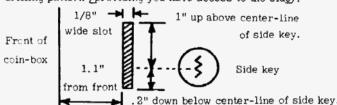
MORE FORTRESS FUN!

Last week, I met with "CJ" and "The Professor" and told them how much I would like a Fortress Fone of my very own to play with. About 1/2 hour after they left, they returned with one and gave it to me to open. "The Professor" was able to pick the upper lock after removing the shroud around it. It's only 4 levers. I immediately went to work on it while "CJ" bashed open the coin box. After he opened it, we made the following discoveries:

1. The drill pattern you published in #30 for the front plate would make it almost impossible to get the box open, because the bolts go thru double sets of slots before going into the outer shell of the phone. When the rotary plate is drilled as in #30, it should rotate and retract the bolts.

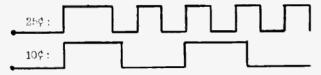
2. The right-hand bolt is really wide and protects the side lock (interlock).

3. The following cutting pattern would be better than a drilling pattern providing you have access to the side7:



The cut should be 1.2" long, 1/8" wide, and 1" deep. It can be done with a special grindstone drill bit, and will shear off the interlock mechanism as well as cut the spiral front plate free so it can turn. We are checking reports of a puller for the cover. If there is such an animal, and if it does work, you'll hear about it first in TAPIT

4. The tones' intervals are not generated by the coins pushing levers on the red box mechanism (like everyone thinks) but by a little relay which reverses the direction of the wheel that the levers cock. In other words, when a coin is dropped, the coin pushes a lever which cocks a wheel. The coin then drops into the drop chute, and the red box goes thru a 70ms delay to allow the coin to clear the mechanism. After that, a unijunction-timer circuit pulls in a relay which unwinds the wheel until it is back where it started. The number of times the relay ticks, pulling the wheel, is the number of beeps. If the wheel went 5 notches forward, a switch drops, telling the unit to do 35ms bleeps (for a quarter). However, the first bleep will always be the same as the above-mentioned 70ms pre-bleep delay, because the coin will just be clear, and all of the pulses (bleeps) are actually symmetrical square waves:



I will restate the specs on these tones because they are <u>very</u> important and must be known by all TAP readers. The 25¢ tones are 70ms on, 35ms off, 35ms on, 35ms off, 35ms on, 35ms off, 35ms on, The dime is 80ms on, 80ms off, 80ms on. These can be fudged to 70ms if needed, and better be generated digitally, because they'll fuck up with analog timers, "windows", and analog delays.

Then I made a few discoveries myself:

1. Coin Drop Mechanism - In my last letter, I asked about the "coin-sense relay" but couldn't figure how Bell knew about the money. Now I know! First, they use a low current (20ma) high voltage (50v) relay to release the money. Second, the relay resets a vane which senses the presence of the money. This vane cannot be checked by the operator. However, she can see the current drain caused by the drop relay pulling in. If the vane hasn't been hit by money, the coin-drop relay won't pull in even when the operator tries to make it. The good part is that she can't check the vane until she drops the money. So it doesn't matter when you drop your nickel, as long as you drop one before each time she collects. Also, she can't check it on

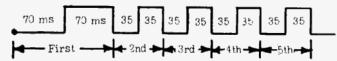


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the initial three minutes because that drops automatically, and so you can talk for at least three minutes for free.

- 2. The pay phone red box tones drift with the outside temperature. So...before boxing away, make sure the payphone frequencies match your red box frequencies or you'll get screwed when you drop your 5¢.
- 3. As I told you last time, the 25¢ set of tones are 5 beeps, the first one twice as long as the rest:



All of the above info is confirmed by an in-depth experiment which can be done on any phone without taking it out of the booth!

2. Drop two nickels into the phone, one at a time. Listen to the receiver or the side of the phone. When the second nickel is dropped, two clicks of the relay are heard - as if a dime had been dropped.

3. Now for some fun: Drop a nickel, and then a dime.

There are three clicks! Amazing, a 15¢ piece!

4. Now try dropping two dimes right together and you'll hear both dimes hit the bottom of the coin holding chute before you hear four clicks! a 20¢ piece!

5. Try a nickel and a quarter and get six clicks (30¢).

6. If you're fast enough, this will work too: Drop a nickel. Then two dimes together and you'll hear the familiar quarter sequence and not five nickel bleeps.

Whether you are listening to the bleeps thru the receiver or clicks on the side of the phone, you'll find these experi-

ments interesting.

