

Nordic Ultratune Update

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Autumn Edition, September 2006

Volume 9, Number 1

Nordic Ultratune News & Notes

A Summer Goes By

Just like that – summer has gone by.

In April I was getting things wrapped up for the season and looking forward to a long, quiet summer.

Instead it seems to have been a fast-forward mix of Ultratune planning and maintenance, some engineering design work, a fair bit of bike riding, and some overdue projects around the house.

The one item that anchored the summer for Margaret (my wife) and I was a canoe trip in Minnesota's Boundary Waters, a trip we planned late last winter. Once the permit was in hand, there was no way to change the schedule! We were fortunate to have great weather in mid-August for our eight days in the BWCAW! It was just the two of us; I'm very fortunate to have a great bow paddler as a wife!

It was also a very long road trip that included time with family and friends along the not-so-direct driving circuit.

Back home now in the Methow Valley, it's the time of year when you can see roller skiers climbing the North Cascades Highway on any given Saturday morning. There will be a frost by mid-September, and snow on Washington Pass by the first of November. Skiing will commence shortly after that.

Ski season is right around the corner. There's no time to waste! Just like that – summer has gone by, and I'm looking forward to a long and exciting winter!

-Mark Waechter



Schedule Notes

As Nordic Ultratune's ski tuning season starts to pick up steam, we'll resume our fall & winter schedule.

Starting in late September, the shop will return to regular winter hours (Thurs, Fri, Sat, Sun, Mon, 11-5). Stop in and say hello!

During the Christmas holiday week, we'll stay open on 26th/27th, but usually Tuesday and Wednesday of every week are reserved for ski testing and a little time off.



“Grind over the weekend” continues for 06/07

Ultratune’s “Grind over the weekend” schedule is intended to minimize turn-around time for ski service.

Batches of skis start the grind process each Thursday, and are shipped out on the following Monday. That will be our standard schedule again for the 2006-07 ski season.

Here’s why it works so well:

If you’re an out-of-town skier, you can ski on Sunday, pack up your skis and ship them to Ultratune on Monday with delivery in time for the Thursday batch. They’ll be back on the FedEx truck at the beginning of the week (4 days later), and you’ll receive them on Thursday. If you work this out, you’ll see that you miss only one weekend of skiing on your favorite boards.

To avoid missing any ski days at all, you can send your skis before the snow flies... ..but that would be too easy, wouldn’t it?



Winter in Washington’s Methow Valley



Some of those sports drinks taste like paper!

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WINTHROP, WA

How to Ship Your Skis

I'm continually asked for advice on the best way to ship skis. Here's how I would ship skis.

Probably the easiest and quickest way to ship skis is to use your ski bag and some bubble-wrap. FedEx will ship a ski bag without any problems. Before you worry too much about the skis being destroyed, let me assure you that the FedEx employees treat your skis better than airline baggage handlers!

Just about the only "planning ahead" you will need is a trip to the hardware store for a roll of bubble wrap and a roll of packaging tape.



A roll of bubble-wrap cost \$3.45 at my local hardware store.

1) First, clean your skis! Use a scraper to remove any storage wax – and don't forget the grip wax on classic skis!

2) Next, fill out a work-order form completely for each pair of skis. You can tape the work order to the skis. For multiple pairs (hey, why not!), you can put all the work orders in an envelope and tape the envelope securely to one of the pairs of skis.

3) For each pair of skis, rubber-band or tape the pair together. Don't send your favorite ski ties, or they'll become part of our collection!

4) Next, tape the pairs of skis together into a single solid quiver. If you're sending 3 pairs, for instance, you'll have a solid bundle of skis that are easy to protect in the ski bag. Double check to make sure you've taped the work orders to the skis!



Tape them together so that they make a single block of skis.

5) Wrap the bundle of skis with the bubble wrap. Make sure you've protected the tails and tips of the skis. It doesn't hurt to mummy-wrap the whole bundle, but take extra care to wrap the tips, tails, and bindings. The bubble wrap goes on the skis as a group, and not wrapped around each individual ski.



Mummy-wrap the bundle of skis, and add some extra to the tips and tails.

6) Insert the bundle of skis into the ski bag and secure the bag with the buckles and straps.



Stuff the ski bag, you can add extra padding if space allows.

(continued on next page)

How to Ship Skis (continued from previous page)

7) Taping up any loose ends, like straps, with some duct tape will help to keep everything in order.



