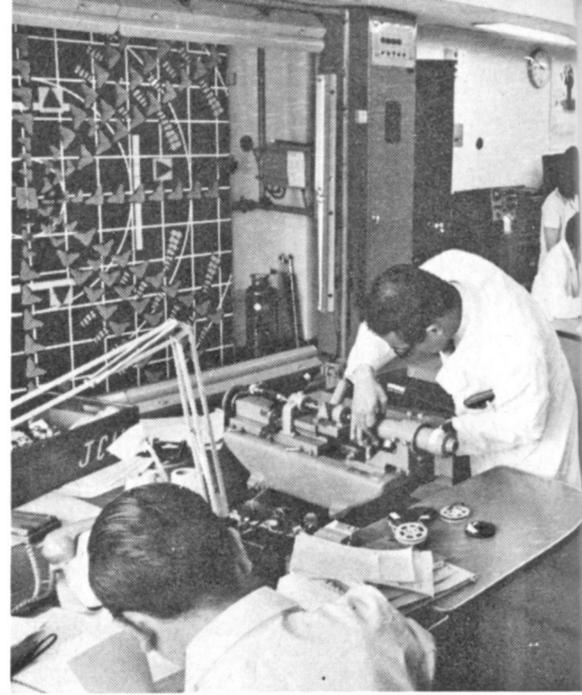


# More Than Just a Sticker?



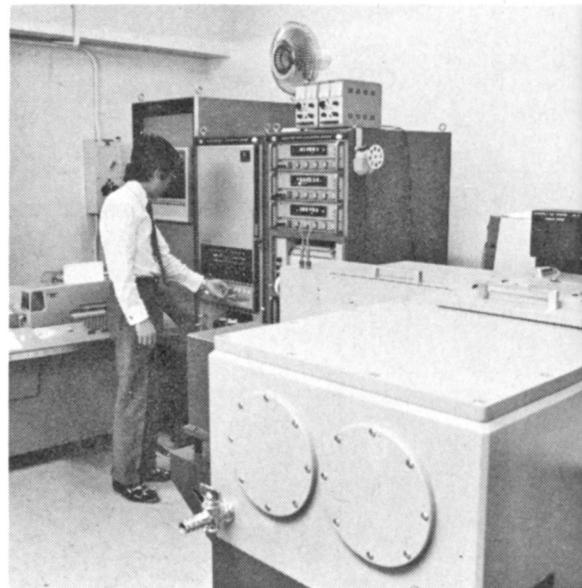
Durability test room: How well does a camera work after it's been banged about?



Research room: If the test instrument doesn't exist, it gets built.



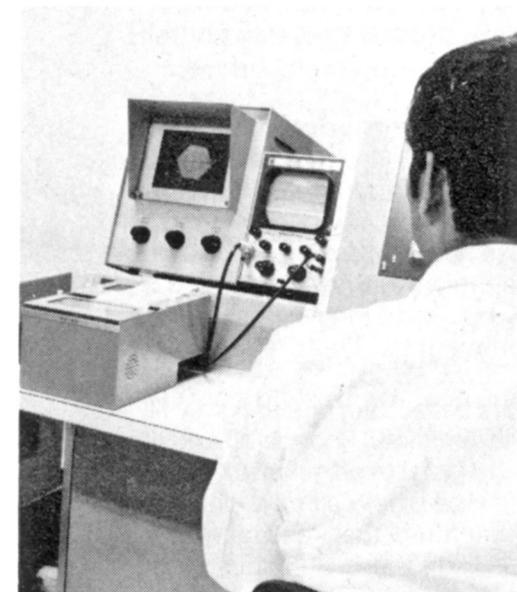
Optical bench: Traveling optical bench microscope measures focal length.



