

SHIMADEN FP93 INSTRUCTION MANUAL FOR GAS KILNS

(STEP BY STEP SOLUTIONS)

2025

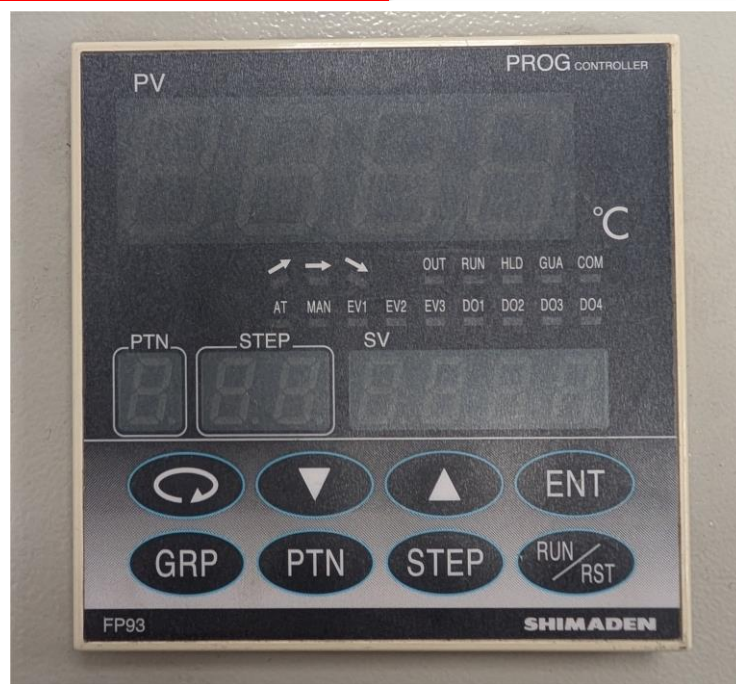




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Please note:

Programs 1-4 are already set-up in the programmer; you will not have to set these up yourself.



FIRING OF KILN WITH FP93

NB: If there is no energy regulator present, the firing rate is automatically set in the FP93 to 100%.

Do not fit ceramic close off bungs to vent holes during dry out firing.

Allow kiln to cool completely before opening.

The above is necessary as kilns during their firing cycle put out by-products from clay at the approximate rate of 50 – 1, some of these by-products can be in the form of steam acid vapours, lead vapours, etc., depending on clay, glazes, etc. being fired.

NB: It is recommended that the bung holders are closed off with the bungs at temperature below 750°C in the cast or biscuit firing. It is better to leave the bungs out for the entire firing rather than putting them in early. It is recommended that the first firing of a new kiln be a slow firing, with the kiln empty, to a temperature 10%-15% less than the maximum temperature of the kiln. This is to enable the cement to mature and to remove any moisture from the brickwork.



PROGRAM F – FULL HEAT TO TEMPERATURE

This program does not have any set rates of increases or soak times; it only increases in temperature as fast as possible to the set maximum temperature.

Press PTN key until PTN F is displayed, then press ENT key to confirm selection.

STEP 1

Set temperature to your desired maximum temperature. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press and hold RUN/RST for a few seconds until kiln turns on – the OUT light will light up and the RUN light will flash

Temperature read out shows the kiln temperature.

The furnace will hold at the set temperature until the operator manually turns it off.



PROGRAM 1 – SLOW BISQUE TO 1000°C

STEP 1	25°C/hr 100°C	
STEP 2	Soak time: 01.00 hour	
STEP 3	60°C/hr 700°C	
STEP 4	75°C/hr 1000°C	
STEP 5	Soak time: 00.10 minutes	END

Press PTN key until PTN 1 is displayed, then press ENT key to confirm selection.

STEP 1

Press the GRP key.

Then press the STEP key to display PTN 1 STEP 1

Set temperature to **100°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **04.00** (4 hours, 25°C/hr) (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 2

Press the STEP key to display PTN 1 STEP 2

Set temperature to **100°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set soak time to **01.00** (1 hour). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 3

Press the STEP key to display PTN 1 STEP 3

Set temperature to **700°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **10.00** (10 hours, 60°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 4

Press the STEP key to display PTN 1 STEP 4

Set temperature to **1000°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **04.00** (4 hours, 75°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 5

Press the STEP key to display PTN 1 STEP 5

Set temperature to **1000°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen



Set soak time to **00.10** (10 minutes). (Use ↑ or ↓ keys to select)
Press the ENT key to confirm changes.

