

# CEC

COMPANY GUIDE

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Archiv Michael-Otto*

Chuo Denki Co., Ltd.

*Music is Food for the Soul  
CEC Provides the Instruments*

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### A Word from the President

In 1954, when CEC was established, the audio industry was still in its infancy. For example, the field of drive motors for phono turntables was as yet largely unexplored when we set about to make our mark. Due to the lack of proper materials and precision parts, we had to cope with considerable problems, but after our share of initial learning experiences, we succeeded in creating the first high-precision phono motor. We became the first company to make turntables in Japan, and our products were highly regarded by music lovers.

The arrival of other companies on the scene made the market livelier and more competitive, and a new age began, bringing with it the first audio boom. Nowadays, the demands of sophisticated audio users are high and extremely diversified. Many new companies have appeared, but others have had to leave the stage. Guided by their wish to stay competitive, companies are designing various strategies. For CEC, the aim has always been clear. We have continued to create superior, high-quality products. Thanks to their thoughtful design and legendary longevity, our products end up being cheaper for the user than bargain basement alternatives. This quality-oriented policy has served us and our customers well, regardless of market fluctuations.

Although our roots are in the field of analog turntables, we have expended considerable efforts for the development of CD players, and we are recognized as a top-quality manufacturer also in this field, domestically as well as overseas.

In July of 1990, we have inaugurated a new company building as well as a new production facilities. This will be an incentive for us to make even better products in the future. We like to think of our creations not so much as technical products but rather as musical instruments which are designed to move the hearts of music lovers the world over. We at CEC are proud to help bring about one of the greatest human enjoyments: the pleasure of hearing good music well reproduced.

A handwritten signature in black ink that reads "H. Takada". The signature is written in a cursive, flowing style.

H. TAKADA  
President

# *The Pride of the Specialist: CEC Means Stereo Turntables and CD Players*

The history of stereo turntables and CD players is almost synonymous with the history of CEC itself. CEC was founded in Tokyo in 1954. In the same year, we introduced the high-precision phono motor FR216 which caused quite a stir in the audiophile community. The next products to follow were the turntables STP61 and BD3000. Based on an accurate evaluation of users' needs, we have since continued to develop and introduce products which have given us a solid reputation in the audio field.

Regardless of our analog roots, R&D work on CD players at CEC started early. We are now offering a lineup that is renowned in Japan as well as abroad for innovative design and uncompromising performance.

In 1988, we introduced the no-holds-barred analog record player ST930, and in 1990 the Compact Disc changer CH5000R. These products have

made waves in the industry and earned us praise worldwide. Our solid technological know-how and our determination to accept nothing less than perfect performance are the secrets which sustain our success in a highly competitive market.

Every single one of our products is designed and manufactured in house. This allows us to carry out stringent quality control while at the same time keeping costs within reasonable limits. This policy applies to products sold under our own name as well as to our OEM division. In this age of diversifying needs, many companies have come to depend on CEC's rich expertise and creative power. We do not disappoint the expectations placed in us, simply because the sense of accomplishment and responsibility is the same for any of our products, whether it bears the CEC name or not.

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During new product development meetings, aspects such as product concept, customer needs, target performance, industrial design, and manufacturing technology are discussed in detail and examined from various angles.



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In the technical laboratory, latest measuring instruments and computers are used extensively to gather data on electrical circuits and to analyze product performance. The results provide the basis for the progress of new projects.



CEC activities extend from the planning stage to the actual manufacturing process. Engineers are using sophisticated CAD systems to design new products.

*True Musical Sensibility is  
the Hallmark of CEC*

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**Listening room equipment lineup**

CEC: Analog turntable ST930, CD player CD770X  
A Capella: Loudspeaker Triolon MKII, Celestron I, Celesta, 5th Avenue  
5th Avenue MKII, Fidelio (with subwoofer)  
Burmester: Preamplifier 808MK3, 838MK2, 846MK2, 877MK2, 897,  
870MK2, D/A converter 871, power amplifier 878, 909

CEC products are created by employing the best method for each particular aspect. Parts requiring particular attention are hand made whereas modern manufacturing techniques are extensively used in other areas. This seamless cooperation of man and machine assures optimum results.