If you don't believe me about the timing of the tones on

the 25¢ bleeps, try tape recording them (have a friend call you from a pay phone and drop money) at 7 1/8 ips on a reel-to-reel recorder. Slow down the tape on playback to as slow as possible and mark the tape at the beginning and end of each bleep. When done marking, measure the marks and you can determine the tone durations. You will find most phones adjusted perfectly, whether single tone or mf phones, so the first bleep is twice as long as the rest.

If you should ever have access to a phone in a relatively private place, and wish to record the tones interference-free, get a phone pickup coil from someplace like Radio Shack (bletch!) and place it 3" behind the top keyhole on the right side of the Fortress Fone. It picks up the tones fine there.

Computer Wizard

Some Fortresses must have a mechanism defect. It seems that they will take two dimes or two nickels - a 50% savings! Please advise readers to deposit two nickels first and listen for second dial tone. This is for a 20% local call area.

Mugs

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THE PRINCIPLES OF TWX PHREAKING

by Cheshire

INTRODUCTION

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THX R4 PHREAKS

ATTN: MILO FONEBILL

Please get in touch with me through the TAP office.

Tom Edison

COMING NEXT ISSUE !!!

Our next issue, #5), marks the 7th anniversary of TAP. To mark the occasion, issue #5) will be a special double edition with color pages. I want his to be the best fickin issue #7 TAP that nevice ever put still fin additional states are reserved, expecially those with nave set in their a state of the reserved in things to help out over the past jeans, to send in information newscillps, articles, and columns. I want i pages just bursting with sechnical knowledge. Lets show Bell that we DC care!

LETTERS FROM READERS

Dear TAP,

Perhaps some of your readers would like to chat with ships of the high seas. This is now possible through a satellite called Marisal. Actually there are two currently operational: Atlantic and Pacific, and in a very short time there will be one for the Indian ocean too. Enclosed is a list of most of the ships that you your favorite 600 or 556 manner, then become the ships that you your favorite 600 or 556 manner, then become the ships that you will sake you billing information, so you should have a story made up as to who (what individual/or company) is calling and give her a number to bill it to filke IBM or Continental Bakery, or whatevery. She doesn't have any way (presently) of knowing where the call is coming from. (If you going to cost somebody 10 backs a minute!) And be a good guy and give her the ship's number (like SS Jussion #1680231) and tell her you want to speak with..... on, what the hell, the chief stewart or cabin boy - anyway, the radio operator will get the call and you can bullshit with him. Sparks can tell you where the ship is, courses, speed, destination, etc. Commat has some other numbers that might prove fruithi if somebody knows how to exploit them: (203) 264-9030 is Data Test fassociated tigits 1800-924-4646, which may be a computer entry node?), 264-9040, 264-9050 (data set), and 264-9060. You might also try 264-9094, 5922 - dedd, which may be a computer entry node?), 264-9040, 264-9050 (datas set), and 264-9060. You might also try 264-9094, 5922 and the fruited Nations language bank (free transiations?) is 212-886-3061.

May the force be with you,

May the force be with you, R2-D2

Greetings,

In Missouri, Southwestern Bell has forced itself upon an unsilling public. They now charge 20¢ per directory assistance call (after the first five free ones per month).

Well, in a burst of insight it came to me--and it has been verified by experiment and questions to operators. It is:

Call the 555-1212 number, using the 1 code, omitting the area code (as in calling directory assistance for another tone in your area code). Alone the operator sake you while toldy pleased just say the mane of your town (in my way of knowing what town you are disling from! And there is no charge for the 5591212 number.

Back Issues are 50¢ each.
Sucscripting - 10 issues - US Bulk rate 35.
US First Class in plain sealed envelope 37.
Canada & Mexico First Class 37. Danida & Mexico First Class St.
Fireign \$5.

MPDETANT! Include mailing lated in Xerox copy when writing to TAP about your subscription.

B. L. M. Mooply \$1.03.

Blettining Curses = 100 each. A - DC Basics,
B-AC Basics, C - Phone Basics, D - Amplifiers,
TAP mups = \$4.00.

TAP Interior = \$4.00. Specify size and color: Small,
TAP Interior, Extra Large, Black or red T-shirt with white TAP logs.

TAP TAP Bell is A Cheap Mither T-shirts = \$4.00.

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Shipboard Terminal Installations: where educated with shipboard fer mass which have been commissioned for operation with the Markart System.

