

# 2011 region 2 ARDF championships

## START AREA OPERATIONS

### Overview

The purpose of this document is to describe the operations that take place between the point in time that the competitor transport bus arrives to the point in time that the last competitor is sent across the start line for the 2011 region II ARDF championships.

Each station in the start area and its purpose are outlined in this document.

The Other event areas are described in separate documents for each area.

**The start operations area is divided into 5 different stations that are listed below.**

**Bus arrival area**

**Competitor holding area**

**Receiver impound and Pre-start staging area 1**

**Pre-start staging area 2**

**Start line area.**

This document is organized into 5 chapters that contain the operating procedures for each of the above listed stations. Each station is part of a sequence that occurs from arrival to start.

For events that do not use a bus for competitor transport this document can be modified to remove the sequences that refers to operations that are related to the use of a bus and replace them with operations that refer to groups of competitors arriving in personal or rented vehicles. The area in this document that requires medications for a non bus event is the Bus arrival area procedure chapter 1. All other procedures are the same for a non transport bus event.

*Credits*

*Unless noted photos and graphics are by WB8WFK*

## Chapter 1

# Bus arrival area operating procedure

### Overview

This area is typically within walking distance of the competitor holding area. The area for this operation is selected where the bus can safely operate and unload all the passengers and personal equipment. Safety for offloading the competitors is also a prime concern and must be considered in the selection of the location of this station.

It is acceptable to have up to a 2 Kilometer length walking distance between the bus arrival area and the Competitor holding area. This allows placing the other operational areas away from the bus drop off point in the event that unimproved roads or trails are the only method of access to the other start areas.

### Example of a bus arrival area setup

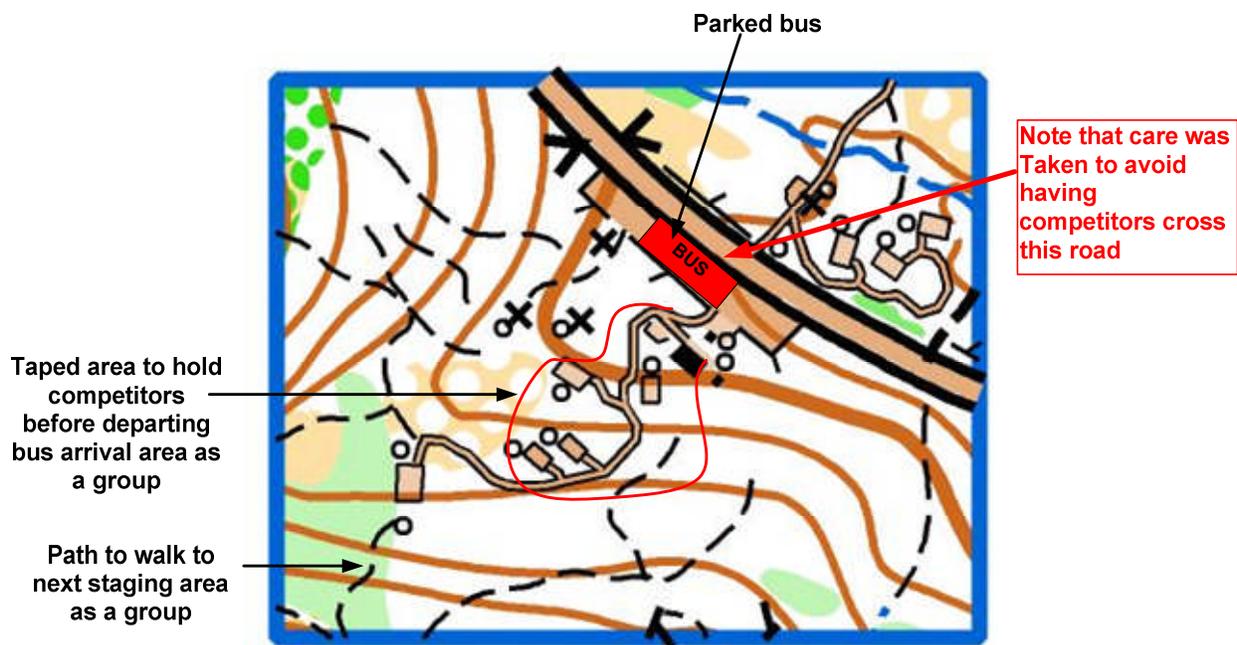


Figure 1 Bus Arrival area example (NMO map section WB8WFK graphic)

Graphics for both event days will be developed to outline the bus arrival areas that will be used for both of our meet days.

### Special options

**If the layout and vehicle access of the selected meet venue permits, this operation can and should be combined with the competitor holding area station.**

**Duration of operation for the bus arrival area**

The use of this area is very short term, Just long enough to off load all competitors and there equipment from the bus. Expected operation time is less than 20 minutes after the bus arrival occurs.

**Minimum required staff**

This event station requires 2 persons with one being a ham operator (if no cell phone service) to communicate with net control.

**Responsibilities for staff at this station are:**

## Person 1

In charge of directing bus offloading etc. Also monitors the competitors to ensure that DF receivers are not being used.

## Person 2

Provides communications regarding station status with the net control and is a safety observer (watches out for anyone that may stray into harms way). Also monitors the competitors to ensure that DF receivers are not being used.

**Operating procedure for this area is as follows.****Step 1 Pre-bus arrival.**

All Event staff in all areas is notified within 10 minutes of bus arrival by the communications net control station. At this time a transmitter located at the start line (in homing beacon mode on the hidden transmitter frequency) is placed on the air. This will prevent any advance DFing by blocking reception of the course transmitters with the temporary beacon as the bus arrives at the drop off site.

*Notes:*

- 1. Communications between the bus (at least one event staff person is onboard the bus) or the bus escort vehicle and the main event communications net operations center is taking place so that the net control station knows the status and whereabouts of the bus from the time it departs Albuquerque. As a backup to the escort vehicle, the staff person onboard the bus is also knowledgeable about of the location of the bus arrival area.*
- 2. The communications net also forwards this information to the start line operations, finish line area and all field operations areas. The main communications net control station is located at the finish area.*

**Step 2 As soon as the bus arrives.**

A Message from the bus arrival area should be sent the communications net control that the bus has arrived.

All passengers are asked to gather all their equipment including any personal belongings they want transported to the finish line after they start. **Note: Before unloading the bus everyone is asked to ensure that there DF receivers are off.**

Passengers are asked to gather at a pre-marked gathering point marked by trail tape just outside and away from the bus in a safe location. Passengers are asked to stay at this gathering point until instructed to go the next event station.

Notes:

1. *Transport bags with name tags were provided to each Competitor that will be placed in transport pickup zone near the Competitor holding area when their names are called to begin the pre starting sequence.*
2. *If restroom facilities exist at this location the group should be give the opportunity to visit them. If facilities don't exist the bus will make a rest stop before arriving at this location.*

**Step 3 after bus offloading.**

Staff at the arrival area will verify that everyone is offloaded and accounted for, and that each person has their equipment and any items they want to transport to the finish line after they start.

