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## IMPLEMENTING A CLINICAL LABORATORY EQUIPMENT SUPPORT PROGRAM IN YOUR HOSPITAL, PART II

By Myron D. Hartman, CCE, CBET, Director of Clinical Engineering  
South Hills Health System, Jefferson Hospital, Pittsburgh, PA

*This is the second article in a three part series. As you may recall in the first article (which appeared in the Summer, 1993 RPI Newsletter), the author focused on what is necessary to lay the ground work for implementing a clinical laboratory equipment support program in a hospital. In part II of this series, he provides details about the kind of information you'll need to gather and steps to take in order to develop a clear, concise program.*

When developing your program, let me suggest that you first gather information so you can better determine what lies ahead. What follows are some suggestions as to what information you'll need and where you can find it. As I mentioned before, start slowly, go in increments and build confidence.

### Department Organization and Current Service Contracts

Who knows more about the laboratory than the laboratory personnel themselves? Most individuals will welcome the opportunity to talk about their department if asked in a polite, courteous manner. Ask a clinical laboratory supervisor to attend one of your department meetings to share some information about the lab department. If you need more time, reserve a conference room and conduct an information sharing session. Make sure that the session is not held in the shop where phones are ringing and other distractions could interfere with the meeting.

It's very important when developing your program to define the roles that both your department and the clinical laboratory department have with one another, currently and in the future. By defining roles, you set up the framework as to who does what and when, who are the decision makers, who's responsible for what, etc. For example, roles that should be discussed for the clinical engineering department would include: service/repair during normal business hours and off-hours; preventive maintenance scheduling and tagging; documentation of equipment maintenance records; and preparation of reports.

If you are just beginning an equipment support program, you need to get a good understanding of what's already in place. The laboratory will have plans in place for manufacturer contracts, independent service organizations, and medical equipment insurance (if applicable). These plans need to be shared with your department. Review all of the plans in place and identify areas or equipment where your department could provide some level of service.

### Biomedical Equipment Technician Training

Advanced training on clinical laboratory equipment will need to be done by sending biomedical technicians to manufacturer service schools. Currently, there is very little indepen-

dent training for servicing clinical laboratory equipment. The Association for the Advancement of Medical Instrumentation (AAMI) has offered several introductory courses at their annual meetings which are quite good. Or, if you have a local biomedical society, network a little. Ask if there is anyone currently servicing laboratory equipment who would be willing to meet with you. Learn how they received training, how they manage their programs, etc. Take some time to learn from those who have already experienced the up's and down's, the in's and out's.

### Equipment Fundamentals and Operation

Next step is to identify the specific equipment for which your department could provide preventive maintenance and repair service. Again, your best source for this information is working directly with the clinical laboratory department. Come to an agreement as to which devices will be serviced and inspected in-house by your department. Some examples include: balance scale, blood warmer, Bunsen burner, centrifuge, CO<sub>2</sub> incubator, cool plate, cranial saw, dry bath, dryer, hot plate, incinerator, incubator, knife sharpener, microscope, mixer, oven, paraffin dispenser, platelet shaker, power supply, refrigerator, rotator, scale, shaker, slide strainer, sterilizer (loop and steam), stir plate, stirrer (magnetic), temperature block, thawing bath, timers, UPS systems, and water bath.

### Regulatory and Safety Requirements

To meet the requirements of the Joint Commission for the Accreditation of Hospitals and Organizations (JCAHO), a complete equipment inventory of the clinical laboratory needs to be developed. As a service to the lab and to meet the JCAHO requirements, inventory and tag all of the equipment. Try to use the same tagging system that is in place for the other equipment your department currently services. The key is to collect as much data on the equipment as you can. Information collected should include:

- Basic equipment identification such as make, model, serial number, manufacturer, etc.
- Purchase date, cost, leases, warranties, special agreements, etc.
- Current preventive maintenance programs including costs, vendor, agreement terms, customer satisfaction, etc.
- Identify equipment that is not included in any formal equipment management program.

As with any new area of responsibility, proceed in manageable steps and do not over-extend your department's capabilities.

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## SECOND SOURCE PARTS: LEGAL & BUSINESS IMPLICATIONS

That's the topic of the RPI-sponsored roundtable discussion which will be held at AAMI's 29th Annual Meeting and Exposition in Washington, D.C., May 21-25. It promises to be a lively discussion with Al Lapides, President of RPI, and Jack Spears, Publisher and Editor of Second Source Publications, Inc. moderating the event.

