

5 **Rapid #: -5249051****Ariel****IP: 134.48.158.6**

Status	Rapid Code	Branch Name	Start Date
New	GZQ	Raynor Library	2/28/2012 11:52:52 AM
Pending	IQU	Zimmerman	2/28/2012 12:00:44 PM
Batch Not Printed	IQU	Zimmerman	2/28/2012 12:36:05 PM

CALL #: PZ1 A1 A48
LOCATION: IQU :: Zimmerman :: zper

TYPE: Article CC:CCL
 JOURNAL TITLE: Analog science fact & science fiction
 USER JOURNAL TITLE: Analog science fact, science fiction.
 IQU CATALOG TITLE: Analog science fact & science fiction
 ARTICLE TITLE: Letter to the editor
 ARTICLE AUTHOR: John P. Conlon
 VOLUME: 73
 ISSUE: 4
 MONTH: June
 YEAR: 1964
 PAGES: (5,90) non known - *Usually in the front of the Journal.*
 ISSN:
 OCLC #: 4432844
 CROSS REFERENCE ID: [TN:232010][ODYSSEY:206.107.42.109/ILL]
 VERIFIED:

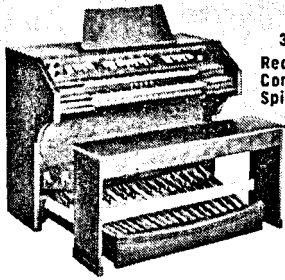
BORROWER: GZQ :: Raynor Library
PATRON:

PATRON ID:
 PATRON ADDRESS:
 PATRON PHONE:
 PATRON FAX:
 PATRON E-MAIL:
 PATRON DEPT:
 PATRON STATUS:
 PATRON NOTES:



This material may be protected by copyright law (Title 17 U.S. Code)
 System Date/Time: 2/28/2012 12:36:05 PM MST

ASSEMBLE YOUR OWN ALL-TRANSISTOR *Schober* ELECTRONIC ORGAN



3 NEW MODELS
 Recital \$1500
 Console II \$850
 Spinet \$550

This is the all-new, all-transistor Schober

Recital Model...the most versatile electronic organ available today. Its 32 voices (plus amazing "Library of Stops"), 6 couplers and 5 pitch registers delight professional musicians...make learning easy for beginners. Comparable to ready-built organs selling from \$5000 to \$6000.

The pride and satisfaction of building one of these most pipe-like of electronic organs can now be yours...starting for as low as \$550. The Schober Spinet, only 39¼ inches wide, fits into the smallest living room. The new, all-transistor Schober Console II is the aristocrat of "home-size" organs...with two full 61-note manuals, 17 pedals, 22 stops and coupler, 3 pitch registers and authentic theatre voicing.

AND YOU SAVE 50% OR MORE BECAUSE YOU'RE BUYING DIRECTLY FROM THE MANUFACTURER AND PAYING ONLY FOR THE PARTS, NOT COSTLY LABOR.

It's easy to assemble a Schober Organ. No special skills or experience needed. No technical or musical knowledge either. Everything you need is furnished, including the know-how. You supply only simple hand tools and the time.

You can buy the organ section by section...so you needn't spend the whole amount at once.

You can begin playing in an hour, even if you've never played before—with the ingenious Pointer System, available from Schober.

Thousands of men and women—teenagers, too—have already assembled Schober Organs. We're proud to say that many who could afford to buy any organ have chosen Schober because they preferred it musically.

Send for our free Schober Booklet, describing in detail the exciting Schober Organs and optional accessories; it includes a free 7-inch "sampler" record so you can hear before you buy.

THE Schober Organ CORPORATION
 43 West 61st Street, New York, N.Y. 10023

Also available in Canada, Australia, Hong Kong, Mexico, Puerto Rico, and the United Kingdom

THE SCHOBOR ORGAN CORP., DEPT. AN-2
 43 West 61st Street, New York, N.Y. 10023

Please send me FREE Schober Booklet and free 7-inch "sampler" record.