*Note a head count was taken when the bus was loaded at the Albuquerque Hotel and this can be used to verify that the group is all accounted for.*

When the group is ready and everyone is accounted for the group will proceed to the next step.

**Step 4 Depart bus arrival areas on foot.**

When the group departs the arrival area on foot all staff persons will go with the group. One person leads the group and the second person follows the end of the group to ensure no one strays.

After arrival at the competitor holding area the bus and escort vehicle is re-located to the finish area and operations of this area terminates. This is accomplished by using the communications net. At this time the 2 staff persons can take on other tasks.

*Note: In the event of possible approaching bad weather (possible electrical activity), the bus may be asked to stay stationed at the arrival area incase its needed as a shelter.*

## Chapter 2

# Competitor holding area operating procedure

### Overview

This area is typically a short distance from the receiver impound and pre- start 1 staging areas and is placed out of sight of that area to prevent competitors from observing any activity at all other stations from this location. This area also should be located to prevent any competitors from studying any posted park maps that may be in the area. If possible temporary cover any park maps that competitors may walk by between this location and the bus unloading point. It is also required that this area is isolated from the finish line to prevent any communications between persons returning from the course. By design the start and finish are isolated at national and international ARDF meets.

It is common at ARDF meets for the competitors to arrive with personal items such as a change of clothes, extra water supply, portative gear such as rain gear for use while in the holding area or spear equipment. Some items not taken out on the course are placed in the personal item transport bags that have name tags attached to them.

***Note: Any spear DF equipment must also be impounded. Spare DF equipment should be marked with bib numbers of team members that are authorized to retrieve it.***

Personal item transport bags are placed in the designated pickup area just before the competitor begins the 15 minute start sequence. As they accumulate the personal item transport bags are transported to the finish area by event organizer volunteers.



Figure 2 Personal item transport bag example from 2010 ARDF world championships in Croatia (WM5R photo)

If possible the competitor holding area should provide shelter. However it is common at ARDF meets to be staged in areas that don't have shelter (remote forested areas).

## Example of holding area setup



Figure 3 2009 national ARDF championships in Boston holding area (K0OV photo)

The 2009 ARDF championships in Boston used a very remote open hill top as the competitor holding area. No shelter was provided. There was a long walk (>2 KM) to this area from the main parking areas. There was a small stash of drinking water in the area.

If the area is remote, then if possible select an area where shade is available. If the area is developed, try to select an area that has picnic tables and restroom facilities as the holding area.

If a shelter is not available in the staging area the competitors will be notified at the pre-meet opening day meeting as to what expected conditions at both meets venues will be encountered. If necessary they will bring rain gear to stash in their personal transport bags.

The key thing to remember for area staff is to keep all competitors in this area isolated from any outside contact. If possible mark the area using trail tape to define the holding area. Competitors should have rain gear in their transport bags.

Make an announcement that all competitors with cell phones or ham radio HT's should have them be turned off and packed away.

***After the announcement is made Volunteers should record the bib numbers of any competitors that are using cell phones or ham radio HT's and pass along that data to the event net control station.***

A small area for doing warm-up exercises should be provided.

## Duration of operation for the holding area

This area is in operation until the last competitor is called to the impound area to receive their equipment and begin the start sequence. At this time all transport bags left in this area should be moved to the finish area and operations closed. Any other items left behind should be packed up and removed. The net control station should be notified that this station is being shut down.

## Minimum required staff

2 persons

**Responsibilities for staff at this station are:**

1. **Verify that everyone has arrived from the bus unloading station**
2. **Watch for any unauthorized use of communications devices or reviewing of venue maps**
3. **Start the receiver impound process**
4. **Verify that everyone has seen and understood the course setter notes**
5. **Send competitors to the receiver impound area to begin their start sequence**
6. **Execute the start sequence**
7. **Close down operation**

**Additional Equipment required**

1. Clock (GPS or atomic) that displays seconds and or receiver tuned to fox frequency to follow ARDF cycle.
2. Setup graphic for this event day showing location of this station and layout

**Operating procedure for this area is as follows**

**Step 1**

**Announce to all competitors** upon arrival at this station that cell phones and ham radio HT's are for emergency use only. Anyone seen from this point on (until crossing the finish line) using a communications device for non emergency use will be disqualified no exceptions. Also indicate that there will be field marshals on the course that will be watching and reporting all activity.

**Announce to all competitors** that use of any DF device or receiver device is not permitted until there start time at the start line as indicated by the audio start tone.

**Announce to all competitors** that the international jury will review all reports of unauthorized use of communications devices or DF equipment and receiving devices and any protests made by competitors before certifying the event results.

**Announce to all competitors** that they must make any protest they have to the jury within 10 minutes of crossing the finish line.

**Announce to all competitors** to review any posted course setter notes.

*Note the international jury member names will be announced in advance of meet day and the jury will meet in the finish line area as soon as the last finish line crossing takes place. The Jury will certify meet results and address any protests, meet issues encountered. If necessary the jury can make adjustments to correct meet defects. The international jury decision is final.*

*As soon as the Jury certifies the meet handing out the awards can take place.*

**Step 2 (receiver impound sequence)**

Using the start list in reverse order ( starting at last start to first start) **send all competitors to the receiver impound area in single file in that exact order.** Verify that all competitors return from receiver impound with no equipment.

**Step 3**

**Step 3 A** After receiver impounding is complete and all competitors have returned to the holding area make an announcement to remind all competitors to review the posted course setter's notes.

**Step 3 B** At that time ask if everything that is posted is understood.

**Step 3 C** Have the communications person send a message to net control that this step and receiver impound is complete.

**Note: At this time the transmitter at the start area will be turned off and the verification sequence to certify that the course is ready for competition will take place.**

**Step 4 (Pre start warning)**

**Net control will give a 5 minute warning that the starting sequence will begin.** At this time queue up the first start group by calling bib numbers and names from the start list and start on the next cycle.

**Step 5 (beginning of start sequence)**

**Using the clock or ARDF receiver** to start the start group. The group will be requested to proceed to the next station. When this sequence occurs it will take 15 minutes to pass through all the start stations until they cross the start line. When a start group departs this station notify net control that the event has taken place.

**Note: Using a clip board that has the start list and start bib numbers of each person mark of each group as the group departs this station.**

**At this time queue up the next group from the start list**

**Step 6**

Repeat step 5 until all competitors are sent to the next station. When the last competitor has left this station notify net control that all competitors have departed this station and begin shutdown operations of this station.

### Chapter 3

## Receiver Impound and Pre-start staging 1 operating procedure

### Overview

This area is used to impound all DF equipment until the start sequence begins.

