



Mobile Hands Free Operation

Ontario Regulation 366/09

Display screen visible to driver prohibited

78. (1) No person shall drive a motor vehicle on a highway if the display screen of a television, computer or other device in the motor vehicle is visible to the driver. 2009, c. 4, s. 1.

Exceptions

(2) Subsection (1) does not apply in respect of the display screen of,

- (a)** a global positioning system navigation device while being used to provide navigation information;
- (b)** a hand-held wireless communication device or a device that is prescribed for the purpose of subsection 78.1 (1);
- (c)** a logistical transportation tracking system device used for commercial purposes to track vehicle location, driver status or the delivery of packages or other goods;
- (d)** a collision avoidance system device that has no other function than to deliver a collision avoidance system; or
- (e)** an instrument, gauge or system that is used to provide information to the driver regarding the status of various systems of the motor vehicle.

Wireless communication devices

78.1 (1) No person shall drive a motor vehicle on a highway while holding or using a hand-held wireless communication device or other prescribed device that is capable of receiving or transmitting telephone communications, electronic data, mail or text messages.

Exempt devices

7. The display screens of the following devices may be visible to any driver in a motor vehicle driven on a highway:

- 1. A device that displays,
 - i. information on the conditions, use and immediate environment of the vehicle, or**
 - ii. information on road or weather conditions.****
- 2. An ignition interlock device.**
- 3. A car audio control that displays only text or static images.**
- 4. A hand-held device that displays only text or static images and is connected directly into and operates using the audio system controls of the motor vehicle.**

Exemption for pressing buttons

14. (1) A person may drive a motor vehicle on a highway while pressing a button on a hand-held wireless communication device to make, answer or end a cell phone call or to transmit or receive voice communication on a two-way radio if the device is placed securely in or mounted to the motor vehicle so that it does not move while the vehicle is in motion and the driver can see it at a quick glance and easily reach it without adjusting his or her driving position. O. Reg. 366/09, s. 14 (1).

(2) A person may drive a motor vehicle on a highway while pressing a button on a device that is worn on his or her head or hung over or placed inside his or her ear or is attached to his or her clothing and is linked to a hand-held wireless communication device to make, answer or end a cell phone call or to transmit or receive voice communication on a two-way radio or a hand microphone or portable radio

Highway Traffic Act

ONTARIO REGULATION 366/09

DISPLAY SCREENS AND HAND-HELD DEVICES

Time-limited exemption for amateur radio operators

13. (1) Until January 1, 2013, drivers who hold a valid radio operator certificate issued under the *Radiocommunication Act* (Canada) may drive a motor vehicle on a highway while holding or using a two-way radio

“two-way radio” means a wireless communication device, consisting of a main receiver unit and a separate hand-held microphone, that is operated by a push-to-talk function on a set frequency and that allows for voice communication but not for the transmission and receipt of voice communication at the same time.

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So What Is Required For Legal Operation While Driving?

Mobile or Portable Radio that :

- Is securely mounted inside the vehicle;
- Is in view at a glance;
- Can be readily adjusted from the drivers position;
- Uses a Microphone that is not handheld and
- Uses a PTT button/switch that is not handheld but may be worn on the body.

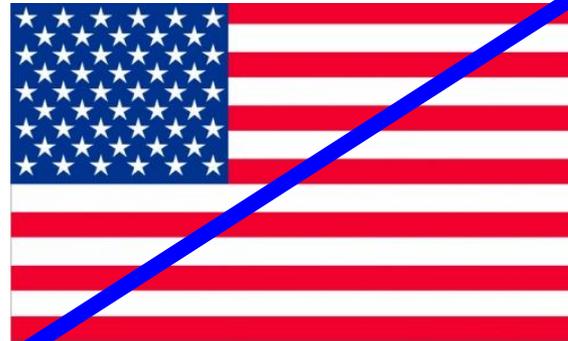
Ultra Vires?

