



Intervals ICU Coach V5 (Railway T2 Engine)

AI-Driven Endurance Performance Framework • Unified Reporting v5.1

📝 How to Set Up Your LT1 (HRTLND_LT1) Field in Intervals.icu

Step 1 — Add the Field to Your Athlete Settings

1. Go to **Athlete → Settings** (top right gear icon).
2. Scroll down to **Custom Fields**.

?	CUSTOM ZONES	?
Custom activity field values copied onto new activities for this sport	VO2Max	IF 66.00 ?

3. Click the **search icon** 🔎 and type **HRTLNDLT1**.

HRTLNDLT1	Clive King	Users 2
LT1 (Lactate Threshold 1) marks		
the first sustained rise in blood lactate above baseline. It reflects		
the point where your body begins producing more lactate than it		
can clear entirely via aerobic metabolism – but you're still mostly		
using fat as your main fuel.		

HRTLNDLT1P	Clive King	Users 0
LT1 Power is the pair for (Lactate		
Threshold 1) HRTLNDLT1		

4. Select Edit icon **HRTLNDLT1 (LT1 – Lactate Threshold 1)** and **HRTLNDLT1P (LT Power pair)** from the list.

Activity Fields			
<input checked="" type="checkbox"/>	VO2Max	VO2MaxGarmin	?
<input checked="" type="checkbox"/>	IF	IF	?
<input checked="" type="checkbox"/>	HRTLNDLT1	HRTLNDLT1	?
<input checked="" type="checkbox"/>	HRTLNDLT1P	HRTLNDLT1P	?

Activity Field

Name	Visibility	
HRTLNDLT1	Public	
Field is visible to everyone and will appear on your profile. Data you capture for the field is only visible to your followers.		
TYPE	DESCRIPTION	SCRIPT
Code	Type	
HRTLNDLT1	Numeric	
Units	Convert	
mmol/l	None	Min Max
<input checked="" type="checkbox"/> Moving average only counts days with a measurement (?)		
Prefix	Format	Suffix
	.1f	mmol/l
Example		
<input type="radio"/>	<input checked="" type="radio"/>	42 HRTLNDLT1 42.0mmol/l
Text Align <input checked="" type="checkbox"/> Center <input type="checkbox"/> No <input type="checkbox"/>		
<input checked="" type="checkbox"/> FIT file field <input type="checkbox"/> Inline <input checked="" type="checkbox"/> None <input type="checkbox"/>		
<input checked="" type="checkbox"/> Processes fit file messages (?)		

DELETE **CANCEL** **OK**

Activity Field

Name	Visibility	
HRTLNDLT1P	Public	
Field is visible to everyone and will appear on your profile. Data you capture for the field is only visible to your followers.		
TYPE	DESCRIPTION	SCRIPT
Code	Type	
HRTLNDLT1P	Numeric	
Units	Convert	
Watts	None	Min Max
<input checked="" type="checkbox"/> Moving average only counts days with a measurement (?)		
Prefix	Format	Suffix
	.1f	Watts
Example		
<input type="radio"/>	<input checked="" type="radio"/>	42 HRTLNDLT1P 42.0Watt
Text Align <input checked="" type="checkbox"/> Center <input type="checkbox"/> No <input type="checkbox"/>		
<input checked="" type="checkbox"/> FIT file field <input type="checkbox"/> Inline <input checked="" type="checkbox"/> None <input type="checkbox"/>		
<input checked="" type="checkbox"/> Processes fit file messages (?)		

DELETE **CANCEL** **OK**

5. Click **OK**

6. Tick the checkbox to activate it.

Activity Fields			
<input checked="" type="checkbox"/>	VO2Max	VO2MaxGarmin	(?)
<input checked="" type="checkbox"/>	IF	IF	(?)
<input checked="" type="checkbox"/>	HRTLNDLT1	HRTLNDLT1	(?)
<input checked="" type="checkbox"/>	HRTLNDLT1P	HRTLNDLT1P	(?)