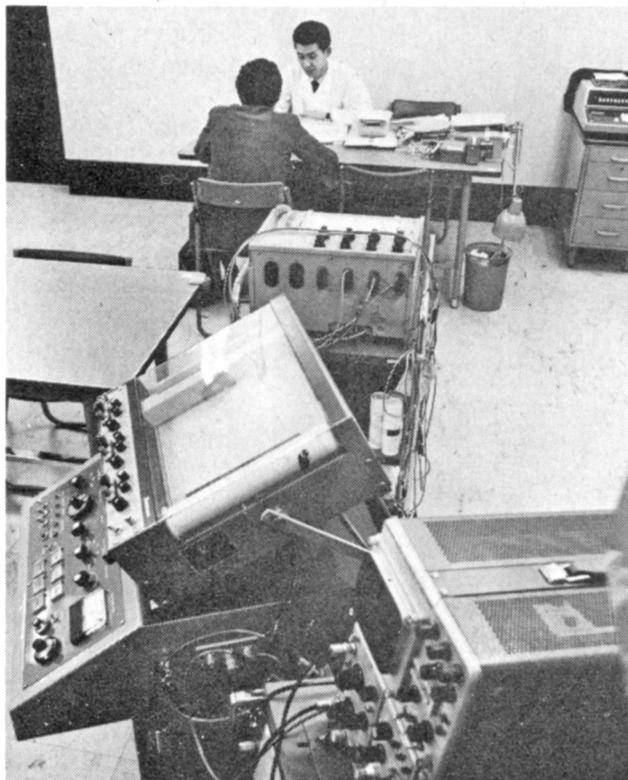
Light measurement: Spectro-photometer is now hooked up to computer.



Commercially available flash meter wasn't good enough, so JCII built a \$2,000 one.



Is your f/number accurate? JCII has an automatic f/number testing machine.



Lens makers need results from Optical Transfer Function machine. JCII's got one.

When you buy a Japanese-made camera or lens outside of Japan, the chances are that it comes affixed with a small gold-colored paper label with the word "Passed" in bold black letters plus the lighter letters JCII at the top, and JMDC at the bottom. The average photographer knows that this label in some way indicates that the product—usually a lens or camera, but sometimes a flashgun—has managed to survive some sort of inspection. The owner can either leave the label in place and let it slowly wear off (which is messy) or he can attempt to remove it by force (which

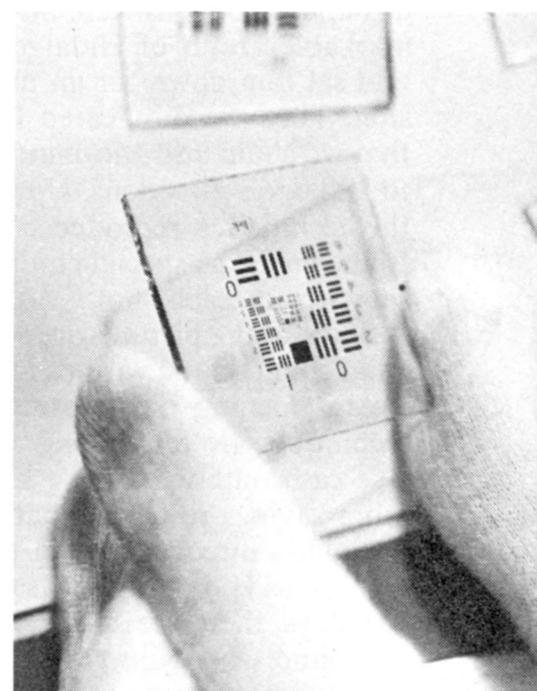
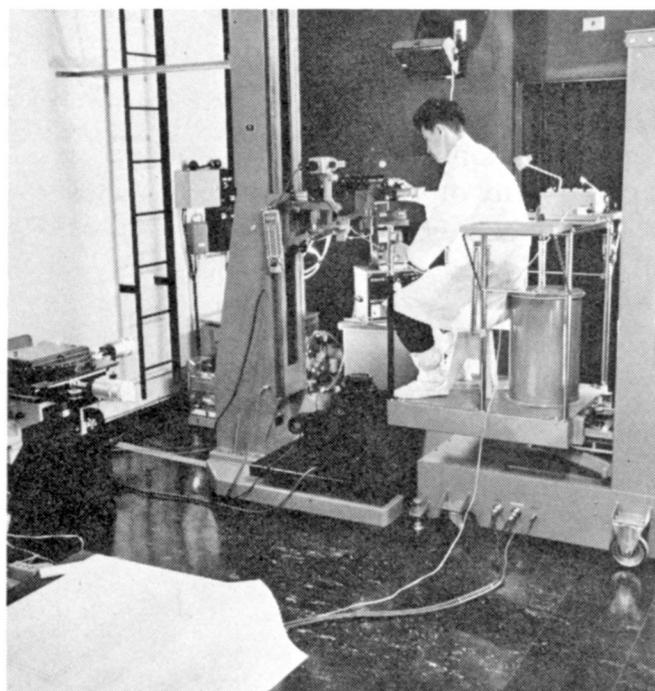
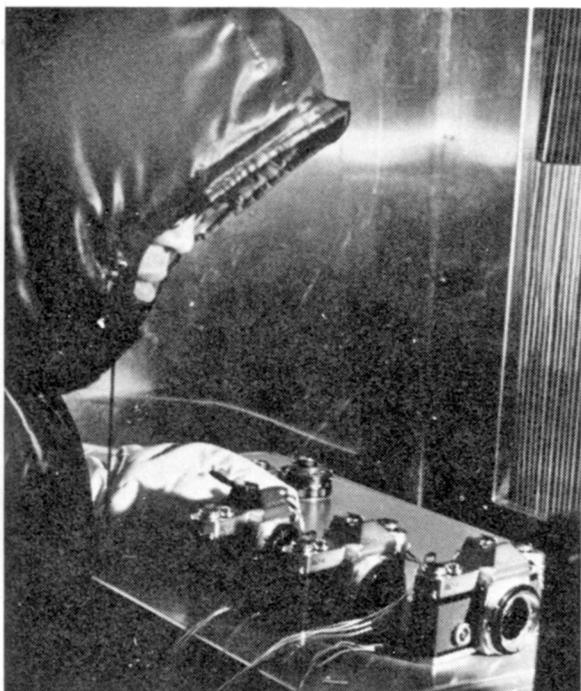
can be equally messy, unless you apply alcohol or laquer thinner).

