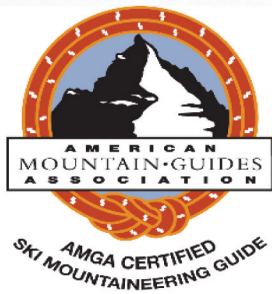




Ski Guides Course Manual



American Mountain Guides Association

A M E R I C A N M O U N T A I N • G U I D E S A S S O C I A T I O N

Ski Guides Course Manual

Published by:
American Mountain Guides Association
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ACKNOWLEDGMENTS

This manual is the product of the volunteer work, assistance and advice of many AMGA guides and program instructors. Special thanks go to Freddy Grossniklaus, Rob Hess, Jean Pavillard, Mike Powers, Howie Schartz, Bela G. Vadasz, Art Mooney and Martin Volken, the members of the AMGA's Technical Committee and special thanks to Alain Comeau for the production of this manual. Most importantly, the AMGA thanks those course participants, past and present, who have supported professional guides training.

Cover photo courtesy: Gabe Rogel Doug Coombs, La Grave, France

In Memory of Doug Coombs and Chad Vanderham

Revision: 2008
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Introduction

A.M.G.A. Ski Guides Course

The Ski Guide Course is designed for skilled skiers who wish to learn the skills and techniques used while guiding from a lift-served and backcountry environment.

The course addresses the skills in an off-piste and backcountry, non-glacial environment, often addressing the challenges of high-season winter snow conditions. Emphasis is on maximizing client rewards through a ski-centered experience, while effectively managing risk.

There will be many lessons and skills sessions in the course. Techniques will be presented and you will be given opportunities to apply the skills.

In addition to time at or near the ski resort, we will experience 1-day and multi-day routes with long ascents and descents with total elevation gain near 6,000 ft. Some days may involve rope training skills at local crags and steep snow slopes.

Before You Come to the Course:

Review the equipment list. Make sure to bring the required items. If you have questions call the Course Director.

Review the sample itinerary, but be prepared for adjustments due to weather and snow conditions. Read the articles about guiding in the back of the booklet. Practice the techniques presented. Do the best you can. If something doesn't make sense make a note in your booklet and get the answer during the course. If it is an urgent question or you need clarification call the Course Director.

There is a large amount of material to cover in 12 days. It is imperative that you familiarize yourself with the prerequisite material before coming. It will be difficult to cover the material in the time allotted if you are not prepared. This is not to say that if you do not understand something that we won't take the time to make sure you do, only that everyone has a responsibility to everyone else to come prepared.

Using This Booklet:

The booklet's small size was chosen so you would be able to carry it in the field during the course. There are note pages to give you space for diagrams or notes. Plan on carrying it with you all the time, even on ski tours.

Required Skills for AMGA Ski Guide Course

Knowledge and mastery of the following:

Avalanche Training and Experience:

Have completed a Four-day Level 2 avalanche course that includes stability evaluation and documentation of avalanche activity, weather and snowpack (AIARE or comparable). Candidates must be familiar and well practiced in SWAGS recording standards as they will be used throughout the course. Candidates must also be well practiced in multi-victim rescue.

Skiing Skill and Experience:

Skiers will have to demonstrate Advanced and Expert skiing skills in a variety of terrain, possibly up to 50°, and in a variety of snow conditions demonstrating a variety of turn types, speeds and skiing intensities.

Uphill techniques including track setting and a variety of appropriate kick turns. Ability to vary uphill pace from less than and greater than 1000 ft. of elevation gain per hour for as much as 6,000 ft.

Mixed Climbing Skills:

Candidates must be experienced and proficient in climbing with ice axe and crampons, utilizing a variety of techniques including self belay and self arrest, as well as safely and efficiently climb on Class 3 and 4 snow covered rock with ski mountaineering boots.

Knots: Follow through eight, figure eight on a bight, bowline, clove hitch, prussik, Munter hitch, double fisherman's, and water knot, flat overhand

Placement of traditional protection: stoppers, camming units, hexcentrics and tricams.

Belaying in a variety of terrain with belay plates, auto locking devices, (body belays).

Rappelling on multi-pitch terrain using a variety of devices (including carabiner brakes).

A working knowledge of the following:

Improvised ascending methods

Mechanical advantage systems (2:1 assisted and 3:1 mechanical advantage systems)

Belay escapes

Required Reading for all Participants:

Technical Handbook for Professional Mountain Guides: AMGA & ACMG

SWAGS: *Snow, Weather, and Avalanches: Observational Guidelines for Avalanche Programs in the United States*

Recommended reading:

Alpine Climbing by Mark Houston and Kathy Cosley

PSIA Alpine Technical Manual: Skiing and Teaching Skills

<http://www.psia.org>

Avalanche Handbook, 3rd Edition

<http://www.thebackcountry.net>

Ski the Whole Mountain by Eric and Rob Deslauriers

Ski Mountaineering Guide Cards, Brooks Range Mountaineering Equipment CO.

Course Overview:

In the Ski Guide Training Program it is difficult to adhere to a prescribed specific agenda due to variable weather and other ever changing snow conditions. Many of the lessons are adjusted and often interlaced within the ski tours and terrain travel.

The Course Director will work to include all lessons and best utilize all the learning opportunities throughout the course.

Guides Fieldbook

A Guides Fieldbook is a very important tool for developing skills. It helps create a process for daily stability evaluation, hazard assessment, tour plans, time plans, navigation plans, weather observations, avalanche activities and more. It maintains records that may be helpful to represent a guide's prudent standard of care sometime in the future.

See sample: page 28 and 30

An avalanche fieldbook and its entries were introduced to each candidate at an AIARE or similar Level 2 Avalanche Course.

Required fieldbooks can be:

- 1) 311 Level, Rite in the Rain with reference cards. Samples of commercially available reference cards are provided – <http://www.brooks-range.com>

And / or

- 2) AIARE Fieldbook Rite in the Rain – <http://www.avtraining.org>

Operational Stability Analysis

Morning and evening OSA should be incorporated into daily Guides Meetings.

See sample: page 32 and 33

Guides Meetings

Morning and Evening Guides Meeting will be conducted daily.

See an example of a template that may be helpful: page 34 and page 35

Tour Plans

Tour or route plans are helpful to create time estimates and time management plans during travel. They also help in pre-establishing recognition of slope aspect, incline and elevation to be traveled during different times of the day.

See sample: page 36 and 37

Questions:

For questions regarding your course application, payment, travel/lodging, call or email the AMGA office at 303-271-0984 or program.director@amga.com. For questions regarding the course content, equipment, or logistics contact the Course Director. Consult your course confirmation letter or call the AMGA office for the correct contact person(s).

On behalf of all the instructors we look forward to meeting and working with you. See you at the pre-course meeting.

Conduct on Courses:

Safety of all participants is paramount on these programs. Skiing and uphill climbing ability is expected.

If you feel uncomfortable with a skiing or climbing situation please let the instructors know so they can adjust the situation. If you feel uncertain about snow conditions or any other objective hazards, it's your responsibility to voice your concerns.

Be conservative at all times. This will involve the following;

- Avoid unnecessary risk to yourself as well as the group.
- In learning to become a guide, guide security, as well as client security are paramount.
- "There is no client security without guide security".



Equipment List

This list may be adjusted by your Course Director based on the venue and time of season.

SKIING EQUIPMENT:

- Alpine Touring, Telemark, or Snowboard (split-board or with short approach skis)
- Boots (randonnée or telemark), poles, climbing skins
- Ski brakes recommended when more appropriate than leashes, depending on binding type.
- Ski straps multi purpose

SNOW SAFETY EQUIPMENT:

- Avalanche transceiver (457 kHz single frequency)
- Avalanche probe
- Shovel
- Pack(s) (for guides equipment, 1-day and multi day)
- First Aid Kit
- Guide's Bivi Sack or Guide's Tarp that converts into a bivi sack (2 or more people)
- FM VHF radio and/or cell phone*
- Avalung, avalung pack, or ABS pack should be considered situationally

SNOW STUDY KIT:

- Guides Notebook- 4 5/8" x 7" all-weather paper ("Rite in the Rain" LEVEL, No. 311 recommended) with Field Observation templates *Available from Brooks Range Mountaineering - <http://www.brooks-range.com>, and/or AIARE Fieldbook.
- 2 Mechanical pencils
- Crystal card
- Magnifying loupe (5x-10x)
- 1-2 Dial-Stem Thermometers (Centigrade)
- Snow saw and/or Ruschtblock cutting cord
- Folding ruler (1-2m) or other measuring device
- Clinometer (or compass with clinometer)

GUIDE'S EQUIPMENT:

- Map (s)
- Map case
- Compass
- Altimeter, and/or alarm watch
- Map ruler (for distances and slope angles) *Available from Brooks Range Mountaineering - <http://www.brooks-range.com>
- Repair kit
- Light ski harness w/ adjustable leg loops, belay loop and gear loops
- 3 Screw-gate pear-shaped carabineers
- Four non-locking carabineers
- 2 Cordelettes (6mm x 4-5m)
- 3 Slings (sewn double-length) or additional cordelettes
- 1 Ski rope (8 or 9mm single or half rope 30-45 (meters), situationally dependent)

- Small ascender like Rope Man or tibloc (optional)
- 2 pieces of rock protection (small – med)
- Rescue sled (improvised or commercial) * Available from Brooks Range Mountaineering - <http://www.brooks-range.com>
- Climbing helmet (may be situationally appropriate)
- Skiing helmet (optional)
- Ice axe, boot crampons and ski crampons may be recommended by your course director

*Optional, if you are not yet familiar with these items, you will learn about them during the course and you may obtain them soon after.

CLOTHING:

- All necessary under, mid, and outer layers appropriate to the area and season
- Winter gloves
- Warm hat
- Sun hat
- Balaclava or neck gaiter
- Gaiters or in-the-pants gaiters
- Socks

OTHER ACCESSORIES:

- Headlamp with spare batteries and bulb
- Sunglasses
- Goggles (light lenses)
- Sun screen SPF 30 or greater
- Lip balm SPF 30 or greater
- Butane lighter
- Ear plugs (optional)
- Toilet articles
- Toilet paper
- One-liter water container
- Vacuum bottle (optional)
- Camera, film or digital
- Topographic Maps: TBA

SKI CAMPING/ BIVY EQUIPMENT:

- Sleeping bag
- Sleeping pad
- Stove, fuel, cook pot for 2-4 people
- Cup and spoon
- Shelter for 2-4 people if not using huts

FOOD:

Food preparation arrangements will be announced prior to the course.

Summary - Day 1

- Sessions:
- 1) Introductions, AMGA / IFMGA educational process
 - 2) Guiding techniques vs recreational techniques
 - 3) Skiing skills evaluation
 - 4) Skiing techniques for ski guides
 - 5) Downhill guiding
 - 6) Evening session

Goal: Introduction to professional ski guiding and techniques used for ski guiding.

Location: Classroom, ski resort, classroom

Read: Technical Handbook for Professional Mountain Guides, PSIA Alpine Manual (optional)

Overview: Focus will be on predominately in area, lift-accessed downhill skiing and introduction to downhill guiding.

Session 1: Introductions Course Overview

Introductions

Candidates, instructors

Course overview

AMGA / IFMGA educational training and certification process

Session 2: Guiding Techniques vs Recreational

Guides professionalism

Mannerism

Behavior

Punctuality

Dress

Gear maintenance

Session 3: Skiing Skills Evaluation

SKIING AT RESORT WITH OFF PISTE ACCESS

Risk Management Plan (for the day) (See page 22)
Evaluation of individual skiing skills
Begin gathering stability and hazard data through observations and other resources.

Session 4: Skiing Techniques for Ski Guides

Wedge turns
Wedge christie
Stem christie
Parallel / Telemark turn
Hop Parallel / Telemark turn
Pedal hop

Session 5: Downhill Guiding

Avalanche / snow safety gear
Intro to clients

Session 6: Evening Session

Guides auxiliary gear
Appropriate to situation

Session 7: Risk Management Planning

Designing and implementing appropriate plans to the different phases of the program.
Emergency response

Summary - Day 2

- Sessions:
- 1) Guides meeting process
 - 2) Out of Bounds Skiing
 - 3) Evening session

Goal: Introduce a variety of skills in downhill guiding and introducing uphill technique to clients to access more downhill skiing.

