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lightning-t5-f6/6314-radio-controllers-for-arc-52-and-ptr-175-radios)

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📄 Radio Controllers for ARC-52 and PTR-175 radios

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🔍

ScottBouch

Offline (/)
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🕐 15 Jul 2016 15:22 #29734

**ScottBouch replied the topic: Radio Controllers for ARC-52
and PTR-175 radios**

Available frequency selections:

Digit 1:
1, 2, 3

Digit 2:
0 to 9

Digit 3:
0 to 9

Decimal 1:
0 to 9

Decimal 2:
0 or 5

I've also photographed all numbers for you from the manual
display, so you can model it on real images too.

Cheers, Scott

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Algernon

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🕐 15 Jul 2016 15:28 #29737

**Algernon replied the topic: Radio Controllers for ARC-52 and
PTR-175 radios**

Aha. That's what I predicted and coded! 🙂 Always nice to be
right, haha.
One thing, though, I forgot to mention when talking about
compromises for FGFS - both FGCom and VOR/DME/ILS in
FlightGear use 10khZ increments. For instance, Valley ATIS is
120.72 MhZ. So I think we'll have to swallow a little unrealism for
functionality's sake and make the increments on the final digit 10
hZ instead of 50 hZ 😕 It's not an easy thing to make into an

option either.

Looking forward to getting those digits textured!! 🙂

ScottBouch

Offline (/)

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🕐 15 Jul 2016 15:28 #29738

ScottBouch replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

> Algernon wrote: Amazing, thanks for that comprehensive list. I need to rescale the unit when I've got an hour or two spare, that ought to help somewhat!! Although bear in mind, once again, the compromise element comes in here - each knob has to be a teeny bit bigger, to hide the 2D photo image of itself on the texture beneath.
>
>> ScottBouch wrote: I should also do some sound recordings of changing the mode and setting different preset channels, as it has some quite distinctive clunks, but with helmet on and engines running, I guess you'd not hear it much, but you do when in the cockpit without engines running.
>
> Yeah, this is something we've never really known how to simulate with the resources available (it's actually really difficult, see above about limited sound options). I personally have always gone for a "game" rather than sim approach, where the sounds are generally drowned out by aircraft and engine noise, but are still sort of audible. Ideally, if FG could handle outputting to two or more sound sources, we could take the load of the sound engine AND route the loud aircraft audio through the speakers, and send comms, intercom, avionics etc. to a headset etc. etc. That's the ideal solution. Doubt it will ever happen though 🙂

Man, if you could make that happen, I'd give you sample sounds of how the flying helmets make sounds appear, as some helmets do produce different sounds, the Mk2 and MK3 helmets (used from 1960's through to 1990's) give an echoey sound as they have a single speaker in the rear, and pipes going to ear capsules. the earlier MK1 (1950's, and through to the 70's), and later Mk4 (introduced in the mid/ late 1980's) helmets had individual speakers in the ear pieces and sounded much nicer.

If two sound engines could be used to drive two sound cards, you could wear a headset, or a real flying helmet & mask for the comms, and have the ambient sounds through speakers.. that would be awesome!!

Cheers, Scott.

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ScottBouch

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🕐 15 Jul 2016 15:30 #29739

ScottBouch replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

Fair enough on the 10KHz vs 50KHz steps - it's got to be usable!

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ScottBouch

[Offline (/)]

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🕐 15 Jul 2016 15:32 #29740

ScottBouch replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

With the radio background noise, could you just forget the warm up an just change the current background noise for the post-warm-up background noise? wouldn't add any sound engine stress above what it's currently doing, but would add realism.

Cheers, Scott

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conversation.

Algernon

[Offline (/)]

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🕐 15 Jul 2016 15:39 #29741

Algernon replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

> ScottBouch wrote: If two sound engines could be used to drive two sound cards, you could wear a headset, or a real flying helmet & mask for the comms, and have the ambient sounds through speakers.. that would be awesome!!

Let's put it this way - I don't think it will even happen built into FlightGear. HOWEVER... it's pretty easy to get anything from the FG property tree out into other software or hardware to provide sound. For a more specific project, rather than using FG as a game, it's probably possible to do it with much, much broader limits. So, for example, an aircraft-specific simulator could run seperate audio software and not rely on FG for sound AT ALL, or maybe just use FG for the positional 3D sound (which it doesn't do too badly, and can do 5.1 surround I believe) and have other sounds routed through different hardware outputs.