Is this, like anti antenna by-laws, invalid as in conflict with federal legislative authority (i.e. The Radio Act) ?

Feds have told RAC no but that remains to be seen.

Exemption Does Not Cover

- US Hams
- Other Visiting Hams
- FRS and GMRS
- Other Licensed Services Not Exempted



Possible Solutions

- Wired Approaches
- Wireless Approaches



www.WALGOTT.com

The Wired Option

•The Visor Mounted Mic

- Works with cellphones
- Could be S/N problems
- Require wired PTT switch
- Could work better with over the ear headset type mic



HEIL TRAVELER

SINGLE SIDE



PTT

- VOX
- Momentary
- Finger Tip



Wireless Option



- Short range (10M)
- 2.4 GHz ISM Band
- Digital 64 Kbps Pulse Code Modulation (PCM)
- Exclusively paired system
- Can handle control functions like PTT

Bluetooth™ **Basics**

- **Named after Danish Viking King Harald Blatand (translated “Bluetooth” in English). King Bluetooth evidently ate a lot of Blueberries which stained his teeth blue, hence the name.**
- **King Bluetooth (10th century) kingdom united Denmark and Norway hence the inspiration of the name of the technology uniting devices**
- **Bluetooth is essentially short range wireless cable replacement technology**

Bluetooth Radio Basics

- Operates in the 2.4 GHz ISM band between frequencies 2402 – 2480 MHz
- Frequency Hopping Spread Spectrum
- 79 frequencies in the Hop Set (1 Mhz between frequencies
- Hop sequence is randomly generated
- 1600 Hops/Second / 625 usec per hop
- All TX and RX transceivers share same hop sequence in “PICO-NET”
- Up to 7 Slave devices to one Master Device in a single Pico-Net.



Other Bluetooth Basics

- **Class 1 device = 100 mW (20 dBm)**
- **Class 2 device = 2.5 mW (4 dBm)**
- **Class 3 device = 1.0 mW (0 dBm)**
- **Most consumer devices are 2.5 mW for a range ~ 10 meters**
- **Receiver sensitivity ~ -70 dBm for 0.1% bit error rate (BER)**

Bluetooth Services

- **Personal Area Networking Service**
- **Dial-Up Networking Service**
- **Serial Port Service**
- **Lan Access Service**
- **File Transfer**
- **Object Push Service**
- **Printer Service**
- **Human Interface Device Service (ie Mouse)**
- **FAX Service**
- **Audio Headset Service**

Pairing Process

- Device “A” searches for other devices in the “discovery” mode. (I'm available)
- Device “A” detects Device “B” with Name ID.
- Device “A” sends Device “B” “PIN” Code
- Device “B” compares received “PIN” Code with its own.
- Device “B” sends “PIN” Code back to Device “A”
- Encryption “Link-Key” exchanged.
- A “trusted Pair” is established for further communications and shouldn't require further authentication.

Bluetooth Security

- Unique 48 Bit address for every Bluetooth device.
- PIN codes (generally 4 digits).
- Authentication using PIN between units in initializations process
- Devices paired to the Master in a Pico-Net assigned an “Active Member Address”, others can't break into the Net.
- Encrypted “Link-Key” established and exchanged
(128 bit)

*Hands-free operation is possible, using the wireless Bluetooth® option, and a headset.

Hands-free operation with VOX function 

Options



BH-1
Bluetooth® headset
(Water proof equivalent to IP65 standard)
(The optional BU-1 Bluetooth® unit can be installed either in the control panel unit or in the main body)



CAH-1
Headset change base for the BH-1 Bluetooth® headset



BU-1
Bluetooth® adapter unit

HEAVY DUTY YET EASY TO OPERATE

* A minimum number of key buttons on the front control panel, for safer operation during motor sports activities. The large multi-functional dial and durable keys are easy to operate even when wearing gloves.