Tape down the loose ends with duct tape.

8) Take the ski bag to a FedEx shipping center (if you're in a city, a Kinko's copy center will ship FedEx). A lot of people are able to use the shipping/receiving department at their workplace, so that's an option.

As noted, FedEx shipping will take your carefully packed ski bag without batting an eye. They have special hang tags to hold the shipping labels and will help with any questions you might have.



FedEx has special plastic hang-tags to hold shipping labels, made just for items like soft luggage and ski bags.

If you're not in a hurry, use the least expensive shipping method available (FedEx ground in most cases).

Keep in mind that Nordic Ultratune will usually return your skis in the packaging you send them in. Ultratune will send them back to you using FedEx Express Saver service (3rd day delivery).

It's easy for Ultratune to keep track of your ski bag, and easy for us to re-package your skis for safe shipping back to you in your ski bag, too.

Odds and Ends:

Some of you have **hard-shell ski cases**. Packing your skis inside of a hard-shell case is great! FedEx will ship it! No problem.

Boxes?

If you've already got a cardboard ski box that is the right size, then that's great! Use it! But there's simply no need to pay for a ski box, nor to use an oversized box (oversized box will cost more to ship).

Horror Stories?

The most common horror stories are from customers who carry their skis (unpacked) into a "UPS Store". They ask for packaging materials and shipping. The clerk at the UPS Store then quotes them a price for a box, packing material (double whammy – they use the dreaded styrofoam peanuts!), and overnight shipping that can run up to triple digits for a single pair of skis!

Lots of skis?

You can fit a lot of skis into a big ski bag. Ski reps and racers send a dozen pair or more in a single bag!



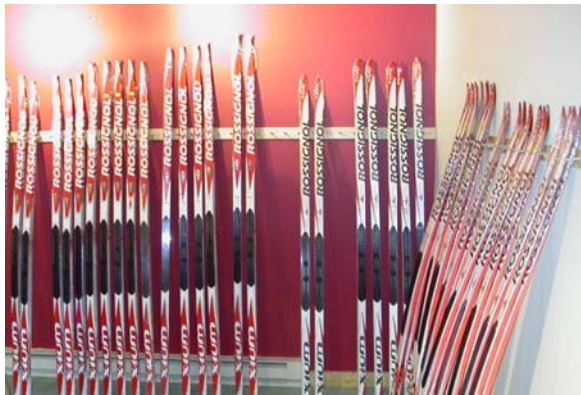
There are 14 pairs of skis in this bag!

Let's Summarize:

Packing skis in a ski bag is quick, easy, and inexpensive. FedEx treats them well, and a padded ski bag provides about as much protection as a cardboard box.

When they've been taped together and mummy-wrapped as a group, they're easy to protect.

Keep in mind that your ski bag might get a bit dirty and travel worn, but that's what they're for, right?



We carry only Rossignol's Xium Skate & Classic skis, and we focus on getting a great fit for each skier.



Rossignol Xium NIS Skate Skis – Fast and Stable!



Busy at Ultratune.

Ultratune's Hand-Picked Rossignol Skis

Looking Ahead to the 06/07 Season

Nordic Ultratune has had great feedback on the hand-picked Rossignol Xium NIS skate and classic skis offered last season, and we'll repeat our new ski program again for the 06/07 season.

Ultratune has pre-ordered close to a hundred pairs of Xiums - skate and classic - to arrive in September. If you would like to be on our "head's up" list, just send an email with info (your weight, skate/classic, ski conditions, etc) and we'll give you a call when the skis arrive and we've sorted through them with the flex tester.

All the skis are selected by flex test and picked to meet the customer's needs. The skis are stone ground with your choice of finish structure, and then they're hot-boxed for good wax saturation. The flex testing, stone grind, and hot-box are included at no extra charge – you get "race ready skis".

From the line-up of Xium skis, we've really having good luck picking great fits with this year's Xium NIS-1 & NIS-2 skate skis. In classic skis, we've found that both the C1 and C2 classic skis are easy to fit for people and ski beautifully.

We'll also have a selection of the Xium AR waxless classic skis, after getting a lot of requests for them last season.

We continue to keep in touch with Rossignol's head of Nordic skis, Robert Lazzaroni, and exchange info on ski fitting, boot fitting, and what's happening in the racing world.

