

the codes to the telephone company so that the pay phone will not get the 'busy' or 'hang-up' command. Leave this wire disconnected when you discover it. What will happen: Anytime that someone puts any amount of money into the pay phone, the deposit will not register with the phone company and it will be held in the 'temporary' chamber of the pay phone. Then, (a day later or so) you just come back to the phone, reconnect the wire, and click the hook a few times and the phone will dump it all out the chute. (What is happening is that the 'hang-up' code that the phone was not receiving due to the wire being disconnected suddenly gets the code and dumps its 'temporary' storage spot.) You can make a nice amount of money this way, but remember that a repairman will stop by every few times it is reported broken and repair it, so check it at least once a day. Enjoy and have fun.. Many phones I have done this to, and it works well with each..

## **96. Computer Based PBX**

**by The Jolly Roger**

To get a better understanding of what a pbx can do, here are a few basic fundamentals. The modern pbx is a combined computer, mass storage device, and of course a switching system that can:

1. Produce itemized, automated billing procedures, to allow the identification and management of toll calls. [hahaha]
2. Combine daytime voice grade communication circuits into wideband data channels for night time high speed data transfers.
3. Handles electronic mail [including office memos].
4. Combine voice channels into a wideband audio/visual conference circuit, with the ability to xfer and capture slides, flipcharts, pictures of any kind.

Both the external and internal calling capacity of the pbx system must be carefully considered because many business operations run a very high ratio of internal station to station dialing and a low capacity system will not handle the requested traffic load. A critical factor is the number of trunks and the central office facilities that are used for outside connections. Another is the number of junctions or [links] that make up the internal calling paths. To understand the services available on a typical computer run pbx it is necessary to introduce the subject of time division switching. In a time division switching network all connections are made via a single common bus called (of course) a 'time-division bus'. Every line trunk that requires a connection with another is provided with a port circuit. All port circuits have access to the time division bus through a time division switch. [when two ports require connection, their time division switches operate at a very high frequency (16,000 times per second.) This technique, which is called 'speech sampling', allows many simultaneous connections over the same time division bus. Each connection is assigned a time interval, the 'time slot', and the number of time slots identifies the number of simultaneous connections among ports.] The next critical item is circuit packs. The system elements that we will be describing in future tutorials [lines/trunks/switches, memory and control] are contained on plug in circuit packs. Each line circuit pack contains a number of lines, in example, four. But the assignment of station numbers to actual phone line circuits is flexible. The system memory is contained in circuit packs which provide the call processing functions. The circuit packs are held in small frames called 'carriers'. Within each carrier, the circuit packs are plugged into positions: the 'slots'. Every circuit can be addressed by, say a five digit number which tells its location by carrier-slot-circuit.... [starting to get the idea?] There can be three types of carriers in a modern pbx system:

- O line carriers
- O trunk carriers
- O control carriers

The line carriers contain station lines. In AT&T's "dimension" model, for example, a total of 52 to 64 lines are provided. The trunk carriers contain slots for 16 trunk circuit packs. The control carrier includes processor, memory, control circuitry, data channels for attendant console control and traffic measurement outputs. Pbx systems will directly reflect the types of services offered at the c.o.

- o ccsa
- o ccis
- o picturephones [sooner than you think my phriends]

Common control switching arrangements (ccsa) permit any unrestricted telephone station to call any other internal or external system station by using the standard seven digit number. Alternate routing is a feature of ccsa service the inter-facility, alternate routed calling paths are accomplished at the telephone company central office level, not at the pbx level. A system of interest to large scale telephone users is common channel interoffice signaling ccis. Typically, this technique employs common channels to carry all inter-facility signaling instructions: dial pulses, on hook (idle), off hook (busy), and so on, between two switching centers. [getting warm]. Ccis replaces older methods of interoffice signaling such as 'in band' and 'out of band' techniques. By the way, real phreaks are selling their boxes to idiots who still think they're worth a lot...the former (in band) transmits signaling data within the normal conversation bandwidth. It's shortcoming is that false information may be transmitted due to unique tone or noise combinations set up in the talking path. [this is the official reasoning]. Out of band signaling techniques placed the interoffice data in special channels, generally adjacent to and immediately above the voice path. To preserve interchannel integrity, out of band signaling requires very efficient filtering or greater 'band guard' separation between channels.

## **97. PC-Pursuit Port Statistics**

**by PC-Pursuit Users**

*Introduction:*