Total firing time: **19 hours.**

Press GRP key until screen displays current kiln temperature, PTN number, STEP - -, SV 0.

Press and hold RUN/RST for a few seconds until kiln turns on – the diagonal UP arrow and RUN lights will turn on.

Temperature read out shows the kiln temperature.



PROGRAM 2 – EARTHERNWARE GLAZE/POTTERY TO 1080°C

STEP 1	150°C/hr 600°C	
STEP 2	Soak time: 00.10 minutes	
STEP 3	114°C/hr 1000°C	
STEP 4	80°C/hr 1080°C	
STEP 5	Soak time: 00.10 minutes	END

Press PTN key until PTN 2 is displayed, then press ENT key to confirm selection.

STEP 1

Press the GRP key.

Then press the STEP key to display PTN 2 STEP 1

Set temperature to **600°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **04.00** (4 hours, 150°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 2

Press the STEP key to display PTN 2 STEP 2

Set temperature to **600°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set soak time to **00.10** (10 minutes). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 3

Press the STEP key to display PTN 2 STEP 3

Set temperature to **1000°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **03.30** (3 hours 30 minutes, 114°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 4

Press the STEP key to display PTN 2 STEP 4

Set temperature to **1080°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **01.00** (1 hour, 80°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 5

Press the STEP key to display PTN 2 STEP 5

Set temperature to **1080°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen



Set soak time to **00.10** (10 minutes). (Use ↑ or ↓ keys to select)
Press the ENT key to confirm changes.

Total firing time: **8.5 hours.**

Press GRP key until screen displays current kiln temperature, PTN number, STEP - -, SV 0.

Press and hold RUN/RST for a few seconds until kiln turns on – the diagonal UP arrow and RUN lights will turn on.

Temperature read out shows the kiln temperature.



PROGRAM 3 – STONEWARE MIDFIRE TO 1200°C

<u>STEP 1</u>	150°C/hr 600°C	
<u>STEP 2</u>	Soak time: 00.10 minutes	
<u>STEP 3</u>	114°C/hr 1000°C	
<u>STEP 4</u>	80°C/hr 1200°C	
<u>STEP 5</u>	Soak time: 00.10 minutes	END

Press PTN key until PTN 3 is displayed, then press ENT key to confirm selection.

STEP 1

Press the GRP key.

Then press the STEP key to display PTN 3 STEP 1

Set temperature to **600°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↺ key – tCR displays on screen

Set duration of increase to **04.00** (4 hours, 150°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 2

Press the STEP key to display PTN 3 STEP 2

Set temperature to **600°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↺ key – tCR displays on screen

Set soak time to **00.10** (10 minutes). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 3

Press the STEP key to display PTN 3 STEP 3

Set temperature to **1000°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↺ key – tCR displays on screen

Set duration of increase to **03.30** (3 hours 30 minutes, 114°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 4

Press the STEP key to display PTN 3 STEP 4

Set temperature to **1200°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↺ key – tCR displays on screen

Set duration of increase to **02.30** (2 hours 30 minutes, 80°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 5

Press the STEP key to display PTN 3 STEP 5

Set temperature to **1200°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↺ key – tCR displays on screen



Set soak time to **00.10** (10 minutes). (Use ↑ or ↓ keys to select)
Press the ENT key to confirm changes.

Total firing time: **10.5 hours.**

Press GRP key until screen displays current kiln temperature, PTN number, STEP - -, SV 0.

Press and hold RUN/RST for a few seconds until kiln turns on – the diagonal UP arrow and RUN lights will turn on.

Temperature read out shows the kiln temperature.