Location: Meeting room, ski area, classroom

Read: Technical Handbook for Professional Mountain Guides

Overview: An overview of downhill guiding with climbing skins access for increased downhill skiing.

Session 1: Guides Meeting Process

Weather forecast
Stability evaluations
Hazards assessment
Guiding assignments
Review risk management issues
Information to gather

Session 2: Out-of-Bounds Skiing

Transceiver and rescue presentation to clients
Rescue practice
Group management
Downhill guiding
Uphill guiding
Hazard recognition and evaluation
Risk minimization
Skiing skills/ tactics/ instruction
Client care

Session 3: Evening Session

Evening guide meeting
Debrief / recap of day
Navigation
Introduction to time planning
Tour plan assignment

NOTES



Summary - Day 3

Sessions: 1) Guides meeting process

2) Ski tour

3) Evening guides meeting

Goal: Introduce concepts involved in an intensive day tour away from the ski resort.

Location: TBA

Read: Technical Handbook for Professional Mountain Guides

Overview: A study in presenting a day of ski touring with significant up-hill travel, managing risk, yet providing a high level of client satisfaction.

Session 1: Guides Meeting

Route selection finding

Session 2: Ski Tour

Track setting / pace

Uphill turnarounds and kick turns for clients

Observations

Stability test

Data collection

Hazard re-assessment

Risk management

Session 3: Evening Guides Meeting

Debrief / recap

LNT for the guide

Summary - Day 4

- Sessions: 1) Rope handling skills
2) Guides anchoring skills
3) Guides belaying techniques
4) Evening session
- Goal: Introduce or review important rope handling and anchoring skills.
- Location: Local crag area or rock gym.
- Read: Technical Handbook for Professional Mountain Guides, Alpine Climbing by Mark Houston and Kathy Cosley
- Overview: An opportunity to review a repertoire of skills to have available to increase security to clients and guides as needed.

Session 1: Rope Handling Skills

Knots useful to the guide:

Figure eight family, overhand family, double fisherman, ring bend, clove hitch, Munter hitch/blocking knot (mule), bowline, bowline on a coil, butterfly and others.

Friction hitches:

Prussik / double - triple, Kemheist, French prussik, Garda

Harness appropriate to situation

Improvized harnesses and direct tie-ins

Session 1: Anchoring Skills

Natural anchors
Artificial anchors
Equalization
Ski anchors
INXHT

Session 3: Guides Belaying Techniques

Spotting and bracing

Body belays

 Sitting hip belay

 Fortified by arm brace

 Standing hip belay

 Shoulder belay

 Hand belay

 Terrain belays

Munter hitch belay

Standard belay device

Auto-locking hands free device

Braced belays

Anchored belays

Combo braced / anchored belays

Belaying off the harness

Belaying off the anchor

Belaying off the harness redirected through the anchor

Session 4: Evening Session

Client orientation

Client assessment

Summary - Day 5

Sessions: 1) Guides meeting
2) Ski tour
4) Evening session

Goal: To continue to demonstration in assessment, problem solving and application of techniques on day tours.

Location: TBS

Read: Technical Handbook for Professional Mountain Guides

Overview: More complex touring day with increased transitions throughout the day that may involve the rope.

Session 1: Guides Meeting

Guides meeting, route selection

Session 2: Ski Tour

Track setting / pace
Observations
Stability test
Data collection
Hazard re-assessment
Risk management

Session 3: Evening Session

Guides meeting
Debrief / recap
LNT for the guide

Summary - Day 6

Sessions: 1) Spotting / bracing

2) Short pitching

3) Introduction to short roping

Goal: To increase security techniques applicable in a ski guide environment.

Location: TBA

Read: Technical Handbook for Professional Mountain Guides

Overview: An opportunity to evaluate how traditional alpine techniques may be modified in ski guide scenarios.

Session 1: Spotting and Bracing

Spotting and bracing techniques

Session 2: Short Pitching

Storing rope

Kiwi coil

In the pack yet retrievable (when appropriate)

Securing clients

Terrain wraps

Trusting clients to stay still (when appropriate)

Cordelette belays (only when appropriate)

Session 3: Introduction to Short Roping

Moving simultaneously (when appropriate)
Combination of short roping and short pitching
Acceptable ratios
Techniques for both with and without skis

Notes



Summary - Day 7

Sessions: 1) Guides meeting
2) Emergency rescue sled

Goal: To practice construction of a rescue sled and management of a rescue scenerio.

Location: TBA

Read: Technical Handbook for Professional Mountain Guides

Overview: Practicing emergency rescue scenerios while on a ski tour.

Session 1: Guides Meeting

Guides meeting
Ski tour

Session 2: Emergency Rescue Sled

Construction
Management

Notes



Summary - Day 8

- Sessions:
- 1) Guides meeting
 - 2) Ski tour with training
 - 3) Rappelling
 - 4) Lowering
 - 5) Knot pass
 - 6) Raising systems

Goal: Learning lowering, rappelling and raising systems in a snow covered environment.

Location: TBA

Read: Technical Handbook for Professional Mountain Guides

Overview: Practice emergency scenerios while on a ski tour.

Session 1: Guides Meeting

Guides meeting

Session 2: Ski Tour

Ski tour with training sessions

Session 3: Rappels

Techniques appropriate to the situation

Appropriate back ups

Separate belays

Belay from below

Friction hitch back ups

Client pre-rigs

Simultaneous rappels with client

Session 3: Lowering and Knot Pass

Techniques appropriate to angle and situation

Multi client lowers

Knot pass

Releasable systems

Munter, mule, back up

Session 4: Raising Systems

Mechanical advantage systems

2:1

3:1

5:1

6:1

Summary - Day 9 - 11

- Sessions:
- 1) Extended 3 day ski tour
 - 2) Light weight ski camping and/or hut management
 - 3) Presenting quality experience
 - 4) Navigation exercise
 - 5) Rescue exercise
 - 6) Emergency bivouac techniques

Goal: To experience the commitment of guiding a multi-day route with peak ascents and ski descents.

Location: TBA

Overview: The multi-day tour provides an opportunity for candidates to apply skills and practice guiding roles with supervision from their instructors.

Session 1: Extended 3 day ski tour

Light weight ski camping techniques

Presenting quality experience

Navigation exercise

Rescue exercise

Emergency bivouac techniques

Summary - Day 12

- Sessions:
- 1) Assessment / Evaluation, Pick up skills
 - 2) Leave no trace assessment
 - 3) Transceiver / rescue assessment
 - 4) Debriefs
 - 5) Evaluations
 - 6) Questions and answer period

Goal: To provide important feedback to each individual candidate.

Location: classroom, outside if necessary.

Overview: A debriefing day allowing for pick-up skills practice if necessary.

Session 1: Assessment / Evaluations

Assessment / Evaluation
Leave no trace assessment
Transceiver / rescue assessment

Session 2: Final Debriefs

Final debriefs
Evaluations
Question and answer period
Course closure

RISK MANAGEMENT PLAN

For Backcountry Ski and Ski Mountaineering Guides

Edited by Bela G. Vadasz

The following is a set of guidelines from which Guides create a Risk Management Plan appropriate to the situation, season, terrain and activity.

- 1) Prior to any program, guides should review and be familiar with the Risk Management Plan.
 - a. Review and update emergency numbers and ensure all instructors/guides are familiar with local emergency resources and likely response protocols. Instructors/guides should write important numbers in their field notebooks.
 - b. Review cell phone, satellite phone or radio coverage for areas of field activity.
 - c. Establish a 24-hour emergency contact person.
 - d. Instructors/guides should carry a copy of the Program or Course Roster with participant names, medical information and emergency contact information.
 - e. Each instructor/guide should carry a copy of the emergency response plan. Accident Quick Reference, Accident Report Form – Site Description (5-9 thru 5-11, *Technical Handbook for Professional Mountain Guides*) and a copy of an Avalanche Involvement Report (short form) from CAA or AAA.
 - f. Instructors/guides should obtain and carry a copy of weather and avalanche forecast when available and/or useful.

- 2) Morning Guide meetings, whether by oneself or with fellow guides should discuss:
 - a. Snow stability using a stability analysis form (when appropriate)
 - b. Hazards analysis and trends
 - c. Current weather and forecast weather
 - d. Participant profiles, including skill, experience and fitness – if yet known
 - e. Time plan, including departure, turnaround and return times.

*Using a level of detail appropriate for the program, make notes and record your thought process, decisions and observations in your field notebook.

- 3) Application, Medical and Release Forms
The Program Manager will send out and receive all necessary forms prior to the course or exam. The Program Manager will let the course or exam Director know if they need to collect any last minute forms from candidates.
 - a. Guides should ask all members of the group during orientation if they have any questions of risks or hazards that are mentioned in the Release Form. Avoid answering any questions pertaining to legal matters we are not qualified to answer.
 - b. Ask if anyone needs to discuss any medical issues with the instructors/examiners.

- 4) **Avalanche Transceiver and Rescue Practice**
Guides should provide transceiver and rescue practice with participants, appropriate to the situation and time allowances on every program possible when avalanche safety equipment is being carried. Other self rescue techniques, such as crevasse rescue should be practiced as early as possible in relationship to exposure to the hazard.
- 5) **Operational Records**
Daily operational stability and hazard forms, observations and field tests recorded in guide's field notebooks should be photo copied and filed with the AMGA office.

The following topics should be considered when appropriate for backcountry programs away from the ski area.

- a. Morning weather observations
 - b. Weather forecast
 - c. Stability rating
 - d. Other hazards (increased rock fall, crowding, etc.)
 - e. Other field observations
- 6) **Emergency Response Plan**
 - a. 24-hour contact person should be available to help coordinate and facilitate rescue response
 - b. Communication via VHF radio, cell phone or satellite phone should be ensured to help coordinate rescue
 - c. Determine access to local medical facilities
 - d. At the trailhead, instructors and guides inform participants of immediate emergency plan to include radio communications, emergency contacts, first aid kit, vehicle key locations, directions and bearings of locations and landscape features
 - e. Self-rescue is the guide's responsibility. Outside rescue is only a backup. Each instructor/guide is responsible to organize the following group emergency gear.

Ski and Snowboard Touring and Mountaineering

Field notebook with emergency plan & emergency contact numbers
Course roster with participant names and emergency contacts
(This roster should be carried in Guide's Field Notebook, then returned to Guide's Packet envelope after completion of program)
First aid kit
Emergency bivouac sack
Electronic communications
Watch
Headlamp
Accident Quick Reference form
Accident Report form
Patient Assessment form

Site Description form
Camera (digital, film or small disposable)
Water, food and warm clothing
Emergency rope, carabiners, sling and cordage
Transceivers, probes and shovels
Spare transceiver, probe and shovel in vehicle at trailhead
Map, compass, altimeter, GPS (when appropriate)
Snow/weather study kit
Rescue sled components
Fire starter or mini stove and fuel
Repair kit
Spare food, water and extra clothing

- f. Incident/accident forms to be filled out after each incident where an injury has occurred. These forms are available to be photo copied from *Technical Handbook for Professional Mountain Guides*.
- g. Post incident/accident debriefs are to take place with ALL instructors/guides and participants regardless of whether or not they were involved in the accident.
- h. A record must be kept of the discussion.
- i. Close calls (no injuries or actual avalanche involvements) should be debriefed in the same fashion. The group as a whole should be involved in this discussion to avoid changes in the facts in people's minds. Explain what happened and why.
- j. Regardless of type of incident, instructors should go through their own "end of day" internal review.

Serious Accident With injury or death

First Call to coordinate emergency rescue and medical if life-threatening and time sensitive

Second Call to insurance carrier coordinator.