7. Click **Close** to save.

You should now see “HRTLNDLT1” and “HRTLNDLT1P” under your Custom Fields list.

Step 2 — Enter Your LT1 and Power Value

1. In the same **Athlete Settings → Custom Fields**, locate **HRTLNDLT1**.

?	CUSTOM ZONES	VO2Max 66.00	IF	HRTLNDLT1 2.0mmol/L	CUSTOM FIELDS
Previous sections					

2. Enter your **latest LT1 value in mmol/L** (for example 2.0).

3. Click **Save ✓**.

Typical LT1 range: **1.5 – 2.5 mmol/L**

for HRTLNDLT1; If you're unsure, start with **2.0 mmol/L** – the standard aerobic threshold.

for HRTLNDLT1P; add power pair for LT1 eg. 195

Step 3 — Apply It to Activities

1. Open one of your **recent activities with power**.
2. Scroll to the bottom and click **Custom ▾**.

3. Tick **HRTLNDLT1** and **HRTLNDLT1P** to enable them for that activity and future activities.
 4. Refresh the page — your LT1 and LT1P value will now appear automatically for all new activities (if this doesn't appear for an activity you can actions/reload from source or just change an interval temporarily and it will refresh and populate values from athlete settings).
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Step 4 — Keep It Updated

Whenever you do a new **lactate or endurance test**, update your LT1 and LT1P values in **Athlete Settings → Custom Fields**.

The new number will instantly flow into:

- Your **future activities**
- Your **reporting pipeline** (used in endurance-zone calibration)

 **FTP acts as your LT2 anchor**, while **HRTLNDLT1 and pair HRTLNDLT1P** defines your aerobic base. Together, they shape your personalized endurance (Z2) range.

Summary

Field	Example Unit	Purpose
VO2Max	66	—
HRTLNDLT1	2.0	mmol/L
HTTLNDLT1P	195	Watts power pair for LT1
FTP	300	W

Inside the ChatGPT app – what does this mean?

Lactate Summary

Data Status

 At this time we are using the generic lab model (Mader & Heck 1986):

Your Lactate Metrics

Metric	Value	Meaning
Average lactate	2.0 mmol/L	Represents aerobic threshold (LT1) level

Metric	Value	Meaning
Latest lactate	2.0 mmol/L	Most recent data point used for calibration
Range (min–max)	2.0 – 2.0 mmol/L	Flat, no variability detected
Samples detected	1	Just your profile default
Correlation with power	$r = 0.0$ (weak)	No measurable link to power yet
Lactate-power model	FTP-based fallback	Zones derived from FTP, not measured test (unless you updated these in Intervals post LT2)

Threshold Calibration (Applied)

Threshold	Value	Description
LT1	2.0 mmol/L	Aerobic threshold — where lactate first rises above baseline. Equivalent to ~200 W for you.
LT2	4.0 mmol/L	Anaerobic threshold — near your maximal steady-state (~300 W).
Calibration source	FTP-based default	Standard lab defaults used.
Confidence	0 %	Because correlation with power = 0.0 (no true data link).

Interpretation

- You're training in a Z2-dominant aerobic base, which is ideal for lifting your LT1.
- Your fat oxidation efficiency (0.59) supports this — it's close to the fat/carb crossover zone around LT1.
- No sign of threshold overload or excessive glycolytic work.

Essentially:

"You're operating right around your aerobic threshold — exactly where your endurance engine grows strongest."

Coach Recommendations

Goal	What to Do
Refine LT1	Add a 30–40 min steady ride at 200–220 W, track HR stability and drift (< 5 %).
Refine LT2	Do short threshold intervals (~300 W) and note HR — if it rises rapidly, your true LT2 is slightly lower.
Future improvement	Upload any lactate test file (.csv or .fit with mmol/L field) — the system will instantly replace FTP defaults with your real curve.

Bottom Line

- Lactate data: available (1 point)
 - LT1: 2.0 mmol/L (~200 W)
 - LT2: 4.0 mmol/L (~300 W)
 - Confidence: low (FTP-based)
 - Next step: optional test upload for precision
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