Everything you always wanted to know about second sourcing but were afraid to ask will be addressed by panel members who represent various areas of expertise on the subject. Our distinguished panelists include Carla Baskett, Support Services Manager, Biomedical Engineering, Kaiser Foundation Hospitals; Ron Katz, California Managing Partner, Coudert Brothers, Attorneys at Law; Michael Argentieri, Vice President, Technology Management, ECRI; and, Dan Schneider, Chief Financial Officer, Schneider, Bulau & Talerico, Inc., "The Insurance Alliance".

So join us at the roundtable on Sunday, May 22, 5:00-6:15 PM, for an evening of fun as we explore the many facets of second sourcing. Also, don't forget to stop by the SBET Reception, co-sponsored by RPI, for food, drinks and conversation, on Tuesday, May 24th, 5:45-7:00 PM. And, you're always welcome to come by our booth to meet with us. We're looking forward to seeing you there. For details about the AAMI Meeting & Exposition, please call AAMI's headquarters, (703) 525-4890.

## SERVICE TIPS

### Centrifuge Safety

*An excerpt from  
"There's More To It Than "Just"  
Changing Brushes!"  
By Ivan L. Frank, E.T.\**

1. Be sure the centrifuge is level. The rotor will seek a perpendicular attitude to the earth's gravity and can cause a failure of the drive.
2. Be sure the centrifuge is in good operating condition.
3. Never open the lid or chamber door while the rotor is turning. The air in rush could upset the rotor and overload the drive and motor. In addition, debris going in or out of the chamber could result in an accident.
4. Do not stop any rotor by hand. Even a slow moving rotor develops a lot of hard force. Smooth anglehead rotors can actually fling out razor sharp plating.
5. Do not bypass any safety features or interlocks of any kind.
6. If a rotor accident occurs, the safest place is a position below the rotor level.

In closing, proper knowledge and handling of centrifuges and rotors will result in long life and good separations in an accident-free environment.

\* For a free copy of the book, "There's More To It Than "Just" Changing Brushes," please fax us your request, (818) 882-7028 or call us, (800) 221-9723.

## CUSTOMER COMMENTS

*This is what working together is all about.*

"Dear Benco Dental Supply Co.:

I recently ordered repair parts for my ancient autoclave. Because identification of necessary parts was difficult, your parts man put me directly in touch with RPI. With the excellent help of John at RPI, I was able to obtain the necessary parts and repair the autoclave.

The combination help of your company and RPI solved my problem and helped to cement my loyalty to Benco. It is this kind of cooperative effort that had made me a loyal Benco customer and is liable to keep me so.

Thank you.

Sincerely,  
Marshall K. Muller, D.M.D.

cc: RPI Customer Relations  
John at RPI"

*Editor's Note:* Benco Dental Supply has been an RPI customer since 1973.

## HOT PARTS

Fast acting or time delayed, RPI has a fuse for you. Choose from more than 30 different fuses to fit your specific needs. Or be prepared with the Fast Acting Fuse Kit (RPK410) or the Time Delay Fuse Kit (RPK411). Both Kits include a wide variety of the most commonly used fuses and come in a convenient 18-compartment carrying case, a perfect size for your tool box. For details, see page 93 in the April, 1993 RPI catalog.

### UPS Increases Shipping Rates

UPS announced increased shipping rates on all available services effective Feb. 7, 1994.

From  
the  
desk  
of  
the



Al Lapides, President

## PRESIDENT

Rumors come and go. But some come back again. That's when you wonder if they're true. That's the case now with Pelton & Crane's (P&C) OCM and OCR lines of autoclaves. As I recall, it was somewhere around last Spring when word got around that P&C was going to stop supporting that line. That real soon, they were going to stop manufacturing any parts for repairing and maintaining all those thousands of units out there. That was followed by an update rumor that said that timing for this action was going to be some five years out. That was followed by another update rumor that said the first two rumors may not be real.

Guess what rumor is starting off the New Year. You are perceptive aren't you? Yes, it's the OCM and OCR rumor again. Only this time I believe we may be closer to the real truth. Not to doubt any of you previous rumor passers, but this time I think I have a really good source.

Now this newest go round may not be accurate. But if it is, you'll still be able to get all those parts you need from RPI. As long as you have OCMs and OCRs to repair, we'll have the parts for you. Now, you may have noticed that there are still a few critical parts not in our inventory. The most essential of these, the chambers, are in development right now. We're starting with a chamber to fit the OCR. You should be able to get them by late Summer or early Fall. The chamber to fit the OCM should be ready by this time next year.