- **Cooperate with medical, police and rescue authorities.**
- **Get statements from witnesses. Written in their own words and signed. Note anyone refusing first aid, assistance or anyone who is a witness but refuses to make a statement.**
- **Photographs, videotape recordings, measurements, distances and other visual and technical records and data are beneficial.**
- **Do not conceal or alter facts.**
- **Refrain on commenting on accidents or incidents. Avoid speculation or assessing fault, blame or cause; whether the accident involves your party or any other.**

- **In case of fatality, do not move the body without permission from authorities.**
- **Information gathered by guides may be protected from use by others, including investigating authorities and agencies. This requires prior arrangements with legal counsel.**
- **Beware of making off-the-cuff statements to the media. Let authorities deal with the media. Appoint a media contact to coordinate such efforts if possible.**
- **Contact your insurer, legal counsel and a representative of your Association's Executive Committee (President/VP/TD) to inform them of the situation and obtain advice if necessary.**

Emergency Phone Numbers

Prioritize order as is appropriate to the situation

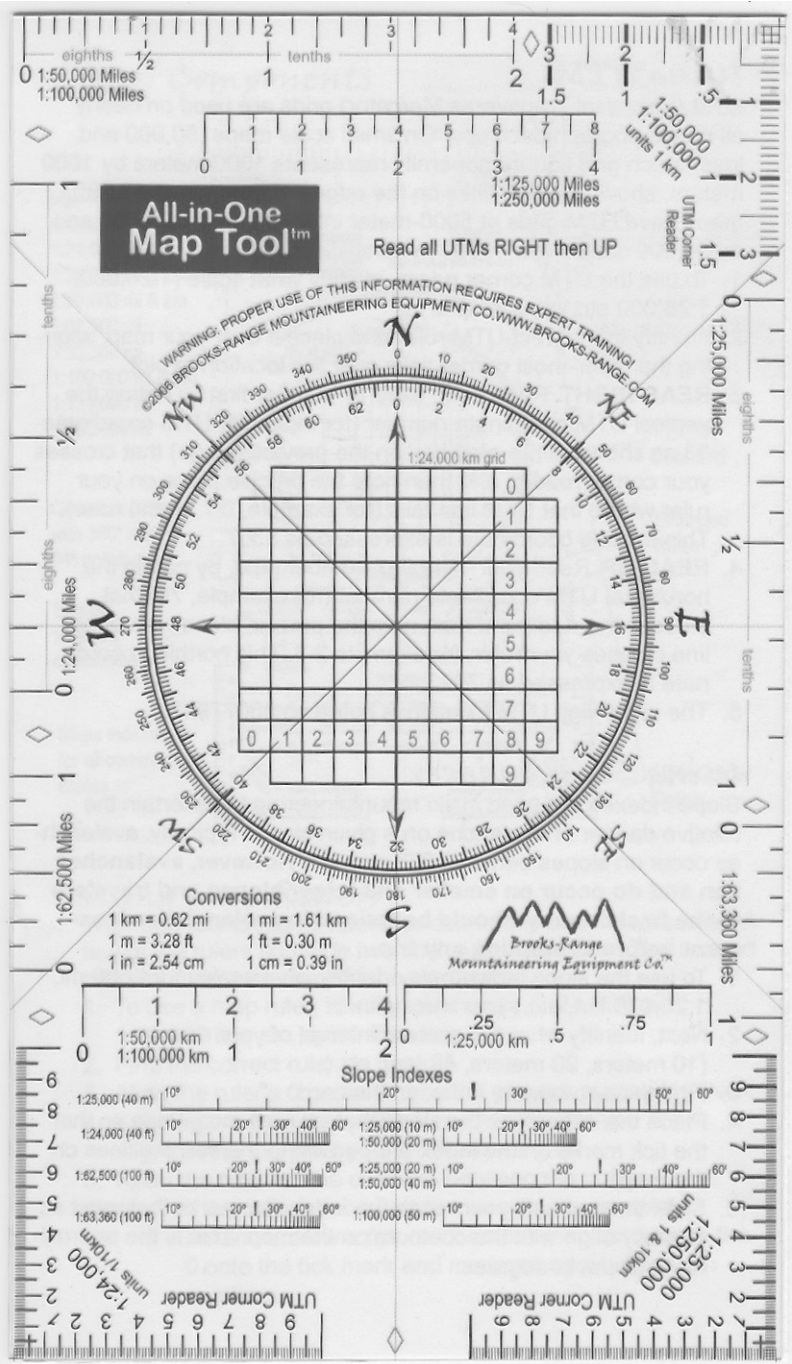
Emergency outside assistance required – 911

Most domestic rescue or emergency transport efforts are coordinated through the county Sheriff's office. In national parks, efforts are coordinated through the parks rescue system. For out of the country emergencies: research and obtain appropriate contact numbers prior to the program.

Instructors/Guides are encouraged to review Risk Management 5-1 to 5-14 in the *Technical Handbook for Professional Mountain Guides*.

Guides should note additional important phone numbers or radio frequencies of local resources that may offer assistance, such as local search and rescue groups. Ski resort ski patrol near your area of operation, etc.

Carry phone numbers of other Senior Guides who may offer insight for emergency management



Snow Profile

Date 060226 Time 16:30 Observer Howie/BelaLocation DonnerRidge Objective Baseline DataEl. 7'400 Aspect E Incline 11° Precip. SISky ⊕ Wind SW M Temp -2° Blsno NoneF Pen 5cm Type Foil

H (cm)	R	F	E (mm)	θ	ρ (kg/m ³)	Test results and comments	H (cm)	T (°C)
153		tr					Tsurf	-0.5
	F	⊙	2.5	M	300		T10	-0.5
145							T40	0
	K	X	3	~	470		130	0
123							120	0
	I	X	~	~	~		110	0
120.5							100	-0.5
	P	●	.2	~	380		90	-0.5
100		□	1			CTN X 2	80	-0.5
	P	●	.5	~	350	STN X 2	70	-1
89							60	-1
	P+	X	~	~	400		50	-1
78							40	-0.5
	P+	X	1.5	~	370		30	-0.5
14							20	-0.5
	P	X	2.5	~	~		10	0
0							0	0

Morning Guide's Meeting

GOALS: Field Observations, Hazard Analysis

Goals for the Morning Guide's meeting includes going over the plans for the day, and determining the types of hazards that might be encountered.

Weather Station Observations

Each morning, note the following using the template provided at the right:

- Sky
- Present temperature
- Storm (cm)
- Wind speed/direction
- Precipitation type/rate
- 20cm temp
- HS
- Ridge blo sno ext/dir
- Maximum temperature
- Minimum temperature
- Foot penetration
- Precipitation gauge(mm)
- Barometric pressure
- Standard (cm) 12 hr
- Surface form/size
- Pressure trend

Weather Forecast

Winds and Temperatures:

- Elevation 1, Winds, Temps
- Elevation 2, Winds, Temps
- Elevation 3, Winds, Temps

Precipitation:

- Today
- Tonight
- Tomorrow

Other Data (technical synopsis, solar radiation, etc.)

Hazard Analysis/Forecast

Use and attach additional forms (stability assessment, etc.) and/or records (weather forecast, etc.) if necessary.

Review and/or assess:

- Previous evening's snow stability, avalanche hazard, and other hazards observed/assessed
- Critical changes that occurred overnight and this morning's observations (weather observations, recent avalanche activity, recent rockfall/icefall, etc.)
- This morning's snow stability, avalanche hazard, avalanche character, and other hazards (consider elevation zones, aspects, terrain, etc.)
- This morning's weather forecast

Then discuss and forecast:

- Snow stability, avalanche hazard, and other hazards as of this morning (consider time of day, elevation zones, aspects, terrain, etc.)

Discuss Guiding Program

Record particulars separately if necessary, in field book, considering:

- Where do we want to go?
- What are the client's skill levels, desires, and needs? How are their stress and energy levels today?
- What coaching will the clients likely need today?
- What risk mitigation do we need to put in place?
- What terrain features should we avoid?
- What alternatives or options do we have?
- What alternative activities do we have if the weather doesn't improve?
- Radio check and communication issues (repeater issues, cell phone holes, freak out times for late return)?
- What additional or new data do we need for the evening meeting?

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Rev. 1 08-05

MORNING GUIDE'S MEETING TEMPLATE..

- Use Rite in the Rain Nos 311 or 313 field book.
- Place upper left corner of notebook page over 1 and copy headings and dividers, using card edge as rule.
- Place upper right corner of notebook page over 2, and copy headings and dividers, using card edge as rule.

Weather Station Observation Organization

Date	Time	Location	Sky	Current	Storm	Wind	Precip	Type	Rate	Amt	20 cm	T	HS	Blo	Snow	Br	Pres	Ft	Pn	Stc	Fm	Sz		
												Elev 1	Wind	Temp	Elev 2	Wind	Temp	Elev 3	Wind	Temp	Precip	Today		
												Precip	Tonight			Precip	Tomorrow							
												Weather Forecast Organization										Comments		
																						2		

1

Evening Guide's Meeting

GOALS: Field Observations, Hazard Analysis, Review
 Goals for the Evening Guide's meeting includes going over the observations and events of the day, and determining the types of hazards that might be encountered the following day.

Weather Station Observations

Each evening, note the following using the template provided at the right:

- | | |
|---------------------------|---------------------------|
| • Sky | • Present temperature |
| • Storm (cm) | • Wind speed/direction |
| • Precipitation type/rate | • 20cm temp |
| • HS | • Ridge blosno ext/dir |
| • Maximum temperature | • Minimum temperature |
| • Foot penetration | • Precipitation gauge(mm) |
| • Barometric pressure | • Standard (cm) 12 hr |
| • Surface form/size | • Pressure trend |

Field Weather Summary (field area observations)

- | | |
|---------------------|---------------------------|
| • Area observed | • Precipitation type/rate |
| • HN new (cm) 24 hr | • Wind speed/direction |
| • Elevation range | • Maximum temperature |
| • Storm (cm) | • Ridge blosno ext/dir |
| • Sky | • Air temperature |
| • HS snowpack | |

Hazard Analysis/Forecast

Use and attach additional forms (stability assessment, etc.) and/or records (weather forecast, etc.) if necessary.

Review:

- Critical changes that occurred during the day and this evening's observations (weather observations, avalanche activity, rockfall/icefall, etc.)
- The day's observed snow stability, avalanche hazard, avalanche character, and other hazards (consider elevation zones, aspects, terrain, etc.)
- This morning's weather forecast

Then assess:

- Snow stability, avalanche hazard, and other hazards as of this evening (consider time of day, elevation zones, aspects, terrain, etc.)

Debrief the Day

Record particulars separately if necessary, in field book, considering:

- Clients – How are the clients holding up? Are you able to maintain adequate safety for them? Are they within their physical and technical abilities? Are the individuals open to coaching/teaching? Are they enjoying themselves? Are their objectives for the trip being met, and if not, why not?
- Group – How is the group holding up? Is communication working?
- Guides – Are you guiding within your comfort zone? Are you choosing routes based on your clients' needs and desires, not your own? How long can you sustain this pace?
- Decisions – What decisions were made today, and how do they affect the group and the trip? Where any error corrections necessary and how were they carried out?

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Rev. 1 08-06

EVENING GUIDE'S MEETING TEMPLATE...

- Use Rite in the Rain Nos 311 or 313 field book.
- Place upper left corner of divider inside notebook edge as rule.
- Place upper right corner of notebook page over 21 and copy headings and dividers, using card edge as rule.