### Example of holding and area setup



Figure 4 Impound area that was used at the 2010 world championships (WM5R photo)

A tarp should be placed on the ground to protect the receivers from getting wet. A tent or a top tarp cover can be used to protect the receivers from the elements. Competitors are called in reverse start order to place their receivers in the impound area so that during the normal start sequence receivers can be removed in order without stepping over equipment.

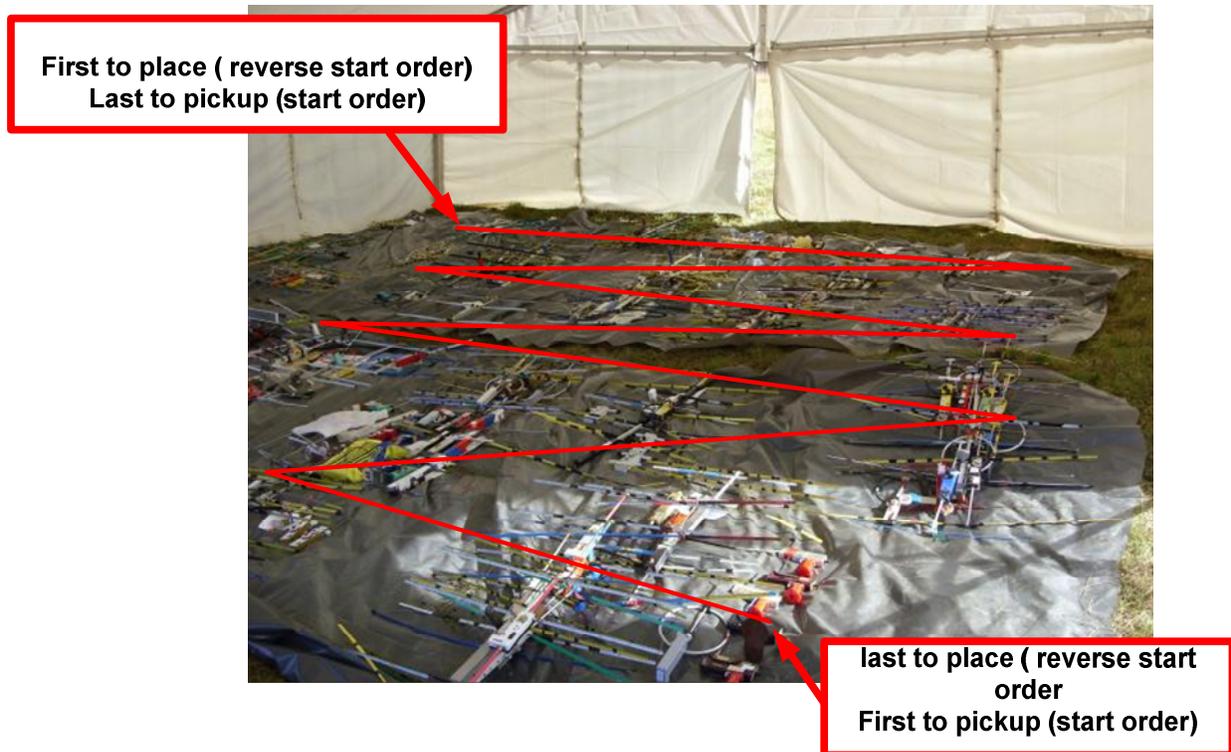


Figure 5 order of impound sequence (WM5R photo WB8WFK graphic)

#### Duration of operation for the holding area

This area is typically in operation shortly after arrival of competitors to the last start group called recovers there receivers and moves to the next station in the start sequence.

#### Minimum required staff

1 person

#### Responsibilities for staff at this station are:

1. Conduct impound check in using reverse start order using the stat list
2. Return receivers using the start list in start order and verify SI stick numbers with BIB numbers.

#### Additional Equipment required

1. Clock ( GPS or atomic) that displays seconds and or receiver tuned to fox frequency to follow the ARDF cycle
2. Setup graphic for this event day showing location of this station and layout

**Operating procedure for this area is as follows****Step 1 (impound sequence)**

Conduct the impound sequence using the start list in reverse order. Competitors will arrive in reverse order

**Step1 A**

Use the start list and request each competitor to place their receiver in the impound area in reverse start order.

**Step1 B**

Check off each name as the receiver is placed on the tarp and send the competitor back to the holding area as soon as the receiver is impounded.

**Step 2 (Starting sequence)**

Operations that begin when competitors are sent back from the holding area to begin their start sequence. It is T-15 minutes to start when this sequence started.

**Step 2 A**

When a start group arrives instruct each competitor to remove their receiver from impound.

**Step 2 B**

After receiver recovery, using a clip board that has start bib numbers of each person in this start group call each name with SI stick number and ask for verification. Note any differences between bib and SI stick numbers and report them to net control.

**Step 2 C**

At the next cycle start (indicated by the start tone from the ARDF start timer) send the entire group to the next station to start the next sequence

**Step 2 D**

As soon as the group departs for the next station report to net control that the sequence for this group (give group number) is complete. Repeat starting at Step 2A

## Chapter 4

# Pre-start staging 2 operating procedure

### Overview

This area is used to perform the Sport Ident clear and check operation T-10 minutes before the assigned start time and hand out maps.

### Example of pre-start staging 2 area setup

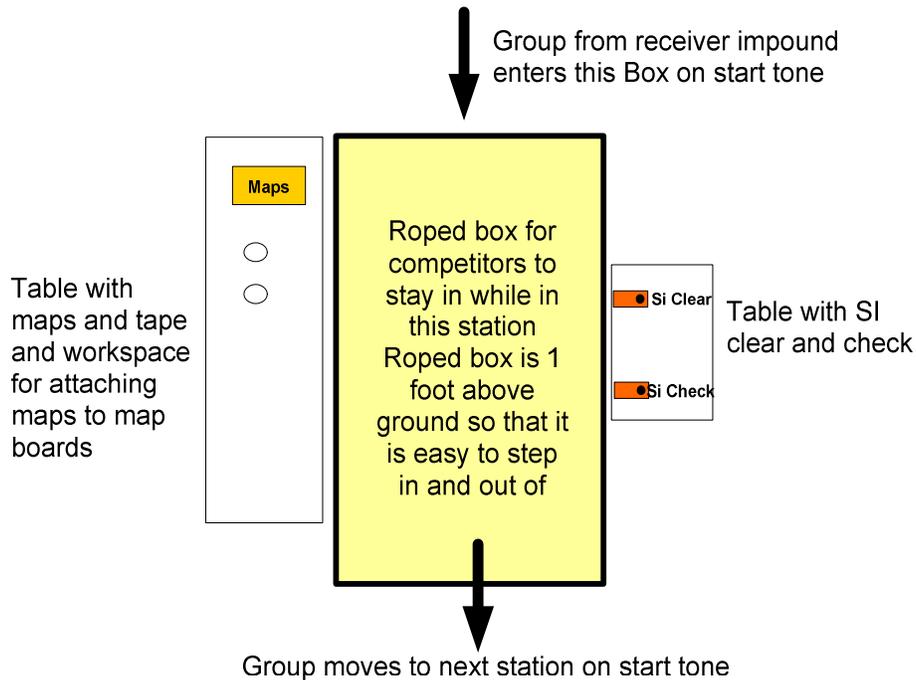


Figure 6 prestart 2 area layout

*Note: the width of the roped area should accommodate 10 persons and equipment.*

### Duration of operation for the holding area

This area is in operation from the beginning of the event until the last start group is processed by this station.