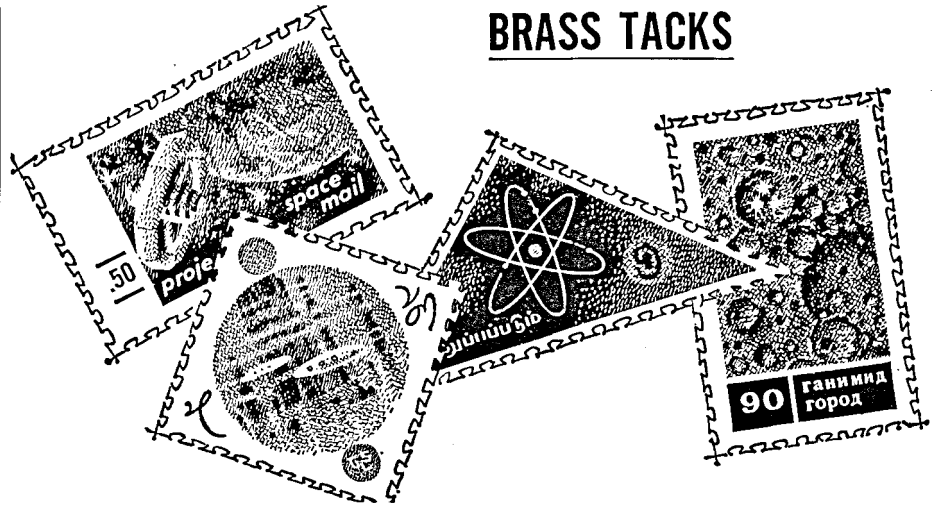
Enclosed find \$2.00 for 10-inch quality LP record of Schober Organ music. (\$2.00 refunded with purchase of first kit.)

Name _____

Address _____

City _____ State _____ Zip No. _____

BRASS TACKS



Dear Mr. Campbell:

Thanks to Frank Herbert for presenting one of the most mature and highly readable science fiction stories of the past few years.

I praise not the technical and scientific merits of Mr. Herbert's story—though there are undoubtedly many—but the literary qualities. Even a science-fiction writer must find praise for other than his technical knowledge refreshing now and then.

Most letters to your omnipotence the editor of Analog, seem usually to dwell over the pros and cons of some technical or scientific bric brac, or point in the story. Not that this is wrong. Quite the reverse as your letter column would otherwise turn into the "how wonderful we all are" stagnation so prevalent in many publications.

But praise where praise is due, and my praise is for the literary qualities of Mr. Herbert's story "Dune World"—though I'm also thankful for the intricate construction of social systems he portrays so vividly in the clash of cultures on the desert world Arrakis.

His story contained some of the best characterization in the genre in much too long a time. The only fault I find, is that Mr. Herbert ended his novel a little too abruptly. (Or was it the editor who didn't want to extend it another month?) Paul's realization of who or what he was and the extent of his abilities was a little too abrupt a *deus ex machina*, in wrapping up the story.

Perhaps when Mr. Herbert presents the final draft of the novel for book publication—and I have no doubt it will be published in book form—he will develop his ending more fully. Hawat, Gurney Halleck, etcetera, are much too fully developed characters for the reader not to want to know what happened to them in greater detail. I for one will be among the first to buy the full novel if this is done. Once again my thanks to Frank Herbert for one of the most enjoyable stories in a long while.

R. C. MUNN

185 Theresa Street,
 Port Arthur, Ontario, Canada

The ending is being developed more fully—120,000 words full. It'll be ready late in 1964, and will appear here!

Dear John:

Although I enjoyed Mr. McLaughlin's story and solution, I believe that the effects pictured are about an order of magnitude too severe.