For the 06/07 season, the Xium NIS skate skis remain unchanged, and the classic skis get a change in graphics – same great ski, but with graphics that are identical to the skate skis.

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Boots?

Looking Ahead to the 06/07 Season

Like the Rossignol skis, the Rossi World Cup skate and classic boots will be unchanged for next season. We'll continue to carry the boots as well.

Ultratune will again have a full size run of the Rossignol boots in stock – in two widths. The Rossi boots are the insider's pick for great fit – they come in a regular and “low volume” width, so they're more likely to fit a variety of feet. And they come with heat-moldable insoles.



Rossignol World Cup Skate & Classic Boots

We have the special thermo-forming machine from Rossignol to help with boot fitting if you're here in the shop; this really is helpful for getting a custom fit.



The Suspension Bridge near Mazama, WA.

If you're local, or visiting the Methow Valley, we can arrange for help with orthotics or molded insoles with the help of Pete or Amanda at Winthrop Physical Therapy. They're just down the street and can do all sorts of great things for people with hip/knee/ankle or balance difficulties due to footwear issues. They can handle anything from simple fit issues, to the exotic video gait analysis stuff.

I know it's inconvenient for you, the customer, to deal with boots through the mail if there are any fit questions. But there are a lot of skiers that find their way to the Methow Valley in the fall and winter, and the choice of boots is pretty limited in most places, so if we can help you get a good fit, let us know. Or, if you need us to send a couple of boot sizes to you, and have you keep the right fit and send the other pair back – well we can do that easily. Just ask.

If you're a fan of the Rossignol boots already or if you have hard-to-fit feet, then we can help.



photo credit to: Christian Haas



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Hey! Where are the safety glasses?

Any New Grinds for 06-07?

Work was done with a couple of new grinds in the late winter and spring, but there wasn't enough of the right kind of snow to get conclusive results. More testing will be done in the early part of the winter, and if there's a real knock-out, then it'll be available.

Some 'promising data' simply isn't enough to roll out something new. I think it's confusing to have too many grind choices with a lot of overlap. The goal is to maintain a handful of very good grinds that perform well in a relatively broad range.

Very few skiers have enough pairs of good skis to warrant a lot of grinds for special conditions. But, if you do need some 'specials', let us know and we can help you out. There are more grinds in the recipe book than we show on our menu.

The good news is that the offerings we have right now are performing very well, and it's not easy to find a good broad-range recipe that is better.

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XC02 & R2.3 Continue to Perform

The tried and true **XC02** grind continues to be very reliably fast for classic and skate skis in dry snow conditions. During the '03-'04 and '04-'05 seasons, testing showed this grind to be extremely free-running in all sharp, dryer snows, as high as -2 C. The XC02 has a polishing overgrind step that smoothes the "peaks" on the structure and results in very smooth glide.

When conditions warm up considerably, and coarse grained and moist conditions appear, the **R2.3** grind stands out. The R2.3 grind is a 3-stage grind, with a linear structure in the tip, a cross structure in the mid and tail, and a linear overgrind on the tail section. The aggressive structure requires large crystals and moisture to excel, and is a specialty grind for wet transformed conditions.

Make It Simple...

Recommended Grinds:

LJ03	Lowest cost, general-purpose, all-around grind
MVL	Fine linear structure racing grind for colder, "east slope" conditions -- great for classic skis.
MVX	All-around cross structure for skate skis, for colder "east slope" conditions
XC02	Racing grind for cold, dry snow
R2.3	Racing grind for moist snow

Recommended Waxing Service:

Hotbox Basic	Saturate your skis with this 90 minute hotbox treatment
Hotbox Deluxe	Anti-static wax plus warm paraffin, with 3 hour super-saturating hotbox

Hotbox Service at Nordic Ultratune

I routinely get emails asking for clarification of our Hotbox services. Here's what we offer:

Hotbox Basic - In our basic Hotbox process, skis are waxed with a warm paraffin and placed in the Hotbox for 90 minutes for thorough wax penetration.

Hotbox Deluxe - With the Hotbox Deluxe process, the skis receive an antistatic treatment using a special process, followed by a warm paraffin, then Hotboxed for 3 hours, providing super-saturation. The Hotbox Deluxe is highly recommended for all stone-ground skis.

Part 1: Respiratory Muscle Training

By Margaret Waechter, M.S.