Weather Station Observation Organization		Field Weather Summary Organization												
Date	Time	Location	Sky	Current T	Storm cm	Wind	Precip	Type/Rate	Amt	20 cm T	HS	BlosSnow	Bar	Press.
1														
		Area Obs.	Elev.	Air Temp	Min/Max	Precip	Type/Rate	Sky	HN/24	Storm	HS Snowpack	BlowSno	Comments	2

FROM AIARE FIELDBOOK

Tour plan				
Leg#	Start/End Elv.	Bearing Out (Back)	Elevation Difference	Distance of of leg
1	11,260' 11,800'	174/ 354 Magnetic	+540'	0.7km
2	11,800' 12,165'	106/ 286	+365'	0.6km
3	12,165' 12,200'	150/ 330	-116/ +178/ +35 net	0.9km
4	12,200' 12,570'	158/ 338	+370'	0.8km
5	12,570' 12,683'	96/ 276	+113	0.4km
6	12,683' 12,000'	114/ 294	-683	1.3km
7	12,000' 11,405'	160/ 340	-600	1.0km

Tour plan		
Time Estimated	Time Actual	Navigation Plan, Comments, Handrail, UTM Coordinates
:35 min	:30 min	13S,340769,4318770 Use treeline/last trees to take bearing
:26 min	:20 min	13S,340708,4318109 easy cruise up - make even switchbacks.
↓:05 min ↑:17 min	:25 min	13S,341256,4317820 pop over 1st ridge; watch altimeter
:29 min	:25 min	13S,341527,4316851 reach next ridge handrail but keep good distance; travel tech
:11 min	:20 min	13S,341666,4316176 - steady trav up to Pearl Pass - chop steps? Travel techs.
:20 min	:15 min	13S,342015,4316078 - reassess avi cond. glide left some and avoid gullies
:17 min	:13 min	13S,343063,4314299 - hut in trees on small knoll. Use Star Col back bearing if needed

Ski Guide Course Articles

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Aspirant Exam Information

Ski Mountaineering Guide Course/Aspirant Exam Information

The Ski Mountaineering Guide Course/Aspirant Exam includes two components:

- 1- Those times dedicated largely to instruction and coaching on real objectives and or appropriate scenarios.
- 2- Those times dedicated to assessment/examination for the purpose of determining skills necessary for obtaining aspirant status.

The Ski Mountaineering Guide Course/Aspirant Exam is 10 days in length, seven of which are dedicated to instruction and coaching on real objectives and/or appropriate scenarios; three days are dedicated to assessment and examination for the purpose to prepare candidates for the Ski Mountaineering Exam and to determine skills necessary for obtaining Aspirant status.

In general, the course and Aspirant Exam will be structured so that the bulk of the training and coaching will occur during the initial days of the course. However, the Transceiver Search, Movement and Rescue Skills portion of the Aspirant Exam will occur on day one or day two. The specific Aspirant Guided days will occur on days 7 through 9 of the course.

Candidates must arrive at the Ski Mountaineering Guide Course prepared to demonstrate competency with their Transceiver, Movement and Rescue skills.

Aspirant Ski Mountaineering Movement Skills-Pass/Not Pass

Day: 1 or 2

Ski Movement Skills:

If you do not pass the movement skills portion of the Aspirant Exam on Day One or Day Two, you will be required to take the entire Ski Mountaineering Guide Course and Aspirant Exam over again at a later date. If you do not demonstrate your ability to ski at the Ski Mountaineering Guide Course standard you may be asked to: a). act as a client for the remainder of the course; or b). be asked, per the instructor's discretion, to leave the course at that time.

Skiing Movement Skills

An initial assessment of uphill and downhill skills will be made early during the course. Fundamental, uphill touring skills including step-around turns and kickturns will be observed and assessed. Downhill skiing will be assessed by the instructors/examiners prescribing specific tasks on specific sections of slopes that may involve a variety of snow conditions and slope angles.

Class 3-4 Mixed Terrain Movement Skills:

Climbing on rock, snow, ice and mixed terrain will be assessed when practical during the course/aspirant exam.

Avalanche Transceiver Search Time allowed: 7 minutes

Day: 1 or 2

Three electronic avalanche transceivers, each in the top flap of an average sized pack (35-45 liters), or under 30cm x 30 cm targets. The candidate may have one assistant for digging if working in an exam constructed site. After digging out the first two transceivers the assistant may turn them off. If working in a beacon park, no assistants will be allowed. In this case, once a probe strike has been confirmed, the beacon will be turned off after 60 seconds. The exercise is complete the moment of probe strike and confirmation of the third buried pack or beacon park device.

Aspirant Rescue Sled, Lowering –Pass/Not Pass Time allowed: 70 minutes

Day: 1 or 2

Equipment allowed:

- One CE rated half rope
- One ice axe
- One pack
- One pair of skis
- One pair of ski poles
- One snow shovel
- One ice screw
- One harness
- One cordelette (6mm nylon is acceptable for use on snow)
- Three locking carabiners (plus one additional on victim's harness)

- Four non-locking carabiners
- Four slings, (cord or webbing) Cord for friction hitches may be 5mm to provide adequate friction on the half rope.
- One emergency rescue sled (improvised or commercially manufactured, must make use of victim's skis).
- Victim's skis, poles and pack.
- Bivouac sack or guides tarp.

On a slope of 40° or steeper, lower the victim 2 rope lengths from the most appropriate anchor (rock, snow or ice), managing one lowering station transfer. During the final lower a knot pass must be effectively executed. If appropriate for security, the rope end must be anchored. A second candidate may be used as an assistant.

Aspirant Exam Guided Days-Pass/Marginal/Not Pass

Day: 7, 8 and 9 of the course

(Candidates are graded for two climbing days)

Ski tours will involve travel through mountainous backcountry terrain where route finding,

snow stability evaluation, hazard assessment and management, and group control will be among your primary responsibilities. Additional emphasis will be placed on client rewards and enjoyment.

The 3-day assessment tour will be assigned by the instructors the evening before. All candidates will be required to have a completed tour plan for the entire tour. Candidates may be asked at anytime to take over and guide their group. All candidates will be graded on the 9 assessment categories listed on the marking cards.

Bivouac Construction Pass/Not Pass Time allowed: 30 minutes

Construct an effective emergency bivouac shelter for three people suitable to the snow conditions and snow depth. This exercise will be conducted when practical during the course.

Equipment allowed:

- One snow shovel
- One 2-person bivouac sack or guides tarp
- 3 pairs of skis
- 3 sets of poles.

Documentation Pass/Not Pass

During the course and aspirant exam, candidates will be required to present fieldbook documentation of recorded observations of avalanche activity, snowpack and weather per SWAG standards as well as route plans and risk management plans to include emergency contacts.

Aspirant Exam Scoring

Assessment is based on the ability of the candidate to provide a safe and rewarding experience to his or her “clients” based on the client profile.

During the Aspirant Exam guided days, candidates will be assessed on the following skills:

Risk Management. The candidate must:

Client Security - maintain an adequate level of security for the client(s) given the objective, conditions and the client profile.

Hazard Recognition/Analysis - recognize and analyze hazards that will affect risk, such as objective hazards, general internal and external hazards, etc.

Minimization of Risk - minimize risk by use of all reasonable, appropriate measures.

Guide Security - maintain an adequate level of security for the guide given the objective and conditions.

• Client Care. The candidate must:

Comfort - be aware of comfort levels and ensure not to compromise safety.

Communication - clearly and professionally communicate instructions for a safe, comfortable, and enjoyable experience.

Quality of Experience - provide a rewarding and enjoyable experience within the confines of conditions, risk management, client profile and exam assignment.

• **Technical Systems.** The candidate must understand and correctly use:

Protection/Anchors/Belays - protection, anchor, and belay techniques.

Rappelling/Lowering - rappelling and lowering techniques.

Rope Management - appropriate rope management techniques while using short-rope and pitched climbing techniques.

Short-roping/pitching - short-roping and pitching techniques.

Rescue Skills - rock, snow, and/or crevasse rescue systems and evacuation depending on discipline.

• **Application.** The candidate must:

“Apply the right technique in the right place at the right time.”

• **Terrain Assessment.** The candidate must:

Route Selection - assess assigned routes and use alternatives if required.

Route finding - appropriately approach, ascend, and descend routes.

Track setting - (ski and alpine only), set an effective, efficient, and safe track.

• **Movement Skills.** The candidate must display:

3rd and 4th class terrain - efficient, safe and secure movement in 3rd and 4th class terrain. Candidates may be asked to demonstrate their ability to lead and guide short sections of rock, steep snow, ice or mixed terrain in ski mountaineering boots, possibly with or without crampons.

Skiing ability - Must show efficient and confident skiing movement and able to link dynamic turns in variable back country snow. Capable of ski guiding in a variety of snow conditions up to 50°. Demonstrate personal skiing ability equivalent to PSIA Level 2-3.

Fitness & stamina - adequate to complete the day's objective and maintain a reasonable margin of additional energy. Able to Ascend 6,000 vertical feet and descend up to 12,000 vertical feet.

Pace & time management - show efficient use of time, and good pace given the days objectives, conditions and client profile.

• **Mountain Sense.** The candidate must:

Decision Making - effectively identify, act upon, and carry out options.

Stress Management - manage stress without unduly compromising performance.

Error Correction - correct errors in due time, without compromising safety or the objective and with minimum disruption of activity.

• **Professionalism.** The candidate must:

Planning/Preparation - plan and prepare adequately for trips, and activities. This includes research, knowledge of options, and familiarity with alternatives.

Client orientation - provide adequate information to the client.

Environmental consciousness - exhibit current environmentally sensitive back country travel and climbing practices.

• **Instructional Technique.** The candidate must:

• Lesson Planning - use an implement appropriate lesson plans and teaching progressions.

Pedagogy - understand and use a variety of teaching methods, adaptable to learner types. Communicate clearly with a positive attitude.

Coaching and Tips - provide appropriate coaching and tips to assist in making a comfortable and rewarding experience.

Marking Scale

The Marking Scale used during the Aspirant Exam is Pass, Marginal and Not Pass.

P= Acceptable performance. The candidate shows consistently strong performance in all guiding techniques and skills. A high and consistent level of good judgment with respect to safety and objectives is shown. The candidate is comfortable in a leadership role and has sufficient energy to meet the needs of the client.

M= Marginal Performance. The candidate displays weakness in important techniques, knowledge, or experience. Poor or inconsistent application of guiding techniques or principles is apparent. Multiple attempts and/or excessive time are required to attain acceptable performance. The candidate is preoccupied with his/her own needs and has limited energy for the group or client.

NP= Substandard performance. The candidate makes a major error (or is stopped in the process of making a major error) that has potentially life threatening ramifications or seriously compromises objectives. The candidate chronically makes mistakes of a lesser magnitude and/or has little energy for client needs.

Interpretation of Marks

During the Movement skills portion of the Aspirant Exam, the marking scale used is Pass or Not Pass. If a candidate receives a Not Pass on the Movement Skills objective, they may be asked at the instructors discretion, to leave the course at that time or act as a client for the remainder of the course and will be required to retake the entire Ski Mountaineering Guide Course and Aspirant Exam at a later date.

During the Transceiver Search, Bivouac Construction, Documentation and Rescue Skills portions of the Aspirant Exam, the marking scale used is Pass or Not Pass. If a candidate receives a Not Pass on any of the above objectives, they will be required to take the 1-day Objective Skills Re-Examination.

During the Aspirant Exam Guided Days section, the marking scale used is Pass, Marginal, or Not Pass. Candidates are examined in each of the 9 designated assessment categories. Furthermore, candidates are scored at the full exam standard, however the number of marginal scores allowed is greater than what is allowed during the Certification Exam. Candidates will be scored on their performance during each day of the Aspirant Exam Guided Days section. At the end of the second day candidates will receive a Marking Card Summary. In order for a candidate to pass this portion of the Aspirant Exam they are allowed a maximum of 6 Marginal scores or 3 Not Pass scores. The Not Pass scores must be in separate assessment categories and the candidate may not receive any marginal scores. (2 Marginals are equal to 1 Not Pass).

If a candidate does not pass the Guided Days portion of the Aspirant Exam they will be required to take the 2-day Guided Days Re-examination at date to be determined by the A.M.G.A. office.

On Being a Guide

By Robert SP Parker

A guide must;

Never show fear.

He should be courteous to all, and always give special attention to the weakest member in the party.

He should be witty and be able to make up a white lie on short notice, and tell it in a convincing manner.

He should know when and how to show authority; and, when the situation demands it, should be able to give a good scolding to whomsoever deserves it.

Conrad Kain 1935

Guiding is a hard profession to work in. It has its rewards and it has its deficits. All guides seek to do the best job possible, but the qualities that make up a truly good guide are elusive and subtle.

