Kaliedo Protocol

Kaliedo Roaster Protocol

Quick command reference for Artisan / HiBean serial control

Format Conventions

Instruction stream uses {[as prefix and]} as suffix.

Data stream uses { as prefix and } as suffix. Responses start with sid (status byte).

All keywords are uppercase. Each command is terminated with a newline (\n).

Multiple commands can share one {[ ]} pair, separated by commas — for example: {[HP 80,FC 60,RC 90]}

Connection and Setup

Command	Description
{[PI]}	Ping — connection test. Returns {sid}.
{[SC AR]}	Start Artisan session. Returns {sid,SN:xxxxxxxx}.
{[SC CP]}	Start Cropster session. Returns {sid,SN:xxxxxxxx}.
{[CL AR]}	Close Artisan session.
{[CL CP]}	Close Cropster session.
{[TU C]}	Set temperature unit to Celsius.
{[TU F]}	Set temperature unit to Fahrenheit.

Reading Data

Command	Description

{[RD A0]}	Read main parameters (BT, ET, AT, HP, FC, RC, AH, TS).
{[RD A1]}	Read main parameters plus heating status (adds HS field).

Example response (A1)

{0,BT:190.5,ET:185.0,AT:25.0,HP:80,FC:55,RC:90,AH:0,TS:180.0,HS:1}

Response fields

BT — bean temperature (0-300 °C / 32-572 °F)

ET — drum / environment temperature

AT — ambient temperature

HP — heater power %, step 5

FC — smoke fan speed %, step 5

RC — drum roll speed %, step 10

AH — auto-heat enabled (0 or 1)

TS — target temperature setpoint

HS — heating active (0 or 1, A1 mode only)

Heat Control

Command	Description
{[HS 0]}	Stop heating.
{[HS 1]}	Start heating.
{[HP n]}	Set heater power n% (step 5, range 0-100).
{[HP UP]}	Step heater up by 5%.
{[HP DW]}	Step heater down by 5%.
{[TS n.n]}	Set target temperature (0-250 °C / 32-482 °F).
{[AH 0]}	Disable auto-heat (manual power mode).

Command	Description
{[AH 1]}	Enable auto-heat (device PID controls heat to TS).

Fan and Drum

Command	Description
{[FC n]}	Smoke fan n% (step 5, range 0-100).
{[FC UP]}	Step fan up by 5%.
{[FC DW]}	Step fan down by 5%.
{[RC n]}	Drum roll n% (step 10, range 0-100).
{[RC UP]}	Step drum up by 10%.
{[RC DW]}	Step drum down by 10%.

Cooling

Command	Description
{[CS 0]}	Cooling off.
{[CS 1]}	Cooling on.

Roast Event Markers

Sends a user-tagged roast event to the device. The device synchronizes the event to its embedded control panel.

Command	Description
{[EV 1]}	Charge — beans loaded into drum.
{[EV 2]}	Temp Return (TP) — turning point.
{[EV 3]}	Dry End — end of drying phase.

Command	Description
{[EV 4]}	First Crack Start.
{[EV 5]}	First Crack End.
{[EV 6]}	Second Crack Start.
{[EV 7]}	Second Crack End.
{[EV 8]}	Drop — beans dropped to cooling tray.
{[EV 9]}	Cool End — cooling complete.

Status Byte (sid) Decoder

Every response begins with a status byte. Convert sid to 8-bit binary, then read the low 4 bits when the lowest bit of the high nibble is 0:

Command	Description
0000	IDLE
0001	CHARGE
0010	TP (Turning Point)
0011	DRY END
0100	FC (First Crack)
0101	FC END
0110	SC (Second Crack)
0111	SC END
1000	DROP
1001	COOL END

Typical Session Sequence

The handshake Artisan uses on connection, captured live from a real roaster:

Command	Description

{[PI]}	Ping the roaster to verify connection.
{[TU C]}	Set the unit (C or F).
{[SC AR]}	Open an Artisan session — roaster returns its serial number.
{[RD A0]}	Poll for live data, repeated about every 1.5 seconds.
{[CL AR]}	Close the session when disconnecting.

Notes

Polling interval for RD should be at least 1 second. Default 1.5 seconds. Repeated queries faster than 1 second are ignored.

The roaster responds to RD without requiring SC AR first, though using SC AR is the documented startup sequence.

Baud rate observed: 57600, 8 data bits, no parity, 1 stop bit, no flow control.

CP210x VID:PID is 10C4:EA60.

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