Actually, the label indicates that this product has passed a type of test by the Japan Camera Inspection Institute (JCII); recently they changed the name to the Japan Camera and Optical Instrument Inspection and Testing Institute. Wow, it's a long name! Let's keep it short—JCII, and the Japan Machinery Design Center (JMDC). Basically, the JCII looks over a product for quality, and the JMDC examines the design to see that it isn't a copy of some other manufacturer's equipment, but is in-

deed an original concept.

In truth, the sticker means less today than it originally did. In 1954, the Japan Camera Inspection Institute was formed under the direction of Kinji Moriyama, a member of the Japanese Diet (Parliament) who was appointed just recently to the office of Director of the Science and Technology Agency of the Japanese government. There was a real need for the JCII. Prior to and right after World War II, the Japanese manufacturers were thought of as nothing more than toy manufacturers, and

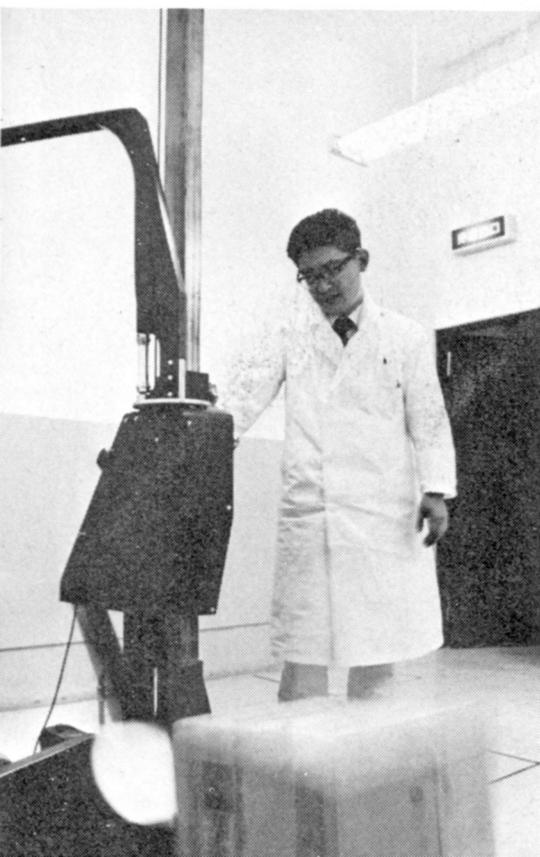
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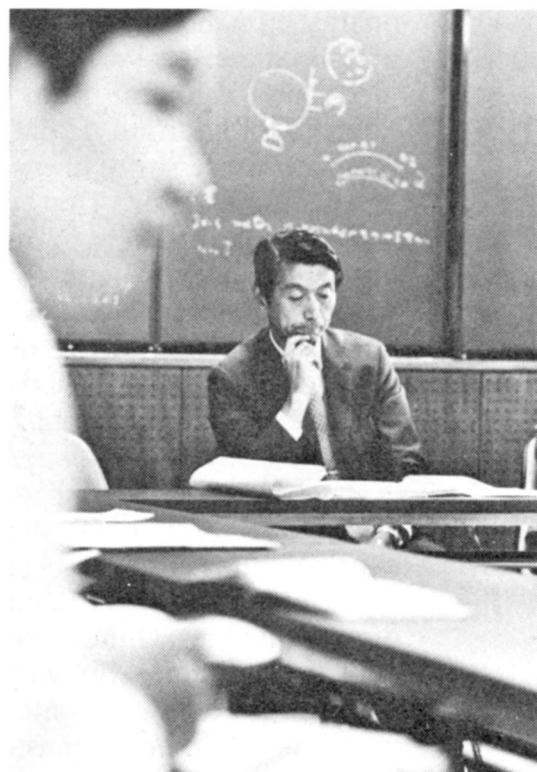
Where does JCII get its test charts? It makes its own with this precision camera.