The motivation behind the desire to guide is hard to define and for the individual is as complex a question as to the often asked, "Why do you climb?" Frequently the guide finds themselves having to offer their answers to these questions and sometimes having to answer the latter question for their client.

In an attempt to draw some vague parameters for what is entailed in guiding the following thoughts are offered.

A good guide now commands from ten to fifteen dollars a day. I know of one who has received twenty-five a day. He is, of course, equipped with character, knowledge, tact, and years of experience. Too many young men learn their way to the top of a peak or to the bottom of a canyon, guide for one or two years, and then are ready to drop out the instant some other work appears attractive or even offers a slight increase of salary. Enos Mills 1910

Guiding is not climbing. Sometimes it will include it, but much of the time does not. Too often the climber becomes a guide in an attempt to realize the dream of being paid to do what one enjoys. Disillusionment often follows when the reality fails to match the expectation. As in many other occupations the top practitioners are not necessarily the best to introduce others to the sport and the best climber does not necessarily make the best guide. The drive to climb and achieve may often be a hindrance to becoming a good guide since personal desires and goals must be relegated to a secondary concern. The opportunities for doing routes that one has not done previously do arise, but care needs to be taken before doing a route because the guide wishes to. Clients can often be persuaded into doing almost anything. It is the rare realist who says that they do not feel up to doing a route that has been collected as one of the "Great Fifty" or has just made the cover shot of *Rock and Ice*. The response of "I can help you up over the hard sections" is fallacious and can eventually lead into unpleasant predicaments. Pushing someone towards their limits is part of the process of learning but once taken beyond those limits a survival situation is the most likely consequence. The guide is always asked to make up for another's deficiencies in one form or another, but they can never totally compensate. Many clients can not accurately estimate their abilities and capabilities. Expectations are often high and failure to realize them can be demoralizing.

“The work of the guide implies abnegation. The guide does not go where he wants to go, but must go to the summit of which his client has dreamed. The guide does not climb for himself but primarily for the pleasure of the companion he is leading.”

- Gaston Rebuffat 1965

Guiding involves doing the same route numerous times, day after day, usually at a level far below one’s limit or capacity. And each time the enthusiasm must be summoned to enjoy doing it. One does not guide for one’s own personal climbing pleasure. The guide’s pleasure comes from his clients’ delights and successes, and from their reaction to a new world.

The temptation of a guide to persuade the client into ventures that the guide wishes to do for their own pleasure must be guarded against. It may be a route in the local mountains or an 8,000-meter peak, but the client may end up merely being a means to an end, gaining little from the experience other than depleted finances and an unrewarding time perhaps even dissuading them from trying climbing again. The constant media coverage of extreme and difficult routes can tend to create the “It cannot be all that hard” syndrome in some clients and play upon their unrealistic desires. To use a client as a vehicle to one’s own ends is unethical in guiding as well as in life.

A guide must operate by themselves at almost all times. This becomes more true in an alpine environment but is also valid in the rock sphere. The cynical maxim of “The guide is always soloing” is not necessarily the best approach and can be a version of treating the client as a fool. The guide must be self-reliant and not expect more than the client is capable of giving, but in many cases the client can add real security. In unknown terrain or on loose rock even the best are not immune from holds breaking. To consider all clients as inept and incapable is degrading to both the client and the guide.

Parallel to this is the concept that the margins of safety allowed a guide are less than those found in one’s private climbing. Again, guiding is not the same as climbing with a partner of equal ability. Decisions made and their consequences are entirely the responsibility of the leader—the guide. Whilst any climbing has little room for errors, a guide does not have the luxury of another person to correct their mistakes. If that water knot on the rappel sling is not threaded back or if the rope ends don’t reach the ground, the client will generally not recognize the fact and be unable to comment or help. To the guide this must bring an enforced and heightened awareness of their actions. Reliance, out of necessity, must become self and total. Added to this is the work of ensuring the safety and comfort of the client. Actions should become automatic, double-checked and 100 percent correct.

But guiding is so much more than merely being a mechanical placer of top ropes and provider of a safe climb. Above all, it is a people skill and requires adaptability and tact in dealing with individuals.

Opening a client’s eyes to the overall experience can be as much of a challenge as merely getting someone up a vertical piece of rock. In a world of narrowing vision the guide should be able to expand horizons. The environment needs to be communicated. A well-rounded guide also knows the names of the plants and trees as well as the names of the routes, can give a brief discourse on the local geology and why the landforms happen to be there, as well as taking reflective moments to watch the sun set over the desert. In other words, to be able to give an alternative education to people who have all too often become caught up in their own preoccupations.

Role modeling also becomes important and is too often casually overlooked. Awareness of the consequences of a unthinking action is required since clients often will pick up on them and emulate their mentor's practices. Details become important and a distinction must be drawn between what one might do in personal climbing and what should be done in a guiding role. Cutting a switchback on a trail, leaving "biodegradable" orange peels behind, or burning "dead" desert wood denote casual actions that have long-term effects, but which are all too often seen by the client to be acceptable since the guide does it. Attitudes are all too readily assimilated from those who are presumed to "know" by those who do not.

The guide as psychologist is an extremely important role and one that can be extremely taxing. It may be coaching someone up a route when their nerves are becoming frayed from the unaccustomed exposure or a more complex unraveling of problems. Some people come to guided climbing at a turning point in their lives, whether it be a divorce, disenchantment with their life-style or just a sudden realization of time slipping by. The guide is expected to change and adapt their approach with each individual, responding to each need and providing what is required. For most, being placed in this role is an experience that mere climbing fails to prepare them for and is a role requiring the utmost patience, empathy and insight into the human psych.

"A useful analogy for examining this imperative (test your nerve) is the game of Russian Roulette. No doubt it is a tremendously exciting pastime while it lasts. However, it would be a dull game when played with no bullets and a short one when played with them all. We can think of a climber who tests his nerve as a kind of Russian Roulette player who gives it a whirl every so often. Of course, how often is crucial. The professional guide must clearly use a very small number of bullets if he hopes to play the game regularly and still survive."

Robin Campbell

Guiding is a stressful occupation and this may be one of the hardest factors to deal with. There are few other occupations where one can be put in jeopardy through someone else's sheer lack of knowledge. Things take much longer than expected and early starts do not preclude late, after-dark returns. The realization that by yourself you would be back at the car rather than out here in a storm never helps. The increased risk factor provides much of the basis for stress, less so in a rock environment where close control and a high margin is possible, more so in the alpine world where many factors combine to remove total control from the guide. Different individuals have different thresholds but at some point everyone who guides cannot help but feel it.

The safety margin can be increased by the guide always keeping on top of things and not relinquishing control. Self preservation ranks highly here and it is easy for a guide to become overconfident and cocky. Familiarity does breed contempt. After leading the same pitch numerous times it may become easy to forgo protection and run it out. But consider the consequences of a random stone from above, or a carelessly-made move. The guide has little opportunity to relax and to switch to autopilot.

Although it has its drawbacks, guiding also has its rewards: the pleasure of being in the outdoors, the lack of a regular nine-to-five schedule and the delight of opening a new world to someone. There is a large degree of freedom in the guiding life and the pleasure of sitting atop a route after a job well done makes it all seem worthwhile. You never know, you might even get some climbing in...

We often compare ski guiding to rock or alpine guiding and talk about the lack of a rope connecting us to our clients much of the time. The ski guide needs to develop subtle ways to make the connection to their client without the rope, or to create the “invisible rope” through actions, attitude and impressions that are left with them. Often the movement patterns we create can consciously or subconsciously be interpreted by the client to help them as part of the experience and advantage of skiing with a professional and certified guide.

In alpine guiding we often use the rope in short rope mode during ascent not only to check a slip and prevent a fall, but for group management, micro route finding for the clients, pacing and energy management. During ascents on skis, keeping track angles low and comfortable when efficient make it overall easier and more comfortable for the client. Pacing clients with the skiers step to achieve “Magic Mountain Pace” will better assure their comfort and success at achieving their goal. Traveling close utilizing tip-to-tail technique when the guide’s confidence in stability evaluation is high becomes an invaluable tool for creating the invisible rope. It is basically ropeless short roping on skis to achieve pace and group management. Spotting, bracing and assisting can increase the necessary security at least with certain members when applied at the appropriate yet critical moments.

In downhill skiing the movement skills of a guide are paramount. The language that is spoken by the demonstration of the guide is again what can make the connection with the client in the ropeless situation. The guide’s skiing needs to be inspirational to the client yet at times needs to create an image that is comfortable for the client to attempt to duplicate as part of their own growth and personal development. At times, the guide needs to alter their technique yet again to demonstrate a maneuver that is well within the client’s ability when safety and security are at stake. We have to ski better than the majority of our clients and some of them ski well! The few exceptions could be the athletes and professionals who join us and if our skiing is foundationally correct and guide like, they will understand and accept the difference between our ability and theirs and still respect our other guiding decisions and advice.

A guide shouldn't have to concentrate on or even have to think about their own skiing. There are too many other things to focus on at a very quick pace while downhill skiing. Imagine on a glacial descent, besides skiing and skiing to motivate the client, the guide may need to make quick route finding decisions through the crevasses, set parameters of safety with their tracks, look back over their shoulders at the group members while skiing together and get a visual of the next uphill section through the seracs before losing view. Just imagine if they are missing these crucial tasks because they have to be concentrating on their own personal skiing. The skiing needs to be automatic as if it were on auto pilot.

At the top of a climb or at the start of a descent with questionable snow conditions a seasoned ski guide would assess his or her client's ability and, say in a group of four, recognize the weakest skier's skills and the strongest skier's skills. Even though the guide could power aggressive turns, instead they may choose to begin the run with a stem turn on each side. This would give visual snow conditions information for the clients to process. The guide would slowly turn up the volume leaving a modeling impression for each client's skill level to follow. The guide would keep it just above the strongest guest's level leaving an impression for each client to automatically follow.

The status quo of skiing's hierarchy and respect can't be changed. Clients expect their guides to be excellent skiers - that's what will motivate and inspire them. It is also the respect and trust they will show to other elements of your leadership and decision making throughout the guiding day.

Our adaptability and versatility to ski for the client is an absolute key to our skiing guides success. Adaptability in turn types, turn shapes and skiing intensities along with client assessment, terrain assessment, and snow conditions assessment are part of the complex puzzle that must be solved. This blending of skills is part of what sets an excellent ski guide apart.

A guides primary job is risk management and the goal is to provide clients with rewarding mountain activities while keeping risk at acceptable levels. Throughout this discussion words such as reasonable, acceptable, minimize and appropriate are used to describe guidelines.

Our discussion of risk management will be based on three highly active components; hazard recognition, hazard analysis, and minimization of risk.

The final stage of risk management- emergency response- is reactive, what to do if an incident occurs.

Hazard Recognition

External hazards are those presented by the mountain environment, weather, rockfall, avalanche, etc.

Internal hazards are those created from within the individual members of the party; skill level, group dynamics, physical and emotional condition, etc.

Hazard Analysis

External hazards

Is the hazard related to time, day, season, location etc.?
Is your information complete and relevant?
How active is the hazard?

Internal hazards

Are you assessing your own abilities and condition honestly?
Are you assessing your clients condition and abilities honestly?
Do you have experiences in similar conditions?
What are the underlying motivations , yours or your clients?

Answers to these questions and the resulting hazard analysis lead to options for risk management.

Minimization of Risk

Avoidance

When practical hazards are avoided.
This is accomplished by appropriate route finding or re
treat if risk become unacceptably high.

Minimizing exposure

By limiting the amount of time spent in the areas exposed
to hazards, risk can be substantially reduced.

This can be accomplished by:
Increasing speed in areas of exposure
If time related choose appropriate times
Choosing or modifying route to minimize exposure
Adjusting group size based on terrain, activity and
experience level

Appropriate equipment

Planning, and carrying the equipment needed to protect
the party. Knowing how to use the equipment and using it
at the appropriate times and places.

Appropriate techniques

Familiarity with appropriate application of techniques used
to protect clients from hazards.