What is pictured is a congruency of two regions of space: our atmosphere and some low-pressure region. Flow has been established from the high-pressure system to the low-pressure system. To a good approximation the flow in both regions will be of the source or sink type. That is, in our atmosphere the flow streamlines converge as they approach the congruency and diverge after the congruency. Thus, the flow field is similar to a converging-diverging nozzle, except

that in this case it's three-dimensional. The main point here is that the congruency corresponds to the "throat" of a converging-diverging nozzle. Therefore, the Mach number at the congruency is one provided the pressure on the other side is sufficiently low.

On the basis of this reasoning the pressure, temperature, et cetera, at the congruency will be the "cortical conditions" so that the pressure will be approximately 7.8 psia and the temperature approximately 20 degrees below zero—our men are wearing tee-shirts? Since the flow field in our atmosphere is, to an approximation, a sink flow; the flow area will vary as the square of the radius. My calculations indicate that at a distance of only thirty-three feet from the congruency—assuming the diameter of the congruency is ten feet—the Mach number is down to 0.01—the air speed is a mild breeze of eight miles per hour—and the pressure and temperature are essentially the normal values. Moreover, my calculations indicate that for a ten-foot diameter congruence it would take somewhere on the order of 2×10^9 hours—a reasonably long time—to reduce the atmosphere pressure by 0.1 per cent.

As a final comment let us hope that all future congruences are limited to low-pressure regions. A congruency with a stellar interior would be much more difficult to handle!

ROBERT L. GLICK

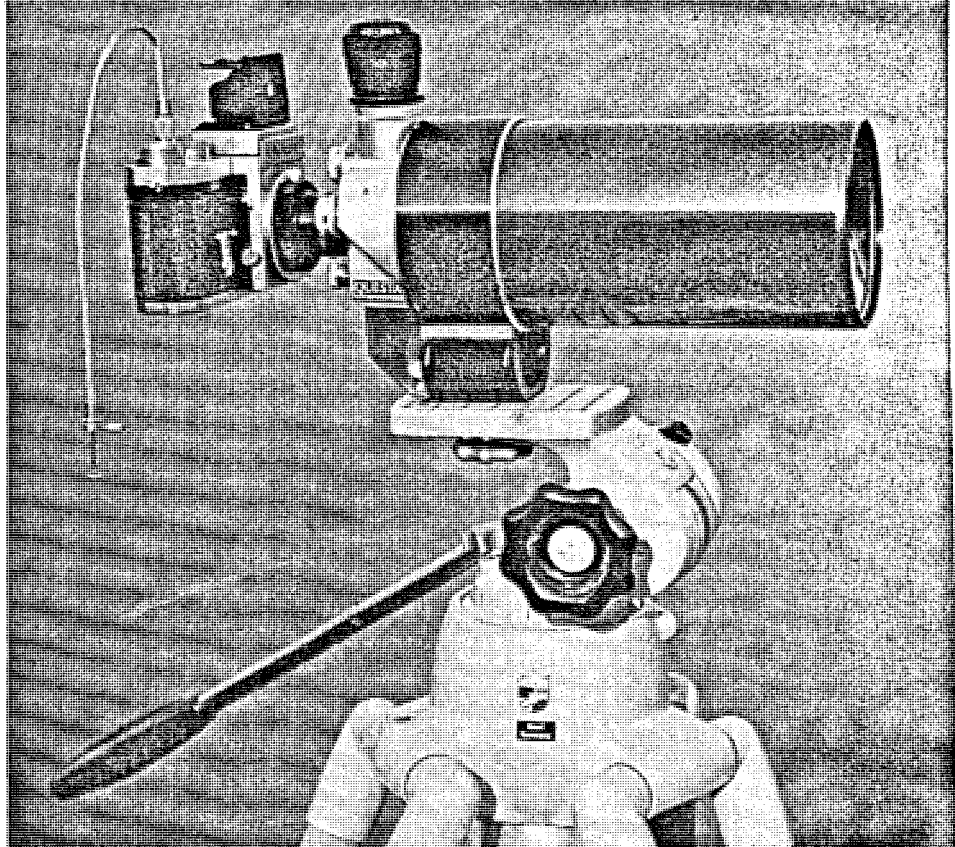
2342 Pansy Street S. W.
Huntsville, Alabama

You know—that type of congruency would be rugged! Or even a congruency with the lower layers of Jupiter's ammonia-hydrogen atmosphere.

