

Robert Coburn 2610 Avebury Victoria, B.C. V8R 3W2 Canada

January 3, 1991

Dear Bob.

I spoke too soon. Enclosed is a letter from the SaltShakers with questions about the bells and, specifically, their casting. I don't feel qualified to answer his four questions, so I am writing to ask that you please take on this little project. I will go through my files and copy some correspondence for him and will explain that in large part the casting was handled by the donors and not us.

They are scheduled to appear before the MERC commission next week and a METRO committee later this month. It would be helpful if I had a copy of your response as soon as possible, as ammunition. I realize that the MERC meeting is too soon for a turn-around from Canada, but might I hope to have it by the 22nd?

Thanks very much for your help. Happy New Year!

Sincerely,

Eloise MacMurray

Public Art Program Manager

cc: Neil McFarlane

Commissioner Pauline Anderson



Mr. James B. De Young, Th.D. Co-chairman, the SaltShakers 5511 SE Hawthorne Blvd. Portland, OR 97215

January 3, 1991

Dear Mr. De Young,

Neil McFarlane forwarded to me your letter of December 20, 1990 in which you requested information about the casting of the two large bells for the Oregon Convention Center. I, in turn, have asked the designer of the project, Robert Coburn, to answer your specific questions about the casting processes and symbolism, as he had the most direct contact with people in Sapporo and Ulsan.

I do include for you, however, copies of correspondence between various people here and in Japan and Korea. Reading through these letters, I believe that you will find a recurring theme, namely that these bells represent the close Sister City relationship between Portland and the two Asian Cities. They are also key musical elements in Mr. Coburn's sound garden, which was designed to provide "soundmarks" for visitors to the area surrounding the Convention Center. Mr. Coburn asked for specific dimensions and pitches to enable his composition to succeed as a cohesive and harmonious musical whole. Nowhere is there reference to this project as a religious one or to the bells themselves as having any religious context. They are instruments of beautiful sound and symbols of international friendship and good will.

I would be happy to discuss this with you if you would like to give me a call.

00056/10

Sincerely.

Eloise MacMurray

Public Art Program Manager

cc: Neil McFarlane, Metro



#### **MEMORANDUM**

DATE: January 3, 1991

TO: Berit Younie

FROM: Eloise MacMurray

SUBJECT: ID Plaques for Convention Center art

I don't think I've already sent this information to you. The holiday season has left me in bit of a blur...

Bob Coburn's third Bell Circles II plaque needs to include the same info as the other two, with the addition of "Wind bells designed and cast by James Stewart".

And, as we agreed, the two big plaques will be corrected to read that Buster's Host Analog is in the right place.

I think that should just about do it. Thanks!

#### METROPOLITAN EXPOSITION-RECREATION COMMISSION

AGENDA FOR MEETING: Wednesday, January 9, 1991 Room B113, Oregon Convention Center, 12:30 p.m.

#### **AGENDA**

- I. Roll Call and Determination of Quorum
- II. Approval of Minutes
  - A. Regular Meeting December 12, 1990

#### III. UNFINISHED BUSINESS

A. Election of Vice Chairman

[action-Vote]

B. Election of Secretary-Treasurer

[action-Vote]

C. Spacing Policy

### IV. <u>NEW BUSINESS</u>

A. Amendment to Vintage Trolley Agreement

[action-Resolution No.105]

B. Budget

[action-Resolution No.106]

- V. INFORMATION ITEMS
  - A. Committee Reports
  - B. Asian Bells
  - C. General Manager's Report
- VI. Announcements
- VII. Adjournment

ITEMS MAY NOT BE CONSIDERED IN THE EXACT ORDER LISTED

Next Metropolitan E-R Commission Meeting - Wednesday, February 13, 1991

James De Young

no ref to relig theme
vice mayor of ulsan

did call Them "temple

bells" asked if we discussed symbolism - I said not specifically. Did schematics 8how symbolism + did we inquire he mesning? I said no. Told him BC would

Send any Visuals -



Mr. James De Young, Th.D. Co-chairman, The SaltShakers 5511 SE Hawthorne Blvd. Portland, OR 97215

January 10, 1991

Dear Mr. De Young,

As you requested, I enclose copies of the only visual materials made available to us concerning the Sapporo Bell for the Oregon Convention Center. You will remember from our telephone conversation that we had no photographs or description of the decorative aspects of the Ulsan Bell prior to its arrival at the Port of Portland.