### Minimum required staff

2 people

### Responsibilities for staff at this station are:

Hand out maps and perform clear and check operation in preparation for start.

#### Person 1

Hands out the course maps.

Makes requests for replacement SI sticks with the start line radio communications person for any runners that have SI sticks that will not clear or check.

***Note there can be one radio communications person that works both this and the start station since they are co-located.***

#### Person 2

Oversees the clear check sequence and sends on to next station.

### Special equipment at this station is

1. SI clear station labeled start SI code 2
2. SI check station labeled start SI code 3
3. Table to use for taping maps to map boards, Have tape on hand
4. Start list with bib numbers and SI stick numbers
5. Setup graphic for this event day showing location of this station and layout



Figure 7 SI clear and check stations

Operating procedure for this area is as follows

#### Step 1

Person 1 asks each competitor to take one map from the map stack. Step 2 can start at same time as step 1 to save time.

## Step 2

Person 2 has each person do the clear and check sequence in that order. If stations don't beep repeat sequence for up to two more times. Have persons that have issues stand aside as they may need a new stick.

### Person 1 or 2 Make an announcement to this start group

In the event of a SI station failure in the field use the pre printed backup punch card that is printed on your course map. Only punch the map if a SI station in the field does not beep. If a backup punch is made notify the finish line SI download operator after crossing the finish line before downloading your stick.



Figure 8 Example of preprinted backup punch area on course map

The above figure is an example of the backup punch area that will be included on all the event maps.

## Step 3

When the start timer gives **the long beep start tone** send the current group to the next station (**hold back any persons that cannot get there SI stick to pass the clear and check sequence**). At that time inform net control of any persons that are having SI stick issues and request a replacement stick. If a replacement stick is issued make a note of the new number on the start list clip board and notify net control to pass on the new number to the finish line.

Work on correcting issues for persons that have SI stick issues. When there SI stick issue is corrected send them to the next station on the next available cycle long beep tone.

## Step 4

Repeat with next group starting at **step 1**.

## Chapter 5

# Start line operating procedure

### Overview

This is the final sequence in the start procedure, when this step is completed the competitor is officially on the course. **When this sequence starts it is T-5 minutes** before assigned start time.

### Example of start line area setup

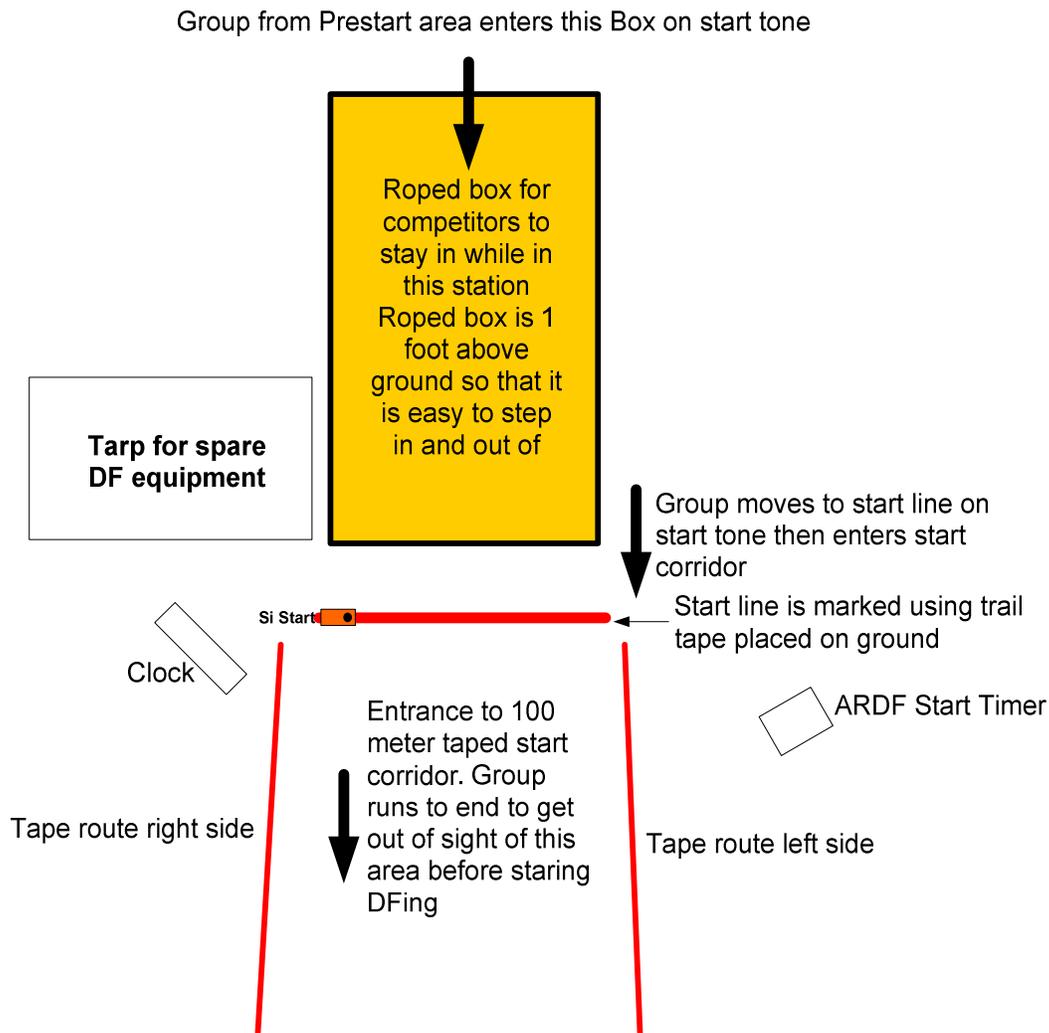


Figure 9 Start area layout

*Note: the width of the roped area should accommodate 10 persons and equipment.*

**Duration of operation for the start line area**

This area is in operation from the beginning of the event until the last runner crosses the start line.

However if any spare DF equipment is stashed at the start line one staff person must stay with the equipment until the last person crosses the finish line. At that time any spare equipment is transported to the finish line and this station is closed down.