As you know, these are critical items as they are primary pressure vessels. We began development on them early last year. We've put a lot of effort and time into making sure we have a good product for you. When they become available to you, they will have gone through extensive testing. We are going to run a burst test to find the maximum pressure the actual chamber can withstand. Each chamber will be pressure tested to 300 psi before delivery to you. Each will be serialized with its manufacturing history kept on file. In short, you're going to get one of the best parts you've ever gotten from anybody. Again, *Super RPI* to the rescue.

Call us Toll-Free Monday-Friday, 8:00 AM-4:30 PM (Pacific Time), (800) 221-9723





Sherry Lapides, General Manager

## from the PRESIDENT'S BOSS

Today, the radio announcer reports that the weather in the East and Midwest is frigid, while here in Los Angeles it is clear, warm and breezy. Headlines in the newspaper suggest that an economic upswing and recovery are on the way. The stock market is strong and interest rates are still low. Here in Southern California the outlook isn't quite as bright, but we'll keep our fingers crossed. I look forward to 1994 as being a great year for all of us.

Looking back, 1993 was an interesting year here at RPI. (There hasn't been a dull one yet!) Some very talented people have joined our staff, and the team is working very smoothly. Under Phil Goldstein's capable direction, our Product Development Department has some much-needed and long-awaited parts in production. We are especially excited over the autoclave chambers, which should be ready for shipment some time this summer. We're all working hard to get parts for you as fast as possible, and always with the best quality.

We added many new customers in 1993 and our list of long-time active customers continues to grow over the years. We thank you all for your confidence in RPI and for your loyalty, and in many cases, the true friendships that have grown over the years. We thank you, too, for the patience and understanding you have shown when things have not gone as they should. In 1994, we will continue to strive to live up to the goals we have set for ourselves and the performance we have told you to expect from us.

To all of you, our best wishes for a healthy, happy and prosperous new year. *NOTE: Obviously this was written before the January 17, Northridge, CA earthquake.*

### RPI TO THE RESCUE, AGAIN WITH PARTS TO FIT OCMs & OCRs

Need parts to fit the Pelton & Crane OCM and OCR table top sterilizers? Don't worry. RPI has the parts you need. And, we are developing more parts, including the chambers for introduction later this year.



# TECH TALK

by John Downs  
RPI Product Development Department

## Light Fantastic LFI & LF+ Transformer to Dimmer Switch Wiring Instructions and Diagram

Just follow these simple instructions when wiring the transformer that fits the LFI or LF+ to the dimmer switch and you will have it connected in no time at all.

The transformer you'll need is RPI Part #PCT621.

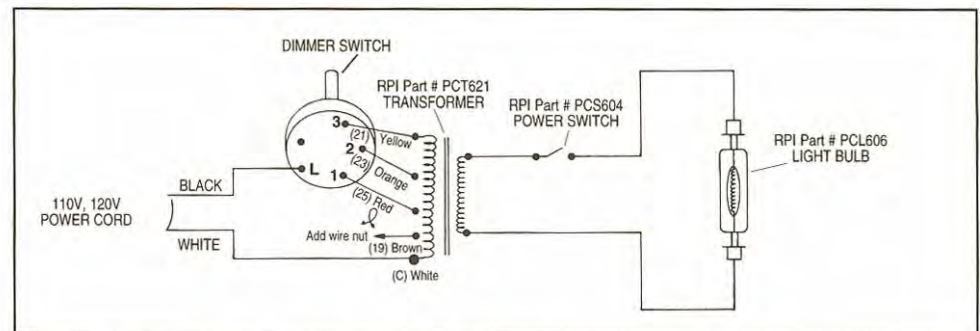
Connect the white wire (C) from the Primary (PRI) side of the transformer to the white wire (or the neutral wire) from the AC power cord.

Connect the wires from the Primary (PRI) side of the transformer to the dimmer switch leads as follows:

Transformer Wire		Dimmer Switch Lead
Red wire (25)	to	#1 Lead
Orange wire (23)	to	#2 Lead
Yellow wire (21)	to	#3 Lead

The way in which you connect the wires to the leads depends on the switch that is currently installed. If the switch has male connectors, simply plug in the female connectors from the transformer wires to make the connection. However, if the switch does not have connectors, simply remove the wire connectors and slip the bare end of the wire into the appropriate lead and make sure the wires fit snug to ensure proper contact.

The Brown wire (19) is not needed, so remove the connector and attach a wire nut for non-use. If you have any questions, please feel free to call me.