PROGRAM 4 – STONEWARE HIGHFIRE TO 1280°C

<u>STEP 1</u>	150°C/hr 600°C	
<u>STEP 2</u>	Soak time: 00.10 minutes	
<u>STEP 3</u>	114°C/hr 1000°C	
<u>STEP 4</u>	93°C/hr 1280°C	
<u>STEP 5</u>	Soak time: 00.10 minutes	END

Press PTN key until PTN 4 is displayed, then press ENT key to confirm selection.

STEP 1

Press the GRP key.

Then press the STEP key to display PTN 4 STEP 1

Set temperature to **600°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **04.00** (4 hours, 150°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 2

Press the STEP key to display PTN 4 STEP 2

Set temperature to **600°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set soak time to **00.10** (10 minutes). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 3

Press the STEP key to display PTN 4 STEP 3

Set temperature to **1000°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **03.30** (3 hours 30 minutes, 114°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 4

Press the STEP key to display PTN 4 STEP 4

Set temperature to **1280°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen

Set duration of increase to **03.00** (3 hours, 93°C/hr). (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

STEP 5

Press the STEP key to display PTN 4 STEP 5

Set temperature to **1280°C**. (Use ↑ or ↓ keys to select)

Press the ENT key to confirm changes.

Press the ↻ key – tCR displays on screen



Set soak time to **00.10** (10 minutes). (Use ↑ or ↓ keys to select)
Press the ENT key to confirm changes.

Total firing time: **10.5 hours.**

Press GRP key until screen displays current kiln temperature, PTN number, STEP - -, SV 0.

Press and hold RUN/RST for a few seconds until kiln turns on – the diagonal UP arrow and RUN lights will turn on.

Temperature read out shows the kiln temperature.



OPERATING INSTRUCTIONS ONCE PROGRAMMER IS SET

Power ON.

Programmer beeps then self-checks, and then displays kiln temperature plus last program used number + segment 1.

Press the PTN key to select a program to run. Dot point flashes until ENT key is pushed. This will not start the program.

To start the selected program, press and hold the RUN/RST key for a few seconds.

Step 1 appears – a light under a small arrow showing direction of heating lights up.

Program will run and when finished will go back into RST.

Press and hold RUN/RST button again for a few seconds to stop the firing.

Bisque Firing Sequence

1. Turn panel ON
2. Press O/T Reset
3. Open door
4. Start Program 1 (See above for program temperature profile & time)
5. Turn ON burner 1 only
6. Wait for purge to complete
7. Close door only half way
8. 2 hours after purge, close door fully
9. A further 2 hours later turn burner 2 ON
10. A further 1 hour later turn burner 3 & 4 ON

Glaze Firing Sequence

1. Turn panel ON
2. Press O/T Reset
3. Open door
4. Start Program 2 / 3 / 4 (See above for program temperature profile & time)
5. Turn ON all burners
6. Wait for purge to complete
7. Close door fully



WARRANTY

(Applicable only to products marketed and used within the Commonwealth of Australia.) Kiln has been thoroughly tested and inspected during manufacturing and is guaranteed against faulty materials and workmanship. Should there prove to be defective material or workmanship, within 12 months from date of purchase, it will be repaired free of charge, provided it is returned intact, freight paid to, Tetlow Kilns and Furnaces Pty Ltd. Naturally the warranty does not cover failure due to accidental damage, misuse, negligence, consequential damage, modification, or where the controller is not installed and operated in accordance with any statutory regulations, the appropriate installation code, or with details appearing on the controller rating plate. The warranty is valid wherever you live in Australia even if you move. For ready recognition of your warranty, record the date of purchase hereon and retain this for your record. Also retain proof of purchase as you may be asked to produce same in event of a service claim. This warranty is the sole guarantee by the manufacturers and they are not responsible for any other obligations assumed or expressed by any other person or persons.

No other remedy shall be available to the buyer (except the conditions contained in this warranty) for damage to kilns, ware or property, lost profits, or lost sales or any other consequential or accidental loss.

If service is required on this equipment on site, a service charge will be made according to time taken at normal trade rates including travelling time.

In case repair under guarantee is claimed, this guarantee must be tendered.
Please note that elements are not covered by guarantee.

**For further information, locate us at our website, www.tetlow.com.au
Do not hesitate to contact us at Tetlow Kilns and Furnaces at 03 8545 8296 or
info@tetlow.com.au**