



# USSA Athlete Development Ski Jump Technique

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This document was created originally by Chris Gilbertson in Steamboat Springs in 2003. Casey Colby made some Modifications in 2007 and made it available for the benefit of athletes, parents and other interested parties.

Too often, jumpers progress from hill to hill on an arbitrary system. The purpose of this plan is to establish systematic goals Technical skills and not age will be a factor in determining on what hill a jumper should train. It is the goal of this plan to better prepare athletes for the progressive skills necessary to become top jumpers.

## K10-20

- Key Concepts
  - Have Fun
- 1. Inrun
  - a. Basic Inrun is strived for but not required
  - b. **Simple balance and coordination skills**
- 2. Air Flight
  - a. Survival
  - b. **Beginning sense of body awareness in the air**
- 3. Landing
  - a. Balanced landing
  - b. Balance is sought using Nordic equipment, but not necessary
  - c. **Basic ski control**

## K25

- Key Concepts
  - Solid Inrun Position
  - Have Fun
- 1. Inrun

The inrun is beginning to form and should be stressed at this level. It is necessary to find a natural inrun position for each jumper based on their body type.

- a. Sufficient shin angle
- b. Low & Balanced position
- c. Long back
- d. Shoulders even with knees or in front
- e. Head in neutral position

## 2. Take-Of

Take-off is moving rhythmically & aggressively up and forward.

- a. Some shin angle is maintained throughout the move
- b. The idea of the hips being even with the feet at the take-off is introduced.
- c. "Beat the Feet" (not diving or trying to instantly fly)
- d. The jumper is trying to push down from the whole foot. (in balance)
- e. The move starts from feeling pressure/contact with entire foot maintaining balance

## 3. Flight

- a. The idea that the legs should be locked and the ankles cocked is a concept introduced to the jumper.
- b. The "V" is introduced but not emphasized.
- c. Natural, relaxed, body position.

## 4. Landing

- a. Jumpers are introduced to the telemark landing; it is not the focus on the K25.
- b. One foot in front of the other.
- c. Weight mostly on the leading foot.

# K30-50

- Key Concepts
  - Strong Take-off
  - Balance moving forward on take-off
  - Locked legs and cocked ankles in air flight
  - Stable Telemark Landings

### 1. Inrun

The inrun position should be well established at this point. It may be necessary to move the athlete down to a smaller hill to control the inrun.

(continue work on athlete flexibility)

- a. Sufficient shin angle
- b. Low & Balanced position
- c. Long back
- d. Shoulders even with knees or in front
- e. Head in neutral position

### 2. Take-Off

Take-off is moving aggressively up and forward.

- a. Main emphasis is on pushing down.
- b. Move starts from balanced position
- c. Balance is maintained throughout movement
- d. Back stays long
- e. Shin angle is maintained
- f. Jumpers are beginning to show effect when jumping
- g. More emphasis is placed on Rhythmic movements
- h. Hips stay behind during take-off and flight
- i. Upper body stays low, not leading the move

### 3. Air flight

The idea that legs should be locked in the air flight and the ankles should be cocked is stressed.

- a. The "V" starts to develop
- b. Hands should be in control near the side.
- c. Balance is forward, body is in front of feet in air.

### 4. Landing

- d. The Telemark is reinforced and strengthened at this level.
- e. Weight on both feet & in balance due to cord length restriction
- f. The telemark is initiated by stepping forward from the air flight.

## **K60-70**

- Key Concepts
  - Aggressive Move on Take-Off

- Strong Air flight
- Solid Landing

1. Inrun

Inrun position is well established at this point in the athlete's progress.

2. Take-Off

3. Take-off is creating effect and the feet are at least even with the hips.
- a. Shin angle is maintained throughout move.
  - b. Upper body stays aerodynamically low.
  - c. Rhythm and Technique stressed

4. Air flight

- a. Legs are locked and the ankles are cocked
  - b. The "V" is more established and is controllable.
  - c. The hands are by the side or in front of the hips just slightly.
  - d. Head is looking away from the hill, not down. (pulling toward the fall line not the Kpoint)
  - i. Hips remain up while flying, not allowed to push thru
  - e. Landing
5. Telemark is stable and solid.
6. Jumpers are stepping forward into the Telemark.
7. Able to land jumps beyond K-point with relative ease.

## K90

- Key Concepts

- Aggressive Move on Take-Off
- Strong Air flight
- Solid Landing

1. Inrun

Inrun position is well established and individualized for each athlete.

2. Take-Off

- a. Take-off is creating effect and the feet are at least even with the hips.
- b. Idea of building effect and height over knoll and flying after the knoll (patience)

2. Air Flight (educated in judges deductions and points)
  - a. First Phase
    - i. Movement is continued from take-off. (building height while maintaining speed)
    - ii. Hips continue to move up and forward.
  - b. Second Phase
    - i. Legs are locked and the ankles are cocked throughout flight
    - ii. The “V” is more controlled.
    - iii. The hands are by the side or in front of the hips just slightly.
    - iv. Head is looking away from the landing hill, not looking down.
  - c. Landing (educated in judges deductions and points)
    - i. Telemark is stable and solid.
    - ii. Jumpers are stepping forward into the Telemark.
    - iii. Telemarks are attempted past the K-point.

## K120

- Key Concepts
  - Aggressive Move on Take-Off
  - Strong Air flight
  - Solid Landing
- 1. Inrun
  - Inrun position is well established
- 2. Take-off
  - (1. Take-off is moving aggressively forward and is creating effect.
- 3. Air Flight
  - a. Legs are locked and the ankles are cocked
  - b. The “V” is more established and is controllable.
  - c. The hands are by the side or in front of the hips just slightly
- 4. Landing (educated in judges deductions and points)
  - a. Telemark is stable and solid.

- b. Jumpers are stepping forward into the Telemark.
- c. Telemarks are expected past the K-point.