I have numbered the three pages so that you can see that it was not until the bell was cast, complete with commemorative inscription, that we saw any of the ornamentation planned for the bell. As I reported to you on the telephone, there was no discussion at that time about the religious symbolism of the ornamentation, because this bell was to have no religious context in its home at the Convention Center.

I hope that this information is helpful.

5/1

Eloise MacMurray

Public Art Program Manager

cc: Neil McFarlane, Metro



Mr. James DeYoung Co-Chairman, The SaltShakers 5511 SE Hawthorne Boulevard Portland, OR 97215

January 22, 1991

Dear Mr. DeYoung,

Enclosed for your information is a letter I received today from Robert Coburn, designer of the Oregon Convention Center's "Bell Circles II". In his letter he specifically addresses questions you asked in your letter of December 20, 1990 to Neil McFarlane.

I hope that this resolves any lingering concerns you may have.

Sincerely yours,

Eloise MacMurray

Public Art Program Manager

cc: Neil McFarlane, Metro Lee Fehrenkamp, MERC

Commissioner Pauline Anderson

# RECEIVED JAN 2 2 1991

2610 Avebury Victoria, B.C. V&R 3W2 January 12, 1991

Eloise MacMurray Public Art Program Manager MAC 1120 SW Fifth, Rm. 1023 Portland, OR 97204-1983

Dear Eloise,

Sorry for the continuing problems with the Saltshakers. Here is the information I can provide in response to the questions in the letter of December 20. As you are aware, the bells are gifts from the cities of Sapporo and Ulsan, and arrangements for their casting was handled by the cities directly.

- 1) The two bells were produced by bell manufacturers in Japan and Korea. I have no knowledge of any ceremony performed during the casting of these bells.
- The Ulsan bell was cast by :

Sung Jong Sa Company

I have very little other information concerning the Korean bell.

The Sapporo bell was cast by :

The Iwasawa Bell Co., Ltd. 22, Karato-cho Uzumasa, Ukyo-ku Kyoto 616 Japan Tel: (075) 871-0257

All during the process of completing the project my communications with the Iwasawa Bell Company were done through the following person:

Akiko Sugioka, Director International Relations City of Sapporo City Hall North 1, West 2, Chuo-Ku Sapporo, Hokkaido Japan 06-0 Tel: (011) 211-2032

- 3) The bells are cast in traditional designs as is fitting a gift from these cultures. One would not expect to receive such a gift of friendship from Sapporo or Ulsan that did not represent their culture. One of the primary points behind this project was the linkages of friendship and cooperation between the cities of Portland, Sapporo, Ulsan, and the sister cities of Taiwan, the Republic of China. In the case of the Korean bell it is a replica of a very famous national treasure, and was designed by Professor Um Yung Ha of the Seoul National University who is chairman of the Korean Bell Study Institute.
- 4) The symbols are decorative in nature and carry no specific meaning.

One of the problems in regard to these bells seems to be their description as "temple" bells. Although they were originally used in temples, they are now found throughout their countries in many different settings both public and private. The word "temple" in this case is used much like the same word in relation to "temple" blocks found in every symphony orchestra throughout the world. It may relate to the origin of the object but has little to do with its specific, modern use when taken out of a religious context.

I will limit my comments in this correspondence to the information requested. It is unfortunate that a project which represents the ability for cultures to work together in mutual respect for each other should be so misinterpreted by a few people with specific, narrow views.

If you need anything else just let me know.

