

# BAA Boston Marathon Amateur Radio Communications

## START

### Communications Plan



*Presented by the BAA Communications Steering Committee*

*Amateur Radio Leadership Team*

*2015*

## History

Date	Version	Description
Mar. 3, 2015	1.0	Released
Mar. 12, 2015	1.1	BAA Review
Mar. 24, 2015	1.2	Added assignments in appendix, removed assignments from position descriptions.
Mar. 25, 2015	1.2.1	Removed maps (to separate document); updated frequency assignments table
Mar. 27, 2015	1.2.2	Updated list of assignments and tactical IDs. Misc. formatting changes. Added commercial radio channels for all zones.
Mar. 29, 2015	1.2.3	Noted CTL's in bold text Improved headings for each assignment Added controlled net operating procedures
April 1, 2015	1.3	Initial Release to Volunteers
April 6, 2015	1.4	Moved assignments to separate spreadsheet

## Table of Contents

Subject	Page
Nomenclature	4
Meeting Location	6
Important Times	8
Lay of the Land	9
General Requirements for Volunteers	11
Assignment Overview	11
Assignment Details - Athlete's Village & NCOC	13
Assignment Details - Town Common	23
Assignment Details - State Park	27
Assignment Details - South Street	28
NCOC	29
Volunteer Communications Plan	31
Lost Communications	36
Appendix - Major Event Timeline	39
Appendix - Timelines for Assignments	41
Appendix - Commercial Radios	46
Appendix - RALLY Points	48

## Purpose and Audience

This document describes START, the teams involved and anticipated work flows.

Reading and understanding this START Communication Guide is essential to each and every communications volunteer. Know and understand how your individual contributions and teamwork fits into the big picture. A working understanding of all tasks increases your value to the overall operation.

Just remember: you are a Communicator first. Providing a vital communications link is your reason for being a member of a very large team. Your every effort to maintain this link, including proper equipment and maintaining a strict listening watch, is essential to success.

### Required Reading

*Amateur Radio at the BAA Boston Marathon: An Introduction*  
*Communication Standards*

### Optional Reading (mandatory for CTL's and Net Controllers)

*Downfield Safety Guide*  
*Decisions and Direction Policy*  
*Standards for Medical Issues and Environments*  
*Backup Medical Dispatch Communications Plan*  
*Boston Marathon Survival Guide*

## Introduction

With over 30,000 runners and many spectators, plus BAA staff, public safety, and security, managing START at the BAA Boston Marathon in Hopkinton is a complex task demanding of precise timing and, for our mission, flawless communications. When we say START we mean much more than the Starting Line. Getting to the line safely, beginning the event on time through its staged runner release, managing transportation, and a host of other duties compress into a short time frame over a fairly wide geographical footprint.

This document will describe START, from start to finish! We'll begin with some terms used throughout the text.

## Nomenclature

START	The entire complex in Hopkinton (parking lots, Starting Line, and Athlete's Village). <i>START is capitalized to avoid confusion with the Starting Line at the Town Common.</i>
Town Common	The Starting Line, Green, Media, Elite and VIP areas.
Corral	Staging areas for all runners (except Elite).
Athlete's Village	Includes the runner drop-off areas, runner support tents (including Medical), BAA Operations Centre, Public Safety Command Post, and the runner exit staging area.
South Street and State Park	Parking lots and central bus transportation loop locations.
Segment	Refers to a specific and named operational portion of the START complex (Athlete's Village, Town Common, ect).
Shadow/Escort	An Amateur Radio communications staff member who provides direct communications access to their assigned BAA manager
MEDICAL Sweep	A team of EMT's who provide emergency medical care to runners at START

Down-Course Safety	A team, consisting of 5 radio operators, who provide runner release clearance from the Starting Line to the first ½ mile of the race course.
BAA START Operations Center	A unified command and control for BAA race operations at START
BAA Boston Operations Center	A unified command and control for BAA race operations for the entire Marathon. The BAA Operations Center assists the BAA START Operations Center, but does not perform START management.
BAA Clay Operations Center	Hosts the dispatch center for COURSE and TRANSPORTATION.
Public Safety Operations Center	A unified command and control for any and all public safety issues at START
NCOC	The Amateur Radio Net Control and Operations Centre at START
SSC	The Start Segment Coordinator is responsible for all Amateur Radio operations at START and the primary point of contact for the BAA.
NCS	The Net Control station for START
NCO	Net Control Operator
NET	The Net Controller call sign for START
PROCEDURES	A special controller in the NCOC who handles various tasks and procedures in support of the NCO
CTL	Communications Team Lead
Safety Corridor	The first 800 meters of the race course
UCC	Unified Command Center (public safety)

## Meeting Location

Notwithstanding your assignment, all START volunteers must report to the Information Tent located at the Town Common by no later than 0500 (see maps in Appendix). For early arrivers, staff will be on site to greet you beginning at 0445. If you arrive later than 0515 you may miss critical briefings (there will be two). You may also miss distribution of credentials and your identifying jacket. Meeting attendance is mandatory for service at the Marathon. If you don't make the meeting, the secure area may close and you will not be granted access. Security is tight. There will be no exceptions. Make every human effort possible to be there, on time.

Security sweeps and road closures will begin at 0600 in the Town Common area.

## Talk-In

The primary repeater, HOTEL 5, (see ICS 205 frequency list) is monitored for units needing talk-in or to report late status.

## Parking

ALL volunteers are urged to park at the Hopkinton State Park. A shuttle bus system will begin operation at 0430 and will run continuously between the State Park and the corner of Route 85 and Route 135, near the Town Common. There will be NO PARKING downtown - at any location - after 0600. All vehicles will be at risk of towing. This information is direct from the Hopkinton PD.

As an alternative, those volunteers wishing to drive to the briefing may find parking spots near the Town Common. It is permitted to park, attend the briefing, and then drive to the State Park and take the shuttle back to the Town Common.

However, certain volunteers should go directly to the State Park at 0430 as the transition time between the close of the morning briefing and the start of duty is immediate. These include the NCO, PROCEDURES, AVC, HTCC and UCC.

## Security

As has been the case last year, security in the START area will be tight. You are expected to wear your volunteer jacket and keep your credentials (you may have more than one) in plain view.

**From the BAA as of 3/25/2015:**

- Backpacks are NOT permitted, not even the “transparent” kind.
- Small “fanny packs” are permitted
- A radio vest is permitted.

You may carry the equipment you will need on your belt and, if you have one, your vest. By volunteering at START, you must trade-off certain conveniences for the sake of the security imposed. There will be plenty of coffee and other beverages and snacks available for all volunteers, except those at the remote parking lots, so there’s no need to carry lots of food. A spare battery, and any personal items such as medicines, keys, your mobile phone and some cash can easily fit in your pockets and a small fanny pack.

See the BAA’s guidelines here:

[www.baa.org/races/boston-marathon/event-information/volunteer-information/volunteer-baggage-policy.aspx](http://www.baa.org/races/boston-marathon/event-information/volunteer-information/volunteer-baggage-policy.aspx)

## Media Inquiries

Questions about the race - runner results or issues, incidents around the course, security policies - should be directed to BAA Media Relations. Volunteers should simply tell the media representative to contact BAA Media Relations.