**Minimum required staff**

3 persons

**Responsibilities for staff at this station are:**

Person 1

Provides radio communications person to provide communications for both this station and the pre-start 2 station and net control.

Person 2

Is a backup recorder for the SI equipment and records bib number and start time from the clock for each start. This person should only focus on this task.

Person 3

SI start station monitor and start supervisor. Ensures that there is beep for each start punch.

**Special equipment at this station is**

1. SI start station labeled start SI code 4 and control flag
2. Trail or flagging tape to mark start corridor ( 2 sides for 100 meters)
3. WB8WFK ARDF Start timer
4. GPS receiver with clock display or atomic clock with seconds
5. Communications equipment to talk with net control
6. Clip board with start group bib numbers, names and SI stick numbers
7. Setup graphic for this event day showing location of this station and layout
8. Pre impound blocking transmitter to prevent advance DFing as the competitors arrive

**Operating procedure for this area is as follows**

## Pre meet start Setup sequence

### Place the ARDF start timer in position



Figure 10 ARDF Start timer

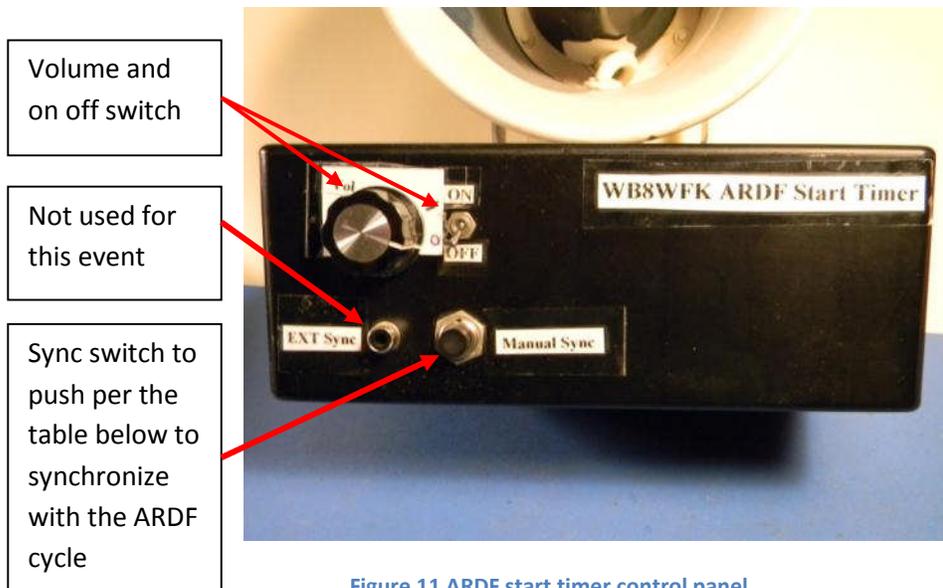


Figure 11 ARDF start timer control panel

### Setup step 1

Use the start area graphic for the event day or marked location to place the timer. The timer should be located so the audio start tone can be heard at pre-start staging area to indicate that the group moves into the start area when the long start tone occurs.

### Setup step 2

Power up the timer .

Set the power switch to the on position and the volume control to the black mark just above the zero position. This sets a good volume level and provides long battery life.

### **Setup step 3**

Synchronize the ARDF start timer using a GPS receiver or an atomic clock that displays seconds. When this step is completed the Olympic stile start tone will now occur on 5 minute intervals in synchronization with the transmitters and the sport ident timing systems.

Beeps will occur within the cycle to facilitate determining the current phase of an ARDF cycle.

To synchronize the timer, push and hold the manual sync switch Within 10 seconds of the beginning of the cycle and then release the push button switch at the beginning of a 5 minute cycle.

Refer to the cycle schedule excel spreadsheet figure below for the times to push the switch for synchronizing on 5 minute steps within an hour using either a GPS receiver or atomic clock that displays seconds.

Time (min)	Transmitter	Reset event (at start of cycle) GPS or atomic clock time
0	MOE (1)	push reset switch and release at once
1	MOI (2)	
2	MOS (3)	
3	MOH (4)	
4	MO5 (5)	
5	MOE (1)	at 4:50 push reset switch, release at 5
6	MOI (2)	
7	MOS (3)	
8	MOH (4)	
9	MO5 (5)	
10	MOE (1)	at 9:50 push reset switch, release at 10
11	MOI (2)	
12	MOS (3)	
13	MOH (4)	
14	MO5 (5)	
15	MOE (1)	at 14:50 push reset switch, release at 15
16	MOI (2)	
17	MOS (3)	
18	MOH (4)	
19	MO5 (5)	
20	MOE (1)	at 19:50 push reset switch, release at 20
21	MOI (2)	
22	MOS (3)	
23	MOH (4)	
24	MO5 (5)	
25	MOE (1)	at 24:50 push reset switch, release at 25
26	MOI (2)	
27	MOS (3)	
28	MOH (4)	
29	MO5 (5)	
30	MOE (1)	at 29:50 push reset switch, release at 30
31	MOI (2)	
32	MOS (3)	
33	MOH (4)	
34	MO5 (5)	
35	MOE (1)	at 34:50 push reset switch, release at 35
36	MOI (2)	
37	MOS (3)	
38	MOH (4)	
39	MO5 (5)	
40	MOE (1)	at 39:50 push reset switch, release at 40
41	MOI (2)	
42	MOS (3)	
43	MOH (4)	
44	MO5 (5)	
45	MOE (1)	at 44:50 push reset switch, release at 45
46	MOI (2)	
47	MOS (3)	
48	MOH (4)	
49	MO5 (5)	
50	MOE (1)	at 49:50 push reset switch, release at 50
51	MOI (2)	
52	MOS (3)	
53	MOH (4)	
54	MO5 (5)	
55	MOE (1)	at 54:50 push reset switch, release at 55
56	MOI (2)	
57	MOS (3)	
58	MOH (4)	
59	MO5 (5)	

Figure 12 ARDF cycle time chart with opportunities for synchronizing the Start timer with transmitters

### Set up the SI start station

The SI start station is located at the start line. The SI station is placed on a stand with a standard orienteering flag attached to it.



Figure 13 SI Start station

**Verify that the station is marked START and has SI code 4 marked on it.**

All runners must punch the start station and their clock begins as soon as the station beeps.

Also install a GPS or atomic clock near the station that displays seconds. A recorder will record all bib numbers and the start times as a back up to the sport indent system.

It is important that the clock and runners at the SI start station are both visible to the recorder person.

Before the SI start station was issued to the start team it would have been tested using the SI setup procedure.

### Set up the start corridor

Using trail or flagging tape establish and tape the start corridor. Each side should be marked for ~ 100 meters length. The minimum width of the corridor is 10 feet. The maximum width of the corridor is should not exceed 20 feet. It is desired that the end of the corridor is obscured from the start and other staging stations.