Sincerely,

Robert Coburn

PS. The third wind bell has been up for a few weeks and is doing just fine. We still intend to adjust the movement of the wind vanes but will wait for a little better weather. Glad to hear that the plaque question can be taken care of.

All my best to you and others...

Clorice Remember this.

You angeles doesn't
seem to have
any problems with
their bell.

### BELL OF FRIENDSHIP

There is a new sound in the air over Los Angeles Harbor, an infrequent rumble resonating from the cliffs of San Pedro. It is the ringing of a bell . . . the Korean Bell of Friendship. A Bicentennial gift from the people of South Korea to the people of the United States, the Bell is suspended in a belfry high atop a windswept bluff overlooking the Pacfic Ocean, Catalina Island, and the picturesque entrance to the Port of Los Angeles, known as Angels Gate.

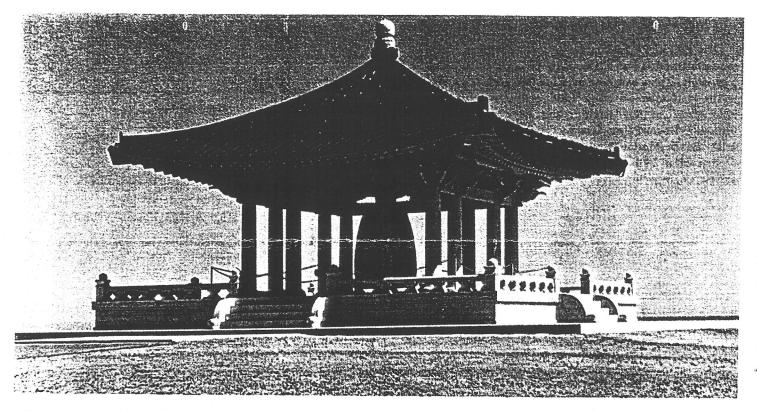
Having Los Angeles selected as the site of the Bell of Frindship is a unique example of total cooperation between all levels of government and the unceasing efforts of many distinguished govenment officials working to accomplish a common goal. It was the unflagging dedication of then President of the Los Angeles City Council John S. Gibson, Jr., and Mayor Tom Bradley that gave impetus to the site selection. Mayor Bradley called the Bell a "concrete example of the cultural heritage of Korea" and said Koreans "have made a great economic and cultural contribution to our community."

The Bell was presented to this nation during its Bicentennial year, 1976, and, as its name signifies, was cast to further consolidate the traditional friendship between the two countries. In this sense, the Bell was more than a simple gift on the 200th anniversary of American Independence. It is intended to recall the close relationship of the past and to create a new future of mutual cooperation.

The Bell of Friendship was officially dedicated October 3, 1976, and was struck thirteen times for the thirteen original states. The Bell is struck with a log striker suspended by chains. It is expected that this will take place three times each year: July 4th, American Independence Day; August 15th, the Korean Day of Independence; and on New Year's Day.

The Beli is patterned after the Bronze Beli of King Songdok, constructed in A.D. 771, and is the largest Oriental bell in existence. Its design features the Statue of Liberty and a Korean spirit holding Korea's national flower, the Rose of Sharon. Unlike Chinese bells, the Korean Bell has a sound tube on top of the Bell, which is hung in a low pavilion and struck from outside. The Korean Bell is hung low to the ground so that the sound can reverberate against the earth and escape through the sound tube. Due to the peculiar design of the Bell, and the hollow, tile-lined area directly beneath it, it can be heard, and felt, as a low rumble for five minutes over a wide area after being struck. Korea has not, since the eighth century, cast such a huge bell as this Bell of Frindship.

More than twenty skilled Korean craftsmen, under the direction of sculptor Kim SeJung, worked for six months preparing the Bell's mold. When poured, the alloy was eighty-six percent copper and thirteen percent tin, with traces of gold, silver, nickel, phosphorus, lead, zinc, iron, and antimony



added for tonal quality. The Bell alone represents an estimated one-half million dollar investment.

