WearHF – Screen Casting

Version 1.0

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- This guide contains references to third party software (e.g., Android Studio). Your use of the third party software is subject to the applicable third party licenses.
- This guide provides a reasonably skilled programmer with an introduction to programming for HMT-1 devices, but it does not guarantee results.
- RealWear may update this guide from time to time. You should ensure you are using the most current version.

Revision Information

Draft	6-16-2017	Chris Parkinson	Initial Draft

Introduction

There are many occasions where casting the viewable contents of HMT-1 to a larger audience is required. This is done using a technique called Screen Casting, where all audio and video from HMT-1 is passed wirelessly to a large screen TV or projector.

The software for screen casting is built into HMT-1, but by default is switched off.

In addition, a special hardware dongle is required to receive the wireless audio and visual data from HMT-1 and turn it into an HDMI signal suitable for TV or projector.

Hardware Requirements

1. The recommended hardware dongle for screen casting is the ScreenBeam Mini2 from ActionTec. It retails around $40-$60, and is available from Amazon.com here:

    https://www.amazon.com/gp/product/B00O14JG2Y/ref=od_aui_detailpages00?ie=UTF8&psc=1

2. It is also recommended to purchase a female-to-female HDMI adaptor. Many conference rooms only offer a male HDMI cable into their AV system, so the adaptor is an essential piece of the toolkit for those occasions.

    There are many adaptors on Amazon all less than $10. Here is one such item:

    https://www.amazon.com/VCE-Female-Adapter-Coupler-Resolution/dp/B01HYUQVVA/ref=sr_1_5?ie=UTF8&qid=1497632706&sr=8-5&keywords=hdmi+female+to+female
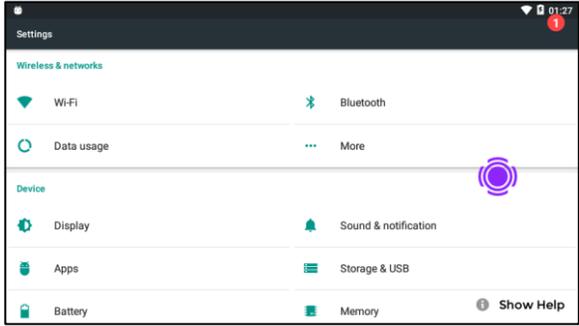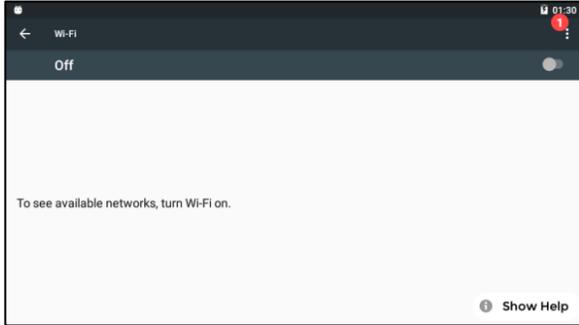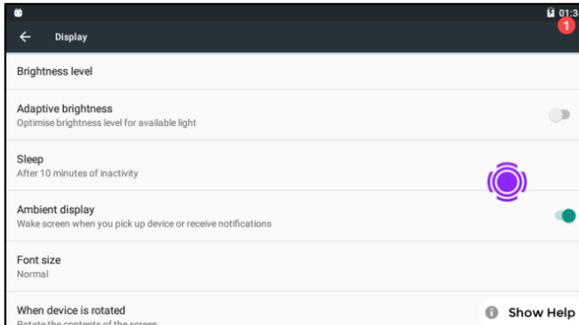
Hardware Setup