Target like MODERN's was made for U.S. manufacturer.

Who will stand the low-temperature test room better? Man or machine?



It looks like a regular shutter-speed tester, but actually it isn't (see text).



From how far must you drop a camera before you hear the tinkle of glass?

It's not just testing, testing, testing. Sometimes, researchers meet to think.

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their products were considered tinny, cheap and short-lived. The major Japanese camera makers were being tarred with the "cheap junk" brush, whereas they actually produced many fine products.

The JCII standards were first implemented to prevent any "toy" cameras from being exported, which would lower the image of Japanese cameras in foreign markets. Secondly, optical and mechanical standards were set up which the equipment had to pass. (The JMDC, incidentally, was set up in 1959 because the government was upset at the many, almost exact imitations of German cameras that were being made. The JMDC was to monitor this to prevent the Japanese camera industry from getting a reputation as just copycats.)

The basic JCII standards were added to as newer equipment had to be tested (which required additional evaluations), but the basic concepts of standards remain today as they were originally—a camera must fulfill the minimum requirements for a usable camera. The JCII is very reluctant to publish the standards since they are the Japanese government's internal laws and because the standards are rather low when compared with many manufacturers' standards. Many engineers for various manufacturers revealed this fact in their interviews with us.

### **No, they don't inspect all**

Contrary to popular thought, the JCII does not inspect every piece of equipment, even though the gold label is affixed. Actually, this institute does not test cameras individually for the purpose of guaranteeing their quality, but it inspects them to keep the overall defect rate low on exported equipment.

The statistical sampling tests are best suited for this purpose, and the quality control division of the JCII applies the techniques very strictly and efficiently. How many samples do they inspect? Sampling is not done strictly by percentage. For example, they take 50 cameras from a lot of between 500 and 800 cameras. But, if that model has a good inspection history—at least 10 lots, with no failure for three consecutive months—then a sample of only 13 cameras is necessary. What does this inspection mean for you, the American purchaser? It minimizes the chances that you will receive defective equipment.

The examination does not always take place at the six-story JCII headquarters at 25 Ichiban-cho, Chiyoda-ku, Tokyo but, more often, in special JCII rooms located at each camera manufacturing plant. This makes the job of shipping and transportation much simpler. Every camera and lens tested must meet the JCII standards, regardless of sales price. These standards consist of some rather important requirements: determining where infinity focus is, the accuracy of shutters and meters, the recycling times of a flash unit (not only when the ready-light goes on, but also how long after that the unit is fully charged), just how honestly lens converters are marked in

magnification, etc. JCII also makes durability tests which include shock and vibration analysis and susceptibility to low and high temperatures. If one sample in a lot fails to pass these durability tests, the manufacturer will have his whole shipment held up until basic changes are made to meet JCII standards.