Dear Mr. Campbell:

I fear you missed your forte. Since *Mad* was not in business when you started editing, you had to settle for *SF*. Your mention of rifles in the Kennedy assassination editorial almost roused me to mirth.

A modern rifle *can* kill a man at a mile, if it hits him in a vital spot, and



This is the New Field Model Questar Telescope.

It weighs less than 3 pounds and costs only \$795. Included in the price are this 4-lb. case, one eyepiece, and an improved basic camera coupling set. There is room for cameras and other accessories.

Twenty-one major changes in this barrel and control-box assembly permit a much wider photographic field of view, which now covers all but the very corners of the 24x36 mm. film frame at f/16 without extension tubes. Exposures are two f-numbers faster.

The New Field Model is optically identical in quality to all Questars. Since only an average of one out of three perfect optical systems surpasses theory by enough to satisfy us, we can continue to state that no amount of money, time or human effort can noticeably improve Questar's power of resolution. For whereas Lord Rayleigh's criteria sets 1.4 seconds of arc as Questar's limit of resolution, a Questar has resolved two stars but 0.6 second apart.

Because our function is to make the world's finest small telescopes in limited number, instead of many of ordinary quality, this New Field Model offers a new experience to the photographer. We offer him the world's sharpest lens, of 89-mm. aperture. We provide him with a low-power wide-field finder view, like that of a field glass, to let him locate distant objects rapidly. With flick of finger he can bring to bear a high-power view of 40-80x or 80-160x to study the object minutely through this super-fine telescope. Another finger flick and slight refocusing brings the object to the clear bright

At this point he is challenged to capture on the sensitive emulsion what this superb telescope of 56 inches focal length is projecting to his film. He has seen it in Questar's eyepiece and in his reflex camera's groundglass. All that remains is to place the image in exact focus on the film and expose correctly with no vibration at all. And at long last we have the only camera able to do this, the Questar-modified Nikon F.

For the first time, then, Questar has a true photographic model, and a camera without mirror slap, shutter vibration, or too-dim focusing. Moreover, from now on we can measure the actual picture-taking light at the groundglass, and abandon inexact exposure calculations entirely, using the new cadmium sulfide meters.

With this new control of vibration, sharp focus, and correct exposure times, only one other factor remains to interfere with high resolution telescopic photography. We need quiet air for good seeing—which is no problem at 7 to 100 feet. But how can we get trembling air to stand still while we take sharp pictures at great distances? There are several things we can do to take advantage of nature's moods, and if you write for literature we will tell you more about it.

New Field Model, \$795 in case with basic couplings as shown. The 80-160X eyepiece, \$35. Questar-modified Nikon F bodies, from \$234.60. Complete outfit shown, with camera and tripod, \$1332, postpaid in U.S.

QUESTAR

continued on page 90

BRASS TACKS

continued from page 5

he is unlucky enough to stop one that far off. But as for deliberately picking out someone that far off, and clobbering him, one would need very good fire-control, stable platform, and either a light-beam weapon, or a projectile weapon with a heavy, stable slug.

The weapons designed for this sort of performance exist, but most are mounted on wheeled carriages or tanks. Take the US/UK 105 mm tank gun, the Russian 85 and 100mm ditto, and the fearsome Flak 88 of twenty years back, and it isn't hard, though you may get some of the victim's neighbors also, even with a HVAP shot.

There is an outside chance a few portable weapons of the day could do it, but Oswald would have looked very odd trying to carry a 20mm Solothurn AT rifle up six floors, elevator or no, and he had been in poor shape for anything for a while.