## Operations sequence for start station

### Pre impound

**Install and active the beacon transmitter 10 minuets before the bus arrive. Turn off the beacon as soon as receiver impound is complete.**

### Step 1

Net control announces that the starting sequence has started. Starting begins on five minute cycles and 15 minutes after the announcement is made the first start group will arrive at this station.

### Step 2

A group enters this station from the previous station when the long tone sounds on the ARDF timer. This group will be at this station for a five minute period.

Operational staff will make the below announcements after a group enters this station.

#### Announcement 1

Indicate that any spare equipment you want held at the start line for yourself or your team can now be placed in the designated marked area and you may or a team member may return later from the course to retrieve it if needed. Your equipment will be relocated to the finish area when the last person crosses the finish line and it can be retrieved there if not used.

#### Announcement 2

You will start when the long Olympic style start tone occurs

#### Announcement 3

Indicate that all runners must punch the SI start station when they start and the station must beep before proceeding. If for some reason the station does not beep remove the SI stick and try one more time.

- If you cannot get a SI start station beep to occur steep aside and stand by the station. This will allow others in the start line to proceed onto the course.
- Do not proceed onto the course until you receive assistance from the start line staff. You may be assigned a new start time and a new SI stick.

**Announcement 4**

Your course time begins when you insert your SI stick into the start station and it beeps. Line up in single file to be ready to punch the start station. **You are not on the clock when the Olympic tone occurs.**

**Announcement 5**

Runners cannot start Dfing until they reach the end of the 100 meter taped start corridor. However you can turn on your receiver when the start tone occurs and adjust it as needed.

**Step 3**

When the long Olympic style start tone occurs:

All runners proceeds to the SI start station and inserts there SI sticks and if the SI station beeps proceed into the start corridor to begin their course.

**One event staff person is assigned to have complete focus on monitoring punching at the start station and provide assistance.** This person will have runners with start problems stand aside and will provide assistance as soon as the current start group departs. A new start time will be assigned.

The recorder person notes the bib numbers and start times of all runners as they depart the SI start station and enters the start corridor.

As soon as this group finishes departing the communications person reports the numbers and start times to net control. The recorder keeps a paper copy on their clip board to turn into the finish line team after the last start occurs.

***Unlikely event, but needs described in case of occurrence***

If there are any start issues with SI stacks the bib number is reported to net control. Also indicate to net control if that bib number will be assigned to a new start time or place a request for a replacement SI stick. In the case of a loaner stick the stick will be exchanged. In the case of an issue with a personal owned stick, the runner will need to check out a loaner stick and agree to the rental fee.

**Step 4**

Repeat starting at **STEP 2** until all start group are sequenced out unto the course.

**Step 5**

Begin Start line shut down sequence.

If no spare equipment is in the designated holding area than the entire satiation can be taken down and all equipment taken to the finish area. Turn in SI stations, start timer and paperwork at the finish area.

If spare equipment is present, take down all other equipment and keep a communications parson on station to watch the receivers. As soon as the last person crosses the finish line (announced by net control) request assistance in transporting the receivers to the finish area so that owners can retrieve them.