* The main body of the FTM-10R/E® is a solid die-cast aluminum sandwich structure. The high quality die-cast aluminum chassis doubles as the heat sink providing more than enough air-cooled ventilation for the power modules. The sandwich structure also provides far better resistance to vibration and shock than many conventional transceivers and radios.

* The design shields against ignition noise and alternator whine for mobile operation!



 **YAESU**
Choice of the World's Top Drivers™

2 m / 70 cm Band FM Dual Band Transceiver
FTM-10R/E*

* E for European Version





Add \$ 100 for BU-1
Bluetooth adapter.



Adapting Existing Radios

TalkSafe (Radio)™

The TalkSafe Ranger has been developed using Bluetooth technology. You can now talk on your radio using virtually any Bluetooth headset. The box clips on to your belt or waistband and connects to your hand portable via a cable. Once installed, you can enjoy freedom of movement, as you have no leads around you to get caught up in. The latched PTT is operated the same way as TalkSafe (using the call pick up/call drop button on the headset). The TalkSafe Ranger can co-exist alongside other Bluetooth devices without fear of interference. The device automatically re-pairs to the existing headset when power is applied.

\$220.00



http://www.radioworld.ca/product_brochures/amateur_accessories/rpf/TalkSafe_Ranger_Datasheet.pdf

Jabra A-210

Designed to convert non –
Bluetooth phones to work with
Bluetooth headsets and car kits

Plug designed to go to cell phone
has audio in and out lines

Build a little interface box for
radio

Use wired PTT

Modify PTT timeout

Function TCA pp. 20

E-Bay \$ 30 - 70

Specifications

- Pairing button for simple connection with your Bluetooth headset
- 3-position setting switch which provides the optimum connection for your phone type.
- Fitted with a standard 2.5mm headset jack for connection to most non Bluetooth mobile phones*
- Blue light (LED) indicating on / off
- Red light (LED) indicating charging and low battery
- Belt clip and Velcro for convenient fixing to your belt or the back of mobile phone
- Bluetooth version 1.2 (forward and backward compatible)
- Weighs less than 1 ounce (12 grams) and measures 2" x 1 1/2" x 1/2" (48 x 37 x 8 mm)
- Supports voice-dialling (subject to phone)
- Range 33 feet (10 meters)
- Up to 8 hours of talk time and up to 240 hours standby time



