

ASC has hand-held marine radios to enhance safety as well as to help with marine/boat related coordination, communications, and operations. Marine radio use is regulated by the FCC and requires adherence to rules, regulations, and proper radio procedures. This guide is divided into three sections. The first section is a summary of FCC rules and regulations applicable to ASC when the radios are used within Ohio. The second section talks about marine radio procedures. The third section is an abbreviated guide to operating the Standard Horizon HX300 marine radios at ASC (The manual for the Standard Horizon HX300 handheld marine radio is available online for those wanting to become more familiar with the operation of the radios. A manual is also available to read in the ASC office).

### **Section 1. FCC Marine Radio Rules and Regulations summarized for ASC operations:**

1. **A license is not required for ASC or individuals (ASC volunteers)** when using ASC's handheld marine radios as long as applicable FCC rules and regulations are followed. You are responsible for following FCC rules.
2. **The handheld marine radios used by ASC are "licensed by rule"** and must be operated in accordance with all applicable FCC rules, regulations, and procedures.
3. **On January 17<sup>th</sup>, 2017, it became legal** to use a handheld while on land (near shore only) when communicating with a vessel (any use on land was illegal prior to that date).
4. **It is illegal to** make fake or false distress calls, use improper channels, use profane language, to transmit on a channel while someone else is transmitting, use false identification, or call "All vessels" except in an emergency.
5. **Channel 16 is the Emergency Distress Channel** that is to be monitored when not otherwise communicating on another channel and is also a "hailing" (calling) channel. After hailing on channel 16 you must immediately switch to a working channel (no conversations allowed on channel 16). Note, hailing on channel 16 should be for less than 30 seconds each time and may be repeated up to three times at 2 minute intervals. Use Channel 16 as the Hail channel at ASC when not able to raise anybody on working channel 78A (or another working channel).
6. **Channel 9 is also a hailing/calling channel** (preferred/required in some areas due to congestion on channel 16). The same hail and switch to working channel procedure as described for channel 16 also applies to channel 9. Note, ASC should normally use channel 16, not channel 9, when hailing/calling is required in central Ohio. If you need to use Channel 9, press and hold the 16/9 Key until channel "9" is in the center of the display.
7. **You must use appropriate non-commercial channels** (and use those channels appropriately).
8. **Communications must be for marine operations and/or safety** related and must also be brief (remember, everybody shares the same few channels).
9. **You must identify your vessel/station in each transmission** (see more details and information under section 2: Marine Radio Procedures).

### **Section 2. Marine Radio Procedures (with focus on ASC operations):**

1. **Check charge level** before taking out a marine radio to use (charge level in upper right corner). When the HX300 is plugged in and charging the display will show "FL" when the radio has a full charge. **Make certain** the battery cover latch and the charging port cover are properly closed to ensure waterproofness of the radio. Note, there should not be any reason to open the battery compartment, just make sure the latch at the bottom is secure. Make certain there is no dirt, sand, or moisture near the charging port before closing the charging port cover.
2. **The radio with the Pink wrist strap** is reserved for the Beach use (**call ID: "ADAPTIVE SPORTS BEACH"**), it is kept near the board for the Boardmaster. The radio with the **Red wrist strap** is reserved for safety boat (**ID: "ADAPTIVE SPORTS SAFETY BOAT"**). Radios with **Orange wrist straps** are for all other ASC boats (**call ID: "ADAPTIVE SPORTS KAYAK xx"**) and the ASC operations center (**call ID: "ADAPTIVE SPORTS CENTER"**). Note, the ASC operations center may not often have a radio but the Beach/Boardmaster will always have a radio. The colored straps will aid in locating a floating radio in the daytime. The radios have a light that flashes when the radio is in contact with water which can help locate floating radios at night or in reduced visibility.
3. **Be sure the Boardmaster notes "Radio"** with a circle around it by your boat number and name (including safety boat, sailboats, and SUPs) before you leave the beach area. Upon return to the beach make certain your boat, name, and the notation "Radio" are erased from the board. If you are on the water returning to the beach and no longer need the radio please check to see if an outbound boat would like a radio. If you do transfer the radio

to another boat be sure to make contact with the Boardmaster and have them transfer the "Radio" designation to the new boat number and name before continuing in to the beach (not after arriving at the beach).