About the author:

Margaret Waechter has an M.S. in Exercise Science, and is an ACSM Registered Clinical Exercise Physiologist®. She does exercise testing for athletes at Winthrop Physical Therapy in Winthrop, WA, and coaches Nordic skiers and cyclists. In addition, she does rehab and diagnostic testing with cardiac patients at Methow Valley Family Practice. No stranger to elite XC-Skiing, Margaret was a Canadian National Cross Country Ski Team member in the 1980's.

Ed Note: This is the first of a 4 article series.

Introduction

Cross country ski performance is dependent on physiological factors such as training and nutrition, efficiency, psychological factors such as motivation, and environmental factors such as ski selection and preparation. There is a lot of research and debate regarding how to optimize your preparation for competition. During the 2006-07 season, I will provide short research reviews in a series of articles on respiratory muscle training (RMT) and altitude training. You may learn some new ways to train your weaknesses and race your strengths!

The following introductory article was inspired by a very interesting presentation on Respiratory Muscle Training (RMT) that I attended while at the 2006 American College of Sports Medicine Annual Conference. I've supplemented this information with various research articles and research reviews on the topic.

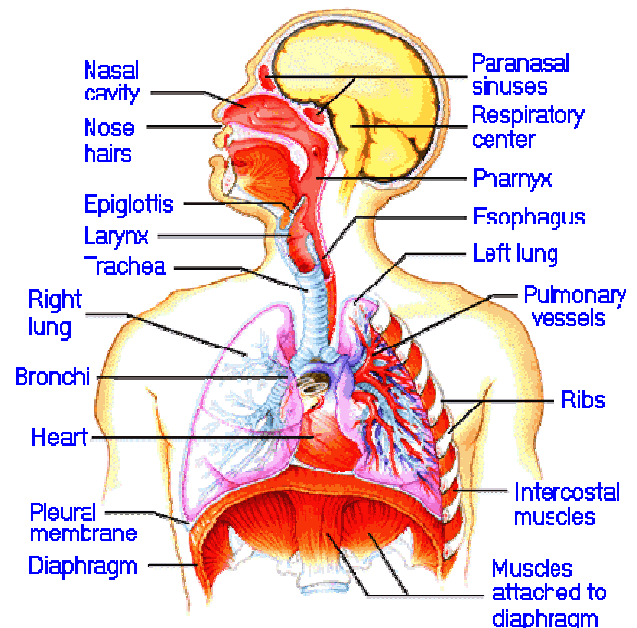
What is Respiratory Muscle Training (RMT)?

For the purposes of our discussions, we'll define Respiratory Muscle Training as specific, isolated exercises and methods intended to train the muscles used for breathing. We'll refer to it as RMT.

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Respiratory System Function

The function of respiration is to exchange oxygen and carbon dioxide between the air and the bloodstream. During exercise the demands on the pulmonary system (breathing) increase. First, the requirement for gas exchange between the lung alveoli and arteries increases, while at the same time, the increase in cardiac output means that there is less time in pulmonary capillaries to achieve gas exchange (Sheel, 2002). Secondly, alveolar ventilation must increase more than 20-fold during maximal exercise. Finally, although healthy respiratory musculature is able to meet the demands of breathing, the physiologic cost of providing adequate ventilation must not be excessive. During exercise, the cardiovascular and pulmonary systems are closely matched to meet the O₂ and CO₂ transport needs of respiratory muscles, and muscles used in the athletic motion (i.e. skiing). In the past ventilation was not considered to be performance limiting, except for some elite athletes exercising at maximal aerobic power (Sheel). Recent research challenges this position, and suggests that RMT may improve general athletic performance (Romer, McConnell, & Jones, 2002).



Respiration requires inspiration and expiration. The contraction of the muscles of inspiration causes the chest cavity to expand and induces airflow into the lungs from the outside air. The major muscle of inspiration is the diaphragm, which pulls the center of the muscle down upon contraction. The external intercostal muscles and accessory muscles also contract to rotate the ribs up to increase lung volume. Expiration at rest is

passive through elastic recoil of the lung and chest wall. However, during exercise some of the abdominal muscles are recruited to assist exhalation (Sheel, 2002).