Despite the fact that the JCII standards are low in some areas (like resolution power of the lens and shutter-speed tolerance), the JCII would like to raise their standards in areas such as automatic-exposure levels, electronic flash guide numbers and durability tests—but it is rather difficult to arrive at a mutual agreement which both satisfies the manufacturer and meets consumer requirements. The JCII itself is afraid that too high a standard might go beyond a small, inexpensive manufacturer's capability even though the same standard might be easily within the capability of a major manufacturer of precision equipment. Since the JCII standards are actually laws promulgated to encourage the export and quality of Japanese goods, too-high standards might work in exactly the opposite direction.

Even the placement of the JCII sticker is a subject that isn't agreed upon. Most companies would like to have a requirement that all equipment (a sample of which has been examined and has passed) should have the sticker right on the individual piece of equipment. Yet there are still others who would settle for a single sticker on the outside shipping carton of a whole batch of lenses. (In this case, the purchaser would get no sticker and become alarmed, reasoning he has gotten a phony lens—which he hasn't.)

Stickers also differ—some are silver—and some purchasers feel that the silver sticker indicates second-class merchandise, while the gold is first-class. Again, pure nonsense.

### **JCII purpose eclipsed?**

Although changes, upgrading, simplification and standardization of labeling would seem to be logical, progressive steps, the original concept of the JCII's purpose has now largely been eclipsed. No one now connects Japan with toy cameras, inferior equipment or copies of German equipment. The responsibility for quality has now been completely transferred to where it should be—to the manufacturer. By and large, purchasers can very accurately gauge which quality they expect from the very top-grade, moderate and inexpensive equipment manufacturers from Japan—and they hold the manufacturers directly responsible for living up to these standards.

The JCII long ago realized that the initial reasons for its existence would fade, and they planned for a far larger and increasingly more important role for the organization in the Japanese photographic industry—a central information agency on all matters technical (for development, research, design, manufacturing and testing photographic equipment).

All cameras and lenses are now tested by each camera manufacturer, using test charts and glass plate reticles designed and

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manufactured by JCII. All testing machines employed by the individual manufacturers are periodically checked by traveling teams of JCII inspectors for uniformity and performance. The three-man team examines all equipment, from the simplest microscopes to the most sophisticated new automatic-exposure testing equipment.

The JCII often tests camera mechanism problem areas not only in Japanese-made but also in many foreign cameras. Reports are compiled for manufacturers. Such reports have included items such as camera vibration, shock damage during shipment, light leaks, low and high humidity damage.

The advent of multilayer lens coating created another task for the JCII. To correct unwanted tonal overlays caused by improper multilayer coating, a very expensive spectro-photometer was needed. The JCII made it unnecessary for the manufacturers to buy and man the equipment. JCII themselves installed it at JCII headquarters and did the work there for all JCII members. A new Optical Transfer Function testing machine at JCII now supplies better lens evaluation information, badly needed by lens manufacturers who wouldn't be able to get it in any other way because of the vast expense of such testing machinery.

JCII equips themselves with the best machinery available, regardless of cost. When no instruments are available for a specific

need, JCII technicians don't hesitate to develop their own new test equipment. Recently they completed a glass weathering room on the top of the building for all photographic equipment.

While there are many electronic flash meters available on the market, the JCII technicians found that none were sufficiently precise for their needs. They designed and built their own. Today they assemble this machine at a cost of \$2,000 apiece (approximately) for manufacturers who wish it, but the waiting list is long.

The JCII is fortunate in its acquisition of equipment. Specialized pieces have been made for them by all the major manufacturers, including Nikon and Canon. Many of the instruments needed were actually devised by JCII's own staff engineers. The JCII offers research in depth for all its member companies—research that they don't make public.

If you visit Japan, you can drop in at the JCII. They have a tour of the facilities, with the main emphasis on standard JCII testing, but you'll see a lot more and, if you ask the right questions about what you see, you'll be a lot wiser. You can bet they'll be covering up any not-yet-released products they've been asked to evaluate, but who knows, there's always that one chance in a million you might indeed be the first to glimpse the Canon F-2, the Nikon F3 or other now nonexistent cameras. But whenever they do exist, there will be some inspector at JCII giving the designer a hard time about it.—HIROSHI KIMATA