Defectives are battery....replace

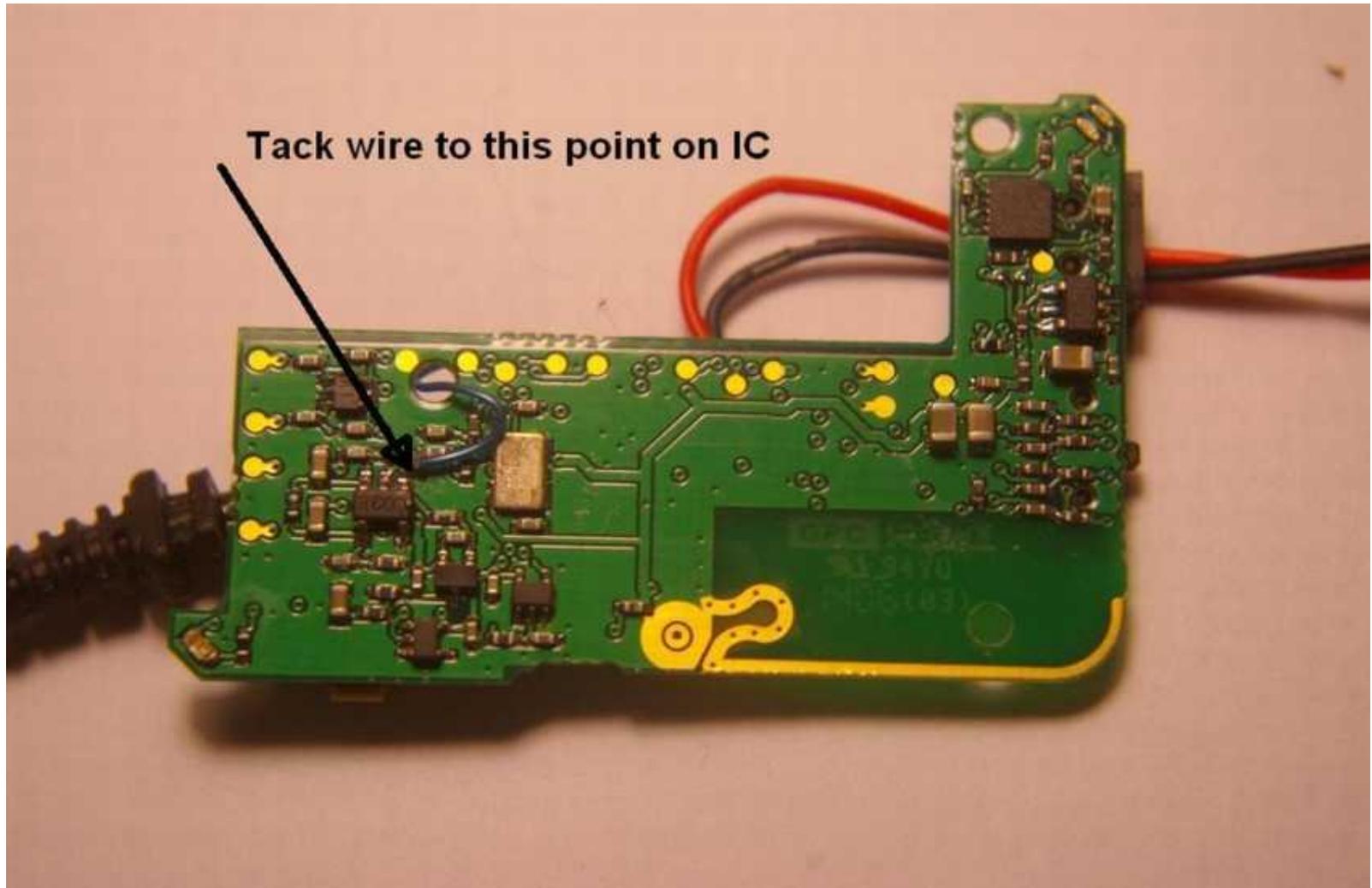
Issues using the Jabra A 210

- **PIN Code is Static and set to 0000**
 - **As a consequence, can not be used with some Bluetooth equipped cars that generate a random PIN code for security.**
 - **Unmodified, the device “Times Out” after loss of Receive Audio for 60 seconds.**