One study showed that short-term training (5 days) elevated antioxidant and enzyme activity in the diaphragm, while inactivation of this slow twitch muscle for as little as 12, 18, and 24 hours causes a decrease in force /frequency performance (Powers, S., ACSM national conference, 2006). If inactivity causes atrophy and contractile dysfunction in this muscle, can RMT training improve the strength and endurance of this muscle?

Respiratory muscles appear overbuilt for moderate intensity and short-term (< 2 min) high intensity exercise. During exercise at $\leq 80\% \text{VO}_2 \text{max}$, the diaphragm appears resistant to fatigue (Sheel, 2002). However, during very high intensity sustainable exercise (short nordic ski races would fit this category!), studies have shown diaphragm fatigue.



A Methow Valley ski trail.



An athlete using an RMT device.

Types of RMT:

Different forms of respiratory muscle training have been used in research studies. These include:

1. Endurance training for the respiratory muscles (voluntary isocapnic hyperpnoea) – at 60-90% of MVV (maximum voluntary ventilation), 15-30 minutes per session, 3-5 days per week
2. Strength training for the respiratory muscles (Inspiratory Resistive Loading) – 30 maximum inspirations, 50% PI_{max} (maximum inspiratory pressure), 1-2 times per day (McConnell, A. K., ACSM national conference, 2006).

A Review of Studies to Date:

The problems with studies looking at RMT include variations in the type and duration of training done and the type of performance tests used, the lack of control groups, gender differences in respiratory exercise physiology (most studies use men), and the small number of participants in studies done to date.

On the positive side, RMT improved time to exhaustion for subjects exercising at a fixed work rate of 64-80% of $\text{VO}_{2\text{max}}$ by anywhere from 16%-50% (Holm, Sattler, Fregosi, 2004; Sheel, 2002). However, more “real-world” time trial efforts show an average of 1.8-3.5% performance improvements. Although not huge numbers, certainly at a higher level of sport an improvement of 1.8-3.5% could change the pecking order on the scoreboard, especially in high intensity sprint events where qualifying times vary by just a few seconds from 1st to 30th!

What is RMT actually doing?

RMT appears to decrease the effort of breathing, decrease inspiratory muscle fatigue, decrease breathing turnover, decrease blood lactate production, and possibly decrease heart rate by 3-5 bpm. RMT does **not** change VO_{2max} , or maximum lactate steady state workload (Markov, Spengler, Knöpfli-Lenzin, Stuessi, Boutellier, 2001; McConnell & Sharpe, 2005).

The mechanism

1. RMT may reduce the amount and perception of respiratory and peripheral effort sensations (the discomfort associated with heavy breathing!).
2. During heavy exercise, at VO_{2max} , the metabolic and circulatory cost of supporting respiratory muscle function is about 10% in untrained individuals, but increases to 15-16% in highly trained individuals.

One explanation is that a “blood flow steal” may occur during sustained heavy exercise that reduces blood flow and vascular conductance to locomotor muscles (your glutes, quads, etc.), to protect blood flow to respiratory muscles. Respiratory muscle fatigue triggers active limb blood vessel constriction. This “metaboreflex” reduces blood flow to exercising muscles and decreases performance. RMT may optimize blood flow distribution between the respiratory muscles and muscles of locomotion (Markov et al., 2001). If the respiratory muscles become more efficient, and use less oxygen during maximal athletic efforts, then a bit more oxygen would be available to locomotive muscles which could yield better performance.

3. RMT may improve ventilatory efficiency.

Summary:

While there is a lot of ongoing research on the effectiveness of RMT, there is wide agreement on the following:

1. Respiratory muscle training (RMT) reduces the sensation of breathlessness which may limit performance.
2. RMT decreases the inspiratory muscle metaboreflex (McConnell, A. K., ACSM National Conference, 2006).

More studies are required using larger numbers of subjects, better control, and reliable test re-test measures. However, augmenting your regular training with respiratory muscle training may be helpful for short distance events.

In the next issue of the Ultratune Update, I will discuss the methods of RMT, and other relevant studies.

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When to Stone Grind Skis

Skis are subject to damage every time you ski on them or wax them, or just leave them sitting around! Abrasive skiing conditions, heat from wax irons, and exposure to air all degrade to your ski bases. The performance of your skis is greatly affected by the condition of the P-Tex and the surface condition of your skis.