The listening room is an important platform where CEC products have to prove themselves. Even the most sophisticated systems for technical analysis can only assist but never substitute the trained human ear when it comes to determining sound quality. In 1990, CEC for the first time brought the loudspeaker Triolon MKII to Japan, for use in its listening room. This impressive four-way horn system is manufactured by the German company A Capella Audio Arts. The massive low-range enclosure possesses two 42-cm units, while the midrange is covered by a 30-cm polymer cone and a 54-mm soft-dome driver unit, each coupled to an exponential horn. The upper frequency

range, the horn-loaded ion tweeter TW-1S assures ultra-fast response.

Another German audio manufacturer who has taken the art of audio to new heights is Burmester Audio Systems. Their modular amplifier system 808MK3 is to be found in the CEC listening room, along with our own turntable ST930 and other high-end components. This listening room is an important tool to develop our musical sensibilities. It is used not only by the employees of CEC but is being made available to other music lovers as well. The world-famous quality of CEC products originates here.

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CD changer which automatically plays up to five discs. Program memory with a capacity for 32 tracks, random play and other attractive features make this high-quality CD changer another example of CEC competence in the field of CD players.

CH5000R



For more than 30 years, CEC has been furthering the state of the art in analog turntables, to create instruments which extract the enormous wealth of musical information inscribed in the record grooves. The no-compromise ST930 represents the pinnacle of our efforts.

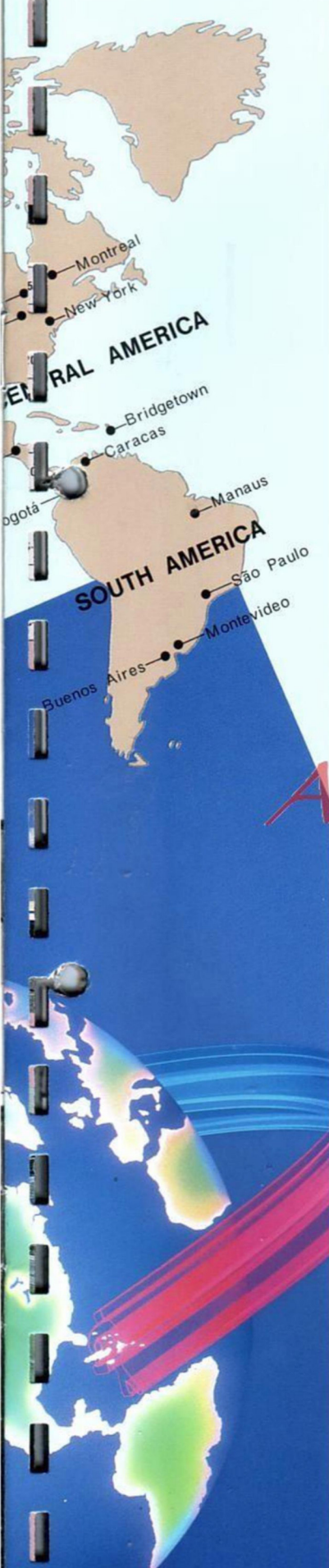
ST930

# CEC is at Home in the World



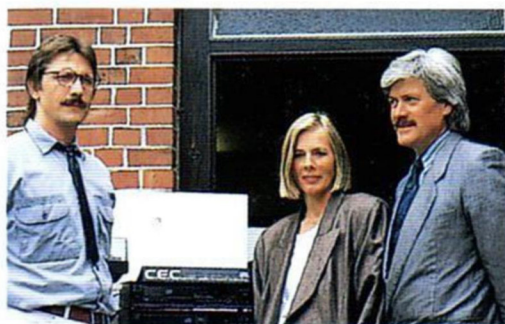
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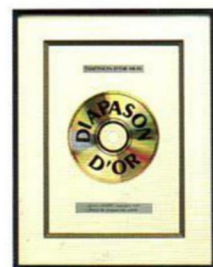


## Music Lovers Everywhere Love CEC

Our impressive track record in the field of audio has helped us to attract capable engineers and other personnel. At the same time, we have successfully expanded our marketing base to cover essentially the whole world. For example, in Europe our activities are coordinated by our German subsidiary and extend to Stockholm, London, Paris, Lisbon, Zurich, Milan and other cities. In North America our bases include New York, Los Angeles, and San Francisco. We are active in Central and South America, in South East Asia, Oceania, South Africa, and recently we have started to market our products in the Soviet Union and China as well. Beyond borders and cultural differences, CEC appeals to people on a global scale.