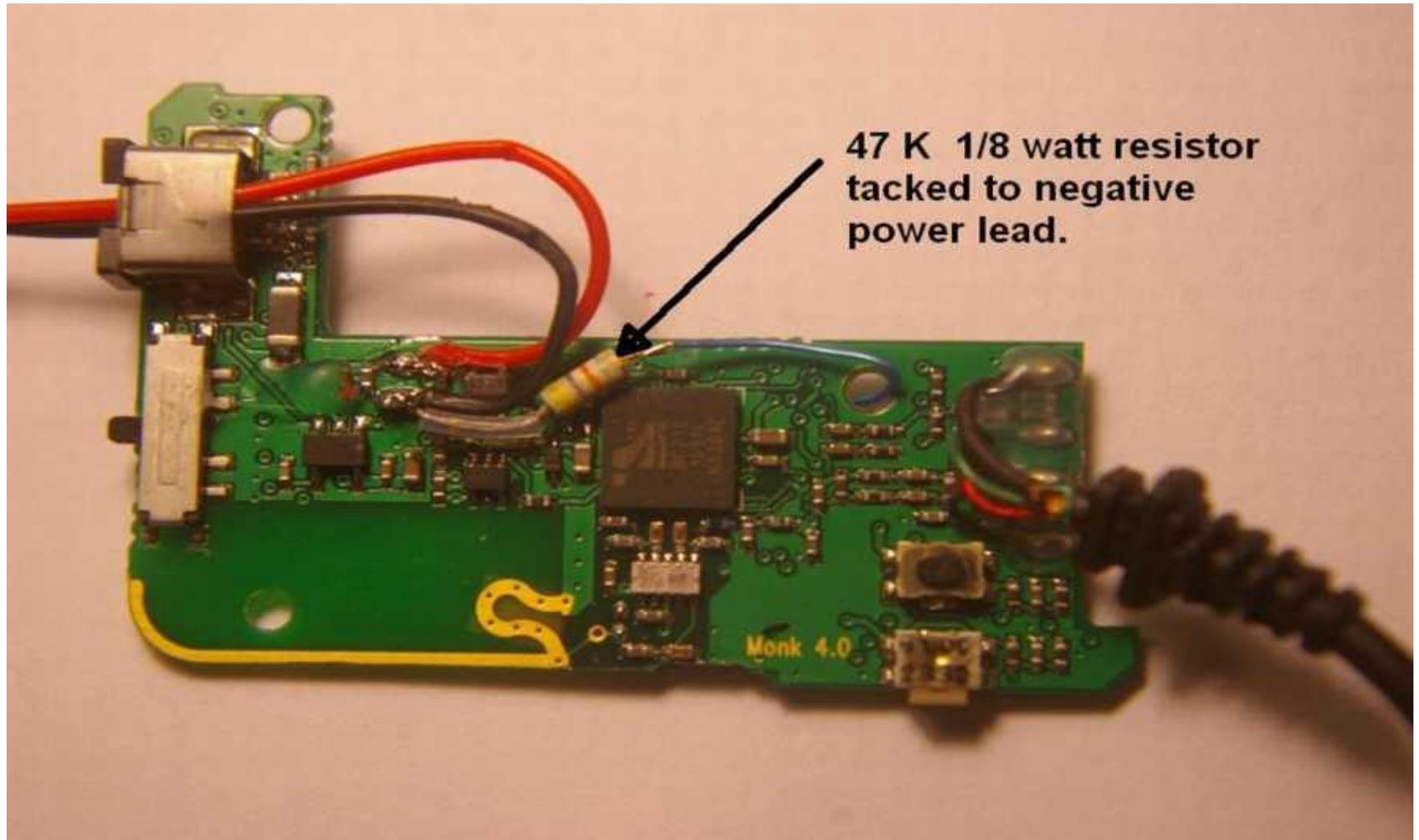
The A210 interfaced to VX 6 Portable



Modifications to A 210 to prevent time out



Modification to A 210 to prevent time out





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FREE shipping

Lot of 5 Defective Jabra A210 Bluetooth Adapters

For Non-Bluetooth Phones, GENUINE JABRA! FREE SHIPPING!

Item condition: --

Quantity: 7 available

Price: **US \$9.99** Buy It Now

You can also: Watch this item

Shipping: **FREE shipping** Standard Flat Rate Shipping Service | See all details Estimated delivery time varies

Returns: No Returns Accepted

Coverage: Pay with **PayPal** and your full purchase price is covered | See terms

Seller info

wirelesstelcom (644 ☆) 99.2%

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Visit store: wirelesstelcom

Other item info

Item number: 280358911341

Item location: East Coast, United States

Ships to: United States

Payments: PayPal See details

History: 18 sold

Enlarge

Bluetooth Headset

Motorola H390

\$29.95 at Walmart



Other Bluetooth Headsets

- Plantronics 510, \$75



Blue Parrott

\$100



Here's the A 210 Mobile Interface for the ICOM IC 706













<http://www.k7sfn.com/projects/bluetooth.html>

In Car View of Chevy Tracker

Interface to microphone
modular receptacle and
headphone jack.

PTT is Red Button
Push On / Push Off