# Reference Figures

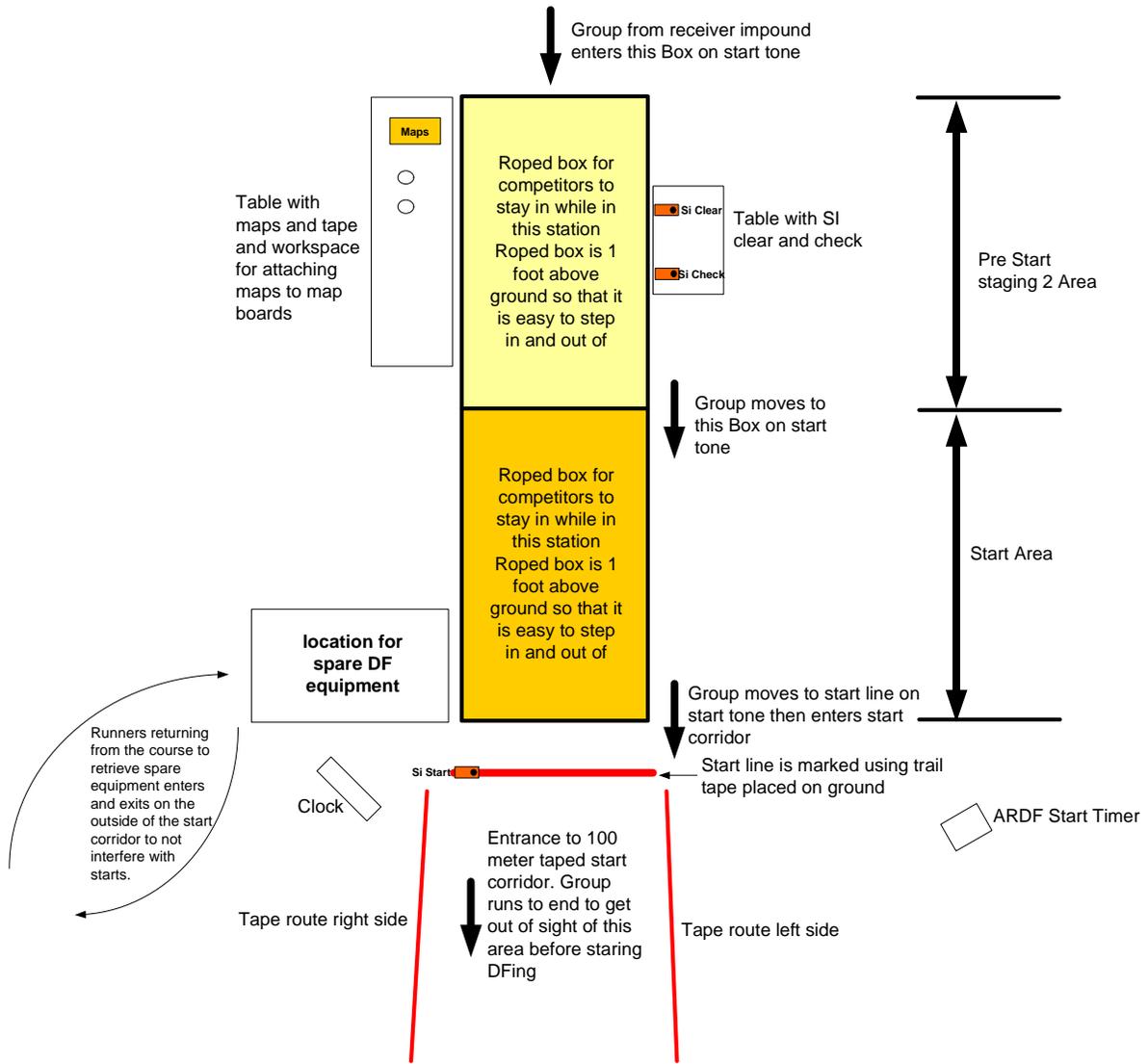


Figure 14 Prestart 2 and start area

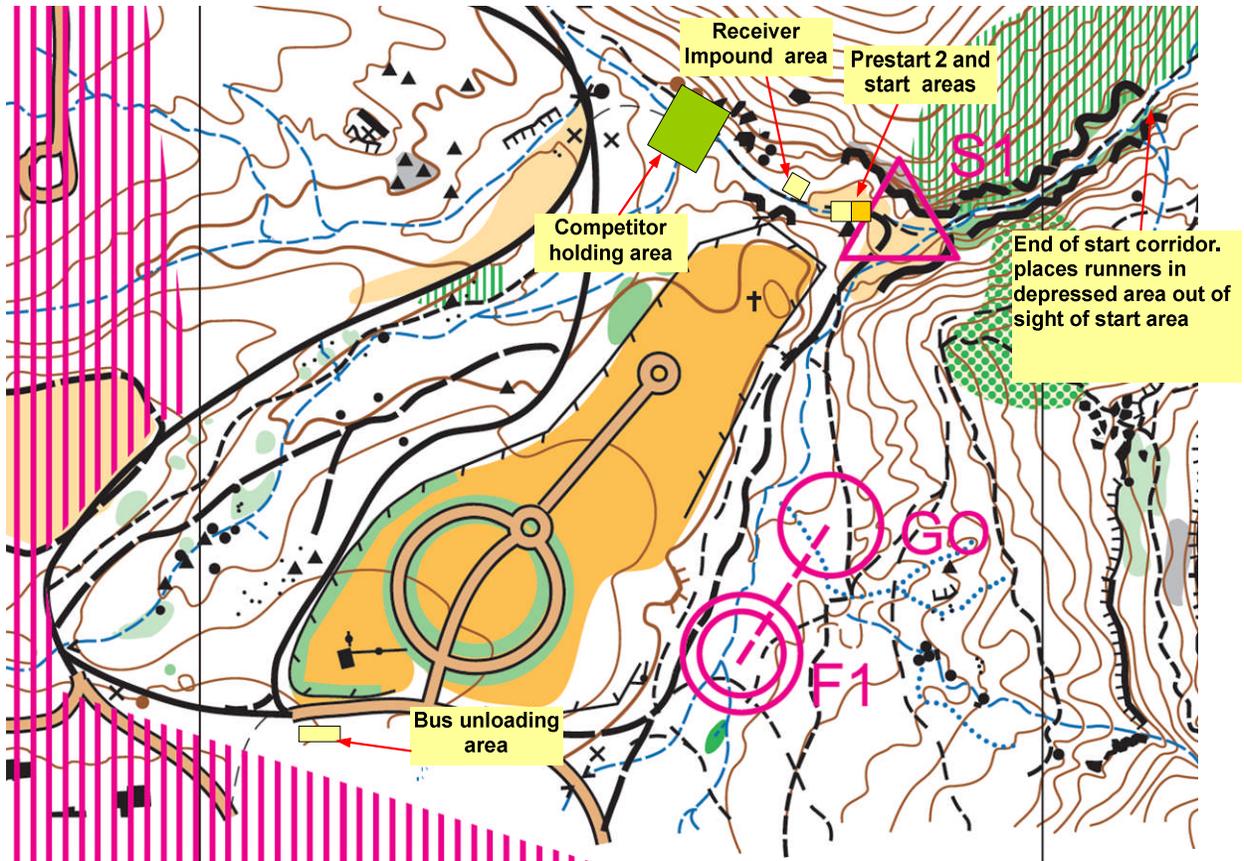


Figure 15 Day one staging areas (NMO map section WB8WFK graphic)

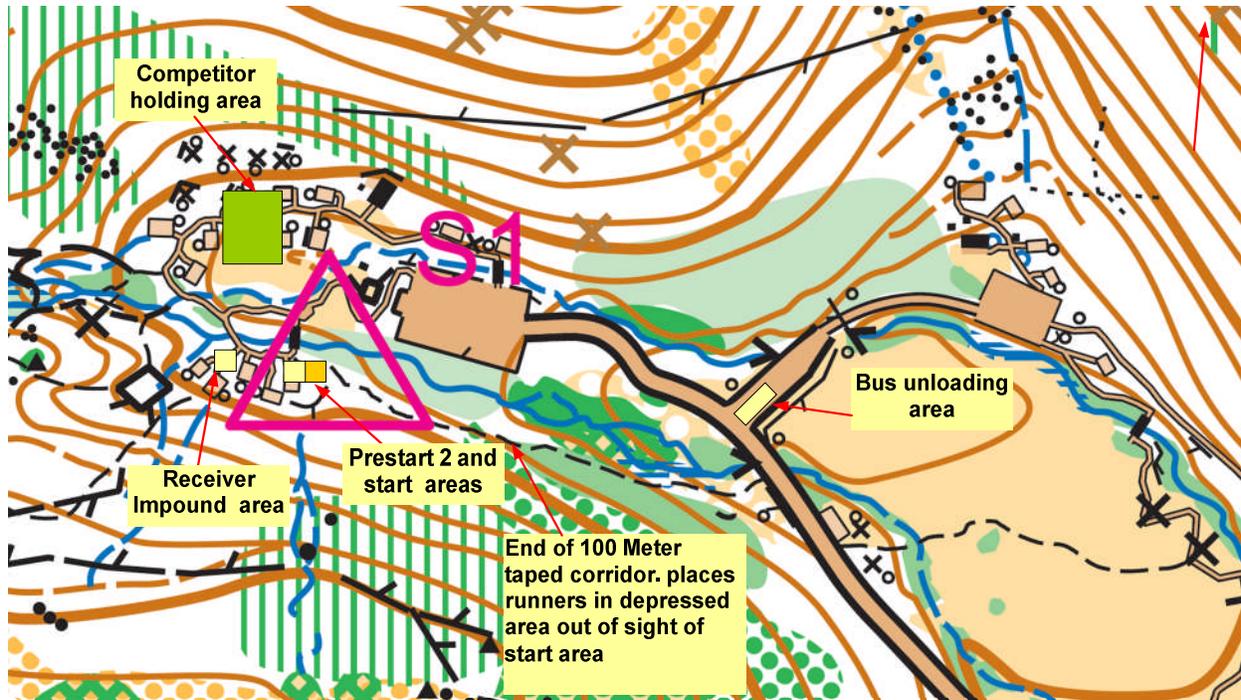


Figure 16 Day 2 staging areas (NMO map section WB8WFK graphic)

The two above figures give guidance on how to design the event staging areas for the starting sequence. The key point to remember is to prevent competitors waiting to begin the start sequence or any competitors that are in the process of the 15 minute start sequence for being able to view any activity at the end of the 100 meter start corridor. In these example competitors that are in the holding area run ~ 110 meters from that area to the receiver impound area to begin the 15 minute start sequence when instructed to start.

