.
Time not decreasing	Check the temperature countdown and the current CHAMBER reading. Heating may be in progress.
After the time, the outputs are OFF.	The regular program waits for NEXT. KASKADA should automatically advance to the next active step.
KASKADA does not start	By default, all steps are disabled. Enable the step, set the time, and check the selected probe if using the meat threshold.
No heating	Check STOP/NEXT, alarms, CHAMBER probe, target, Pmax, and manual power. Do not increase power unintentionally.
CLOUD not saving	Internet connection, correct device, STOP, transfer status, and current bank revision.
Doesn't heat after restart	Check the RESUME prompt. Resume requires conscious confirmation.

When submitting your request, please provide the model, software version, message, screenshot, and a description of the step. Product Center • PAMEL EDU PRW4.

PAMEL, Urodzajna 5E, 42-300 Myszków • tel. 453-343-360 • pamel@pamel.pl. Aktualne dane i pomoc: pamel.pl. BDO 000073814.

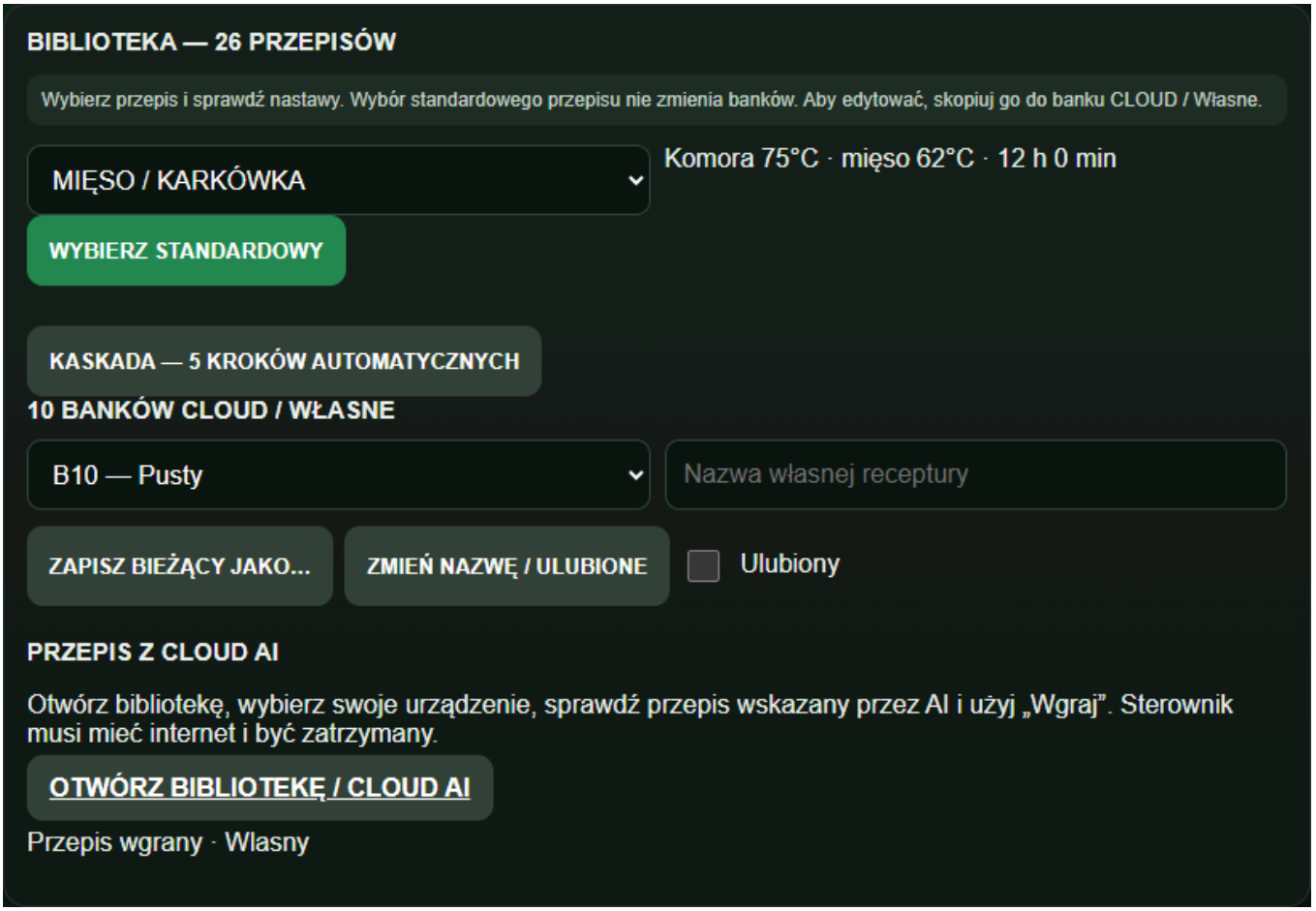
Regulations PAMEL CLOUD • Privacy Policy. Wydanie 28.10.2026.