The BAA is happy for volunteers to talk about their personal volunteer experiences with the media. Share what you do, what you like about what you do, and why you do it.

## Briefing

After checking in at the Information Tent, meeting other volunteers and your team leader, an all hands briefing will be held with the SSC and BAA officials. Following this, applicable volunteers will receive a commercial radio. You will then break out by teams to discuss issues specific to your team assignment. At no later than 0545 NCOC personnel will depart to the Athlete’s Village for an 0600 activation. The SOUTH STREET and STATE PARK teams will depart for their assignments, as will the UCC. Other volunteers will meet with their shadows and take their assigned positions. When on station, each unit will check in to the NCOC.



## Arrival and Briefing Timeline

Time	Event
0445-0500	Amateur Radio operators arrive at Info Tent on Town Common
0500	Team meeting
0540	Credentials, Jackets, and Radios
0545	NCO, PROCEDURES, SSC and AVC depart for Athlete's Village  UCC, STATE PARK and SOUTH STREET units depart for their assignments.  All other units proceed to shadows or assigned locations
0600	NCOC Opens; UCC Opens; Units begin reporting on station
0700	Hopkinton roads close
1130	Last runners clear the start line
1140	Sandwiches delivered to Village
1200	Sandwiches delivered to Town Common

*See Appendix for a comprehensive timeline list.*

## Building a Better Programme

As you know, the entire communications effort this year is the result of a complete top-to-bottom review of previous programmes. Although we have already learned a great deal about this complex event, our real education will be handed to us on April 20th, 2015.

Each and every one of you are contributors to the “deliverables” of our communications services, and its continued evolution and improvement. On April 20th, take notes. Consider what works, what needs improving, and why. Ask questions of your BAA representatives and other volunteers. Deepen your own understanding of not your area of service, and consider how it fits into the larger logistical package. After the event I invite you to write me with your thoughts, suggestions, and of course any incidents that you feel I should know about. What you share will remain confidential with me.

This “after-action” information is but one way to grow the programme. The other is to join the START team in a conference call the week following this Marathon, where we can discuss and,

as they say in ICS lingo, “hot wash” the event. An invitation and proposed meeting dates and times will be sent soon.

The BAA’s leadership team has raised the bar for all of us. Now it’s your opportunity to help lift it even higher.

## Lay of the Land

Refer to the Map Supplement which describe the START complex.



*RP1 and RP2 are RALLY points. See Appendix.*

## Hopkinton State Park

Hopkinton State Park is located about 2 miles north of the starting line and is used for early volunteer parking, spectator parking, and as a runner drop off area.

Volunteers will be dropped off at Route 85 and Route 135 near the Town Common.

Shuttle buses will deliver spectators to and from the town center; corner of Cedar St. (Rt. 85) & A St.

Buses also drop runners at both the front and rear areas of the Athlete’s Village complex. Services will change according to a set schedule (see Appendix).

### **South St.**

South Street is another satellite parking and drop off area located 2 miles south west of the starting line. Shuttle buses take people to and from the town center; corner of W. Main St. & Pleasant St. Buses also drop runners at both the front and rear areas of the Athlete's Village complex.

### **Athlete's Village**

The Athlete's Village is a staging area where runners gather prior to the event start. It is primarily within the property of the Hopkinton High School and Middle School and served by "satellite" parking lots and a bus transportation system supporting the movement of runners.

This secure area contains the control point for all Amateur Radio communications operations at START.

### **Town Common**

The Town Common is the last step to and including the Start Line for the BAA Boston Marathon. Runners arrive within this area, are staged in a "corral", and are released on the race course in waves of 7,000. Smaller numbers of runners are released according to category, such as elite, disabled, wheelchairs, etc.

### **Downfield Safety Corridor**

The first ½ mile from the starting line. The Downfield Safety team operates within this area and assists with the safe execution of runner release.

## General Goals and Requirements for Communications Volunteers

- Provide the BAA with always-available communications between its management and staff leaders in key locations
- Assist the BAA with the safe and orderly movement of runners from the Parking Lots, to the Athlete's Village and on to the Corrals and Starting Line
- Provide the BAA an accurate and reliable status of the course from the Starting Line to the first ½ mile, assuring that the event may safely commence (Downfield Safety)
- Provide immediate communications in the event of a medical emergency, wherever we are stationed and in whatever capacity, to summon medical assistance should public safety or designated and sanctioned medical teams not be within reach
- Organize, deploy, and act as directed by BAA and team leadership
- Provide communications to assist public safety in the event of a Course Disruption event
- Due to the high presence of media, the BAA has requested that all START volunteers be professionally attired with black pants (EMT/Cargo Pants are recommended) and a white shirt. All volunteers must wear their BAA provided jacket and credentials in plain view.

## Assignment Overview

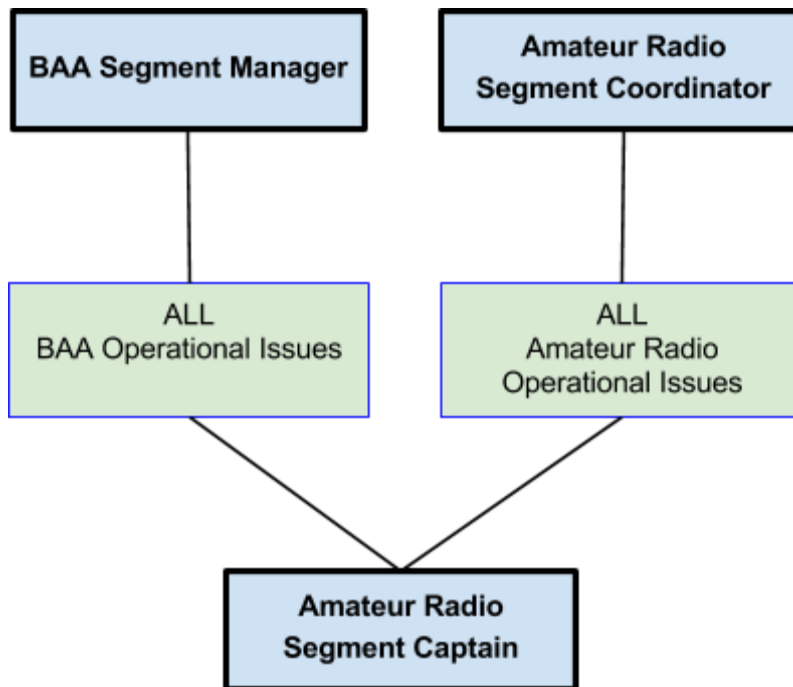
The following section provides information on the Amateur Radio management structure and details for each communications assignment.

START is comprised of seven segments. Each segment is locally managed by a Communications Team Leader (CTL). CTL's report to the START Segment Coordinator (see Management at START, below).

1. Net Control Operations Centre (NCOC)
2. Medical Sweep
3. Athlete's Village
4. Town Common / Starting Line
5. Down-Course Safety Team
6. Hopkinton State Park (parking)
7. South Street (parking)

## Amateur Radio Management at START

The Start Segment Coordinator (SSC) is a member of the BAA's Communications Steering Committee and has overall responsibility for Amateur Radio operations at START. Tasks and responsibilities are delegated by the SSC to a team of Communications Team Leaders (CTL) who lead each of their respective volunteer segments. Each CTL reports to the SSC for Amateur Radio issues and to their assigned BAA representative for BAA matters. See the Appendix for a list of tactical call signs for CTL's at START.