Housing the Bell is a pagoda-style belfry constructed on a site once utilized by the U.S. Army for its Coastal Defense Battery. The site of the belfry is now part of a sixty-two acre park called Angels Gate Park, named after Angels Gate, entrance to the Los Angeles Harbor. The Park was dedicated April 12, 1980, and the Korean Bell and Belfry of Friendship was declared a Historical-Cultural Monument No. 187 by the Cultural Heritage Board on May 3, 1978. Equally significant is the fact that the site of the Bell is also part of the former Fort MacArthur reservation. It was named for the father of General Douglas MacArthur who commanded the United Nations Forces during the Korean Conflict. Part of Fort MacArthur included the Osgood-Farley Bunker barracks that were constructed during World War I as part of the coastal defense system. It was in these barracks that over thirty Korean craftsmen, including stonemasons, tile setters, and carpenters, lived during the construction of the belfry.

Initially, Griffith park was selected as the site for the Bell. But at the request of Councilman Gibson, Mr. Yung Park, the Consul General of Korea, viewed the potential site at Angels Gate and quickly decided that this was indeed a more propitious setting and requested the City of Los Angeles to initiate the necessary action. The property was then under the jurisdiction and control of the Army Corps of Engineers. With the support and cooperation of Congressman Glenn M. Anderson, steps were taken to have the pro-

perty transferred to local control. But even before this, Congressman Anderson prevailed upon the Corps of Engineers to allow the City to enter the property to begin preparing the landscape before the title to the property was transferred. In conjunction with this, State Senator Robert Beverly was instrumental in securing funding for the project under the State's Land, Water and Conservation Grant contingency fund. As another example of intergovernmental cooperation, Senator Beverly assisted in having the California Conservation Corps donate thousands of hours of labor to assist in landscaping the Bell site. In turn, Mayor Bradley and Councilman Gibson negotiated with the State of California to lease barracks on the property at Fort MAcArthur to house the CCC.

On a more local level, the Department of Public Works, with the leadership of Board President Warren Hollier, was the City's lead agency in coordinating the project, with aid and assistance from the Department of Recreation and Parks. The Board of Public Works approved Angels Gate as a special project and guided it through to its completion. Special recognition should go to Bureau of Street Maintenance Supervisor Ygnacio Alva who directed the work of constructing walkways, viewing terraces, etc. A note of appreciation should also be extended to Mr. Marvin S. Levin, former Director, Bureau of Public Buildings; Mr. Fred Crawford, former General Manager, Harbor Department; Mr. Mike McKelvey, Assistant Secretary, Board of Public Works; and Mr. James Hadaway, General Manager, Department of Recreation and Parks.

RECEIVED FED 0 6 1991

2610 Avebury Victoria, B. C. V8R 3W2 Canada January 25, 1991

Eloise MacMurray Oregon Convention Centre Public Art M A C 1120 SW Fifth, Rm 1023 Portland, OR 97204-1983

Dear Eloise,

I hope you received my response to the questions from the Saltshakers in time for your meeting and that they were of some use. Please let me know if you need anything else.

I am writing to request a partial payment of my third instalment to pay for the completion of the wind bells. The three wind bells are now installed. I would like to pay James Stewart the money owed him for his work. I am requesting on the enclosed request for payment a partial payment of \$7000 from the final total of \$17816 that I am still owed. This will allow me to pay Jim. The remaining amount of \$10816 will be requested when the final version of the software is completed and installed. That should be very soon.

I hope you will be able to do this. I do not want to keep Jim waiting for his money but I do not have the funds to pay him myself.

Thanks for your help and I hope things are going well in Portland.

Sincerely,

Robert Coburn

Eloise MacMurray
Public Art Program Manager
1023 Portland Bldg.
1120 SW Fifth
Portland, Oregon 97204
(503) 796-5111

Sandy 5-I have no trouble with This porovided his #5 One vigut. Will you Please dons le check + run by NMC?