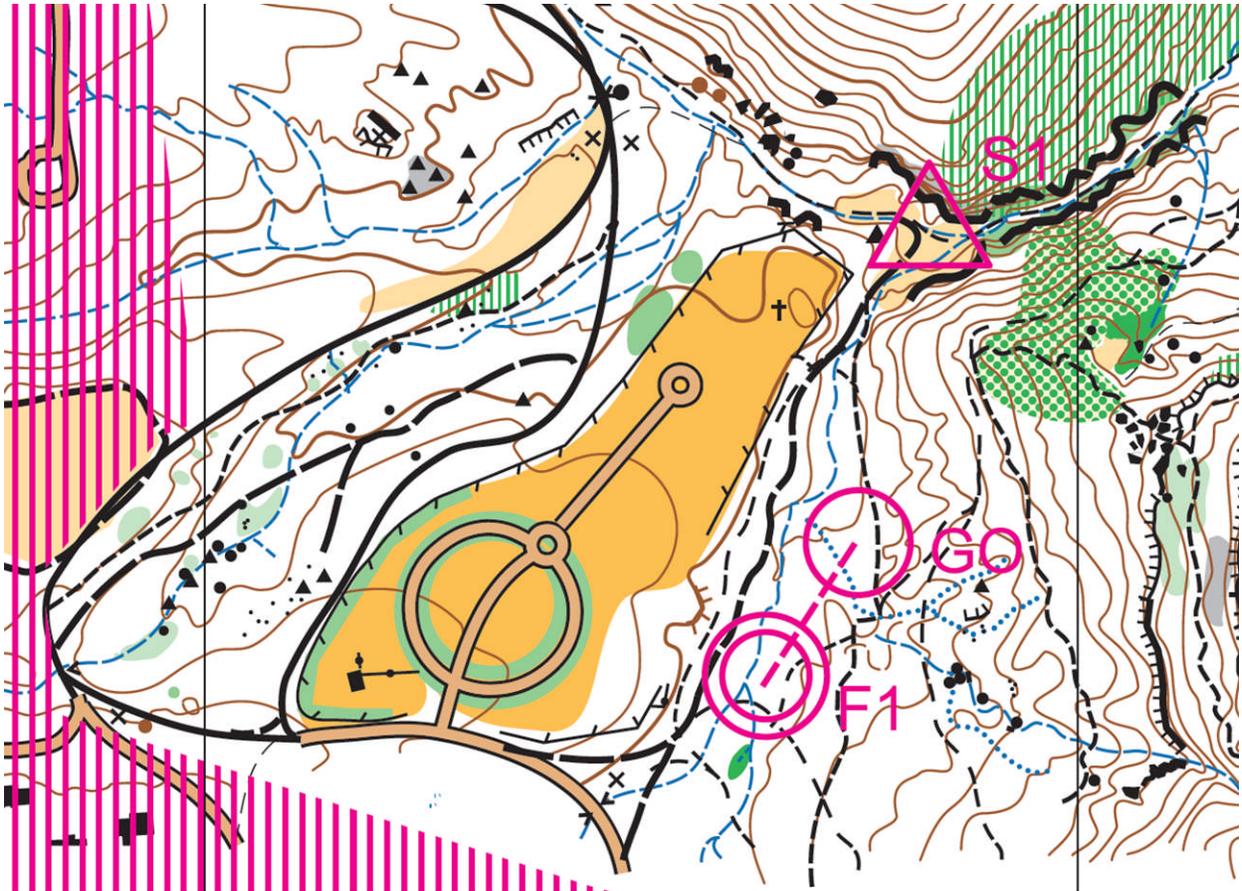


Figure 17 Day one without graphics

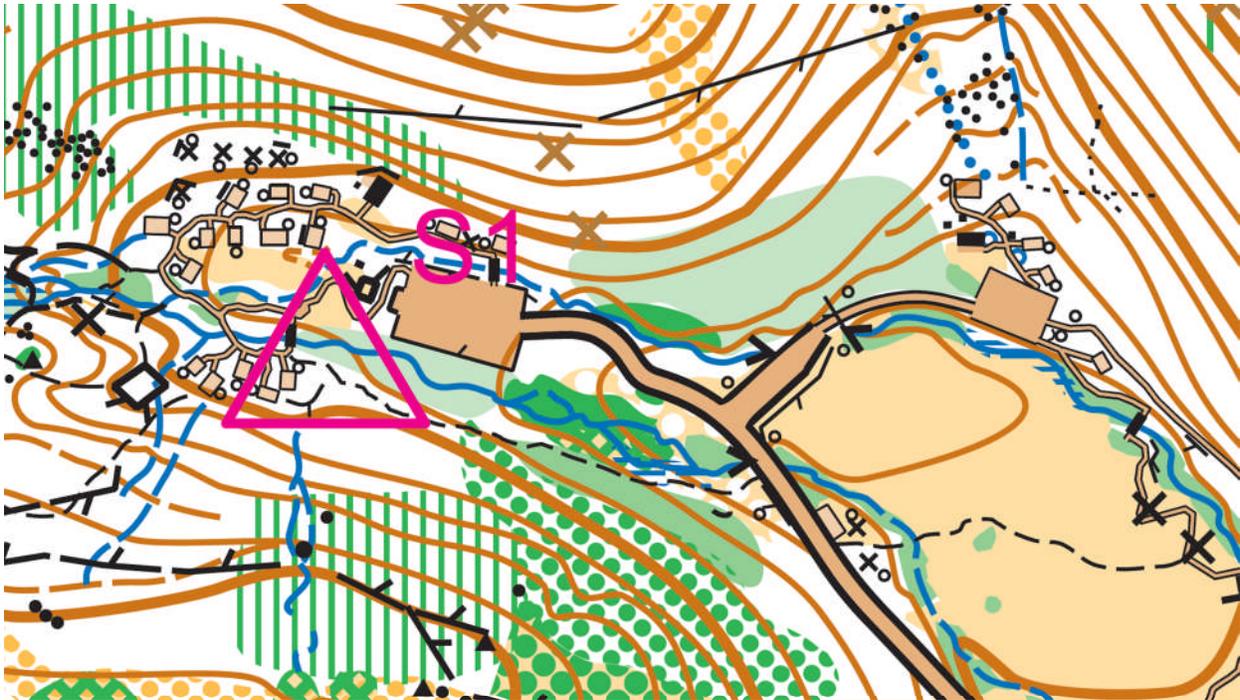


Figure 18 Day 2 without graphics