Emergency Response

A pre planned written emergency plan is recommended from all guides and guiding
companies. This plan should include a response procedure that outlines who to
call in case of an accident, an accident form to record and provide guidelines for
treatment of victims, and an assessment form to assist outside help such as a rescue
team in determining the nature of the accident.

Client care is what sets guiding apart from recreational activities. The difference between a recreational leader and a professional guide is clearly observable in techniques and systems used and the standard of care provided by the guide. In professional guiding, the clients' safety, the quality of their experience, and attainment of goals is the primary responsibility of the guide. Choosing suitable terrain is the primary baseline to begin managing client comfort and control.

Client comfort

Guides are responsible for clients' physical and mental comfort. Physical comfort is related primarily to equipment, food, and shelter. Inadequacies in these basic needs can result in injury or illness, which may compromise their safety. Assessing physical comfort is often simpler than determining mental comfort levels. Fear and stress can be as debilitating as cold or other physical factors. A calm, confident, and rational attitude on the part of the guide helps clients overcome fear, doubt, or other types of stress and build clients confidence in the guide.

Simply asking a client how they are doing may not be enough. Guides must gauge client comfort not only from direct feedback but also through evaluation of the nature of a response, assessment of the overall situation, the client's performance, and general knowledge and experience. A guide must look for clues about the true nature of a client's condition in spite of outward appearances or responses.

Some ways to increase a client's comfort include:

- Psychological support at the first hint of fear
- Helping the client physically, by doing more of their work
- Increase and improve communications
- Increase their perception of safety
- Stay positive
- Keep clients occupied, make them feel useful

Enjoyment

If guides and clients can form a relationship beyond that of pure business, it is easier for them to work together in choosing and overcoming realistic challenges, attaining exciting objectives, and gaining pleasure not only from

the end result but from the process. Guides are highly motivated to keep clients safe and comfortable, and it is relatively easy to take the extra step to be a mentor and friend.

Control

Maintaining adequate margins of safety while attaining reasonable objectives requires guides to exert some measure of control over clients. If clients' actions are inappropriate to the situation or activity, guides must bring this fact to their attention and suggest limitations. Control is required when safety could be jeopardized by inappropriate conduct.

Pace

Perhaps the most important means of controlling clients is pace. Effective pacing takes into account a wide variety of factors including risk, guide and client abilities, importance of the objective, overall goals, etc. A guides pace responds to the need to move fast in areas of hazard or in easy terrain, steadily on moderate terrain, and more slowly in difficult terrain or when hazards are minimal. In this way pace plays a role in the care as well as control of clients. Regardless of speed an efficient pace is rhythmic and creates a sense of flow.

Communication

Effective communication with clients is an essential part of guiding. Every effort must be made to ensure that communications with clients are precise, positive, and understood. In most cases clients who do not follow instructions or stray out of guides control do so as a result of poor communication from a guide when giving instructions or information

Following are some means to maximize effectiveness of communications:

- Prepare your message carefully
- Make your communications positive
- Ensure clients can see and hear you
- Give only the information required
- Ensure clients received and understood the message
- Stay within sight of clients
- Provide positive encouragement and coaching or tips



Environmental Consciousness

The AMGA promotes the 7 Leave No Trace principles and incorporates them on all training courses as part of our commitment to environmental consciousness and good stewardship.

Guides carry an unusually heavy responsibility to protect the climbing environment. Not only as individual climbers must they work to preserve access and aesthetics for their own livelihood, but additionally, and perhaps more importantly, they must instill in their clients that same sense of responsibility.

The best method for guides to increase client environmental awareness is to become more concerned themselves, to act on those concerns and to explain to the clients the importance of their actions. The importance of example cannot be overstated. Clients will not take guides seriously if they do not practice what they preach and will often not understand the guide's concerns and actions unless they are fully explained.

Litter:

Guides must not litter and must not allow clients to do so either.

Carry a small garbage bag to pick up litter left by others. This is especially important in popular areas. Once litter is present it tends to proliferate. Pick up and carry out litter that is found.

On some big walls, particularly those of easy access such as El Capitan or Washington Column, if anything is dropped from the climb the climbers are morally responsible to retrieve it and as well should pick up other litter. This is not to condone dropping items from walls, which in areas such as Yosemite is illegal. Responsible climbers will take everything with them.

In alpine climbing basecamp areas, particularly overseas where litter is much more of a serious problem, organize the group to spend a couple of hours one day to clean up the camp and the surrounding area. In some areas it may be possible to burn the paper, bury the biodegradables and remove the rest. However, the decision to burn trash should not be taken lightly since fire scars in themselves are an ugly form of pollution. Conceal them. Burning cans and plastic leave residue that persists for prolonged periods of time.

Avoid the unnecessary use of wands on glaciers and if they are used then they must be retrieved upon descent. Left behind, they are trash.

Lifetime of trash

Glass bottle	1,000,000 years
Aluminum can	80-100 years
Rubber boot sole	50-80 years
Leather	up to 50 years
Nylon fabric	30-40 years
Plastic film container	20-30 years
Plastic bags	10-20 years
Plastic-coated paper	5 years
Wool socks	1-5 years
Cigarette butts	1-5 years
Orange & banana peels	2-5 weeks

Human Waste:

Toilet paper should never be left behind or buried. Pack it out. One small plastic bag can easily accommodate a week's worth of paper. Burning toilet paper is unacceptable because of incomplete burning and the chance of starting a fire. Make it easy for your clients to dispose of toilet paper by providing them with small zip lock bags.

The preferred method for disposal of human waste depends upon the environment and popularity of the area.

In most climbing environments, feces can be buried. Do this in popular areas so that others do not stumble across it. In less-used areas, it may be left on the surface where it will decompose and disperse more quickly. This method is preferred at higher elevations (but below snowline) where sun, rain and wind will rapidly disintegrate the waste. Defecate at least 100 feet from water. On big walls there are two options: let it fly down the cliff or carry it up. On popular routes, such as those in Yosemite the only acceptable solution is to carry it up the route. A strong plastic container and plastic bags are necessary to accomplish this.

On more remote walls or on routes that see little traffic, it may be preferable to let it drop down the cliff. Feces splattered on rock, exposed to the sun and weather, while offensive for a time, decompose quickly. However in some areas lacking in frequent rain, such as Yosemite in the summer, the waste is more likely to bake on and not fully disperse until the fall. Defecating in a paper bag and throwing it off is no longer considered to be acceptable. The bag will take a long time to decompose and inhibits dispersion and consequently the decomposition of the feces.

Disposal on snow can be a particular problem. As the snow melts, any buried waste eventually comes to the surface. Feces lying on the surface generally will not decompose due to cold temperatures and reduced biological activity, so they merely disperse. They will remain an unsightly mess for months. Wait until off the snowfield or be prepared to carry it out.

On glaciers, all fecal matter should either be carried out or dropped into a deep crevasse. Look for a narrow crevasse that can be straddled to use as a toilet or defecate on the edge and kick or shovel it into the hole. Safety lines should be rigged if necessary. It is preferable not to use plastic bags when crevassing waste.

Camps should be placed in locations that allow for proper waste disposal. When disposing of waste, try to crevasse it in an active accumulation zone, insuring that the waste will be well buried by the following year's precipitation. Again, either burn or carry out the toilet paper. Some glaciated peaks such as McKinley or Rainier have very specific guidelines and regulations for waste disposal that should be followed.

Erosion and Vegetation Destruction

Trail erosion is greatly accelerated on trails that follow or are close to the fall line. Try to follow trails that climb a slope diagonally, minimizing erosion damage. When resting or having lunch stay on the trail or choose an area devoid of plant life.

When traveling cross-country in alpine areas walk on the bedrock and boulders where possible. If trampling on vegetation is necessary do it in lightweight flexible soled boots rather than stiff plastic boots. Avoid walking on woody perennial plants such as heather.

Annuals such as grasses are more resilient.

In order of preference camp on rock, snow, dirt with no plant life and only as an absolute necessity on perennial plant life. One night of camping on heather or other woody vegetation will damage the plants for years. Never trench around the tents.

At the base of routes and instructional areas keep groups confined to areas that will not increase erosion or vegetation damage. Bedrock and boulders are best.

When rappelling or top roping off of trees do not run the rope directly around the trunk as this will eventually girdle and kill the tree. Leave webbing (preferable retrievable) or use a releasable knot.

Rappel and Back-off Webbing:

Webbing left behind should be of a subdued color, preferable matching the color of the rock.

Old and excessive webbing should be removed from fixed rappel stations and carried out. One good fresh sling is worth ten old decaying ones and allows easier inspection of the anchor as well.

Back-off webbing should be removed from fixed gear by a sling retrieval method.

Chalk:

Chalk is pollution and in some areas a particularly obnoxious form of visual pollution. Use it sparingly, especially on overhanging sections that receive little rain. Most guiding and rock climbing instruction is at a level well within a guides un-chalked ability. Clients should also be informed that use of chalk is not mandatory and a chalk bag is by no means one of the most important pieces of equipment to own.

Use colored chalk to match the rock and encourage clients to do the same. For those who feel that the performance of colored chalks is significantly below that of white, consider using one colored chalk bag for guiding, instruction and easier climbs while retaining a second of white chalk for those personal desperates.

Bolts and pitons:

Guides and instructors must feel some responsibility for maintaining the safety of the climbing environment. To the extent allowed by law and the ethics of the local climbing community guides should replace dangerous or suspect fixed belay, rappel and protection pieces and anchors with reliable equipment. However the placement of fixed gear merely to make a route easier to guide is generally insufficient reason.

Quiet climbing:

When possible avoid climbing routes near trails frequently travelled by non-climbers. Climb and camp quietly with minimal visual and aural impact. Reduction of the amount of bright neon clothing worn will reduce the visual impact of climbers.

Natural resources:

Bird nesting sites and areas of archaeological significance must be avoided. In most areas there is a choice of routes and there is little need to venture into such environmentally sensitive areas.

LNT:

Plan ahead

Travel and camp on durable surfaces

Dispose of waste properly

Leave what you find

Minimize campfire impacts

Respect wildlife

Be considerate of other visitors

People today seek the service of professionals in situations where they expect high standards of care. Examples would be the medical profession, the legal profession, commercial pilots, and guides. A professional association embodies a body of knowledge and skills, provides formal education and holds its members to perform at established standards.

Professionalism is service through the use of specialized knowledge, skills, and experience while holding oneself to the highest standards of care.

Characteristics that are shared by all professionals:

Holding high ethical and moral standards,
Honest, caring, respectful and trustworthy,
Positive attitude, well developed interpersonal skills,
Held to higher standards in competency, behavior, decision making and accountability,
Committed to maintaining a high standard of care continuing education.

Professional Expectations ;

Client Safety, Quality Client Experience, Guide Safety

- Safety at all times - both physical and emotional
- Teaching up to date information
- Maximizing client / instructor safety, minimize impact
- Practice what you preach / role modeling
- Condition of personal gear
- Transferable life-long skills
- Providing a positive experience
- An ability to apply concepts to different areas
- Assessment of terrain, personal skill and client skills. Are they in sync with each other?
- Developing a professional career
- Continuing Education

Short Roping and Short Pitching

Short roping is the use of a small portion of the rope to lead clients through exposed terrain in such a manner as to safeguard clients from the possibility of a slip or fall by both reducing the likelihood of a slip and by arresting a slip before it becomes a fall.

There are two distinctly separate components to short rope technique. The first occurs when the guide and client move together, quite close to each other (usually less than 6 feet apart). Traveling in this manner can give the guide a high degree of group control, greatly reducing the likelihood of a slip or fall. There are no belays in the normal sense of the word, but rather the guide moves and holds the rope in such a way that she is prepared to arrest a slip with the rope held securely in one hand and a good stance. The second component of short roping, often called “short pitching” involves the establishment and use of quick belays to safeguard clients on short steps where moving together does not provide adequate security.

For the purposes of clarity this article will refer to “short roping” only as the technique employed when guide and client move simultaneously. “Short pitching” will refer to the use of quick belays. In normal class 3 to class 4 terrain these two techniques are used interchangeably as the difficulty varies. Even though the two techniques are discussed separately here, guides should realize that the skillful integration of the two methods brings out the greatest potential of either technique.