***Chain of Command: Amateur Radio CTL***

## General CTL Responsibilities

- Maintenance of an excellent working relationship and providing communications services to the BAA official at their assigned Segment location;
- Execution of this Communications Plan for their team as well as themselves
- Personal and team safety;
- Prompt and appropriate response to any medical or public safety emergency in accordance with promulgated policy;
- Maintaining a strict listening watch on the NCS channel as well as task specific simplex channel;
- Supporting and managing their team members;
- Executing any tasks, requests or directives from BAA or Amateur Radio management;

## Assignment Details - Athlete's Village & NCOC

### SSC - START SEGMENT COORDINATOR

Location: NCOC (Athlete's Village)

Channels monitored: All

The Start Segment Coordinator is responsible for the conduct of all START Amateur Radio operations as well as serving as the primary point of contact for BAA management.

### Responsibilities

- Recruits, appoints, assigns all communications volunteers at START in conjunction with the BAA's Communications Steering Committee
- Creates the Communications Plan and provides management support of this plan on event day
- Serves as the on-site authority for all Amateur Radio operations, decisions and direction
- Serves as the primary point-of-contact for BAA START management concerning Amateur Radio communications or any other issue
- Serves as the primary point-of-contact between each CTL and BAA START management
- Assists each CTL with the furtherance of their individual missions
- Assures that all BAA policies are followed, specific to all communications volunteers
- Assures that proper communications procedures are followed
- Supports and directly manages the NCS operation
- Maintains overall situational awareness and assures that this information flows efficiently to the appropriate BAA management and that it is accurate and relevant
- Along with situational awareness, maintains a proactive and anticipatory perspective to prevent issues before they occur
- Assists the BAA and Public Safety in any Course Disruption
- Arbitrates any disputes between communications volunteers and/or BAA
- Has the authority to assign, deploy and manage all Amateur Radio resources in accordance with this Communications Plan
- Has the authority to assign, deploy and manage all Amateur Radio resources in the event of any unplanned contingency and may do whatever is needed to assure team and event safety within the Amateur Radio communications domain

## NET

Location: NCOC (Athlete's Village)

Channels monitored: All

The Net Controller sits at the hub of all Amateur Radio communications at START

### **Skills and Responsibilities**

- Possesses an expert-level understanding of this START Communications Plan
- Has an expert-level competence in the Communications Standards
- Provides for the orderly use of limited communications resources
- Maintains focus upon communications and situational awareness, relying upon the PROCEDURES Controller for specific task management and fulfillment (see PROCEDURES Controller section)
- Maintains a strict listening watch on assigned channels at all times (including, where possible, all SIMPLEX channels)
- Provides priority handling for all Medical services requests according to established procedures set forth in this document. Also, refer to Communications Standards, Backup Medical Dispatch Plan, and Medical Issues and Environments
- Applies the communications standards established for general and specific-instance use (such as a Medical request)
- Assists any field unit in maintaining the aforementioned standards
- Assists the Segment Coordinator and other units in the maintenance of situational awareness for BAA
- Creates documented requests for (a) Medical Assistance and (b) General Issue Resolution, and forwards these to the PROCEDURES Controller for handling
- Maintains a full-time direct connection to each CTL
- Is aware of, and follows, all events at START having time-specific criticality
- Defers to the Amateur Radio Communications Manager any questions related to Decision and Direction of the Amateur Radio network
- Consults the Amateur Radio Communications Manager on any questions or concerns related to Decision and Direction where these have BAA implications
- Follows the direction of the Amateur Radio Communications Manager or, in their absence, any of the BAA START Management Team listed in this plan

## PROCEDURES

Location: NCOC (Athlete's Village)

Channels monitored: All

The PROCEDURES Controller is a critical resource in the NCS. PROCEDURES performs the “footwork” needed to fulfill any request or issue that comes to/from NET and owns each issue to its resolution. This frees the NCO, allowing a focus on communications.

### Responsibilities

- Maintains and operates as directed a full-time link to the State Police Command Post at Athlete's Village (CP1)
- Maintains and operates as directed a full-time link to MEMA Medical Operations
- Maintains and operates as directed a full-time link to Hopkinton public safety (TBD)
- Maintains and operates as directed a full-time link to the BAA Operations Centre in Boston
- Maintains and operates as directed a full-time link to the CLAY Communications Centre
- Efficiently forwards, tracks, and closes all EMS or public safety requests which are received through NET
- Efficiently forwards, tracks, and closes all and all other issues requests which are received through NET
- Assists the START Segment Coordinator in the maintenance of status boards
- Assures that the NET controller is not distracted by tasks other than communications
- Maintains a communications log for all major events

**Note:** NET and PROCEDURES should be cross-trained, allowing for duty relief. The SSC may temporarily relieve either position as needed.

See the NCOC section for a full description of this resource.



## **UCC**

Location: Unified Command Centre, Hopkinton PD Headquarters

Channels monitored: HOTEL 5 (NET), HOTEL 6

### **Responsibilities**

- UCC works in conjunction with Matt West (BAA).
- UCC provides an immediate and effective link between public safety and all Amateur Radio assets.
- UCC conducts a listening watch on the primary NCS repeater and simplex channel HOTEL 6. UCC will be assigned a commercial radio and will monitor a channel to be determined on event day.
- UCC will communicate to and through the NCS. More sensitive communications will be conducted on HOTEL 6, through the Commercial Radio System, or by mobile phone. UCC is an integral member of the Downfield Safety team. UCC operations related to this team are described on the Downfield Safety Guide.

Security-related and police requests will be routed to UCC through PROCEDURES via HOTEL 5 or HOTEL 6. In the event of a course disruption, all command and control directives are transmitted by UCC.

In the event UCC receives an EMS request, it will be routed to MEMA Medical Operations via Commercial Radio (see Appendix for procedures).

In the event UCC wishes to relay an EMS request, it will be routed to the NCOC via HOTEL 5 which allows for tracking by PROCEDURES.

### **MEDICAL 1**

Location: **Shadow to Garth Savidge, Athlete's Village Medical Team Leader**

Channels monitored: HOTEL 5 (NET), H7 (MED)

Mr. Savidge will be located in one of the two Main Tents

#### **Responsibilities**

- MEDICAL 1 is the CTL for this team
- Provide communications support for Mr. Savidge
- Maintain listening watch on assigned channels and commercial radio
- Remain with Mr. Savidge, even if he travels

### **MEDICAL 2**

Location: Medical Tent (whichever is not occupied by Mr. Savidge)

Channels monitored: HOTEL 5 (NET), H7 (MED)

#### **Responsibilities**

- MEDICAL 2 provides fixed communications support for the second Medical tent
- Provide communications support for Medical team
- Maintain listening watch on assigned channels and commercial radio

### **MEDICAL [3-5]**

Location: Medical Tent as fixed base with sweep teams deployed with runners

Channels monitored: HOTEL 5 (NET), H7 (MED)

#### **Responsibilities**

- MEDICAL [3-5] accompanies each Medical Sweep (walking) team from Athlete's Village to the Runner Corrals once runners are staged for a release
- Provide communications support for Medical Sweep team
- Provide backup EMS dispatch should commercial radio fail
- You may be asked to monitor/operate commercial radio

### ***General overview and Responsibilities***

The MEDICAL SWEEP team consists of a BAA manager and 15 medical professionals who provide first-responder services to all runners and staff at START. These teams occupy two MEDICAL tents at the Athlete's Village and provide EMS coverage between the Village and the Starting Line at the Town Common as runners stage for each event start.