4. **Make certain the radio is set to US channels** ("U" should be in the top center of display, not Canadian channels "C" or International channels "I", see ASC staff or a manual for how to set to US channels if "U" is not showing near the top center of the display).
5. **Set the volume of the radios used in kayaks as high as comfortable/practical** to make certain hails and messages are heard by you when your attention might be elsewhere. The Beach/Boardmaster radio must be set to maximum volume since it is often very busy and noisy near the board. The radio for the Safety Boat also must be set to maximum volume due to motor noise. See Section 3 for setting both Volume and Squelch.
6. **Channel 78A (US channel numbering, 1078 new/international number) is the normal working channel for ASC marine radios and has been programmed in as both a Preset Channel and a Memory Channel.** If there is excessive usage/congestion on channel 78A then all ASC radios should use either channel 71 or 68. Note, the Leatherlips Yacht Club's (LYC) safety/crash boats use channel 69 as their working channel (as of the time this was written) and therefore although channel 69 is available there can be some congestion on channel 69 when the LYC safety/crash boats are operating.
7. **When ASC kayaks/vessels are close to the beach/launch area (in line-of-sight) their radios should be set to the 1-watt power setting. When ASC boats are operating out of line-of-sight (due to land obstructions) their radios should be set to 5 watts for a strong and clear signal.** ASC Beach (and ASC Center if applicable) should always keep their radios set at 5 watts so all ASC vessels can hear if the message is for them or not.
8. **Kayakers should improve radio reception by NOT laying radios in the bottom of the kayak.** Clip to your life jacket or deck bungee (higher is better for reception).
9. **ASC radios should be set to the Dual-Watch mode** (the radio watches channel 16 while on the working channel). If you do not see Channel "16" in the lower right corner with "DW" over the "16, make certain Channel "78A" is in the center of the main display by pressing "Preset" (to bring up channel 78A) then press and hold the SCAN/DW button until you see "DW" over "16" in the lower right hand corner. **Make certain you are on the working channel (usually channel 78A) when you transmit** unless you are responding to a hail on channel 16 or making a MAYDAY call on channel 16 (see below regarding MAYDAY calls)). Pressing the Preset key will bring up channel 78A. From there you can use the up and down arrows to go to another agreed upon working channel. Flickering channels on display means you are in scan mode. Briefly press SCAN/DW to get out of scan mode.
10. **Listen first**, it is an FCC requirement that you make certain you are not interrupting another transmission before transmitting. Press the PTT (Push-To-Talk) switch/button for one second before transmitting then speak in a clear and normal voice with the microphone one-half inch to one inch from your mouth and the antenna pointed away from you.
11. **Identify your boat/station in each transmission.** Examples are: "ADAPTIVE SPORTS BEACH, this is ADAPTIVE SPORTS Kayak 26 (plus name okay), I am requesting \_\_\_\_\_, Over" or in response, "ADAPTIVE SPORTS BEACH, I \_\_\_\_\_, ADAPTIVE SPORTS Kayak 26, Over" when on a/the working channel. When hailing/calling on channel 16 the procedure would be "ADAPTIVE SPORTS BEACH, ADAPTIVE SPORTS BEACH, ADAPTIVE SPORTS BEACH (the vessel/station you are calling may be said 1, 2, or 3 times in a transmission to get their attention), this is ADAPTIVE SPORTS Kayak 26 over" then ASC Beach would reply "ADAPTIVE SPORTS Kayak 26, this is ADAPTIVE SPORTS BEACH, go to channel 78A (or another appropriate channel), Over".
12. **Under normal ASC operations all ASC radios should be on channel 78A** as the already established working channel and you may proceed with your message on channel 78A (following normal identification and message rules) without having to go through the hailing and channel change process. If a person/boat/station is not paying attention they can ask for the message to be repeated following normal identification procedures. If you do not receive a reply on the working channel after a reasonable period of time, and need to use an attention getting hail, that should be done on channel 16 then change back to the working channel (usually 78A) or other agreed upon working channel for the actual message/communication.
13. **Keep transmissions brief and marine safety or marine operations related** (remember others use the same few channels). For instance, you cannot have a discussion on a marine radio about what food somebody likes or what they are doing later but you can say "ADAPTIVE SPORTS Kayak xx, return to the beach by 12:30/now for \_\_\_\_\_" or "ADAPTIVE SPORTS Kayak xx, please inform all kayaks around you the kayaking session is over and everybody needs to return to the beach as soon as possible" (can add explanations like "your ride/the bus/van is leaving in 10 minutes" but keep transmissions brief and to the point). Use the word "Over" when you are