1. Plug ScreenBean into HDMI port of TV or projector

2. Provide power to ScreenBeam device using USB cable and standard USB power socket

3. Wait 30 seconds for system to boot up

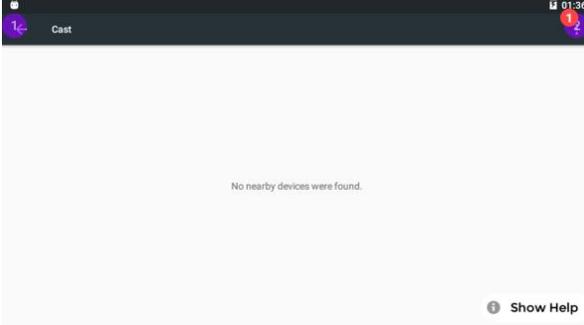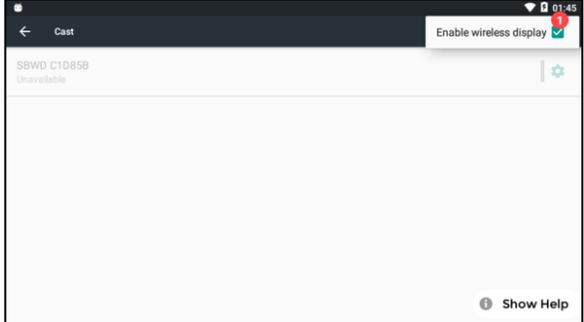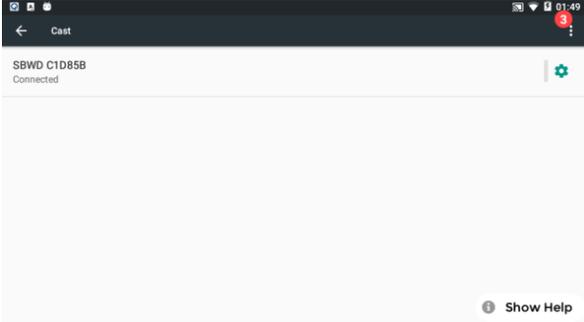4. Switch TV/projector to correct input source (HDMI input)

Software Setup

For first time use, the Casting software already built into HMT-1 will need to be turned on and configured.

Step 1: Go to Android Settings Either say "My Controls" followed by "More Settings", or go to "My Programs" and then select "Settings".	
Step 2: Enable WIFI Go to "WIFI" and the say "Off" to turn <u>on</u> the WIFI network system You don't have to join a network, but just have to ensure WIFI is turned on	
Step 3: Go to Display menu Say "Navigate Back" to get out of WIFI section and then say "Display" to go to display menu	
Step 4: Go to Cast menu The Cast menu is located at the bottom of the Display menu screen. Say "Page Down" to see it, then say "Cast"	

	No nearby devices were found. ⓘ Show Help
Step 5: Enable Casting This is hidden in the ":" menu, top right of screen. Say "Select Item 2" to show this menu. Then say 'enable wireless display' to turn on the wireless casting feature	← Cast Enable wireless display ☑ SBWD C1D85B Unavailable ⚙ ⓘ Show Help
Step 6: Link up to the ScreenBeam device Now the wireless display has been enabled, the list of nearby dongles should appear. Select the ScreenBeam device, usually prefixed with the term 'SBWD xxxx'. To do this say 'select item 3' corresponding to the device you want to select. HMT-1 will try to connect. Once connected the HMT-1 display will indicate the connect status. Also all audio will now be directed to the TV. HMT-1 will no longer 'chirp' when you issue voice commands.	← Cast SBWD C1D85B Connected ⚙ ⓘ Show Help

Runtime Use

Once the wireless dongle has been connected, all video and audio will be visible on the TV or projector device, in very close to real-time.

It will be apparent to the HMT-1 wearer that the connection is active due to lack of audio through the HMT-1 speaker. All audio is redirected to the TV.

If the connection breaks for any reason, HMT-1 will automatically try to re-establish the connection.

Rebooting the device will also cause HMT-1 to auto-connect to this dongle.

Notes

- Once the initial pairing has been completed, HMT-1 will continuously try to connect to the dongle

- WIFI casting can be a heavy drain on battery life!

- To disable Wireless Casting, go to Step 5 in the setup list, and then select 'enable wireless display' to unselect the option.

- HMDI cable length between the ScreenBeam dongle and the TV input is usually limited to less than 50ft with standard HDMI cable.

- Longer lengths have been achieved using an HDMI-to-CAT5 convertor. In this instance, a short HDMI cable is routed into a long length of CAT5 ethernet cable (we have successfully run 300ft of cable) and the CAT5 is converted back to HDMI and then into a TV.