If your skis have base damage, they can be improved with a fresh grind. Any of these symptoms can be remedied with a new base finish from Nordic Ultratune:

- *Surface scratches*
- *Over-heated, oxidized, dried out*
- *Skis won't hold wax*
- *No longer flat – convex or concave*
- *No structure remaining*
- *Skis just aren't fast as they used to be...*

In addition, you can choose the base structure that you need – whether it's an all-around structure for your one-and-only pair of skis, or a special purpose grind for specific snow conditions.



Please clean your skis - don't send them looking like this!

Why Grind New Skis?

The bases of new skis are better than they've ever been in the past. However, your new skis have probably been sitting in a warehouse for the better part of a year. Often new skis have dried-out, oxidized base material. It's also common for new skis to have a very aggressive structure on the base which is slow for all but wet or icy conditions. Sometimes new skis have scratches and often brand-new skis aren't perfectly flat.



Next Issue's Topics

The never accurate index of what's to come in the next issue of the Ultratune Update:

- Hardwax over klister
- Early-season notes
- Part 2: Respiratory Muscle Training

Questions? Topics?

If you have any questions or topics that you'd like to see in the newsletter, let me know!

Send email to: xcgrind@ultratune.net

Thank You!

A special thanks to all the Nordic Ultratune customers and friends – you've all contributed to making the past year a lot of fun!



Notes From Our Friends

----- Original Message -----

From: [Brian Gregg](mailto:Brian.Gregg@ultratune.net)
To: xcgrind@ultratune.net
Sent: Tuesday, March 14, 2006 1:12 PM
Subject: Great Grinds at NCAAs

Hello Mark,

I hope you are doing well. I wanted to give you a heads up about some positive feedback concerning the skis I used at NCAAs. I was really happy with the races and my skis. I used an LJ03 on the day of the classic. We were racing on a special wax of Trond's which is similar to VR60 and my skis were very fast. I know that the others on the team didn't have as fast of skis as mine, and with the same kick and glide that leaves the ski and the grind.

Also, in the skate race I ran on my MVX. I know that I had some of the fastest skis in the race. Seeing as I was a bit of an underdog I didn't lead much in the lead pack, but I found myself at the front in most of the downhill. Temperatures were around -10, and the MVX was even faster than the xc02 for both myself and Benni.

I hope you are enjoying spring in the methow.
Take Care, Brian

Ed. NOTE: Brian finished 6th at NCAA's in the skate race, and "Benni" Sonntag finished 2nd! Brian was also 15th in the classic race. Good Job, Guys!

----- Original Message -----

From: [Zachary Caldwell](mailto:Zachary.Caldwell@ultratune.net)
To: 'Mark Waechter'
Sent: Saturday, March 18, 2006 7:10 AM
Subject: Grinds

Hi Mark - The New England wax room at JOs was right across the hall from PNSA and I spent a fair amount of time bullshitting wth Ben. Some of the kids had your work on their skis and I got a chance to look at the MVX. I just wanted to pass along my compliments on some really high quality work. I hope you've had more opportunities to play with different ideas this year. I'm looking forward to seeing more!

Zach

Ed. Note: It's super-nice to get such a note from Zach. He's a guy who really knows his stuff!

Notes From Our Friends

----- Original Message -----

From: [Marko Gracer](mailto:Marko.Gracer@ultratune.net)
To: xcgrind@ultratune.net
Sent: Sunday, December 11, 2005 10:18 PM
Subject: RE: Hvala

Mark,

Thanks to you, because you helped us on every step. All people around here in Silver star were so good, they really need to keep such a competition. I see you become a part of Slovenia team that is great. Also for us was great to work with you, you should go with us to Canmore. Athletes were very satisfied with you for most of them was that a new experience. It's late evening we'll go sleep, but for sure keep in touch.

Wish you and your great wife all best

Marko

Ed. NOTE: It was a privilege and a highlight of the season to work with Marko and the Slovenia team at the World Cup races at Silverstar BC in December.

----- Original Message -----

From: [Bruce U](mailto:Bruce.U@ultratune.net)
To: xcgrind@ultratune.net
Sent: Friday, February 24, 2006 6:53 PM
Subject: Re: classic skis

Mark,

I got to ski today on old, chalky, dirty snow. Slow and abrasive too! At least it was hardwax and cold and sunny.

This pair of skis must be "race stock" not commercial grade. They are fantastic!