### RECEIVED FEB 0 6 1991

2610 Avebury Victoria, B.C. V&R 3W2 Canada January 25, 1991

To: Eloise MacMurray
Oregon Convention Center Art Projects

### Request for Partial Payment of Third Installment

This is to request a partial payment of the third installment for work done on the Oregon Convention Center Bell Project. Please pay the amount of \$7000 for completion and installation of the wind bells. This will leave \$10816 still due of the total third installment of \$17816. I will request final payment of \$10816 when the final version of the software is complete and installed.

Sincerely, Robert Coburn

Skto gradmir Skorsk gall Feb. 5,1991

2610 Avebury Victoria, B.C. V&R 3W2 Canada June 9, 1991

Ms. Eloise MacMurray
Public Art Program Manager
MAC
1120 SW Fifth Ave., Room 1023
Portland, OR 97204-1983

Dear Eloise,

Just a note to update you on the final pieces for Bell Circles II. I was in Portland in late May and early June working on a music project and was able to see the final version of the software. It looks great and seems to do everything I wanted it to do in the first place. I will be in Portland June 19 to 22 to install the final ringing patterns and will submit my final billing at that time. I am sorry that this has drawn out so long but the end result will be all I wanted it to be. I will leave copies of an operating manual for you and Lisa so that there is information on how to run the software for calling up special ceremonial patterns, resetting it in case of crashes, etc.

Thanks for all your support through this project. I understand it hasn't been particularly easy for anyone involved. Many of the problems were the result of my own inexperience. I have learned much. I think we can all be proud of the end result.

Sincerely,

Robert Coburn



Robert Coburn 2610 Avebury Victoria, B.C. V8R 3W2

April 18, 1991

Dear Bob.

I hope spring as sprung as beautifully in Victoria as it has here in Portland. We are in the midst of prime tulip time and the city is brimming with color.

Not such good news is that one of the wind-bell ringers was stolen the other night. Apparently, someone was able to reach up and yank it hard enough to disconnect it. Berit is looking into replacing it, including calling James Stewart to discuss costs and fabricator.

I am also wondering when you plan to come to finish the programming, thus wrapping up the project and billing us for your final payment. The general feeling seems to be that, contrary to worries about having the bells ring too often and bothering people in the neighborhood, people would like them to ring much more often. Berit said that she heard one ring this week for the first time since the grand opening and she spends more time there than many. I see this reaction as a testament to the beautiful sound of the bells and to the success of the project as a whole. I hope you will agree.

I hope that all is well with your new endeavors. I was in Ottawa recently giving a speech for a public art conference and was reminded again about how wonderfully hospitable Canadians are. You are lucky to be living among such kind people.

I look forward to hearing from you.

Eloise MacMurray

Public Art Program Manager

## RECEIVED APR 2 9 1091

2610 Avebury Victoria, B.C. V8R 3W2 Canada April 24, 1991

Ms. Eloise MacMurray
Public Art Program Manager
MAC
1120 SW Fifth Ave., Room 1023
Portland, OR 97204-1983

Dear Eloise,

It was good to hear from you although I was sorry to hear of the loss of the wind vane from one of the bells. I am trying to keep in touch with the project this year and had talked with Jim Stewart about the loss just a few days before your letter arrived. He will be able to replace the item and we discussed ways to strengthen the point at which the vane is attached to the clapper. We hope to come up with a stronger mechanism for all three bells.

In regards to the final version of the software, Roberta Taussig is currently working on it and I will know more about final delivery date in a few weeks. I gave the programmers a break from the job between December and March at their request. I felt it was more productive to have them finish it up when they really felt like working on it then to force them to go ahead with it under duress. I want the best possible program they can produce. I will be in Portland the last week of May into early June for a music project I have been working on. I hope to install the software then and finish up the final patterns. I would make my final billing, hopefully by the middle of June.

I was very pleased with the general consensus that the bells could ring more often. I started out conservatively but would be happy to program the final patterns so that they are heard more often.