Shortest operation paths

Goal	Path
Start standard	MENU → PROGRAM → 26 STANDARD → selection → main screen → START.
Change the default	Select a standard → 10 BANKS / COPY → SAVE HERE → OK → STAGES → SAVE.
Start CASCADE	MENU → PROGRAM → KASKADA → STAGES → enable and save steps → START.
Change the countdown	WWW → PROGRAM / STAGES → PROGRAM STAGES → Countdown → SAVE PROCESS CONDITIONS.
Upload recipe CLOUD	Library / CLOUD AI → PRW4 device → bank → Upload → Confirm → Read.
Check update	WWW → OTA / SERVICE → CHECK.
Return after the break	Check the device and product → RESUME → confirm or press STOP to discard the save.

The following images show the local web panel with sample readings. They are not your controller's readings.

WWW - programs and banks



SELECT STANDARD selects an item from the catalog. KASKADA opens a separate five-step program. SAVE CURRENT AS… saves a copy to the specified bank.

The name and Favorites tag are confirmed by pressing the RENAME / FAVORITES button. OPEN LIBRARY / CLOUD AI leads to the web service.

WWW - single stage editing

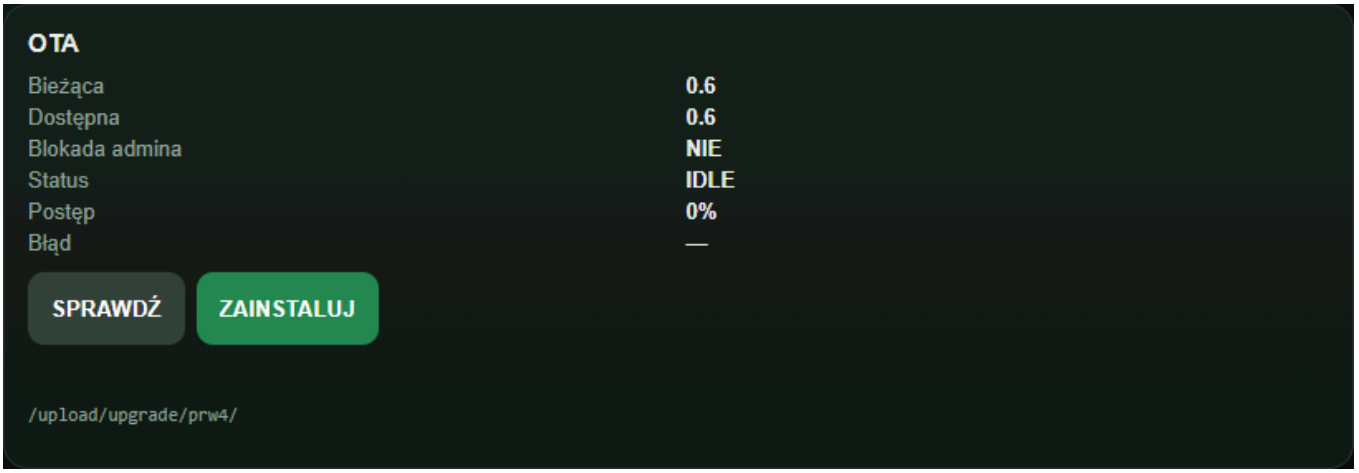


The checkmark in the upper right corner enables or disables the stage. Enter the temperature, time, fan, and smoke, then press SAVE.

The illustration shows sample values, not a process recommendation. In CASCADE mode, use SMOKING steps 1–5; dehumidification, ignition, and final cooking remain disabled.

With the factory program, saving changes is not available. First, save a copy to the bank. Editing stages requires STOP.

WWW - OTA update panel



Current means the version running on the device. Available means the version reported by the server. The sample view does not confirm installation.

CHECK downloads update information. INSTALL is a separate step. Progress and Error help evaluate the result, and the version should be checked after a restart.

Manual version: 0.8. The update procedure and conditions can be found in the "OTA Update" section.

Screen and CLOUD AI version 0.8

The decrease buttons are blue on the left, and the increase buttons are red on the right. Larger numbers and darker green buttons improve readability. The CONTACT screen shows PAMEL data; STATUS provides device and connection information.

PRW4, PRD4, and PRD5 use the CLOUD AI. Select your device in your PAMEL account. The images in the catalog are for illustrative purposes only and correspond to specific products; please check the recipe and settings before saving. The appearance of the CLOUD 0.31 does not change the process parameters.

To upload a photo from your phone, open CLOUD AI and create a QR code. Scan it with your phone, select the photo, preview it, select consent, and run the analysis. The code expires and is one-time use. In the demo mode, the photo is not transferred to the AI service.

Uploading a recipe requires STOP, selecting a bank, and confirming the overwrite if the bank is busy. Success is confirmed by reading data from the controller. Writing does not start the process. Execute START in PRW4 on the controller or on the local WWW; do not assume the availability of a remote START based solely on the appearance of CLOUD.