- Two tents, with 3 medical staff each
- Three walking teams with 3 medical staff per team

MEDICAL SWEEP requires a trained Amateur Radio communicator to accompany each of the three teams and to occupy each of the two tents. The MEDICAL SWEEP also serves as a shadow to the Athlete's Village BAA Medical Team Leader.

The commercial radio system is used for primary communications among the BAA's Medical Sweep team.

#### **Responsibilities:**

- Assist teams in maintaining a listening watch on the commercial radio system as requested
- Provide immediate and efficient communications between Medical Sweep teams should the commercial radio system be unavailable, or as requested
- Supplement the EMS dispatch system as requested or as circumstances require (such as in the case of a Mass Casualty Incident (MCI))
- Provide immediate communications, through the NCOC, for any BAA official requiring contact with any other BAA official located at any Marathon position
- Provide situational awareness information to the NCOC on a regular basis
- Report relevant situational awareness information to the Amateur Radio communicator's assigned team
- Any other duty as requested by an BAA official or through the NCOC

## **AVC**

Location: **Shadow to Joe Robertson, BAA Athlete's Village Coordinator**

Channels monitored: HOTEL 5 (NET), HOTEL 4 (tactical)

This role provides the Athlete's Village Coordinator with direct access to all Athlete's Village assets through the Amateur Radio communications network. The AVC communicates through the NCOG and may request incidental tactical communications be conducted on Simplex Channel HOTEL 4.

The AVC is also designated as the NETWORKS Controller providing technical support for the communications infrastructure at the NCS.

### **Responsibilities**

- Assist village coordinator with any and all communications to/from staff
- Direct team volunteers as necessary in order that this Communications Plan is carried out
- Direct any and all public safety requests to NCS for efficient handling. All communicators are trained to make such requests directly to NCS and need not first communicate with the AVC.
- Communicate regularly through the NCS any situational awareness information relevant to START operations
- Provide village coordinator with any situational awareness information via NCS relevant to START operations
- Relay any and all PA communications (announcements) to each of the two PA positions within the Athlete's Village
- Relay any and all messages, requests, or commands from BAA Management
- Comply with the directives of SEGMENT COORDINATOR in normal operations.  
Comply with the directives of SP COMMAND during a Course Disruption event

## **PA 1**

Location: With PA announcer

Channels monitored: HOTEL 5 (NET), HOTEL 4 (tactical)

Additional equipment: Field glasses / binoculars

The PA 1 assignment should establish an effective working rapport with the PA Announcer. Ability to remain in one place for several hours (the PA Announcer is approximately 65' above the crowd on a mobile platform) is necessary. Given proximity to high external noise, a suitable in-the-ear headphone is vital.

Given height above terrain, PA 1 may elect to use field glasses for routine surveillance of the complex and to provide situational awareness to AVC or, at their discretion, directly to the SSC. In a Course Disruption event, such surveillance and situational awareness will be potentially valuable and should be routed directly to SSC or UCC.

### **Responsibilities**

- Provide accurate messaging text for the PA Announcer as directed by AVC
- Provide accurate messaging text for the PA Announcer as directed by SP COMMAND or SEGMENT COORDINATOR in the event of a Course Disruption event
- Other duties as requested by AVC or SSC
- Provide situational awareness by virtue of superior venue visibility

See PA Timeline in the Appendix.

## **PA 2**

Location: With the PA Announcer at the overflow/release lot (see Appendix for location on map)

Channels monitored: NET, HOTEL 4 (tactical)

The PA 2 assignment should establish an effective working rapport with the PA Announcer. Ability to remain in one place for several hours is necessary. Given proximity to high external noise, a suitable in-the-ear headphone is vital.

### **Responsibilities**

- Provide accurate messaging text for the PA Announcer as directed by ACV
- Provide accurate messaging text for the PA Announcer as directed by AVC, SSC or UCC in the event of a Course Disruption event

- Other duties as requested by AVC or SSC
- Provide situational awareness to AVC or SSC
- Report release of waves from the Village (alert the team down course)
- Communicate for the exit marshals as needed
- Communicate with corrals when runners are about to be released, to ensure chute is clear/volunteers are ready to receive them.

See PA Timeline in the Appendix.

### **FRONT DROP**

Location: BAA Bus Drop (buses from Boston) in front of High School. There are two separate FRONT DROP locations. Work with on-site volunteers for best positioning.  
Channels monitored: HOTEL 5 (NET)

#### **Responsibilities**

- Assist BAA volunteers with any and all communications as requested
- Provide busing situational awareness to PARK 1 or SOUTH 1 and NCOC as requested
- Report status of arriving and departing buses to PARK 1 or SOUTH 1 and NCOC as requested
- Provide situational awareness to NCOC

See Appendix for Drops Timeline

### **REAR DROP**

Location: BAA Bus Drop (buses from Boston) area in rear of High School  
Channels monitored: HOTEL 5 (NET)

#### **Responsibilities**

- Assist BAA volunteers with any and all communications as requested
- Provide busing situational awareness to PARK 1 or SOUTH 1 and NCOC as requested
- Report status of arriving and departing buses to PARK 1 or SOUTH 1 and NCOC as requested
- Provide situational awareness to NCOC

See Appendix for Drops Timeline

**BOOTH ALPHA**

Location: Middle School INFO Booth

Channels monitored: HOTEL 5 (NET)

**BOOTH BRAVO**

Location: High School INFO Booth

Channels monitored: HOTEL 5 (NET)

**Responsibilities**

- Assist BAA volunteers with any and all communications as requested
- INFO booths provide information to participants. Communications assets are used to forward questions and information to and from BAA staff.
- Provide situational awareness to NCOC

**ROVER**

Location: Athlete's Village; Town Common (as assigned)

Channels monitored: HOTEL 5 (NET)

A ROVER unit provides additional volunteer visibility and situational awareness. A ROVER may be asked to temporarily relieve another volunteer or perform a task.

**Responsibilities**

- ROVER will move about the assigned area to provide enhanced situational awareness and may be asked to provide operator relief

## Assignment Details - Town Common

### HTCC

Location: **Shadow to Andy Deschenes, Hopkinton Operations Director**

Channels monitored: HOTEL 5 (NET), HOTEL 7 during release operations

### Responsibilities

- Key decision-maker for all START operations
- High-level inquiries and tasks
- Performs runner release in conjunction with Downfield Safety Team and NCOC
- Provide all communications and logistical support

### RACE DIRECTOR

Location: Shadow to Dave McGillivray, Race Director; at Hopkinton Common

Channels monitored: HOTEL 5 (NET)

### Responsibilities

- Race director for the BAA Boston Marathon
- Provide all communications and logistical support until Mr. McGillivray has left the START

### TCA

Location: Shadow to the announcer, located at Collela's Market

Channels monitored: HOTEL 5 (NET)

### Responsibilities

- Report runner flow to NCS/HTCC as requested
- Pass PA messaging to Announcer as requested
- Maintain situational awareness
- Assist Announcer and other BAA staff with communications

See Appendix for TCA Timeline



### **CAM**

Location: Shadow to Bob Barnaby, Corral Area Manager, at Colella's Market.