They remind me of an old pair of Atomics that I bought from Audun Ednestad when he was leaving the U.S. team. Those were definitely "race stock." These new Rossingnols are clearly better than any ski that I have owned in many years.

Thank you very much!
Bruce

Notes From Our Friends

----- Original Message -----

From: [Jim DiDomenico](mailto:JimDiDomenico)
To: xcgrind@ultratune.net
Sent: Thursday, March 09, 2006 3:16 PM
Subject: RE: skis?

Hi Mark,

Once again, thank you for accommodating me and the skis and doing it with such professionalism. Anchorage was a lot of fun. I really enjoyed the course and the other folks involved. I was a bit tired from the previous week's race (Birkie), but I felt like I had a pretty good go of it. The skis ran real well (mid twenties - 75% hum.). As free a feeling as they've ever had.

I look forward to working with you in the future as I will probably be redoing a pair or two next fall and will probably be adding another pair as well. Thanks again!

Real Good, Jim

----- Original Message -----

From: Rotella, Jay
To: Nordic Ultratune
Sent: Monday, December 05, 2005 12:09 PM
Subject: classic skis 203cm

Hi Mark,

Just a quick note about the skis I got from your recently: they are really fun to ski on! Thanks for picking them out & preparing them so nicely.

Best!

Jay



*In case you missed it the first time...
Please clean your skis - don't send them looking like this!*

Notes From Our Friends

----- Original Message -----

From: PETER_HALE
To: xcgrind@ultratune.net
Sent: Monday, March 06, 2006 11:36 PM
Subject: Ozbaldy 50km at Kongsbergers

Mr. Ultrastone -

Thought you'd be interested in success of some skis you ground at Nordic Ultratune yesterday - at the Kongsbergers' Ozbaldy 50k skate race.

MVX grind - Used by Greg from Stevens Pass Nordic:

It was approx +1 to +2c, snow flurries and old granular, not quite set up from early a.m. grooming but not so soft, either... And no sun, so I didn't think it would turn into a bath out on the course. (it got softer, but not wetter.) Since the grind was in good shape, and was the MVX, you did earlier in the season, I figured it would be good. I scraped the travel wax from after the Birkebeiner, -- Start LF 06 (violet) -- it's a good "ready" wax -- and hand-corked, polished & brushed the Start fluor block SFR99 (+9/-9). With haste.

One of those serendipitous mornings - I was about to add the same rub-on fluoro to Kent Murdoch's skis, 20 min before the start -- and up the hill came Greg, instructor at Stevens Pass Nordic, just arrived from over the pass. And lamenting that he'd waxed way too cold...

I told him I could rub something on his skis really quick, or he could use a pair of my skis - but he had to make his mind up pretty fast. And use a pair of the new Madshus NNN boots, if he wanted my skis, since he had Salomon boots. So he put the new boots on, while I scraped the 276 HP 190 skis you did a MVX on in November/December.

Greg said he had such fast skis he was passing people double poling or tucking, while they were skating, particularly over the first 5km. So he was impressed, and he and some others took note of the grind. I think he was top 10...

Nice to get into the racing thing, in the midst of travels and shows...

Peter

BIRKIE Notes From Our Friends

----- Original Message -----

From: [Dan Spurlock](#)

To: [Nordic Ultratune](#)

Sent: Wednesday, March 01, 2006 6:21 AM

Subject: Re: Birkie...

My wife skied the Kortelopet, I skied the Birkie. We both used skis with your cold grind, done at the start of this season. I waxed cold, (Solda HPO5 over S3). Several racers complimented me on "rocket-fast skis". My wife finished third in her division, I was in the top 11% of mine. We both felt we had great glide. Thanks for a great ski base! One question; I have several pair of skis I want to get ground. Should I send them to you this spring or wait until next fall. Thanks again. Dan Spurlock

----- Original Message -----

From: [Eric Trommer](#)

To: [Nordic Ultratune](#)

Sent: Tuesday, February 28, 2006 10:31 AM

Subject: Re: so close...

Hi Mark,
Very pleased with my Birkie result.

Starting in the second wave was much more cumbersome than expected. Started about four rows back (not the place to be). No one passed me once I exited the start congestion. 5 skiers in my wave beat me. As you can imagine I passed hundreds and hundreds of skiers. At times I felt invincible. Had to wait or rest going up many many hills because of the bottle necks. I am now initiated on how the race works.