Ship	Registration	Telex Number	Answerback
Al Hasa	Panama	1330701	∺CWD +33070*
Alaskan Star	United States	1501577	4GP1 1521111
American Ace	United States	(50010)	VECV 1530111
Aquanus	United States	500702	WSK5 1530**2
Arco Anchorage	United States	150*104	WC C 1531114
Arco Farbanks	United States	1501103	VICINB 1501113
Arco Juneau	United States	1501102	*S6G 1501172
Arco Prushoe Bay	United States	501101	#PFD 1501121
Allevida	Оептин	2610101	OVR2 2610171
Bon Ocean Lancer	United Kingdom	2443401	GUUU 2440401
Cable Ventura	United Kingdom	3440102	GUNZ 2410112
Chevron Haway	United States	1500401	KINED 1500401
Clest	Unived States	1501516	WBGF 1501176
Donghae-Ho	Sauch Arabia	3743101	HYSA 3743101
Duchess Clane	United States	1501574	MGNA 1501574
Esso Bangkok	Pariama	1330101	HPKD 1330101
Esso Copennagen	Liberia	1240102	ELSJ 1240 12
Esso Malacca	Panama	1330102	HPDA 1330112
Essa Phrippines	Panama	1330103	HPXW 1330153
Esso Withermshavan	Uberia	1240101	ELVX 1240101
Fred H Moore	United States	1500602	MOBL 1500502
Golden Bear	United States	1500501	WE20 1500501
Indian Seal	United States	1503201	SEAL 1503201
indus	Sweden	2370101	SLAT 2370:01
Jonsson .	Canada	1560201	VYXD 1560201
KDO Maru	Japan	3203177	JGCC 3203**7
King Oscar .	United States	1501201	WYVC 1501251
Kurama-Manu	Japan	3200105	700G 3500.15
LASH Arantico	United States	1500201	WEZU 150027*
LASH Italia	United States	1500204	WUAT 1500254
LASH Pacifico	United States	1500202	WIEE 15002/32
LASH Tenye	Liryled States	1500203	WANG 1500223
John A MacDonald . Mercury .	Carrecte	1560101	CG8K 1560101
	United Kingdom	2443101	GJXH 2440*01
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Moon nero . Mormuestar	United States United States	1500601	WLBY 15006C1
Na Many America	United States	1500301	KGOF 1500301
None .	United States	2150201 1501575	IBFR 2150201 KPKV 1501575
Ocean Ranger	Panama	1330702	KPKY 1501575 HENB 1330702
Ponobelo	Panama	1330402	HPBJ 1330/02
Phaedra	United States	1501573	WPSH 1501573
Puerto feco	United States	1503202	WFSR 1501573 WFJK 1503252
U.S. Olympic	United States	1503216	4YZQ 1503216
Paceseller III	United States	1501477	WORT 1501477
Post Enterprise	Linded Kinggom	2440201	GUPS. 2440201
Queen Enzabeth 2	United Kinggom	2440301	GBTT 2440301
Royal Vising Sea	Nonvay	2310101	TECK 531010.
Sedco-709		1500503	KBCG 1500603
Seismic Explorer	United States	1501476	WRHC 1501476
Texaco Georgia	Linken States	1502101	WLDW 7502111
Wild Gannett	United Kinggom	2440202	GMAD 24402C2
			Simula Product

Dear Pari

I understand that at some point in the I understand that Kansa City, Mo 555-1212 info uses computers to retrieve telephone numbers. When will I be able recent past your readers, or your magazine itself to access by computer the up to date directory listings? were interested in knowing the frequencies for those digits that come after 9.

hey	are:	0 (10) * (11) # (12) (13) (14)	941.0 941.0 941.0 697.0 770.0	* * * * * * *	1336.0 1209.0 1477.0 1633.0 1633.0
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this information is available through many publications e.g. pramco Controls Division, Leder Inc. College and Jouth Streets, vicus Ohio 45356. (513) 773-8271. I trust this information will not be used for anything illegal or foolbardy. Branco's

one lonely Canadian



Phone Call Is Rated X

Seattle (UPI) — It may work for Superman, but rhanging your clothes in a public telephone booth can mean trouble for the rest of us.

Huber Martin, 31, stepped into a glass phone booth next to a public park and exposed himself while changing trousers, police said.

He was arrested for changing into blue denim cutoffs while 25 to 30 persons of both sexes looked on.