Channels monitored: HOTEL 5 (NET)

#### **Responsibilities**

- Provide situational awareness to OPS and SEGMENT COORDINATOR
- Provide Bob Barnaby with status of Corral loading.
- Communicate with PA2 at Release Lot to confirm status of Runner Release and Loading

### **MONITOR**

Location: Shadow to Bruce Sather, Corral Monitor

Channels monitored: NET

#### **Responsibilities**

- Provide situational awareness to OPS and SEGMENT COORDINATOR
- Provide Bob Barnaby with status of Corral loading.

See Corral Timeline in Appendix.

### **CENTER SCHOOL**

Location: Shadow to Alex Danahy, at Center School

Channels monitored: HOTEL 5 (NET)

#### **Responsibilities**

- Provide situational awareness to OPS and SEGMENT COORDINATOR
- Communicate the release of WC athletes from the school to the Start Line

See Appendix for Center School Timeline

## **ELITE**

Location: Shadow to Mary Jo Lefreniere, at Korean Church

Channels monitored: HOTEL 5 (NET)

### **Responsibilities**

- Provide communications support for Mary Jo Lefreniere
- Provide situational awareness to OPS and SEGMENT COORDINATOR
- Communicate release of Elite athletes to the Start Line

See Appendix for Elite Runner Timeline

## **VEHICLES**

Location: **Shadow to Ron Kramer, start vehicles, at Ray St.**

Channels monitored: HOTEL 5 (NET)

### **Responsibilities**

- Provide communications support for Ron Kramer
- Appraise Ron Kramer of overall (entire) course status
- Provide situational awareness to OPS and SEGMENT COORDINATOR
- Communicate with Start Line regarding vehicle placement

See Appendix for Vehicles Timeline

## **VOLUNTEER**

Location: Shadow to Dottie Ferriter-Wallace, Volunteer Coordinator

Channels monitored: HOTEL 5 (NET)

### **Responsibilities**

- Provide communications support for Dottie Ferriter-Wallace
- Keep Dottie apprised of any volunteer-related issues (injury, change of assignment, etc, as provided through the NCOC
- Provide situational awareness to OPS and SEGMENT COORDINATOR

### **BOOTH CHARLIE**

Location: Info Tent on town common and any backup operations

Channels monitored: HOTEL 5 (NET)

#### **Responsibilities**

- Provide communications support for Town Common Info Tent personnel
- Provide situational awareness to OPS and SEGMENT COORDINATOR

### **SAFETY 1**

Location: Downfield from starting line

Channels monitored: HOTEL 5 (NET), HOTEL 9 (Exclusive to Downfield Safety Team)

### **SAFETY [N]**

Location: Downfield from starting line

Channels monitored: HOTEL 5 (NET), HOTEL 9 (Exclusive to Downfield Safety Team)

#### **Responsibilities**

- Serves as the Downfield Safety team
- Operates in ROVER capacity before DEPLOY to Downfield Safety

See the [Downfield Safety Procedures Guide](#) which serves as the communications plan for this team.

See Appendix for the Downfield Safety Timeline

## Assignment Details - State Park

### **PARK 1**

Location: **Shadow to Ron Foisy at State Park (Parking area)**

Channels monitored: HOTEL 5 (NET), H2 (Simplex), Commercial Radio Channel 14 (Repeater)

*Note: Tactical operations will be conducted on HOTEL 2. CTL monitors HOTEL 5 (NET) at all times.*

### **PARK 2**

Location: Assistant to PARK 1

Channels monitored: H2 (Simplex)

### **Responsibilities**

- Assist Ron Foisy with all communications
- Maintain communication with bus shuttle drop at Cedar/A Street
- Maintain communications at both ends of the shuttle system at the State Park
- Maintain communications with bus system dispatcher on site
- Provide situational awareness to OPS and SEGMENT COORDINATOR

See Appendix for PARK Timeline

### **A STREET**

Location: Cedar St. (Rt. 85) & A St.

Channels monitored: HOTEL 5 (NET)

### **Responsibilities**

- Maintain communication with PARK 1 (State Park bus shuttle team)
- Indicate status of bus arrivals and departures
- Provide situational awareness to OPS and SEGMENT COORDINATOR

See Appendix for Park Timeline

## Assignment Details - South Street

### **SOUTH 1**

Location: **Shadow to Tab Kadik, EMC Building 52, South St.**

Channels monitored: HOTEL 5 (NET), HOTEL 3 (Simplex/Tactical)

### **SOUTH 2**

Location: Assistant to SOUTH 1

Channels monitored: HOTEL 3 (Simplex/Tactical)

### **Responsibilities**

- Assist Tab Kadlik with all communications
- Maintain communications with FRONT DROP
- Provide situational awareness to OPS and SEGMENT COORDINATOR

See Appendix for the South Timeline

## NET CONTROL OPERATIONS CENTRE (NCOC)

The NCOC, located within the BAA Operations Center at the Athlete's Village, provides a central resource to all communications assets and thereby to the BAA. It is a critical central control point necessary for the effective coordination of all communications elements at START. All Amateur Radio CTL's will maintain a listening watch with the NCOC. Certain positions will use point-to-point communications in addition to the Net Control listening watch while others will conduct operations through the NCOC.

Purposes of this facility:

- Provide an immediate, primary link between BAA management and each and every START segment
- Provide an immediate, primary link between BAA management and each and every BAA Management asset ("shadow")
- Provide a global reach to all Amateur Radio communications assets at any location across the event in the event of a public safety or BAA emergency
- Efficiently direct communications in support of EMS or Public Safety requests
- Maintain a link between BAA Start management and BAA Central Operations in Boston
- Maintain a link to MEMA Medical Dispatch
- Maintain a link to Hopkinton public safety
- Assist all BAA management with the safe and efficient conduct of Start operations
- Assist with any Course Disruption event at the request and direction of public safety officials

A single Net Control channel (repeater) will be used for central communications. SIMPLEX (point-to-point) channels will also be used at each START Segment according to the needs of each Segment.

All communications on the Net Control frequency will be conducted in accordance with the established Communications Standards. Such communications will operate as a closed net, with the Net Controller serving to direct traffic. Communications standards are encouraged on all SIMPLEX channels, while abbreviated exchanges are permitted within the open network environment that simplex operations affords.