A lightly windy & cold start (0 to 5 degrees) with fresh snow on the course (1-3 inches). Finish air temp was about 15-18 degrees). Excellent base density underneath the new snow made for very controlled and super fun skating.

Skis ran very well - I consistently had more glide than any one else which made for easy passes on the down hills. Skis were pretty much stripped clean of wax by the finish and they ran consistently well over the course of the race. Finished the race very strong without tapping any deep reserve energy. Recovered by the next day just fine.

Thanks again for the ski fit and grind.

Eric

BIRKIE Notes From Our Friends

----- Original Message -----

From: [Randy Beckner](#)

To: [Nordic Ultratune](#)

Sent: Monday, February 27, 2006 7:15 AM

Subject: Re: good job!

Mark,
Thanks for the e-mail. I had a great Birkie on great skis. I went with the #2 flex and XCO2 grind. We used a mix of moly and lf blue topped with hf blue and moly jet stream. Very fast. After working with a young skier for 30 k or so we joined onto a pretty big train a few k before the lake. I know better but felt good and went to the front to pull everyone home. Of course the minute we got to the other end of the lake they fried me! What the heck, I always feel better skiing my own race. The xco2 grind has been unbeatable this year.
Randy

----- Original Message -----

From: [Mike and Michelle](#)

To: [Nordic Ultratune](#)

Sent: Saturday, February 25, 2006 7:31 PM

Subject: Re: Good job!

Hey Mark;
Thank you!! Were your ears ringing? We were talking about you yesterday. Our neighbor, Bruce Derauf really enjoyed talking with you. He is convince that he is buying skis from you:))
My skis were superb!! My boots blew out RIGHT at the start line!! What the heck!! I undid the zipper to tighten the ties inside, and when I went to re-zipper them, the zipper just disintegrated right in my hand. What's a gal supposed to do? Oh well. No one died. Duct tape did the trick:))
When I took off, I was tickled. My skis were rockets!! That LJO3 grind is amazing. Mike skied on his today, too. He was very happy with his choice. Thank you so much.
When are you coming out here to ski or do the Birkie? We'd love to have you.

Happy Skiing!!

Michelle

NORDIC ULTRATUNE

2005-06 WORK ORDER FORM & PRICE LIST

(Please attach one copy of this form to each pair of skis)

INSTRUCTIONS:

- Please: we must have a *fully completed* order form to begin work on your skis!
- A personal check, money order, or charge card info (Visa/Mastercard) **must** accompany your skis. We will not begin work until payment is received.
- Remove all wax from skis - there will be a \$5.00 surcharge for removing wax from skis.
- Tie skis together with rubber bands or tape - ski ties will not be returned.
- Fold this form and tape it to your skis. One work order form per pair.
- No styrofoam "peanuts"!

SHIP SKIS TO:

**NORDIC
ULTRATUNE**
177 Riverside Ave
Winthrop, WA 98862

Grinds (all grinds include travel wax):

LJ03 – general purpose “all around” grind
MVL - general purpose for colder “east slope” conditions
XC02 - for cold & dry snow
R2.3, R3.3 - for coarser, transformed snow, high humidity

Prices in US\$

\$ 58.00
\$ 58.00
\$ 72.00
\$ 88.00

Waxing (add to the above price):

Hot Box
Hot Box Deluxe

\$ 15.00
\$ 25.00

Additional Services (add to the above price):

Binding Installation (specify boot size _____)
Ultratune Flex Analysis
Rush order and overnight shipping (please call in advance)

\$ 12.00
\$ 15.00
\$ 35.00

Subtotal:

\$ _____

Washington residents add 7.6% sales tax:

\$ _____

Packaging, Shipping & Insurance: \$15.00 first pair, \$8.00 subsequent pairs

\$ _____

Total:

\$ _____

SHIPPING ADDRESS

NAME		
ADDRESS		
APT / SUITE		
CITY		
STATE	ZIP	

SKI INFO

BRAND		
LAST 4 DIGITS OF SERIAL NUMBER		
SKATE	<input type="checkbox"/>	CLASSIC <input type="checkbox"/>

SKIER INFO FOR FLEX ANALYSIS

SKIER HEIGHT	<input type="text"/>	WEIGHT	<input type="text"/>
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NOTES

CHARGE CARD PAYMENT INFORMATION

NAME ON CARD		
VISA / M.C.	EXP	/
SIGNATURE		