Wiring Diagram: Transformer (RPI Part #PCT621) to Light Fantastic LF+ and LFI Dimmer Switch

### What's Coming Up? Coming this summer!

- **Air Shields** - Heat shield, knob retainers and door assembly to fit the C100/200. And, to fit the C86, C100 and C200, a motor/impeller assembly for each.
- **American Sterilizer** - Many more new parts to fit bulk sterilizers.
- **Clay Adams** - A new motor and lid to cover your Dynac needs.

### A BIG WELCOME TO...

Judy Spry, Dora Aguirre and Sam Sarpong, the three newest members of the RPI family. Judy is the new buyer for RPI and has been with us since last October. Several months ago, Dora joined our Accounts Receivable Department and works very closely with the Customer Service Department as well. All the way from the Virgin Islands to RPI, Sam joined our Shipping Department just before the holidays last year.

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NEW PARTS  
PAGES INSIDE

### Implementing a Clinical Laboratory Support Program, Part II

*continued from page 1*

You must build trust and confidence in the clinical laboratory personnel if you are to successfully provide equipment management support. Gathering information and building these steps into your plan is important for a smooth transition. Be flexible and make adjustments to the plan as you move forward. If you come to a trouble area, give special attention, or back-off and work at it later. Don't force the issue.

In the final article of this series, I will concentrate on identifying the resources that are needed to implement your program, including staffing, capital equipment, and operating supplies.

*Editor's Note:* Myron Hartman has over 15 years experience in the biomedical field. His career includes working for ECRI (Emergency Care Research Institute) and ISS (International Shared Service) as a BMET. He is an active participant in many professional organizations and has made numerous presentations on topics such as "Advances in Healthcare Technologies", "Implementing a Utilities Disruption Plan" and "Achieving Clinical Engineering Excellence" at AAMI's meetings and expositions.

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Additional copies of *The Alternate Source*® may be obtained by calling RPI, (800) 221-9723 or (818) 882-8611.



My career in marketing began at an early age. At seven, I developed my first product and advertising campaign as a school assignment. The product was what I believed to be a "better mouse trap", or, rather, a better bug trap. 100% guaranteed. Completely safe to the environment, children and animals. Killed bugs on contact with no side effects.

The product was two pieces of wood. Each was about 2"x3"x4" and had a handle. Instructions were simple — just place the bug in the center of the bull's eye and slap the wood together. Zap! The bug was eliminated. Gotcha, the product's name, was a winner. Truthful to the slogan, "Gotcha gets 'em every time."

Many years later I packed my bags and moved from my family home in Woodland Hills (a suburb of Los Angeles) to the hills of Westwood, home of UCLA. It was from UCLA that I earned both my B.A. in English and my M.B.A. with a concentration in marketing.

I worked for the UCLA Alumni Association for several years as well as for Applause, the toy company that introduced the Smurfs to the world.

Later, I accepted a position with American Express at their world headquarters in New York City and then transferred to their offices in San Francisco. Among the products I marketed were the Gold Card, Sign & Travel and Privileged Capital.

A year and a half ago, I relocated to Los Angeles with my husband, David. Shortly thereafter I met my current bosses, Sherry and Al Lapides. They were looking for someone to head their marketing department and I happened to be looking for just such a position. It was a perfect match.

Since joining the RPI family, I've enjoyed every minute of my work. It is very rare when you find a company that cares so much about its customers. It truly makes my job that much easier. I look forward to working with you, our customers, and welcome your suggestions and comments. Please feel free to call me at any time.



Joan Woodlock, Marketing Manager

◆ **Air Techniques** - The fan blade, power switch, repair and replacement kits, and assemblies, all new parts to fit the Peri-Pro® I & II. See page 17A.

◆ **Burdick** - Two new boards and a resistor to fit the EK-5A. See page 30B.

## What's New

You Asked For Them  
You Got Them

### YOUR OPINION COUNTS

*In response to your requests, these parts are available now...for same day shipment. Please add the enclosed New Product Update pages to your April, 1993, catalog.*

● **Den-Tal-Ez** - To fit the JS/VS chairs — the seat motor gear and the back motor gear as well as four new actuators. See page 44B.

◆ **Gomco** - Over 10 new parts to fit suction pumps including printed circuit boards, a pilot light assembly, the rotor slide assembly, switches, lights and more. See pages 45B & 45C.

Call us Toll-Free Monday-Friday, 8:00 AM-4:30 PM (Pacific Time), (800) 221-9723