

Austroflamm Technical Bulletin
Airflow Parameter Adjustments



AUSTROFLAMM

By **RIKA**[®]

Caution

- **Information contained in this document advises the reader on how to gain programming level access to the system control software. Improper use or changing settings other than those outlined in this document can lead to unsafe operating conditions.**
- **Only authorized service personnel should attempt to gain access to or change software control settings.**
- **Programming information contained in this document should not be shared with end consumers/retail customers.**

Overview

Austroflamm Pellet Stoves manufactured by Rika come with pre-set control software that has been exhaustively tested and refined for optimum stove operation. Stoves operating with the factory pre-set controls will produce optimum performance in most installations.

Under certain adverse conditions, flame quality and stove output can be adversely impacted. Under such conditions, specific operational characteristics may be observed, such as:

- poor flame quality indicated by inactive or lazy flame
- heavy/excessive clinkering
- increased buildup of ash requiring more frequent cleaning
- dirty glass
- intermittent shutdown with ERR or ERR with CL showing in user display

The main cause of issues resulting in flame or performance degradation is either lack of proper regular cleaning, complex venting configurations, high elevation, and poor pellet fuel quality.

The unit could show any of the same operational characteristics as described above if the burn pot is due for routine cleaning, and/or if an annual cleaning has not been performed since the prior heating season.

Consumers should be advised to use pellets that are manufactured to the standards as defined by the Pellet Fuel Institute (PFI). Consumers should be educated as to the benefits and selection of pellet fuel. No warranty is provided for any work performed to correct issues related to the use of fuel not made to or labeled as being manufactured to PFI standards.

Resolution Description

The control software of all Rika stoves allows for some flexibility in the adjustment of certain parameters (G1 and G2), which control combustion fan speeds. These parameters establish the **minimum** combustion fan rpm when running at the lowest and highest heat output settings of 0 or 100. The on-board controls will then calculate minimum combustion fan rpm at output levels set at other than 0 or 100.

In all cases where adverse output performance or flame quality appears to be an issue, the consumer should be advised to perform a thorough cleaning of the stove, including the burn pot, the area under the burn pot, and the heat exchanger/baffle system which is accessible by removing the two protective cast plates at the back of the firebox. This should be done prior to a technician visit.

A conservative approach should be used when applying any change to the control software, and should be made only after all other alternative resolution methods have been exhausted. These alternative methods include:

- change to a higher quality fuel
- less complex reconfiguration of venting
- possible addition of an outside air source
- thorough combustion chamber cleaning
- door checked for proper alignment and adjustment
- all gasket seals are verified to be intact and functioning properly
- application of Random Field Shutdown TB

Resolution Description

Factory **G1** - minimum combustion fan rpm at 0 output setting:

- 110 (1100 rpm) for the Integra
- 80 (800 rpm) for Premio and Visio models

Factory **G2** - minimum combustion fan rpm at 100 output setting:
190 (1900 rpm) for the Integra

- 170 (1700 rpm) for the Premio and Visio models

Maximum allowable **G1**:

- 150 (1500 rpm) for the Integra
- 110 (1100 rpm) for Premio and Visio models.

Maximum allowable **G2**:

- 250 (2500 rpm) for the Integra
- 210 (2100 rpm) for the Premio and Visio models.

As noted earlier in this document, a conservative approach is suggested in making these changes. If all other resolution methods have been exhausted, incremental adjustments to the G1 and G2 parameters are warranted.

It is not advised to set all stoves in all instances to the maximum G1 and G2 values. Instead, it is recommended that changes be made in two separate adjustment stages.

Adjustment Stage-1

- G1 set to:
 - 130 (1300 rpm) for the Integra
 - 95 (950 rpm) for Premio and Visio models

- G2 set to:
 - 220 (2200 rpm) for the Integra
 - 190 (1900 rpm) for Premio and Visio models

Adjustment Stage-2

- G1 set to:
 - 150 (1500 rpm) for the Integra
 - 110 (1100 rpm) for Premio and Visio models

- G2 set to:
 - 250 (2500 rpm) for the Integra
 - 210 (2100 rpm) for Premio and Visio models

Adjustments that exceed the maximum allowable G1 and G2 values can lead to unsafe operating conditions which could result in a fire. Use caution when changing these values.

After making the Stage-1 adjustments to the G1 and G2 parameters, instruct the consumer to use their stove as normal for a period of at least one week of normal use and observe the new operational characteristics. If the problem is resolved, then no further parameter adjustments should be made. If the problem is not fully resolved, then Stage-2 adjustments are warranted up to the maximum allowable values for each parameter.

Instructions

General Menu Navigation

- Navigate to the specific parameters that will be changed by pressing **ENTER**
- Values are adjusted by pressing + or – (plus or minus)
- Values can be changed while the unit is in normal or startup operation
- Once a value has been changed, pressing enter will save the value and advance to the next parameter.

Accessing Programming Mode

- Power on the stove
- Regardless of current operational mode, press **MENU** (display will show “MO”)
- Simultaneously press + and – (display should now show “PW”)
- For the password press **MENU, PLUS SIGN, MENU** (as you enter the password, a series of three dashes will display below “PW”)
- Confirm by pressing **ENTER** (you should now be in the service menu - display should read “S1” with the value “.9”)

Adjustments will be made to the following two parameters:

- “G1” Minimum combustion fan rpm at lowest heat output setting
- “G2” Minimum combustion fan rpm at highest heat output setting

note: adjustments are made in increments of 5 (50 rpm)

Changing Parameters

- Press enter to advance to and change the G1 and G2 parameters – press enter again after each change:
 - Use the + and – buttons to change “G1” to the corresponding values as outlined in the Stage-1 or Stage-2 adjustments settings on the prior page
 - Use the + and – buttons to change “G2” to the corresponding values as outlined in the Stage-1 or Stage-2 adjustments settings on the prior page
 - Enter through all other parameters and confirm that they are set to factory defaults and not inadvertently changed
 - Exit service menu by pressing **MENU**
- Return unit to normal operation.

Factory default settings for all control software parameters are as follows:

Setting	Range	Premio / Visio	Integra	Parameter Description
S1	1 -44	8	9	Minimum auger pulse, displays in 1/10 seconds (do not exceed these values – a house fire could result)
S2	1 -44	25	33	Maximum auger pulse, displays in 1/10 seconds (do not exceed these values – a house fire could result)
R1	0 -60	1	1	Delay in initiating shutdown cycle / final cleaning, displays in minutes
R2	0 -255	120	120	Duration of final cleaning, displays in seconds
N1	0 -255	5	5	Duration of cool down phase, displays in seconds
Z1	0 -60	12	12	Power on duration of igniter during startup cycle, displays in minutes
A1	0 -60	21	21	Duration of start-up cycle, displays in minutes
G1	100 -3000	800	1100	Minimum rpm of combustion fan at lowest heat output setting, displays in multiples of 10
G2	100 -3000	1700	1900	Minimum rpm of combustion fan at highest heat output setting, displays in multiples of 10
G3	1 -100	30	40	Bandwidth of combustion fan in % of relative minimum
L1	1 -20	8	8	Minimum air flow in 1/10m/sec
L2	1 -20	17	12	Air flow value in 1/10m/sec, at which regular operation resumes