CEC products have earned praise in various European publications known for their demanding standards and highly critical tests. As a case in point, in 1989, the CEC CD player 540CD was awarded the grand prix in the category of CD players by the influential French publication DIAPASON. CEC products deliver total performance extending to sound quality, features, and value. This has made CEC a success story worldwide.



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## Another Side of CEC: Introducing High-end Components to Japanese Audiophiles

In 1989, CEC embarked on a new venture: bringing selected high-end components from abroad to the Japanese market. We tackled this endeavor with the same enthusiasm and discerning dedication as the production of our turntables and CD players. Under the motto "Art for the Ear", Burmester Audio Systems based in Berlin is writing a new chapter of audio history. Their components, which apply an innovative interpretation of balanced signal transmission, can be truly regarded as works of art. Starting with the preamplifier 808MK3, a series of accomplished products was introduced by CEC to Japan, including the CD processor 870, the power amplifier 878, the preamplifier system 897/877, the line-level preamplifier 846MK2, and the dedicated phono preamplifier 838MK2.



In 1990, CEC became the representative for



another German innovator, A Capella Audio Arts. Their refined, high-end compact speaker system Fidelio, the four-way speaker system 5th Avenue, and the ion tweeter TW-1S found the interest of many Japanese audiophiles. Bringing gems of audio engineering to Japan has become an important part of CEC's activities.



# Old-fashioned Dedication and Modern Manufacturing Technology are the Secrets Behind Top-quality Products

CEC's reputation for dependability and uncompromising quality was not built in a day. Rather, it is the result of untiring efforts extending over many years. When designing a product or considering a problem, we always put ourselves in the place of the user first. During the process from an idea to a finished product, the input of all our employees is vital. CEC as well as our suppliers believe that quality is a requirement that must be met constantly, based on a thoroughly established and proven quality assurance system.

During the process of being shipped to many countries all over the globe, CEC products may be subject to grueling conditions, such as a week of extreme cold while being transported on the Trans-Siberian railway, or the heat of a storage room on a ship crossing the equator. But all of this

is not unanticipated. In our testing chambers, we can simulate complex vibrations and all sorts of atmospheric conditions. Other tests are concerned with static electricity, line voltage noise and fluctuations, and the influence of magnetic fields. A complex array of stringent tests during development as well as in the various manufacturing stages ensures that every CEC product will arrive in perfect shape and will continue to deliver reliable performance under all possible conditions. No product leaves the factory unless it has passed the prescribed tests with a 100% rating. Only then do we feel confident to attach the CEC mark to the product. Performing all development and manufacture steps in our own facilities lets us constantly achieve top quality.

## Reliability Test System

Test Item	Manufacturer
Vibration Testing System	EMIC
Drop Test Machine	YOSHIDA SEIKI
Environmental Test Room	ETAC
Temperature & Humidity Chamber	ETAC
Temperature Chamber	ETAC
Coordinate Measuring System	MITUTOYO
Open Site	KEIYO ST
Impulse Simulator	NOISE LABORATORY
Voltage Dip Simulator	NOISE LABORATORY
Electrostatic Discharge Simulator	NOISE LABORATORY
Hot Line Coil Resistance & Temperature Meter	SOKEN



This complex environment testing system was introduced in 1986. It allows testing under a temperature range from  $-40$  to  $+90^{\circ}\text{C}$  and relative humidity from 20% to 90% to simulate transport conditions. Temperature and humidity can be controlled by a computer program which also allows cyclic testing.



In the environmental test chamber at CEC, products are tested for their ability to deliver unchanged performance after exposure to extreme temperatures ( $-40$  to  $+200^{\circ}\text{C}$ ) and humidity (60% to 90%). There is also a large chamber ( $-30$  to  $+80^{\circ}\text{C}$ ) which can be entered by personnel to verify operation of components under test.