### Equipment

- 2M Communications Stations (2)
- 70cm Communications Stations (2)
- Motobridge (1) IP based course communications console
- Public Safety Scanner (1)
- Amateur Radio simplex communications channels scanner (1)
- Commercial Radio (to MEMA Medical Operations and BAA Operations Centre) (2)

- Direct telephone line (2)
- White board/Easel (1)
- Large map with magnetic markers (1)
- Generator for emergency power (the NCS will be continually powered by generator with mains as backup)

### Technology

- It is assumed that two antennas will be used and these placed in physically-separated locations outside the building/tent where the Net Control Centre is located. Each will provide dual-band operation and the two radios will be attached through a combiner.
- The Amateur Radio simplex communications scanner and the public safety scanner will both use an omnidirectional antenna located away from the dual-band antennas (to reduce de-sense) which will hopefully provide effective simplex channel monitoring
- A 2M Yagi antenna will be required for reliable simplex communications with the Downfield Safety team
- The Commercial Radios will each be a base station
- The direct telephone line will be provided through BAA for use exclusively at the NCOC

### Limitations

- Some de-sense is anticipated between systems during transmissions
- NCOC will be a high noise environment demanding headphone use

# Communications Plan for Volunteers

## Volunteer Provided Equipment

- Government issued photo ID; you will not be allowed to participate without one.
- FCC Amateur Radio License (at least a photocopy)
- Dual band handheld transceiver with a gain antenna and all frequencies pre-programed.
- Sufficient batteries to last 10-12 hours. Most HT batteries are rated on a 10-10-80 duty cycle (10% Rx, 10% Tx, 80% standby). Computer aided dispatch system and recording show that the nets average 25% standby and 75% Rx. Please take this into account for your battery decisions.
- Headset with a boom microphone and push-to-talk (PTT) switch or a speaker/mic with headphones - this is a **must have requirement** due to the noise and wind. Do not bring voice activated (VOX) headsets as the noise easily triggers them.

## Channel Assignments

Please refer to the ICS 205 document for the frequency allocations. Downfield Safety team members will receive frequencies that are listed as “on file” before the event.

Channel	Function	Assignment	Remarks
H1	Town Common Tactical	OPS and all other Town Common assets	VHF Simplex
H2	State Park Tactical	PARK 1, PARK 2	VHF Simplex
H3	South Street Tactical	SOUTH 1, SOUTH 2	VHF Simplex
H4	Athlete's Village Tactical	AVC	VHF Simplex
H5	NET	NCOC/ALL	UHF Repeater Primary
H6	Management	NCOC	VHF Simplex
H7	Medical Sweep Tactical	MEDICAL	VHF Simplex
H8	Repeater Backup	NCOC/ALL	UHF Repeater
H9	Downfield Safety PRIMARY	SAFETY 1-5	ON FILE



H10	Downfield Safety SECONDARY	SAFETY 1-5	ON FILE
H11	SHELTER	ALL UNITS	ON FILE
K1	INTERTIE	Command channel connecting all NCO's in Marathon Operation	UHF Repeater
C1.w	COURSE NET	Course Zone 1	VHF Repeater
C1.h	COURSE NET	Course Zone 1	VHF Repeater
K2	Segment Coordinators	Segment Coordinators	ON FILE

**Important:** *SIMPLEX (point-to-point) communications may be used at some Segments for local task communications. When SIMPLEX operations are used the CTL will maintain a strict listening watch on the NET channel in addition to their local SIMPLEX operations channel. It is critical that each CTL is instantly available to NCS at all times.*

### Specific Communication Protocols

Refer to the document, General Standards and Training, for the baseline communications procedures.

Designated segments will operate on a simplex frequency with point-to-point service. Each team will have a Communications Leader (CTL) assigned. This leader works directly with a BAA manager at the assignment. This arrangement affords the BAA manager instant access to remote locations and activities through our facilities. The BAA manager also has a private digital radio system which serves BAA as a necessary operational backbone.

The team leader will monitor and provide a link to a unified command center at Start with the tactical ID of NET. NET has a link to the BAA private radio system and to public safety, assuring that despite simplex operations, a linked structure is maintained.

If communication via the simplex channel is not sufficient for the purposes of your work you may have to operate on the NET frequency, hosted on a UHF repeater and structured as a closed and controlled net.

All shadows likely to have commercial radio. It will be necessary to maintain listening watch on the commercial radios. Please refer to appendix for channel plan and external document for radio operation.

## 2-phase Method

To reduce the amount of time required in exchanging information, and where communications conditions are reliable, use the 2-phase method which removes the initial call-up preceding the transmission of the status information itself.

From:

NET, NET, SAFETY 1 on HOTEL 5
NET answering SAFETY 1
SAFETY 1 is on station

To:

NET, NET, SAFETY 1 on HOTEL 5. SAFETY 1 on station
SAFETY 1 roger, we have you on station at <time>

## Dialog Examples

### Arriving on site / checking in

NET, SAFETY 1 COMM CHECK please
SAFETY 1 you are loud and clear, how me OVER
SAFETY 1 has you loud and clear. <call sign> OUT

### Arrival at Assignment/Shadow

NET, HTCC. HTCC now on station with shadow
HTCC we copy you on station with shadow at <time>

### Emergency / priority traffic

NET, NET, HTCC on HOTEL 5 <b>URGENT</b>
NET answering HTCC
<send urgent traffic>
<NET acknowledges with instructions as needed>

**Ambulance request** (see *Communications Standards, Medical Issues and Environments, and Backup Ambulance Dispatch Communications Plan* for further details)

NET, NET, HTCC on HOTEL 5 <b>URGENT AMBULANCE REQUEST</b>
NET answering the HTCC
HTCC AMBULANCE REQUEST LOCATION <say exact location> BIB NUMBER <say BIB Number> MALE/FEMALE AGE <say age> CHIEF COMPLAINT <say complaint> READBACK
HTCC Rober, we have your URGENT AMBULANCE REQUEST for LOCATION <location> BUT NUMBER <say BIB Number> MALE/FEMALE AGE <say age> with a CHIEF COMPLAINT of <say complaint>. Your tracking number is <say number>. Stand by for ETA. Your time <state>
HTCC has the message. Standing by.
<i>ON ARRIVAL OF AMBULANCE:</i>
NET, HTCC, AMBULANCE on scene
HTCC Roger, AMBULANCE on scene at <time>. Advise departure information. OUT
<i>ON DEPARTURE OF AMBULANCE:</i>
NET, HTCC, AMBULANCE departed for <state destination hospital> with <number of patients> on board. BIB NUMBER/s <state BIB Number/s>.
HTCC we have the message at <state time>.

## Controlled Net

The Athlete's Village, Start Area, and Medical Sweep teams will all operate on Channel HOTEL 5, a 70cM repeater located in Hopkinton. Each of these areas also has assigned a simplex tactical channel. Operating on a shared repeater offers exceptional situational awareness capability, while it presents challenges to a disciplined and organized use of the shared channel and its limited bandwidth.

***To use the repeater effectively, we will operate using a mix between an NCS-mediated process and an informal point-to-point method.***

- Ordinarily there is no need to "request permission to call" a unit. If the channel is clear, with no ongoing traffic present, simply call a unit directly. Just be sure to use the channel efficiently:

AVC from SAFETY 3 on HOTEL 5
AVC answering SAFETY 3
SAFETY 3, advise time of last runner release
SAFETY 3 time of last release was 1027
SAFETY 3 has that, thank you. [ID] OUT
AVC [ID] OUT

- If your traffic will take longer than a simple exchange, call the unit and ask them to SWITCH AND ANSWER [channel]. However, if you cannot guard your assigned repeater channel and conduct simplex traffic on another channel at the same time, be sure to let the NCS know:

SAFETY NET from AVC on HOTEL 5. PERMISSION to call SAFETY 3 and pass traffic on HOTEL 7.
AVC permission granted. Both units advise returning this channel. OUT.
SAFETY 3 from AVC on HOTEL 5. SWITCH AND ANSWER HOTEL 7.
AVC has the message. [ID] OUT
SAFETY 3 now switching to HOTEL 7 [ID] OUT

- Should your simplex exchange be too complex, the NCO may ask you to take your traffic to another simplex channel.
- PRIORITY traffic trumps all. Simply use PRIORITY in your call should you need the channel.