expecting a reply. When you have finished talking and no reply is expected use the word "Out" to let everyone on the channel know the conversation is finished and the channel is open for others to use.

14. **If there is a life-threatening emergency you should broadcast on Channel 16 (by pressing the 16/9 Key so that channel "16" is in the middle of the display) in the following way (as an example):**
  - a. **"MAYDAY, MAYDAY, MAYDAY, THIS IS ADAPTIVE SPORTS Kayak 26, ADAPTIVE SPORTS Kayak 26, ADAPTIVE SPORTS Kayak 26, MAYDAY, THIS IS ADAPTIVE SPORTS Kayak 26" (Mayday then call sign said three times then MAYDAY repeated once along with your call sign to get everyone's attention, clear the channel, and identify yourself).**
  - b. **"I am 100 feet west of the Dublin Road/Route 745 Twin Lakes bridge" (location of you and/or the emergency).**
  - c. **"A person in ADAPTIVE SPORTS Kayak 20 has passed out for an unknown reason" (the nature of the emergency).**
  - d. **"I am okay in kayak 26 and the other person in kayak 20 is okay. All kayaks are okay and NOT capsized" (status of people and boats involved).**
  - e. **"We need the Safety Boat with anybody First Aid/CPR certified and EMS with an ambulance at Extraction Point Twin Lakes (2-XP-TL) right away" (what assistance is needed).**
  - f. **"The person passed out is in DARK GREEN ADAPTIVE SPORTS Kayak 20 and I am in RED ADAPTIVE SPORTS Kayak 26, Over" (to aid in visual identification of boats/vessels/people in distress for people that are responding).**
  - g. **If no response, repeat on channel 16 (typically giving 15 to 30 seconds for a response) then try the last working channel (or try channel 69 if you are in the open river and see LYC safety boats on the river since they can respond/operate at high speed in an emergency).**
15. **If you hear a "MAYDAY" or other distress call you should determine if you can be of assistance without jeopardizing yourself and/or relay information if nobody else responds to the distress call within about 15 to 20 seconds (Note, all boaters are required to assist anybody in distress if they are able to do so any without jeopardizing themselves or their vessel, this is not just a requirement for boaters with marine radios).**
16. **If an emergency is not life threatening** (such as a broken finger) then "MAYDAY" should not be said/used but the information format with regard to who, where, the nature of the emergency, the assistance needed/requested, and help in identification under the MAYDAY procedures should be followed on the established working channel or hail on Channel 16 and then change to an agreed upon working channel.
17. **In the event you, a person with a Marine Radio Endorsement, hear a radio call** but are not able to reach the radio or respond for some other reason, you may instruct a person without a marine radio endorsement to press the talk button and acknowledge the call by saying (for example) "ADAPTIVE SPORTS KAYAK xx, this is ADAPTIVE SPORTS BEACH, Standby and we will get back to you. Over", then hand the radio to you or some other person with a marine radio endorsement. In an emergency, everybody may handle radio communications until a person with a Marine Radio endorsement can take over without putting the person who made the radio call on "standby/hold" (to eliminate delays in emergency situations).
18. **NOAA Weather channels/alerts** are available on the Standard Horizon H300 radios. Press and hold the CLR/WX key for about two seconds to switch to NOAA Weather. The radios have been programmed to NOAA channel 1 for Columbus Ohio but can be changed to other channels/stations with the up and down arrow leys. Be sure to return to normal marine radio mode as soon as practical after listening to a NOAA weather broadcast (another press and hold of the CLR/WX key for two seconds). The HX300 radios have been programmed to receive NOAA Weather Alerts. **If you hear a loud/long beep it is a Weather Alert.** You need to press the CLR/WX key to stop the alert beep and to listen to the alert broadcast weather information. Note, every Wednesday except for the first Wednesday of odd number months (Jan, Mar, etc.) between 11:00 AM and Noon a weekly test alert is broadcast. On the first Wednesday of odd number months (Jan, Mar, etc.) a monthly test is broadcast around 8:50 AM instead of between 11:00 AM and noon.
19. **Be sure to clean and dry the marine radios** after each use and return them to the proper place for the next person or for charging. If you are the last person using a marine radio for the day be sure to put it on a charger before you leave. Also, please help ASC by checking to make sure any other marine radios are also on chargers at the end of the day or an event before you leave. Thank you.