My activities here are going very well. I have had a fine and very productive year. I was interested to see that you had been in Ottawa at a public art conference. Any information you could send me regarding public art in Canada would be greatly appreciated.

Congratulations on your new position at the Oregon Arts Commission.

Sincerely

2610 Avebury Victoria, B.C. V8R 3W2 Canada June 19, 1991

To: Eloise MacMurray Oregon Convention Center Art Projects

# Request for Final Payment for Bell Circles II Project, O.C.C.

This is to request final payment for work done on the Oregon Convention Center Bell Project. Please pay the amount of \$10,816 for completion of the total project.

Sincerely,

Robert Coburn

24 20 mm/ 21/18/91 Robert Coburn 2610 Avebury Victoria, V8R 3W2 B.C. Canada

August 1, 1991

Dear Bob.

Thanks for your recent letter and the final information about the ringing patterns. As far as I can tell, everything is working just fine. I was at the center last evening for the unveiling of the "Skyview Terraces" (otherwise known as cocktail lounges - up high with a great view of downtown) and the wind bells were sounding lovely.

I requested your final payment about two weeks ago, so, unless the mails are terribly slow, you should have your check very soon. It seems hard to believe that this program is almost complete. Just Buster's piece to install at the end of the month and then we are finished! Unless, of course, the new addition becomes a reality.

The next big challenge is art for the Westside Light Rail project.

Congratulations on a project well done and highly successful. I hope that you are pleased and proud of the final outcome. I know people will enjoy it for a very long time and that it will bring special pride to visitors from our Asian Sister Cities. You had a wonderful idea at the start, the ability to adapt your design to necessary changes, and help from many generous people. Well done.

I enjoyed working with you on this wonderful project and hope that our paths will cross again. Best of luck to you.

Sincerely yours,

Eloise MacMurray

2610 Avebury Victoria, B.C. V8R 3W2 Canada June 19, 1991

Ms. Eloise MacMurray Public Art Program Manager MAC 1120 SW Fifth Ave., Room 1023 Portland, OR 97204-1983

Dear Eloise,

Enclosed you will find my invoice for final payment on the bell project. At this point the software is installed and the bell patterns are entered and running. I will enclose information about the operation of the software and the timing of the patterns for your files.

I noticed when I was working at the Convention Centre that Jim Stewart's name was added to the plaque which identifies the contributions of the organizations from Taiwan. There still is not a plaque identifying the wind bells as part of Bell Circles II. I understood that such a plaque similar to the ones at each of the other bell sites would be installed at the wind bells. I also thought that it would be on this plaque that Jim would be identified. I apologize for drawing this out so long but I think it should be done correctly if possible.

Thank you for all your assistance.

Sincerely,

Robert Coburn

PS: I tried to reach you while I was in Portland but you were out of town. My question about repairs to the computer were answered by Lisa Vielbig and everything is fine.

Thanks again -

## Timing Patterns for Bell Circles II:

Most patterns have a 30 second cushion at the beginning to prevent ringings from happening too close together.

seconds	from start	bell number	japan=1 korean=2
japan	3 0 6 0	1	
korean	3 0 6 0	2 2	
opening	0 0 0 2 3 0 3 4 6 4 6 4 9 4	2 1 2 1 2 1 1	
closing	30 32 62 62 92 95 126 126 156	1 2 1 2 1 2 1 2 1 2	

# patterns Pg. 2

solstice	30 40 60 70 100 102 135 135 165	1 2 1 2 2 1 1 2 1 2
equinox	30 30 60 60 90 90 120 121 150 152 182	1 2 1 2 1 2 1 1 2 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1
ceremony	30 30 60 62 92 96 126 126 156	1 2 1 1 2 1 2 1 2

### Bell Circles II - contact information sheet

If any questions arise concerning the operation of this work please contact the following people:

Robert Coburn 2610 Avebury Victoria, B.C. V8R 3W2 Canada any questions or problems.

(604) 592-3624

Roberta Taussig

(503) 696-4923

any questions concerning the operation of the software or the bell

ringing program.