SHORT ROPING – GENERAL CONSIDERATIONS

As in all guiding, we should seek non-technical solutions to our guiding problems. Our first line of defense is good route selection and route finding. Effectively exercising these skills often eliminates the need for time consuming and potentially risky rope work. Second, comes leading, modeling, coaching, and spotting. Leading means showing and facilitating the best route through deliberate routefinding and pace. With good leading, the need for coaching, spotting and rope work is lessened. Modeling is showing exactly how you would like your clients to move and climb. Modeling is an extremely powerful tool and its importance should not be underestimated. Spotting, can only be used in situations where the spotter is on extremely solid footing, for example, a large flat ledge or the ground.

A client on a short rope is under direct and very close control of the guide. This proximity allows the guide to lead the client up the best possible route, and models the most efficient manner to ascend. In loose rock or complicated terrain this may be the only feasible safe means of ascent. Group control through short roping, whether it is with one client or several, is the first and most important consideration when moving through easy but exposed terrain.

The guide leads the client, in the strongest sense of the word, through the mountains, avoiding hazards and choosing the best route. The guide must be aware at all times of this fact, both taking advantage of the strength of this position and, at the same time, remain keenly aware of the limitations of her client’s physical and technical abilities.

Short roping is a tool that a guide may use to protect her client. It is often the best

solution in broken but exposed terrain, providing needed security, reasonable efficiency while avoiding the hazards which long roping (pitching) may produce, e.g. rock fall, poor communication with clients, client confusion, pendulum potentials and others. Both short roping and short pitching are extremely useful when, due to time constraints, the party must move quickly. It is used frequently in alpine climbing, both in ascent and descent, where time is always of the essence. In cragging, where time is usually less critical, short rope and short pitch techniques are normally limited to approaches and descents.

When short roping, the guide moves with the client, usually quite close together. If the client slips, the guide pulls up on the rope aggressively, pulling the client back into balance, and preventing a minor slip from becoming a fall. Being very close to the client allows the guide to watch and sense the client's movement and security, and to keep an absolute minimum of slack in the rope. The guide not only watches (or feels and listens to) the client to be alert to slips, she must also move and hold the rope in such a manner that a slip can be arrested. At the same time, the guide must also climb carefully and safely, route find, and model good, deliberate climbing technique.

As the guide leads through broken terrain she must assess the difficulty of each individual move, evaluate the likelihood and consequence of a client's slip on those moves, decide what is the most effective and efficient method which offers the necessary security, and finally arrange and employ this "belay". All this occurs within the space of a few feet and in the time frame of a few seconds, and must be repeated hundreds of times in the course of a climb.

Short roping allows the client and guide to move very quickly. This increased speed is potentially an extremely important contributing factor in the safety of the climbing team. On very long routes, in times of deteriorating weather, or any time where "speed is safety", the use of the short rope can be a life saver. In difficult terrain (difficulty is determined more by both the client's and guide's skills than by the terrain itself) where the limits of short roping are being pushed, the guide must determine if there is greater security in traveling slower, employing belays, or in short roping.

In deciding whether to short rope or belay the guide must take into consideration the following:

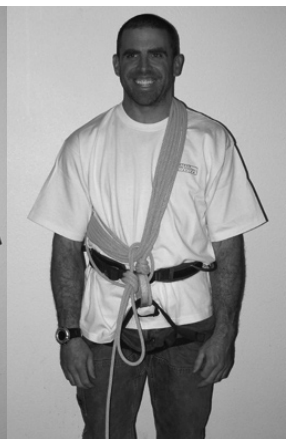
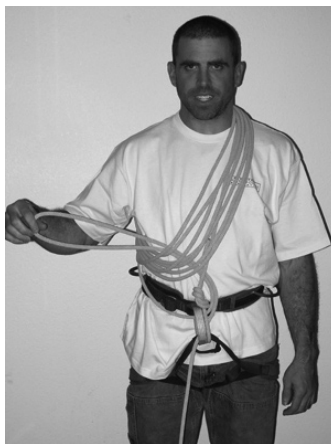
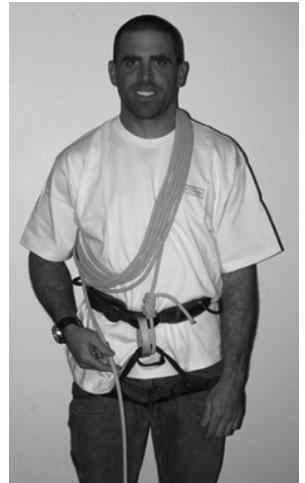
- relative weights of the guide and client
- climbing ability of the client
- client's degree of nervousness
- guide's climbing ability
- guide's short roping ability
- difficulty of the terrain
- featuredness of terrain (for example, solid highly featured or stepped rock is better than low angle ball bearing slabs)
- relative need for speed
- availability of belay anchors
- rope generated rock fall hazard

Short roping requires an incredible degree of concentration, and is extremely demanding of complex decision making. It is a mentally exhausting technique. Give yourself occasional mental breaks if necessary (belaying a client while short pitching provides such breaks) to maintain mental acuity.

SHORT ROPING ON ROCK

Tying off the rope short:

With the client tied into one end of the rope the guide normally carries most of the rope coiled over a shoulder and tied off with a “Kiwi Coil”.



When large amounts of rope are to be taken in (as when shortening the rope from a full rope out to a length of 20 feet) it may be easier and faster to coil the rope around the neck and a forearm held in front of the body (Figure 1.), and then passing an arm through the loop to put it over the shoulder, rather than coiling over a shoulder from the start. For coiling smaller amounts of rope, use the technique shown in Figures 2.



Figure 1



Figure 2

The shoulder coils should be short enough to be out of the way and to keep them from slipping off the shoulder, but not so short that they are uncomfortable. When wearing a pack, put the pack on first, then coil the rope over the shoulder strap of the pack (the pack can be easily taken off by taking the coil of rope off the shoulder but leaving it around the neck). If the rope is going to be lengthened or shortened occasionally, as is frequently necessary, do not carry slings or runners over the shoulder, but rather carry them on the gear loops of the harness or pack shoulder straps.

50 meters of 11mm rope coiled over a shoulder is a pretty bulky and awkward load. Consider using shorter ropes, (80 - 120 feet) if the route being guided does not require a full rope. Alternatively, the guide can lap coil or stack a portion of the rope in her pack, take a few coils of rope round the shoulder tied off with a “Kiwi” and short rope with the remainder. If the rope is not handy (buried in the pack) it is possible to short rope using a cordelette, though short pitching will not be possible.

Hand position

When short roping, the guide holds the rope to the client in the downhill hand. The hand holding the rope to the client cannot be used for anything else. It is the client’s security. Its job is to be prepared at all times to arrest a client’s slip. It is not available for any other use. When short roping, the hand holding the rope to the client is generally not brought above the level of the chest. Occasionally it may be necessary (as when establishing quick belays) to raise the hand above the chest. When this occurs the guide should be sure that the client is in a secure spot or on easy ground, because with the hand high the guide will have difficulty arresting a slip.

Usually the guide and client are very close together, as close as is possible without interfering with each other’s climbing. In most short rope situations the guide and client are tied 20 to 30 feet apart. Less than 15 feet of rope can be quite limiting, however if the terrain

is very broken and difficult sections are very short, less rope is certainly easier to deal with. With the guide and client moving together quite close to one another (5 to 6 feet) this extra rope allows the guide to short pitch occasional difficult steps.

Holding the rope:

The 20 to 30 feet of slack rope can be carried in small coils in the uphill hand. (practice taking in coils in both the right and left hands).

When carrying coils in the uphill hand, the guide may wish to take a wrap around his downhill hand with the rope going to the client. This wrap gives the guide a better grip on the rope, especially useful when the client is heavier than the guide, or when extra security is needed. The disadvantage of taking a wrap around the downhill (client dedicated) hand is that it reduces the ease with which the distance between hand and client can be adjusted. This can be a problem in easy terrain with short steps.



Often you will be coiling slack rope into your uphill hand. If there is any exposure to the client here you should hold the rope to the client, near the client, as you coil the rope into the uphill hand.

1. Grasp the rope in your downhill hand near the clients harness. This hand will provide the security to the client while you are coiling up the rope into the uphill hand.
2. Start coiling into the uphill hand with the rope coming from your tie-in. This will insure that the rope feeds out of your hand cleanly if you are climbing away from your client.
3. Use your thumb and index finger on your downhill hand to coil the rope in your uphill hand.
4. Practice with both hand alternately being the uphill hand.

Body position:

Good body position is vital to good short roping. The guide's feet are the client's belay anchors. They must be placed securely and with purpose. Avoid loose rock and dirt covered rock. Kick steps in dirt or scree. Be aware that if your feet slip it will be much harder to stop a fall. Maximize the amount of time you spend standing "in balance" (downhill leg behind uphill leg) and minimize time spent standing "out of balance". It is far easier to hold a fall standing "in balance" than standing "out of balance". The guide's body should act like a spring, when loaded it can yield, but only for an instant before absorbing the weight of the client. Feel prepared to catch a fall. Be alert and be on your guard.

Sensing the client:

In addition to protecting the client with a short rope, the guide must also climb securely herself and at the same time route find. The guide must frequently take her eyes off the client and look around. At these times the guide must rely on senses other than visual to determine the security of the client. Learn at what level of difficulty and on what type of climbing your client has a significant chance of falling. With this in mind assess the difficulty of the climbing as you proceed. Listen to the client. Listen to their footwork. Listen to their breathing. Feel their rate and fluidity of movement through the rope.

Pace:

Maintain a pace which does not force the client to rush and become sloppy. If their breathing is labored, slow down. As with all aspects of mountaineering, when short roping, a slower but steady pace with few stops is more efficient and far safer than a stop- and-go pace. A breathless client is a careless client.

Likewise, the guide should seldom be out of breath. If the guide is climbing at such a pace that she becomes very out of breath, she will most likely not be as effective at sensing and pacing her client.

Modeling, showing the best route through example:

One of the greatest strengths of short roping is derived from the fact that the client is climbing extremely close to the guide. Through example the guide can show the best foot and hand holds and even the best sequence of their use. Moving with fluidity over rough ground is a skill which must be learned. We, as guides, often do not appreciate the skills we have developed in simply walking. Having your client close behind you is a simple and valuable lesson for them. Tell your client to carefully watch where you place your feet. Climb at a slow enough pace that the client is able to imitate your movement. The increased security and saved energy ultimately derived from the client using all the best holds and following the best route will, in the end, result in a faster and safer climb.

In order to have the client effectively imitate the guide, the two must climb extremely close to one another. The limiting factor is the client getting kicked by the guide's boots. Keep your client close, climb slowly and deliberately and be careful not to kick them. Ask your client to use the same footholds that you do and be aware at all times that he/she is imitating you.

Tension on the rope:

A certain small amount of tension in the rope is necessary for the guide to feel the movement of the client. Some clients feel more secure with a greater amount of tension (usually beginners or novices) while others feel as though they're being pulled off balance (normally more skilled climbers). Ask your client what they would prefer. Whether you use a fair amount of tension of just enough to feel the client's movement, try to keep the application of tension constant, avoid sudden application or release of tension, except when catching a fall.

In time, the guide develops a strong sense of when she can feel the client through the rope and when there is even a small amount of slack. Learn to be aware of when the rope is taught and when it is slack.

Traverses:

Traverses often generate a potential for pendulums. Because of the distance of the fall, these falls may be too severe to stop with short rope techniques. In this situation the best solution is to take a parallel line directly above your client. If this is not possible, try to keep very close to the client in order to minimize the pendulum distance. Grab the rope at the client's tie-in knot or very close to it.

Short roping on descent::

In many ways short roping on descent is easier than ascent. This is largely due to the fact that with your client below you, you can watch their every move. In practice, short roping and short pitching can be very effectively combined in descent. While the client moves down at a slow, steady pace, the guide alternately short ropes and belays short pitches, catching up while the client is on easy ground. In general it is best to keep the rope on the uphill side of the client. With the rope on the uphill side a slip will spin the client to face into the rock rather than away from it. On terrain where direction changes are frequent this will require flipping the rope around in front of the outward facing client quite frequently. Ask your client to assist you in this. Very soon the client becomes "trained" to do this on his own. Be aware that when flipping the rope the client should be on secure holds or on easier ground.