When I posed for the picture that accompanied the interview article in The Village Voice, reprinted in TAP #48, I had no idea that so many readers and friends would write in to ask where those "Ma Bell Is A Cheap Mother" T-shirts could be bought. The original shirt was made up special for me by a real Bell employee! I find it refreshing to know what Ma Bell employees REALLY think of Ma. As a result of all this reader interest, TAP now has a supply of "Cheap Mother" T's. This T-shirt is available in three colors, yellow, blue, and tan. Sizes - Medium, Large, and Extra Large. Cost: \$4 plus 50¢ postage. Total: \$4.50. Be the first on your block to show Ma what YOU really think of HER!

GET MUGGED!!!

That's right, get mugged!!! Start off the New Year right by getting your TAP mug. The mug is white with black TAP logo, 11 onces, and stackable. Excellent for coffee, juice, beer or for using as a planter for your Columbian Gold! Cost: \$4 plus 50¢ for postage. Total: \$4.50. If you're a cheap mother yourself, stop by the TAP office on Wednesdays to pick up your mug and save the 50¢ postage charge.

AT&T's Profits Up 17% in Qtr.

American Telephone & Telegraph to posted its fifth consecutive billion-dollar quarter yesterday, reporting profits in the three months ended Aug. 31 clumbed 177— to \$119 billion.

AT&T's revenues in the period rose 10% to \$9.15 billion.

John D. deButtis, chairman, said that while earnings show sustained improvements there are still a number of states where earnings fall significantly below the level required to support continuing growth and modernization of Bell System facilities."

In these areas, the company will continue to seek rate increases, he said, adding: "in the main, however, our aim is to increase earnings without raising rates."

HELP ROLL BACK PAY PHONE COSTS!

Please do not use this telephone unless your call is of an emergency nature. For more information write: Committee For A Five Cent Phone Call - P.O. Box 30669 - Seattle. Washington 98103.

FLASH! LATE REPORT

KON-KLAVE KANCELLED

by Cheshire

There was to be a Phone Phreak Konklave at the New York Coliseum running concurrently with the Personal Computing Expo (PCX) over the Halloween weekend. About 1/4 of the TAP mailing list (those in the "Bos-Wash" and a few west-coasters) got the word a week or so before the event. The evening before the event was to begin, I was approached by people from Byte magazine, a co-sponsor of PCX. It should be explained that all negotiations had been handled by H A Bruno Associates in New York, who had arranged to rent the Coliseum for the show. I had already checked that no nearby hotel had function rooms (I didn't bother checking the Central Park South hotels), and approached Bruno Assoc. as a representative of a Communications Hobbyist Group wishing to rent function space. When the folks from Byte

came into town, they had a fit.

In June 1975, 73 magazine published the schematic diagram for a Blue Box. Pa Bell came down hard, and sued The Magazine, The Publisher, and The General Manager. The judgement that each one signed stated that none of them would ever again aid, abet, or otherwise help Phone Phreaks again, etc. If the Phreaks held their meeting, it might be construed that Byte, and in particular, Byte's Publisher (then General Manager of 73) was aiding Phone Phreaks, and Byte magazine would no longer exist. This was not designated a goodness.

The meeting was cancelled, flyers were printed up to state this, but we were requested not to release details until after the weekend. This request was also honored. However, as we handed the flyers out, we informed the recipient that we intended to cry into our beer over the cancellation at 4PM at the cafeteria.

A happier bunch of melancholy drunks you never saw in your life! About 20-25 people finally showed up, and one thing was unanimous. THERE WILL BE A PHONE PHREAK CONVENTION WITHIN THE NEXT NINE MONTHS Cur apologies to those who showed up and then couldn't find us. You, and all our friends will have a chance to get together soon.

Oh yeah, why did we try to have a konklave? Because any Phreak worth his whistle knows that digital is the way of the future. We expected a lot of our friends would be attending anyway and wanted to get together. We'll see you soon,

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Address all mail and checks to:

TAP, ROOM 418, 152 W. 42ST, NY 10036

Employes Find Ways To Steal

There are 415 known ways to steal money and/or goods from employers and new methods are being discovered almost every day.according to a recent study by the Dale System for

to a recent study by the Dale System, Inc.

"A clerk in a busy New York City candy store under-rings every sale by one penny and takes home \$5 a day — for 22 years A supermarket manager in Oklahoma City sets up his own cash register at peak periods and in three months collects \$75,000 his employers never knew about," moted Dale statisticians.

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