

MARCH/APRIL 2022

JIMSA[®]

JOURNAL

Your Partner in PUBLIC SAFETY

In this issue:

Signal Coordination:
Are We Really Coordinating
for All Users?

Use Some "Magic" To Upgrade
Your Fiber Optic Network

Portable Traffic Signals Simplify
Complex Roundabout Construction

HOW WOULD YOU ADDRESS THIS? MINI PIN CONNECTION

While mapping hardware components for traffic/pedestrian control devices, a tiny pin on an adapter was bent. Trying carefully to bend it back in place, it broke off. Just one little pin. The adapter is needed to allow the Voice Chip card to be connected to the main control board. The adapter was put back in place, the voice card for the RA-5 was installed – nothing! No location sound, no warning for crossing, only the amber lights would work. Okay, this pin was important.

Realizing it would be a month or more before a replacement could be acquired, Public Relations was contacted to post a warning. Residents were advised to use caution while using this RA-5 as it has lost its audio functioning, but the lights still work.

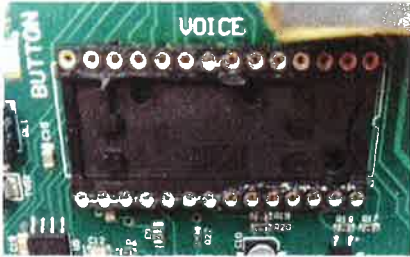


Fig 1: On board socket of missing pin.

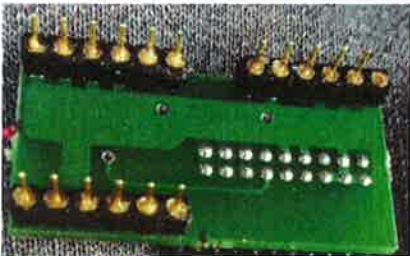


Fig 2: Back of adapter, missing pin

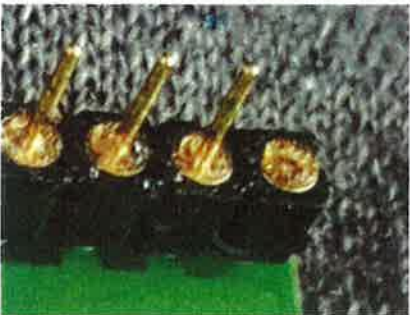


Fig 3: Close up of missing pin.

At my personal workshop, I knew I had some. I did locate an old spool of Radio-Shack Bell wire. It was insulated twisted-pair, 18 gauge, 8 strand. 75mm of one wire was cut off, then 25mm of the insulator was

stripped. Two copper conductor wires were twisted then compared to the remaining pins on the adapter. Too thin, three was the magic number. The three were twisted, dipped in solder paste then tinned. The end of the newly made pin was trimmed to square the tip.

Solder paste was applied to the small copper/brass dome where the pin broke off the back of the adapter. With the aid of a

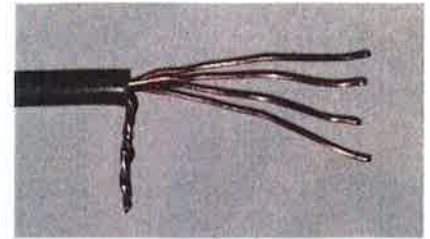


Fig 4: Bell Wire soldered to build a new pin

good magnifying glass equipped with LED light the assembly started. The newly built pin, held by the remaining insulated wire was positioned so the new pin aligned with the remaining pins and was centered on its dome. Soldering iron was cleaned, tinned, then a short period of heat was applied to the pin, not the dome. Didn't want any unnecessary heat near the adapter. Applying heat to the mid pin provided enough heat to allow the pin tinned earlier to solder to the dome. While still holding the insulated wire portion, lightly lifting, it holds good. We've created a new pin. The new pin length was trimmed just a shade longer than the remaining pins.

Back at the RA-5, an adapter with a newly built pin was installed into the onboard socket in the control card. Voice Chip Card installed into the adapter; system energized. There is now a Locator Sound. The PBS for the RA-5 was pressed... "Amber Lights Are Activated, Use Caution Crossing Street, Traffic May Not Stop", wow we're back up and running. Ran a full series of tests on the RA-5 system, everything has returned. Public Relations was contacted, the public was notified this RA-5 was back up and in full function. Start to finish was approximately 2 hours.

How would you have addressed this? ●

Leslie Vanderbeck, CET
IMSA Atlantic

Neither the publication nor IMSA endorses or assumes responsibility for any information or solution in IMSA Member Stories. When repairing any unit, ensure you are compliant with the manufacturer's instructions and warranty.