In the "computer room", the flow of information includes data on exported products and parts, as well as development data and inventory data, all of which are accessible throughout the company on an on-line basis.



Sophisticated industrial robots help to increase manufacturing precision in an environment where man and machine complement each other.



Highly advanced plant engineering techniques help to minimize accidents and eliminate the possibility of human errors, while at the same time reducing manufacturing costs. This lets CEC offer high-quality goods at low prices.

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## COMPANY PROFILE

- **Company name** CHUO DENKI CO., LTD.
- **Location** 1919 Nagayatsu, Yoshimi-machi, Saitama 355-01 Japan  
Tel 0493 (54) 6111  
Fax 0493 (54) 6161  
Telex 2933105 CHUO J
- **Foundation** 1954
- **Capital** 30 million yen
- **Gross sales** 8,000 million yen
- **Product categories** Export: CD players, Turntables  
Import: Hi-end amplifiers, Loudspeakers
- **Number of employees** 250
- **Main OEM clients (in Japan)** ALPINE ELECTRONICS INC.  
KENWOOD CORP.  
SANYO ELECTRIC CO., LTD.  
SHARP CORP.  
TEAC CORP.  
TOSHIBA CORP.  
MARANTZ JAPAN INC.  
MITSUBISHI ELECTRIC CORP.  
A&A INTERNATIONAL INC.
- **Main OEM clients (overseas)** THOMSON CONSUMER ELECTRONICS (France)  
SME LIMITED (U.K.)  
AVS TECHNOLOGIES INC. (Canada)
- **Overseas dealers** HAMBURGER HIFI IMPORT & VERTRIEB GMBH. (Germany)  
DAH CHONG HONG, LTD. (Hong Kong)  
NAHO B.V. (The Netherlands)  
PERFORM HIFI (France)  
TEAC AUSTRALIA PTY. LTD. (Australia)  
TEAC CANADA LTD. (Canada)  
TECH UNION INC. (Taiwan)

**1990** Move to new company building and production facilities

**1989** Start of import of Burmester and A Capella products

**1986** Completion of total reliability testing system

**1985** Production start of CD player 500CD

**1984** Adoption of computerized manufacturing system

**1982** Establishment of CDC brand

**1971** Introduction of best-selling turntable BD3000

**1961** Move of company headquarters and production facilities to Higashi-Matsuyama city in Saitama Pref.

**1957** Move of company headquarters and production facilities to Kawasaki city in Kanagawa Pref.

**1955** Introduction of turntable STP61

**1954** Company foundation in Shinagawa ward, Tokyo. Introduction of phono motor FR216

Type
903-FN-LA/F-200-8M-E04/VC-1000DAR-31-M3C3R
DT-5
CT320p
FH20
FL4/HT250
B706/MICROPAK220
3m
INS410
VDS-B
ESS-625S
DAC-150-UL

Another step in CEC's reliability testing program involves magnetic field strength measurements and interference testing, to ensure that all products fulfill the stringent requirements in various countries.



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*Archiv Michael-Otto*

Hamburg, im Juli 1980

C.E.C. - wieder auf dem deutschen Markt

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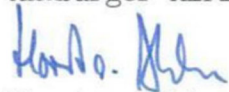
Sehr geehrte Herren,

*Archiv Michael-Otto*  
"be nice to your records", mit diesem Slogan kommt die renommierte japanische HiFi-Plattenspielermarke C.E.C. wieder auf den deutschen Markt. Mit der gleichen Mannschaft, mit dem gleichen Qualitätsanspruch, vom gleichen Produzenten - C.E.C. Chuo Denki in Japan. Einem der bedeutendsten Plattenspieler-Hersteller der Welt.

Zum ersten Mal in Deutschland zeigen wir hier und jetzt uns neues Programm. Sehen Sie es an. Vergleichen Sie die Preise. Sie werden feststellen, C.E.C. kommt mit einem runden Konzept. Das gilt auch für unsere Verbraucherwerbung. Auf der HiFi in Düsseldorf starten wir mit dem Slogan "be nice to your records". Denn C.E.C.-HiFi-Plattenspieler sind für Schallplatten gebaut.

Mit freundlichen Grüßen

Hamburger HiFi Import GmbH



Horst v. Ahlen