# Lost Communications

## Individual Amateur Radio Communications

We may lose communications due to a technical failure of our own equipment, depleted battery, a misconfiguration, or simply operating on an incorrect channel assignment. Communications volunteers are expected to provide their own backup radio, spare battery, and be proficient in equipment operation so they are self-sufficient in configuration and programming their radios. If these failures cannot be corrected, and a backup also fails, you may:

1. Notify the NCOC through another communications volunteer
2. Contact the NCOC through an available commercial radio on Channel 5:

START NCOC from [your tactical] on Village OPS
START NCOC answering [your tactical]
[your tactical] {describe your situation}
[your tactical] {START NCOC will provide you with instructions}

## Comm Loss

For other issues, see the COMM Loss Action Table below.

Failure	Action	Remarks
H5 (Primary Repeater)	Call START NCOC on Channel H6	H6 is guarded at all times; coordinate move to next frequency
H8 (Secondary Repeater)	Call START NCOC on Channel H6	H6 is guarded at all times; coordinate move to next frequency
Any Simplex Tactical	START NCOC on Channel H5 (or if H5 has failed, H8)	Tactical simplex users may switch to H5/H8 for further coordination through NCOC
Downfield Safety H9	Contact START NCOC on Channel H5	NCOC will coordinate frequency change. May move to H10

Downfield Safety H10	Contact START NCOC on Channel H5.	NCOC will coordinate frequency change. May move to H8
K1	Switch to Moto-Bridge	
Moto-Bridge	Commercial Radio Channel 1	Units will coordinate on Channel 1 and determine where to move
Commercial Radios	Coordinate through nearest Amateur Radio Communications volunteer	

### Mobile phone use

1. 9-1-1 is to be used should this prove to be the most expedient means of communications. Identify yourself as a BAA volunteer at Hopkinton and ask to be passed to Hopkinton Public Safety.
2. Contact the START NCOC at
  - a. SSC: 617 592 4392
  - b. NCOC: TBD
  - c. PROCEDURES: 508 277 9406
  - d. BAA OPS: TBD

Mobile phones should be the last resort to any of the above failures.

We recommend you also exchange phone numbers with your team members.

## Appendix - Major Event Timeline

**Monday, April 20, 2015 - 0400-0800**

	<b>DOWNTOWN</b>	<b>VILLAGE</b>
4:00AM	LAS begins setting barricades on Main St. sidewalks	DMSE crew arrives
5:00AM	Hopkinton State Park opens for parking	Trash/recycling, medical, clothing trucks arrive
		All sponsors, vendor staff arrive
	Aegis staff arrive at muster point to check in	Aegis staff arrive
5:15AM	Volunteer buses from State Park depart for Village	Downtown Food/Coffee deliveries loaded
		Aegis staff in place at screening stations
5:30AM	All media vehicles in place, Common	Volunteers arrive
	Food deliveries at BAA VIP, Korean Church, Ctr. Schl	
6:00AM	Aegis staff in place at screening stations	Sound check
	Shuttle bus system begins in Hopkinton	Volunteers deployed for training
	Road closing begins	DOC crews arrive

6:30AM	Barricade crews in place	First Club Buses Arrive
	BBBS vehicles and teams in place	
7:00AM	Roads in Hopkinton close	Food & water stations set
	All screening stations active	Village announcements begin
	All lead vehicles in place on Ray Street	Corral placement begins on Grove
	Poland Spring truck parks at Colellas	
	Start announcements to begin	
	Press and MTFOA buses arrive at Exxon Station	
	Ambassador meeting at Colellas	
	National Guard bus and vehicles to arrive	
7:15AM		Last Club Buses Arrive
7:22AM		First Wave 1 Runner Buses Arrive
7:30AM		
7:58AM		Last Wave 1 Runner Buses Arrive
8:00AM	Ambassadors stationed	



## Appendix - Timelines for Assignments

### PA Timeline

0700 - Village announcements begin  
0905 - Wave 1 corrals 1, 2, 3 called to depart Village  
0910 - Wave 1 corrals 4, 5, 6 called to depart Village  
0915 - Wave 1 corrals 7, 8, 9 called to depart Village  
0950 - Wave 2 corrals 1, 2, 3 called to depart Village  
0955 - Wave 2 corrals 4, 5, 6 called to depart Village  
1000 - Wave 2 corrals 7, 8, 9 called to depart Village  
1025 - Wave 3 corrals 1, 2, 3 called to depart Village  
1030 - Wave 3 corrals 4, 5, 6 called to depart Village  
1035 - Wave 3 corrals 7, 8, 9 called to depart Village  
1050 - Wave 4 corrals 1, 2, 3 called to depart Village  
1055 - Wave 4 corrals 4, 5, 6 called to depart Village  
1100 - Wave 4 corrals 7, 8, 9 called to depart Village

### Corral Timeline

0905 - Wave 1 corrals 1, 2, 3 called to depart Village  
0910 - Wave 1 corrals 4, 5, 6 called to depart Village  
0915 - Wave 1 corrals 7, 8, 9 called to depart Village  
0950 - Wave 2 corrals 1, 2, 3 called to depart Village  
0955 - Wave 2 corrals 4, 5, 6 called to depart Village  
1000 - Wave 2 corrals 7, 8, 9 called to depart Village  
1025 - Wave 3 corrals 1, 2, 3 called to depart Village  
1030 - Wave 3 corrals 4, 5, 6 called to depart Village  
1035 - Wave 3 corrals 7, 8, 9 called to depart Village  
1050 - Wave 4 corrals 1, 2, 3 called to depart Village  
1055 - Wave 4 corrals 4, 5, 6 called to depart Village  
1100 - Wave 4 corrals 7, 8, 9 called to depart Village

### Center School Timeline

0835 - Mobility impaired runners called to start  
0850 - Mobility impaired start  
0900 - All wheelchair/handcycle entrants leave for start  
0917 - Wheelchair start  
0922 - Handcycle start

**Elite Runner Timeline**

- 0925 - Elite women escorted to start
- 0932 - Elite women start
- 0945 - Elite men leave Korean church for start
- 0955 - Elite athletes behind start line, all runners in place
- 0958 - JH elite athlete liaisons back through chute to buses
- 1000 - Wave 1 start

## Vehicles Timeline

*The vehicles are moved from RAY Street onto the course within 5 minutes of the times listed below.*