Short roping more than one client:

It is much more difficult to effectively short rope more than one client than to short rope a single client. It can be quite challenging to arrest the fall of two clients. Also, clients will generally not be nearly as careful as you are in keeping the slack out of the rope, risking a more severe fall and a harder fall to hold on a short rope. With clients of different abilities keep the less skilled climber in close to you and the more skilled not far behind. You can effectively short rope the less skilled client and at the same time provide a somewhat lesser degree of security for the better client. Generally, with multiple clients, the guide will have to short pitch some sections which could have been short roped with only one client.

Placing the less skilled client on a short cow's tail (8" to 10") will make climbing easier for both clients, especially if there is short pitching involved. Instruct the less skilled client not to climb above his knot, and thus generate slack. Generally it is best to keep the clients quite close together, with the limiting factor being the risk of one client falling on or kicking

another. If there is too much rope between clients they will occasionally allow a dangerous amount of slack to build up between them. Fine tuning can be accomplished by tying a figure 8 on a bight close to the second client and clipping the loop to his harness.

When the climbing route is more or less up and down the fall line the distance between clients can be slightly greater than if the route involves traverses. Traverses often expose the rear client to bad pendulum potential. As with a single client, on traverses try to take a line parallel to and directly above your lead client. You may wish to temporarily shorten the distance between your clients using a figure 8 on a bight clipped to the rear client's harness.

It is possible to short rope two clients with each on their own strand of rope. This is useful when you must employ occasional short pitching but do not want the clients climbing simultaneously, for example, when the short pitching sections are fairly difficult. In easier terrain, however, this method poses significant rope handling problems.

SHORT PITCHING

Short pitching is belaying short pitches. The guide uses only a small portion of the rope (15 to 60 feet) and carries the remainder, usually over the shoulder and tied off with a "Kiwi Coil", or inside her pack. Using a small amount of rope saves time, allows the guide to short rope if appropriate, avoids the inevitable tangles which accompany the use of a full rope, and enables the guide to stay in close verbal and visual contact with the client. It is especially appropriate on moderate terrain where the difficulties are limited to short sections or steps.

When short pitching the guide may choose not to place protection. To do so would require a belay from the client and the placement of a belay anchor, both of these potentially time consuming affairs. Most typically the client waits in a secure stance, either anchored or unanchored, while the guide climbs unbelayed up a short section, and then belays the client up with either a body belay or a belay around a natural feature such as a rock horn or a tree, or a belay off a built anchor. If the terrain above is easier the guide may elect to short rope. If not, the party can continue short pitching.

Because very little rope is in use and because time consuming anchors are seldom placed, the guide can switch from short rope to short pitch and back again very quickly and efficiently. The two techniques complement each other and when used together can allow the climbing party to cover moderately difficult terrain very quickly.

To short rope or short pitch?

There is no set rule defining when to short rope and when to short pitch, just as there is nothing dictating when to rope up in the first place and when to belay with fixed belays and protection for the leader. The decision to use any of these techniques is dependent on the climb, the conditions, the client and the guide. Guides who see short roping and short pitching as valid and useful techniques must make complex decisions in choosing the most appropriate method of protection. Guides must become very familiar with the strengths and limitations of these techniques if they are to make the best decision regarding their use.

Distance between climber and guide

When short pitching, the amount of rope between climber and guide is determined by the length of the sections which require belays. Use the smallest amount of rope which still allows you to reach an acceptable stance and establish a belay before the client must start up the difficult terrain. Distances of 20 to 30 feet are common. More than about 50 feet becomes unwieldy and can make short roping between short pitches awkward. Guides should be aware that the further away from their client that they allow themselves to be, the more difficulty the client may have with climbing and route finding, and the greater the difficulty of communication.

A general rule of both short roping and pitching is that the further away from the client you are, the stronger belay you will ultimately need to supply.

Rope handling

When faced with a short section which the guide has decided to short pitch, if the difficulty is not too great, the guide should ascend the rock allowing the slack rope to feed out of her hand as she climbs. This is preferable to dropping a pile of slack rope at the base of the difficulty. (Obviously if full use of both hands are required for climbing then it may not be feasible for the guide to feed out rope as she climbs.)

If possible as the guide belays the client up to a new stance, the guide should take in the rope in such a manner that it becomes neatly coiled in the uphill hand, ready for the party to continue moving together at the top of the difficulties.

After completing a section which was short pitched and in anticipation of continuing with the short rope technique, as the guide coils the rope in the uphill hand she should keep a hand on the client's rope, near the client, at all times. Should the client unexpectedly slip the guide would be ready at any moment to arrest the slip.

Types of belays

In all types of guiding the belay should be unquestionably strong. The guide should do everything within her power to be sure that the load will not exceed the strength of the belay. In 5th class rock climbing we employ a great degree of redundancy, multiple anchors tied together in a redundant fashion. Simply because the exposure on a short step (one you might choose to short pitch) is not nearly so graphic as it is on most 5th class rock climbs, the consequences of belay failure, might be equally dire.

There are many types of belays which can be employed. In choosing which type to employ the guide must take into consideration the options presented to her by the terrain, the maximum load the belay might have to hold, and time constraints. The following methods of belaying named below are not meant to be a comprehensive list. They are, perhaps, some of the more commonly used but are by no means the only ones appropriate.

Sitting Hip Belay

The sitting hip belay is the most stable of the body belays. Often the guide will belay with the classic sitting stance but use a Munter hitch off the harness. This is especially useful when the client is down climbing. Note, when belaying a client toward you be sure you can keep all the slack out of the rope.

Around Horns or Trees

Rough rock has an extremely high coefficient of friction, and because of this solid belays can be established simply by pressing the rope around an edge of rock. Practice and learn the limits of this technique by catching falls. Be sure the rock horns you use with this belay are solid and not so sharp that they may damage the rope.

Frequently rock horns are used in the process of moving together. The guide simply loops the rope over or around a horn as she passes it. This provides brief, but often appropriate protection for both the client and the guide. Care should be taken to insure that the client is not making a difficult move at the same time that the rope is being lifted to be placed over a horn.

Munter Hitch

Using a Munter hitch off a traditionally built anchor is quite valid in short pitching. As in most guiding situations, this technique is strong, secure, but perhaps a little time consuming.

Standing Shoulder Belay

The standing shoulder belay is usually much less stable than a sitting belay. Stability can be increased by leaning against a rock wall. In the standing shoulder belay the rope should be kept in line with the downhill leg. Avoid bending at the waist as much as possible. This belay is also useful in “helping” (hauling) clients up difficult steps. This belay, while very effective, can sometimes be uncomfortable when holding large amounts of weight. It may not be appropriate for use with more than one client, or when the client is very heavy and on steep terrain, or in situations where there is little additional friction of rope on rock and the climbing is steep.

Pinched Carabiner

A bight of rope clipped into an anchored carabiner can be pinched together in the hand to stop a fall. This requires careful attention to control. Keep your breaking hand at least 4 to 6 inches away from the carabiner.

Anchoring climbers:

In many short pitching situations neither the client nor the guide are attached to an anchor. If the stance is somewhat precarious or the client untrustworthy it may be prudent to tie the client to some sort of anchor. A rope wrapped around a horn is often all that is needed. With two clients tied close together at the end of the rope it is often possible to simply take the rope between them and place it over a horn, or to have them stand on either side of a tree with the rope on the uphill side of the tree.. Use your imagination. If time is an important consideration don't anchor either your client or yourself if it is not necessary.

Dropping and taking in coils:

When dropping a large number of coils, as when going from short roping to use of the full rope take the entire coil off of your shoulder and drop the coils to the ground one by one. Do not throw the whole wad of coiled rope on the ground, as it will surely tangle. Learn to take in coils, shorten your rope, and tie it off quickly and efficiently. Avoid the temptation to cover terrain while the rope is not securely tied off.

LEARNING TO SHORT ROPE AND SHORT PITCH

Practice, practice, practice. While it is useful to practice on your climbing partners, they often climb much too quickly to effectively practice the technique. If possible practice on climbers with considerably less climbing ability than yourself.

Have other climbers short rope you. You'll pick up tricks and learn what it feels like from the client's perspective.

When short pitching try to become familiar with all the different types of possible belays and anchors, and spend extra time using those with which you are least comfortable.

Because of the constant need for rapid decision making, the variability and multiplicity of the factors involved in these decisions and the need for constant vigilance, short roping and short pitching are some of the most difficult guiding skills to master. No matter how good you are it is always possible to improve your technique.



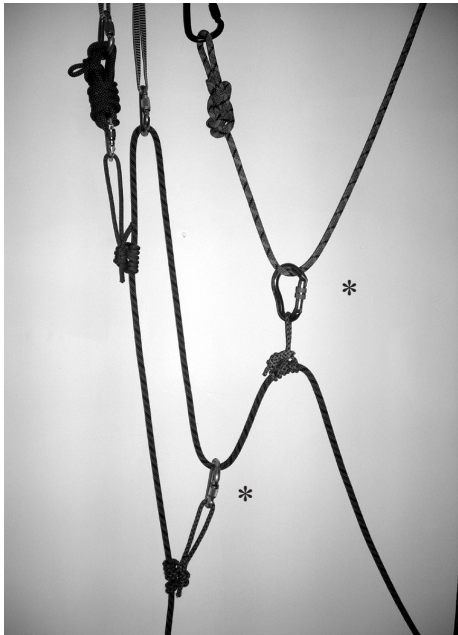
Load releasing hitch
at rachet (block and tackle)
Optional: Prussik from cordellette
munter muled at anchor



3:1 Hauling system

* Non locking biner
acceptable

6:1 Hauling system (a 2:1 on a 3:1)



* Non locking biner
acceptable

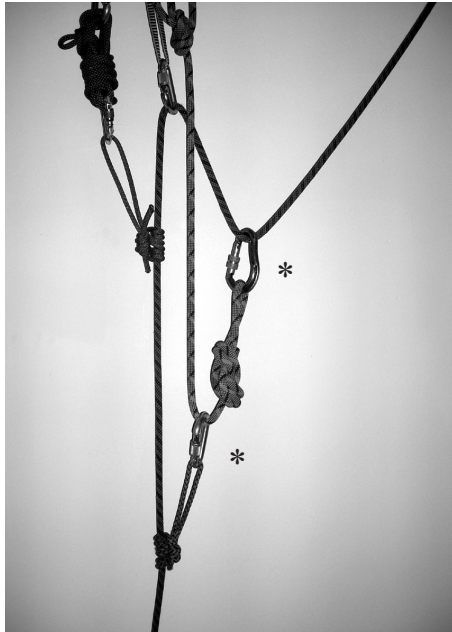
6:1 Hauling system (Dropped loop)

- * non locking biners acceptable



5:1 Hauling system Upward pull

- * non locking biners acceptable



International Ground-to-Air Signal Codes



Require doctor serious injuries



Require map and compass



All well



Require medical supplies



Indicate direction to proceed



No (Negative)



Unable to proceed



Proceeding in this direction



Yes (Affirmative)



Require food and water



Probably safe to land here



Not understood



Require firearms and ammunition



Require fuel and oil



Require engineer

You can lay out these symbols using strips of fabric, pieces of wood, stone, or any other available material. Try to make as big a color contrast as possible between your symbol(s) and the surrounding terrain. Symbols should be at least 8 feet in height or longer. Take care when constructing these symbols so that they can't be confused. In addition, you should use any means possible to try and attract an aircraft's attention: radio, flames, smoke, flares etc.

Aircraft Acknowledgements *Message Understood:* An aircraft will indicate that ground signals have been understood by rocking from side to side or by making green flashes with a signal lamp.

Message Not Understood: An aircraft will indicate that ground signals are not understood by making a complete right-hand circuit or by making red flashes with a signal lamp.



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