



Master Class Power Accelerator

Created by Tom Scotto, ICA Master Instructor
Training Type: Leg Speed and Power
Working HR Zones: Zones 3–4
Total Class Length: 60 minutes

Profile Objective and Intensity

I woke up one morning and the thought hit me: “There are so many great songs on the ICA website submitted by master instructors; I should build a profile solely from this music library.”

As is customary at the beginning of the year, I build four profiles for the purpose of delivering base conditioning to my riders. Next up on the docket was a leg speed and technique workout, so I dug into all the great music contributions to create this profile.

As both a cyclist and fitness instructor, it is important to revisit form and technique at the beginning of the year. Outdoor riders dedicate a good amount of early-season training to technique, and with all of the new members flocking into the health clubs in January, reinforcing proper technique is perfect for creating a solid foundation for everyone.

The objective of the profile is to guide riders to faster leg speeds, emphasizing technique, form, and power output. To ensure their speed work is most effective, I review the muscles responsible for powering the bike at the very beginning of class. We continually refer back to the muscles throughout the ride so everyone remains focused on what will make them powerful and successful.

Countdown and Time Checks

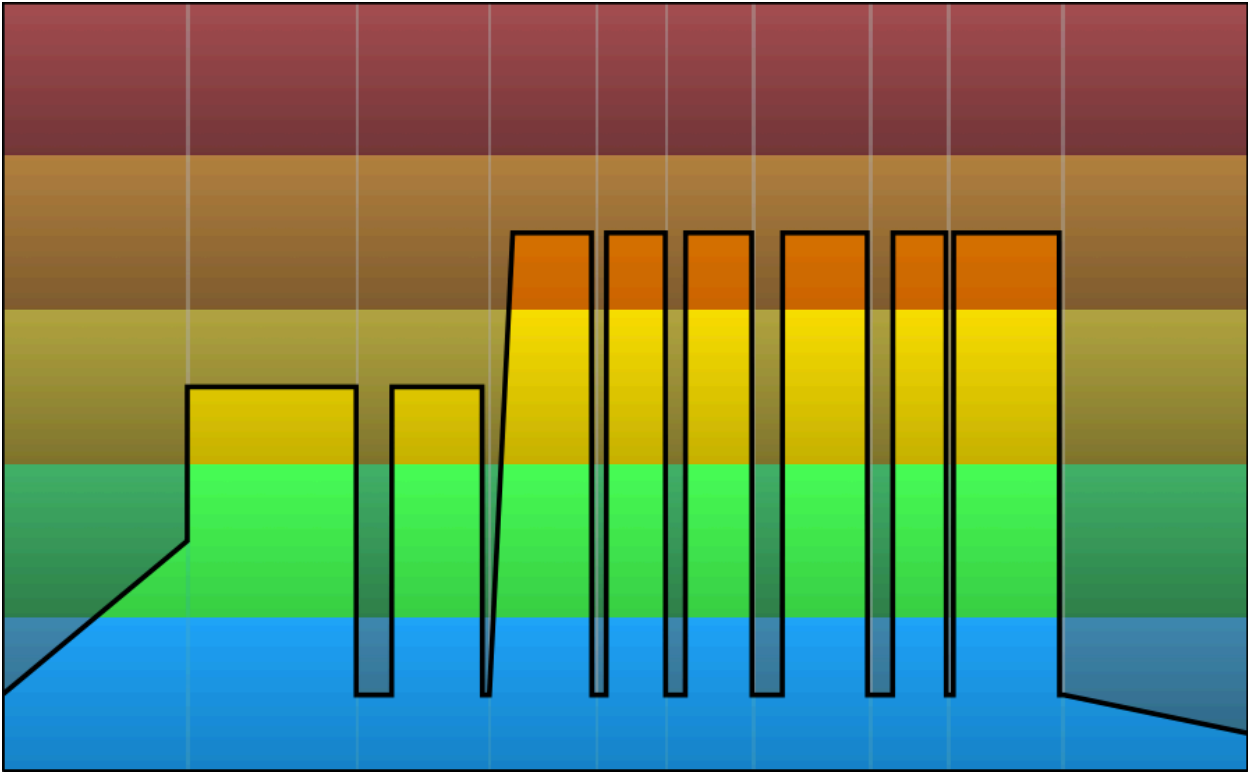
Besides inspirational cues, providing time checks and a countdown can help carry your riders strongly through an interval. Here is an example of time checks and counting down a 60-second interval:

“Set your cadence as close to X rpm as you are able. You have 60 seconds to sustain what you’ve started! 45 seconds to go! 30 seconds! 20 seconds! 15 seconds! 10! 4...3...2...1...”

The Music

As I mentioned above, the music for this profile was selected from songs submitted by our ICA contributing instructors. I have included links to each of the music posts on the ICA website. You will notice that I did not always use the music exactly as was suggested by the contributor. This is just another way of demonstrating how each of us can hear and envision music so differently.

Graphic Profile
(Provided by Class Builder™)



Coaching

Intro / Warm-Up

Little Things, Matenda, 8:59, 100 bpm

(Contributed by Jennifer Sage: <http://www.indoorcyclingassociation.com/friday-favorites-may-27-2011/>)

Besides the usual pre-flight banter, it is important to stress the importance of everyone working at their own abilities. When it comes to pedaling at fast speeds, many will try to accomplish whirling legs at the detriment of their form and safety. Relaxation, alignment, technique, and working within one's limits should remain the focus of the class regardless of the cadence obtained.

Everyone's "fast" is different. Some of us are genetically faster, while others have spent time training our speed. If you have never focused on speed before, especially using the approach we will explore today, do not be discouraged. Many who have made noticeable progress with their cadence have done so over the course of months—months of focused hard work.

Relaxation will bring the greatest success. If you tighten up your body in an attempt to spin your legs faster, your speed will only be hindered. Tight muscles restrict joint movement, which in turn restricts your speed. Relax and let the body fly.

This class is mostly constructed of intervals. Do as many intervals as you can. If you are unable to hit a suggested speed, do the best you can; the speed is "suggested." If you need to skip an interval or two in order to bring your heart rate down or recovery your muscles, do it. It is not a matter of how many intervals you do, but how many you do effectively.

Pedal-Stroke Technique

Orgasmus (Encore une fois Mix by Northern Comfort), Claude Challe & Friends, 8:11, 63 bpm

(Contributed by Byron Black: <http://www.indoorcyclingassociation.com/wednesday-timeless-classic-june-13-2012/>)

Since we are going to be performing most of the intervals at higher speeds, I prefer to slow the tempo down for the purpose of focusing on specific muscle groups. This gives the brain an opportunity to connect with the action it is powering. The pedal stroke is divided among four muscle groups. Riders are given the choice of focusing on one muscle group at a time or trying to combine them as each is introduced.

As I mentioned in the warm-up and will continue to harp on throughout this ride, it is important to remain relaxed so the body can move freely. This includes the lower leg: calves, ankles, feet, and toes.

Avoid pointing your toes or dropping your heels. Simply focus on delivering power via the balls of your feet—the point at which your feet are connected to the pedals.

We are going to divide the pedal stroke into four muscle groups starting with the hip flexors, which are responsible for powering the stroke from approximately 10 to 1 o'clock.

Next the focus shifts to the glutes, responsible for powering the pedal stroke from approximately 12 to 3 o'clock.

The glutes start the powerful downstroke, which is continued by the quads from approximately 10 to 5 o'clock.

Finally, the hamstrings are engaged to power the bottom of the pedal stroke from approximately 5 to 8 o'clock.

Feel free to focus on one muscle group at a time or try to connect one muscle group to another.

Pedal-Stroke Technique at Speed

Release It [Instrumental], Afro Celt Sound System, 6:27, 100 bpm

(Contributed by Jennifer Sage: <http://www.indoorcyclingassociation.com/wednesday-timeless-classics-september-14-2011/>)

After your riders have had an opportunity to work on their technique at a slower cadence, encourage them to make the same muscle connection at a faster speed. Focus on each muscle group for 30 seconds with 30 seconds of recovery in between. For the remaining time, have them put the entire pedal stroke together into one smooth movement.