**Section 3. An abbreviated guide to operating the Standard Horizon HX300 marine radios at ASC (the manual for the Standard Horizon HX300 handheld marine radio is available online and in the ASC office).**

## QUICK REFERENCE GUIDE

This transceiver is equipped with the E2O (Easy-To-Operate) system. You can do the basic operation in numerical order of the illustration below.

- 1 Press and hold the  key to turn on or off the radio.
- 2 Press the  key ("VOL" indicator blinks), then press the  /  key to adjust the speaker audio volume.
- 3 Press the  /  key to select the operating channel.
- 4 Press the  key two times ("SQL" indicator blinks), then press the  key to squelch or press the  key to un-squelch the radio.
- 5 Press the  key to toggle the transmit power between High (5W) and Low (1W).
- 6 Press the  key briefly to recall channel 16.  
Press and hold the  key for two seconds to recall channel 9.  
Press the  key again to revert to the last selected channel.
- 7 Place your mouth about 1 inch (2.5 cm) away from MIC hole and speak in a normal voice level while pressing the PTT switch.



### Common and/or additional keys/functions:

**The ▲ and ▼ Keys: Change channels** unless VOL/SQL key is pressed first.

**The SCAN/DW key: A brief press** starts scanning channels (not the preferred mode). Another brief press stops scan mode.

**The SCAN/DW key: Press and hold 2 seconds** to activate Dual Watch mode. "DW" will appear on the display above the lower right channel number in this mode. **Use this mode.**

















**The PRESET key:** Briefly press to call up the Preset channel(s). This will typically be channel 78A for ASC. "PRESET" will show near the top of the display. Press Preset again to return to the last selected channel.

**The H/L key:** Press to switch between High power (5 watts) and Low power (1 watt). An icon with an "L" in it is shown on the left side of the display in low power/1 watt mode (no icon for high power). ASC vessels should use Low power/1 watt when in line of sight and High power/5 watts when not in line of sight.

**CLR/WX key: A brief press** to stop a Scan, Priority Scan, or Dual/Tri-Watch mode.

**CLR/WX key: Press and Hold** to bring up NOAA weather. Press and hold again to cancel.

### 6.3 RECEPTION

1. Press and hold the  key for two seconds to turn the r
2. Press the  key twice ("SQL" will be blinking).
3. While "SQL" is blinking, press the  key until the "BUSY" indicator will appear on the display, then press the  key.
4. Press the  key ("VOL" will be blinking).
5. While "VOL" is blinking, press the  /  key until the noise or audio from the speaker is at a comfortable level, then press the  key.
6. Activate the squelch adjusting mode by pressing the  key twice (the "SQL" indicator blinks). Press the  key until the random noise disappears, then press the  key. This state is known as the "Squelch Threshold".
5. Press the  or  key to select the desired channel. Refer to section "9. VHF MARINE CHANNEL ASSIGNMENTS" for available channels.
6. When a signal is received, adjust the volume (press the  key, followed by the  /  key) to the desired listening level. The "BUSY" indicator in the LCD is displayed indicating that the channel is being used or the radio is not squelched.