The practical limit of even the best target rifles these days is not much beyond 1,000 yards, and after trying like hell to run over 90x100 on 36" bulls at that range with an Army match type Winchester 70, I can vouch that the average shooter will not get them all under that washtub sized disk so far away.

When we come closer, the performance increases, to the point where below 200 yards, a good marksman with scope-sighted rifle very rarely misses, given a chance to rest his support arm, and clear vision.

As a matter of fact, the old 6.5 Carcano has never rated highly as a target arm, since the army using it relied on machine guns, mortars and artillery much more than we do. Some humorous Italian soldiers called it the "Humanitarian Rifle" since they claimed it couldn't hurt anyone on purpose. I once conversed with a Communist reporter who had served with

a partisan movement, and he felt the Italian carabinieri was the world's worst shoulder weapon, for reasons he gave many of.

But with a scope properly mounted, and zero for short range established, we found that such a weapon could perform with lamentable accuracy.

This has resulted in various moves to ban private purchase of arms except through local purchase, and some clamor for a ban on private ownership of arms. Will this have any effect on crime, or the tenure of office of 1980's President?

JOHN P. CONLON

52 Columbia Street
Newark, Ohio 43055

Hm-m-m . . . that's standard military and target-type guns. How about some of these hand-made specials the gun-nuts play with—the kind a really determined organization could get and use?

Dear John:

Forgive me for not typing, but this is written on a plane to Washington—I couldn't wait to get home, which is some time off.

When I started "The Permanent Implosion" in the February, 1964, issue of Analog I thought, after all these years how nice it is to have a story with some checkable facts and figures. But when I checked them, I was surprised to find that the author obviously hadn't.

I don't know how big the sphere of congruence was—let's say it was three feet in diameter. If the air density was the same near to it as remote from it—it would probably be lower near by—then roughly, one hundred fifty feet away the velocity of the air toward the sphere would be $(1.5/150)^2 = 1/10,000$ that into the sphere. One thousand five hundred feet away it would be $1/1,000,000$ that into the sphere.

But, what would be the velocity into the sphere? Surely, not more than the speed of air molecules, which is the speed of sound, which is about seven hundred seventy miles per hour. Thus we have as a generous estimate of the wind at various distances:

Distance, feet	Wind velocity, m.p.h.
1.5 (at the sphere)	770
150 feet	.077
1,500 feet	.00077

Before further comment, what about the depletion of the earth's atmosphere? The area of a three-foot sphere is about twenty-eight square feet or $1/1,000,000$ square miles. Thus, at seven hundred seventy miles per hour the drain on the atmosphere would be .00077 cubic miles per hour.

The area of the earth is about 200,000,000 square miles. I don't know what the effective depth of the atmosphere is, but if it is three miles, then the volume is about 600,000,000 cubic miles. At a drain of .00077 cubic miles per hour the atmosphere would vanish in about 1,000,000,000,000 hours or about 100,000,000 years.

From this last figure, I infer that as far as the depletion of the atmosphere goes, there would be plenty of time to look for a solution, hence, why the haste?

Because, I suppose, of the winds and storms, which the author depicts so vividly, clearly, these must have had a supernatural origin—the above calculations show they couldn't have been caused by the flow of air through the sphere of congruency. The storms being so plainly supernatural would make them all the more terrifying.

I can see in the story a powerful myth depicting the overcoming of the powers of darkness by an adept with a degree in business administration—I always *knew* that that was black magic.

But John! What is a tale of supernatural terror doing in Analog?

J. J. COUPLING

P.S. I'm dubious about putting the tanks in the pressure chamber. Why didn't he just put a valve on the intake of the supercharger and close it part way to give the desired reduction of pressure in the intake? But then, I'm just an engineer, not a practical man.

Hm-m-m . . . I guess I got too busy enjoying a good yarn to do any careful computing! It took No. 1 in the reader pool, so I guess most of the readers reacted that way, too!