Now THAT is worth thinking about... 🙂 Put like that, it doesn't seem so impossible at all!

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conversation.

Algernon

Offline (/)

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🕐 15 Jul 2016 15:45 #29742

Algernon replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

I've always wanted to have ground intercom and telebrief available, for instance... FG comms is notoriously crappy, but a custom solution could be very sexy. I have a weirdly intense passion for intercoms, talkbacks and stuff like that... when I first started working at the BBC with the 70s in-house ringmains and talkbacks, I would squeal with delight at some of the stuff our clever engineers had designed back in the golden era...

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ScottBouch

Offline (/)

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🕐 15 Jul 2016 16:07 #29743

ScottBouch replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

Here are some controller sounds:

> C1607/4 PTR-175 Radio Control Unit sounds - c...
>
> ▶

I love the idea of telebrief too.. I k now how it works in the Lightning too.

got to dash, the detailed photos will be available maybe next week as I most likely have a busy weekend ahead!

cheers, Scott.

---

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The following user(s) said Thank You: Algernon
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ScottBouch

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🕐 15 Jul 2016 16:09 - 🖉 15 Jul 2016 21:30 #29744

ScottBouch replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

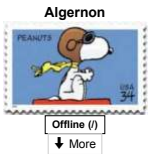> Algernon wrote: Now THAT is worth thinking about... 😊 Put like that, it doesn't seem so impossible at all!

I really love this idea!!! Could even do it across the network, use a raspberry Pi as a sound node, cheap and cheerful! Have al the MP3's on the SD card of the pi, and if it's possible to take cues over Ethernet from FGFS, job done!

I think of Raspberry Pi's as they are cheaper than separate PCI sound cards!

Alternatively, there's a lot of magic that can be done with Arduino's and clever sheilds.

---

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Algernon

Offline (/)
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🕐 15 Jul 2016 16:12 #29745

Algernon replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

Wickedness - that's my next hour or so sorted then!! 😵

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Algernon

Offline (/)
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🕐 16 Jul 2016 10:06 #29758

Algernon replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

PTR-175 Victor B2 Installation

▶

The following user(s) said Thank You: ScottBouch
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ScottBouch

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🕐 16 Jul 2016 10:13 #29759

ScottBouch replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

Truly awesome! Great to hear the real sounds!

I love how this work will feed into so many aircraft types!

My control unit is famous! The clue that it's mine is the serial number on the hinged cover!

Good work, most impressive!

Cheers, Scott

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ScottBouch

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⏱ 16 Jul 2016 11:05 - ✎ 16 Jul 2016 11:24 #29762

ScottBouch replied the topic: Radio Controllers for ARC-52 and PTR-175 radios

> ScottBouch wrote:
>
> > Algernon wrote: Now THAT is worth thinking about... 🙂 Put like that, it doesn't seem so impossible at all!
>
> I really love this idea!!! Could even do it across the network, use a raspberry Pi as a sound node, cheap and cheerful! Have al the MP3's on the SD card of the pi, and if it's possible to take cues over Ethernet from FGFS, job done!
>
> I think of Raspberry Pi's as they are cheaper than separate PCI sound cards!
>
> Alternatively, there's a lot of magic that can be done with Arduino's and clever sheilds.

Ok, initial bit of Googling...

www.arduino.cc/en/Tutorial/SimpleAudioPlayer (https://www.arduino.cc/en/Tutorial/SimpleAudioPlayer)

Reads file from sd card and plays it using a PWM output
This could be the basis of something great!

I've an idea of building a distributed system to operate real instruments from flightgear using serial over usb to a master Arduino board. Then using I2C to talk to a string of ATtiny85 boards, each one handling an instrument or two, depending on complexity and pins required.

The master board would hold a list of all variables received over serial (configured from FGFS .xml file), and corresponding I2C node addresses to send the data out to. (I'd also want this to work 2 ways for switches, throttles and flying controls).

There's no reason the same philosophy can't be applied to some audio boards on the same I2C network. But instead of driving a gauge, you're reading a file and playing it..

Flightgear can supply the regular radio audio, this can be analogue mixed before amplification with the background noises from the Arduono boards, in whatever configuration suits.

This would have to be a specific aircraft sim, as reconfiguring would require a fair bit of messing about. But the beauty is it's cheap as chips! (The edible type)

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Algernon