Now we are going to attempt to engage our muscles at a faster speed—100 rpm. Do the best you can and remember, the key is relaxation.

As the music and the legs attempt to go faster, the mind will be tempted to race as well. Do your best to keep your mind calm. Focus on one muscle group at a time if needed.

You may also be tempted to use very little resistance. Resist this temptation! It is important that you remain in control and feel you are working at all points along the pedal stroke.

TWENTY SPEED INTERVALS

Twenty intervals will follow, ranging from 100 to 120 rpm. As their instructor and coach, the time for education is over. You must now turn your focus to reminding them of what they learned previously. Encourage their form, focus, and working at any level they are comfortable.

The goal over the next six songs is to progressively increase speed, but also increase control and power. If your club/studio has bikes with power, this is a great opportunity to observe the effects of speed on power output. Even if your riders use the same amount of resistance for all of the intervals, they should notice an increase in power as their cadence increases.

No recovery songs will be provided. If riders need more recovery, especially as the target cadence increases, remind them to skip intervals.

Cadence Limits

Different indoor cycling certifications and organizations have recommended cadence limits, such as not exceeding 110 rpm. Work within the guidelines your certification has provided.

Encourage riders to increase their leg speed within the framework of safety, proper form, appropriate resistance, and effective technique.

100 RPM Intervals

DDD (Dirty Disco Dub), The Orb, 5:11, 100 bpm

(Contributed by Jennifer Sage: <http://www.indoorcyclingassociation.com/friday-favorites-06072013/>)

We are going to shift our focus to shorter intervals. The goal is twofold: (1) obtain the target cadence and (2) maintain consistent power at each speed.

We have 20 intervals ahead of us, ranging from 100 to 120 rpm. Do as many as you can. Consistency rather than intensity is the focus. Try to remain in Zone 3, allowing yourself to drift into Zone 4 for short periods of time. If you fall into Zone 5 too often, it will reduce the amount of intervals you will be able to complete.

Feel free to stand at half speed in between intervals in order to stretch the legs.

INTERVAL TIMING:

1. 1:08 – 1:46 (~40 sec)
2. 2:06 – 2:44 (~40 sec)
3. 3:03 – 3:41 (~40 sec)
4. 4:14 – 4:57 (~40 sec)

105 RPM Intervals**Numb / Encore (Clean Version), Linkin Park & Jay-Z, 3:25, 105 bpm**

(Contributed by Jennifer Sage: <http://www.indoorcyclingassociation.com/mainstream-music-monday-strength-speed-mash-up/>)

Let's increase the speed by just 5 rpm from 100 to 105.

If you are trying to match the cadence on the computer on your bike, target a range and not a specific number. Trying to hold a specific rpm can be frustrating, as the cadence on your computer will fluctuate.

Focus on relaxing your upper body: relax your shoulders, arms, and grip on the handlebars.

INTERVAL TIMING:

1. 0:29 – 1:28 (~60 sec)
2. 2:44 – 3:20 (~35 sec)

110 RPM Intervals**The Monster (feat. Rihanna), Eminem, 4:10, 110 bpm**

(Contributed by Tom Scotto: <http://www.indoorcyclingassociation.com/mainstream-music-monday-monster-speed/>)

It is time to amp it up to 110 rpm! It is time for some "Monster" speed!

We are going to attempt six intervals at 110 rpm. Do the best you can.

Remember, leg speed requires focused training. Don't get down on yourself if you are starting to struggle. Return to your technique even if it means slowing down your legs.

Stay calm and allow your body to move freely. Achieve speed through relaxation.

INTERVAL TIMING:

1. 0:54 – 1:29 (~35 sec)
2. 2:04 – 2:39 (~35 sec)
3. 3:16 – 4:06 (~50 sec)

110 RPM Intervals**Smoke On the Water, Deep Purple, 5:42, 110 bpm**

(Contributed by Tom Scotto: <http://www.indoorcyclingassociation.com/friday-favorites-smokin-legs/>)

Three more intervals to go at 110 rpm.