John Marks M. L. Marsh and Associates P.O. Box 2203

Portland, OR 97208 - 2203

(503) 274-7150

any question about the electronic interface between the computer and the valve.

Alan Walters 2575 NE Kathryn #34 Hillsboro, OR 97124

any questions about the air compression system which drives the hammers.

(503) 640-2091

Precision Computers 1111 SE Stephens Portland, OR 97214

any problems with the computer 29, 1991. After that time they can

(503) 234-4553

itself. Warranty is good until August replace or repair as needed.

### Bell patterns ring as follows -

In the program times are given in terms of a 24 hour clock.

opening	8:00 am	a 94 second pattern which rings between the two bells and opens each day.
closing	8:00 pm	a 126 second pattern which rings between the two bells and closes each day. Begins with a 30 second delay scheduled at 7:59:30 pm.
japan	9:30 am 10:30 am 11:00 am 1:00 pm 2:00 pm 3:30 pm 5:00 pm 7:00 pm	a two stroke pattern on the Japanese bell which occurs at the given times each day. Each time begins with a 30 second delay and is scheduled for 30 seconds earlier than it rings.
quartrly	2788 strike points quarterly.	a two stroke pattern on the Korean bell which occurs at approximately a 47 minute interval between 8:00 am and 8:00 pm. These two strokes are the file korean.sng
solstice	12 noon on December 21 and June 21.	a 135 second pattern which rings between the two bells and marks the solstice days. Begins with a 30 second delay scheduled for 11:59:30.
equinox	12 noon on March 21 and September 21.	a 152 second pattern which rings between the two bells and marks the equinox days. Begins with a 30 second delay scheduled for 11:59:30.

Although there is a natural fluctuation in the precise day of the solstice and equinox, the bell ringing pattern is set to ring at noon on the 21st of December, March, June, and September.

ceremony

a second pattern which rings between the two bells and can be scheduled for special occasions. Begins with a 30 second delay.

## To schedule a ceremonial ringing for a particular occasion -

First you must interrupt the currently running time-keeping program. To do this type siSter (return).

Then -

type extra (return)
enter time as requested by the computer (return)
at the prompt for name type ceremony (return)

When complete you must restart the time-keeping program. To do this type daily (return)

The computer will ring the pattern ceremony at the time specified.

NOTE: Always enter special ceremonial ringings only on the day they are needed. NEVER schedule them in advance of the day they are needed or they will repeat on that time and day every year.

## If for some reason the computer is turned off or fails -

Always restart the system in the following order:

- 1) Monitor on
- 2) Computer on
- 3) Interface box on after computer has completely booted up.

If the system must be turned off do so in the following order:

- 1) INTERFACE BOX OFF FIRST
- 2) Computer off
- 3) Monitor off

The switch on the interface box is <u>on</u> when it is in the <u>up</u> position and <u>off</u> when it is in the <u>down</u> position.

#### Miscellaneous -

To quit tmplbels and return to DOS type quit.

To return to tmplbels from DOS type tmplbels

To restart the time-keeping program after re-entering tmplbels type daily.

#### To set the current time -

Interrupt current time-keeping program by typing siSter (return). exit tmplbels to DOS by typing quit and type time. Then enter current time (return)

After setting current time return to tmplbels by typing tmplbels (return). Restart the timing program in tmplbels by typing daily (return).

### General Maintenance:

- 1) The timing card in the computer requires a battery to keep good time. If the battery runs down the computer will lose time. The battery will need to be replaced every 2 to 3 years. For information of how to replace the battery see below or contact service at Precision Computers, 234 4553.
- 2) The air compressors mounted in the bell houses will need to be checked on a twice yearly schedule to see if they have adequate oil. Add oil as needed.
- 3) The clock on the computer should be checked a regular intervals and reset if it is not correct. The process for setting the clock is provided above. The clock should also be checked when changes should occur, such as day-light savings time, to make sure it is correct.