The confusion you mentioned about the names of the modes, so that what is now called Phrygian (and I so named my piece) was originally Doric--this has to do with some mediaeval church people who confused the part of the voice-compass used in the church modes (tessitura) with the tonic--that is, confused the lowest note of the scale with the tonic and thus got the names mixed up. I believe this is why Helmholtz's book is full of terms like "Mode of the Fourth" "Mode of the Minor Sixth" and so on. Probably the abbreviation system used in the latter part of the book, as "ma.mi.ma" standing for a chain of chords major-minor-major is better for the modern use of the modes, giving the harmonization. When the comma 81:80 is recognized, the notes in the "natural minor" on A r are not those of the C major scale. With the 7 ratios admitted, there are still more differences. But after glancing ti twice at the scale diagrams in the latest Journal of Music Theory where they describe the 60-tone instrument, and then my new La Jolla correspondent Mr. Chalmers sending me a photocopy of the keyboard diagram the other day, I fear we are getting tin into a "tal tail wagging the dog " situation where too much arguing about intonations will ke p me from writing new compositions to try out the effects.

Evidently the Angels Theater closed their play Don Juan in Hell by Shaw, without anyone getting around to taking me there to see the play.

Now what went wrong with this typewriter? I can't figure it out. Before I forget what I was writing, better do it over:

Evidently the Angles Theatre closed their play, Don Juan In Hell, by G. B. Shaw, before I had a chance to be taken there to hear the effect of the music tape I composed for them and xxx to see the play. I understand I am to get the tape back, but under the circumstances I will have to remind them, it looks lik . Several places in the tape I used microtonal effects, so if I do get the tape back I will "index" those places so I can demonstrate them for you. If I don't get it back I will just have to get myself in th ti into the mood I was in at the time of com osing--which may be difficult.

And the chap who started all this and hurried me up and brought the tape to be recorded has left his address without trace. Maybe he went back to Germany or Switzerland or whether he hails from.

I received a second price-list sheet from Pantronic of Riverside, who sell sub-assemblies as well as kits for a midget transistor organ. I am going to ask for a quote on individual parts not assembled (special transformers and transistors). From the description, this might be a good first unit. A price of $24 is asked for a sub-assembly of 12 oscillators wired and roughttuned. This is much less than the Artisan kits. In my own case, I would rather build from scratch, so would order only the transformers and transistors, buying all other parts myself. I still don't trust those printed-circuit boards, even if they do save much space and assembly time.

I am ex ected expecting to have Mr. Weiler come to see my

instruments one of these days--he built a couple of organs himself some time back, and has several friends who have done likewise. According to him, key-contacts cause a lot of trouble, and so in his latest instrument he got coin-silver wire and had it gold-plated.

Eby, in his book on the Artisan Kits, goes all out for Nichrome wire, but an electrical engineer (since deceased) told me that was all wrong (about a year ago) he recommended phosphor-bronze. Apparently opinions are quite different. This is quite a problem, and certainly is relevant to your getting some of your keyboard designs built up, so I will keep looking for information.

The [redacted] Baldwin organ uses still another kind of key-contact that has great advantages: it consists of two carbon-coated resistance bands, so that there is about 50,000 ohms in the circuit when contact is made, the resistance falling to a few hundred ho ohms when the key is pressed all the way down. This allows for a gradual organ-like attack even from osciallators which are kept running continuously. I believe the Baldwin patents on this expired recently. Some other makes of organs use similar ideas.

Perhaps some of your acquaintances know about so-called "dry-circuit" contacts and relays. Special precautions have to be taken when keying very small currents and low voltages.

The Lowery Organo used coil springs for contacts so that there would be a sort of wiping action. Dial telephone equipment uses "wipers" of various kinds, so that every contact is cleaned or brushed off every time it is used.

This is one reason why pushbuttons cost as much as the doorbells or buzzers they are supposed to ring. And why flashlights balk and refuse to light up when switched on.

A 31-system organ will have hundreds of contacts in it. Hence my sermon.

And now for a pleasant Sunday afternoon spent trying to patch the two holes in the wall next to my "new" bed.

Yours,