RAY ST STAGING	START TIME	Left side, looking down SPONSOR VEHICLES	Right side, looking down POLICE ESCORT VEHICLES	MC'S
1	8:50	RENTAL VEHICLE: CLOCKS	1	MSP Escort
1	9:12	CHRYSLER: PRECURSOR	1	MSP CRUISER: Precursor Escort
1	9:17	P/U TRUCK: MEN'S WHEELCHAIR	1	MSP CRUISER: Wheelchair Lead
			1	MSP SECURITY VAN
1	9:19	P/U TRUCK: WOMEN'S WHEELCHAIR		1 MSP-W-WC LEAD
				2 MSP-SLOW WC'S
	9:22		<b>HANDCYCLE</b>	<b>2 HC LEAD</b>
1	9:27	CHRYSLER: PRECURSOR	1	MSP CRUISER: Precursor Escort
1	9:27	JEEP WRANGLER: Grand Marshal		2 MSP Escorts
1	9:32	P/U TRUCK: Women's Lead	1	MSP CRUISER: Women's Lead
1		P/U TRUCK- Women's Press	1	MSP SECURITY VAN
1		P/U TRUCK: Women's TV	1	MSP SECURITY VAN
1	9:40	P/U TRUCK: Clock Reset		1 MSP Escort
1	10:00	P/U TRUCK: Men's lead	1	MSP CRUISER: Men's Lead
1	10:00	P/U TRUCK- MEN'S Press	1	MSP SECURITY VAN
1	10:00	P/U TRUCK: Men's TV	1	MSP SECURITY VAN
				1 BAA Race Director
	10:25			2 MSP-Leads
	10:50			2 MSP-Leads
	11:15			2 MSP-Leads
1	11:30	CHRYSLER: Trail		
1	11:30	P/U TRUCK: Road Re-open	1	MSP CRUISER: Road Re-open
<b>15</b>			<b>11</b>	<b>35</b>

- 0700 - All lead vehicles in place on Ray St.
- 0900 - State Police cruiser to leave to flush course
- 0928 - Move lead vehicles into place on Main
- 0932 - Elite women start
- 0955 - All lead vehicles out of Ray St. and in place
- 0958 - DM on motorcycle
- 1000 - Wave 1 start
- 1010 - Elite buses to leave

### **Downfield Safety Timeline**

0845 - Ash St. cleared for wheelchairs  
0850 - Mobility impaired start  
0917 - Wheelchair start  
0922 - Handcycle start  
0932 - Elite women start  
1000 - Wave 1 start  
1025 - Wave 2 start  
1050 - Wave 3 start  
1115 - Wave 4 start  
1130 - Last runners clear start line

### **Park Timeline**

0430 - 0630: Volunteer parking with shuttle to Athlete's Village  
0630: Roads close  
0600 - 1300: Spectator/Runner Shuttle to A Street

### **South Timeline**

0600 - Shuttle bus system begins in Hopkinton  
Spectator shuttle to Pleasant and Main  
Runners shuttle to FRONT DROP

### **Drops Timeline**

0630 - First club buses arrive  
0722 - First wave 1 runner buses arrive  
0758 - Last wave 1 runner buses arrive  
0807 - First wave 2 runner buses arrive  
0843 - Last wave 2 runner buses arrive  
0907 - First wave 3 runner buses arrive  
0943 - Last wave 3 runner buses arrive  
0952 - First wave 4 runner buses arrive  
1028 - Last wave 4 runner buses arrive  
1045 - Club buses allowed to depart

### **TCA Timeline**

0700 - Start announcements begin  
0914 - Dan Clark to sing America the Beautiful  
0916 - Announcement of 1-min to go, 30-sec  
0917 - Wheelchair start  
0921 - Announcement of 1-min to go, 30-sec  
0922 - Handcycle start  
0931 - Announcement of 1-min to go, 30-sec

0932 - Elite women start  
0935 - Introduce veterans  
0948 - Dan Clark to sing National Anthem  
0955 - 5 minute to go announcements  
0959 - Final announcement of 1-min to go, at 30 seconds  
1000 - Wave 1 start  
1024 - Final announcement of 1-min to go  
1025 - Wave 2 start  
1059 - Final announcement of 1-min to go, at 30 seconds  
1100 - Wave 3 start  
1124 - Final announcement of 1-min to go, at 30 seconds  
1125 - Wave 4 start

## Appendix - Commercial Radios

### How To change your zone on the MotoTRBO radios:

- 1) Press the Menu button
- 2) Using the right and left arrows, find "Zone" and press OK
- 3) Use the right and left arrows to find the proper zone and press OK. The display will refresh after a few second.

### START (Zone 3) Commercial Radio Channel Plan

Zone 3 (Radios in Hopkinton)		
1	Operations	WHOLE ROUTE (Course)
2	Medical Call-In	MEDICAL EMERGENCY (Course)
3	Start Line	START LINE (Course)
4	Start Area	DESCHENES (Course)
5	Village Ops	VILLAGE
6	Village Food	VILLAGE
7	Village Exit	VILLAGE
8	Village Transport	VILLAGE
9	Info Booth	DESCHENES
10	Club Buses	DESCHENES
11	Bus Unloading	DESCHENES
12	Hop Busing	MURPHY (Course)
13	Parking South St	DESCHENES
14	Parking HSP	DESCHENES
15	Repeat Park HSP	DESCHENES (Course)
16	Talk-Around	OPERATIONS OVERFLOW (Course)

## COURSE (Zone 2) Commercial Radio Channel Plan

Zone 2 (Radios on the Course)		
1	Operations	WHOLE ROUTE (Course)
2	Medical Call-In	MEDICAL EMERGENCY (Course)
3	Women's Lead	ROUTE VEHICLES
4	Men's Lead	ROUTE VEHICLES
5	Bikes	O'BRIEN
6	Vehicles	ROUTE VEHICLES (Course)
7	Elite Fluids	CARPENTER (Course)
8	Men's Press	ROUTE VEHICLES (Course)
9	Women's Press	ROUTE VEHICLES (Course)
10	Men's WC Press	ROUTE VEHICLES (Course)
11	Women's WC Press	ROUTE VEHICLES (Course)
12	Operations	WHOLE ROUTE (Course)
13	Operations	WHOLE ROUTE (Course)
14	Operations	WHOLE ROUTE (Course)
15	Operations	WHOLE ROUTE (Course)
16	Talk-Around	OPERATIONS OVERFLOW (Course)

## FINISH and TRANSPORT (Zone 1) Commercial Radio Channel Plan

Zone 1 (Radios in Boston)		
1	Operations	WHOLE ROUTE (Course)
2	Medical Call-In	MEDICAL EMERGENCY (Course)
3	Medical Direct	MEDICAL DIRECT
4	Medical Admin	MEDICAL OPERATIONS (Course)
5	Announcers	ROCHE
6	Finish Area	HAVENS (Course)
7	Press Center	FLEMING
8	Marshals	CUMMINGS (Course)
9	Vehicles	ROUTE VEHICLES (Course)
10	Expo	FECHTER/SICUSO
11	Bus Loading	CALDER
12	Transaction	TRANSACTION (Course)
13	Boston Busing	MURPHY (Course)
14	Cavalier Busing	CAVALIER (Course)
15	Operations	WHOLE ROUTE (Course)
16	Talk-Around	OPERATIONS OVERFLOW (Course)

## Appendix - RALLY Points

Please note the location of two RALLY POINTS noted in the Start Area Map. Their purpose is to bring together our teams in a single location should any major disruption occur. You may “self-activate” to a RALLY POINT, or should move to a designated RALLY POINT at the advice and direction of NCS.

Each volunteer is provided with a frequency list. A dedicated simplex SHELTER channel will be used should a RALLY occur. Coordination will be performed on this channel.