Fun Music Fact: The first song most rock guitarists learn to play is “Smoke On the Water.” It sounds cool turned up loud on an amplifier and is relatively simple—at least the chords in the beginning. ☺ (I usually ask for a show of hands from those who have played this song on the guitar.)

Remember, if you need a break, skip an interval or two.

We are also going to attempt some longer intervals. Do as much of each interval as you can.

INTERVAL TIMING:

1. 1:26 – 1:56 (~30 sec)
2. 2:29 – 3:57 (~90 sec)
3. 4:30 – 5:32 (~60 sec)

120 RPM Intervals**Love Runs Out, OneRepublic, 3:44, 120 bpm**

(Contributed by Tom Scotto: <http://www.indoorcyclingassociation.com/mainstream-music-mondays-speed-runs/>)

It is time to push the upper limit.

At this speed everything can start falling apart. Form must come before fitness, which comes before fast.

Relax your breathing as much as possible. Relax your upper body as much as possible. Relax your legs and set them free to fly.

If you are not able to obtain 120 rpm, work at the fastest speed you are capable of while still maintaining form and control.

INTERVAL TIMING:

1. 1:05 – 1:29 (~25 sec)
2. 1:53 – 2:16 (~25 sec)
3. 2:51 – 3:39 (~45 sec)

120 RPM Intervals**Ya Mama, Fatboy Slim, 5:38, 120 bpm**

(Contributed by Tom Scotto: <http://www.indoorcyclingassociation.com/friday-favorites-push-tempo/>)

Five intervals to go!

As the body fatigues, you may find yourself using less and less resistance. If you do not use enough resistance, you will start bouncing in the saddle. If you start bouncing, you can try the following to calm your form and movement: (1) add resistance, (2) focus on your pedal stroke and muscle groups, and/or (3) slow your cadence. It is better to pedal at a slower cadence than fast with poor form.

It is time to “push the tempo”—push our muscles, push our mind, and push our limits.

INTERVAL TIMING:

1. 0:17 – 0:48 (~45 sec)
2. 1:29 – 1:52 (~35 sec)
3. 2:10 – 2:25 (~15 sec)
4. 2:42 – 3:14 (~30 sec)
5. 4:51 – 5:24 (~30 sec)

Cool-Down / Stretch**8 Ball, Underworld, 8:58, 100 bpm**

(Contributed by Byron Black: <http://www.indoorcyclingassociation.com/friday-favorites-nov-18-2011/>)

Final Thoughts:

Profiles that push the limit can draw attention to a rider’s bike setup. Encourage riders to speak to you if they have questions about their setup, power (if you have meters in your class), or any pains or discomfort they may have experienced during the ride.

A ride like this can push you to your limit regardless of the cadence you were able to obtain. Never be discouraged. You worked hard, very hard. As I mentioned earlier, pedal-stroke technique, and the resulting speed, takes time—months.

Continue to work on your leg speed, control, and power, and over time you will see your fitness, including your muscle engagement, progressively improve.

Music Profile

Section	Music	BPM	Time
Intro / Warm-up	Little Things, Matenda	100	8:59
Pedal-Stroke Technique	Orgasmus (Encore une fois Mix By Northern Comfort), Claude Challe & Friends	63	8:11
100 RPM Steady-State	Release It [Instrumental]	100	6:27
100 RPM Intervals	DDD (Dirty Disco Dub), The Orb	100	5:11
105 RPM Intervals	Numb /Encore (Clean Version), Linkin Park & Jay-Z	105	3:25
110 RPM Intervals	The Monster (feat. Rihanna), Eminem	110	4:10
110 RPM Intervals	Smoke On the Water, Deep Purple	110	5:42
120 RPM Intervals	Love Runs Out, OneRepublic	120	3:44
120 RPM Intervals	Ya Mama, Fatboy Slim	120	5:38
Cool-Down / Stretch	8 Ball, Underworld	100	8:58