

## Matsushita Electric Corporation of America

Product Safety & Compliance Division

Panasonic      Quasar      Technics

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September 10, 1999  
KM499-U055

Federal Communications Commission  
Equipment Approval Services  
P.O. Box 358315  
Pittsburgh, PA 15251-5315

Subject:            Class II Permissive Change for Low Power Communication Transmitter  
Panasonic Microcast System / Control Console, Model KX-MC1CS  
FCC ID: ACJ96NKX-MC1CS

Gentlemen:

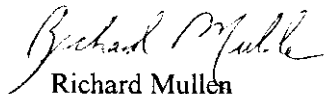
Enclosed, find Matsushita Electric Industrial Co., Ltd.'s Applications for Equipment Authorization, dated September 7, 1999. The subject device was originally granted on April 27, 1999 in compliance with Part 15, Subpart C and in accordance with §15.249 of the FCC Rules.

The Microcast System consisting of three units. The first unit is a PC Transceiver with: (1) 5.755-5.845 MHz transmitter separately submitted for Certification under FCC ID: ACJ96NKX-MC1PC; (2) 904-926.04 MHz receiver authorized under DoC; (3) PC Peripheral Device authorized under DoC; and (4) AC Adaptor type SADC-1165A with DC cable with one bonded ferrite core. The second unit, and the subject device, is a Control Console with 904-926.04 MHz transmitter already certified under FCC ID: ACJ96NKX-MC1CS. The third unit is AV Receiver with 5.755-5.845 MHz receiver subject to Verification.

The subject Control Console's transmitter contains 20-channel non-spread spectrum transmission within 904-926.04 MHz with maximum RF output power of 50mV/m @ 3 meters. Each channel has 450 kHz bandwidth with 1.16 MHz channel separation. This device is also provided with AC Adaptor, type KX-A11 with DC cable without any ferrite core. This Class II Change is to report improved RF characteristics by changing the antenna from an internal fixed type to an external flexible type and changing some of the antenna impedance matching circuitry. Refer to attached Notice of Alterations, photographs and schematic diagram for complete details.

Should you have any questions, please contact the undersigned. Thank you for your attention in this matter.

Sincerely yours,

  
Richard Mullen  
Project Manager

cc:      K. Nawata / KME-KM4

LIST OF ATTACHMENT

1. FCC Application Form 731

2. List of EXHIBIT

EXHIBIT C (Appendix) : Report of Measurement

EXHIBIT D (Appendix) : Photographs

EXHIBIT F (Appendix) : Schematic Diagram

# National Panasonic

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Kyushu Matsushita Electric Co., Ltd.

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Federal Communications Commission  
Equipment Approval Services  
P.O. Box 358315  
Pittsburgh, PA 15251-5315, USA

Date: September 7, 1999  
Ref. No.: KM4-99-U-55

Subject : Changes in Certified Equipment, Cordless Terminal,  
FCC ID: ACJ96NKX-MC1CS

Gentlemen;

In accordance with §2.1043, Changes in Certified Equipment, this application is submitted.

Our cordless terminal Certified under the FCC ID, ACJ96NKX-MC1CS, is modified its antenna from an internal fixed type to an external flexible type, to improve RF characteristics.

Please refer to Notice of Alterations and Test Report attached.

The original grant information is as following.

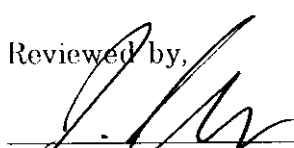
Original Grant Information:

FCC Identifier : ACJ96NKX-MC1CS  
Name of Grantee : Matsushita Electric Industrial Co., Ltd.  
Date of Grant : April 27, 1999  
Equipment Class : Part 15 Low Power Communication Device Transmitter  
FCC Rule Parts : 15  
Frequency Range : 904.00 - 926.04 MHz

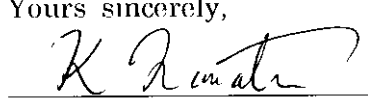
If you have any questions or comments concerning this matter, please do not hesitate to contact with us.

Thank you very much for your attention and time in this matter.

Reviewed by,

  
\_\_\_\_\_  
J. Sumi,  
Manager of Product  
Safety Section

Yours sincerely,

  
\_\_\_\_\_  
K. Nawata,  
Sr. Project Engineer of  
Product Safety Section

## NOTICE OF ALTERATIONS

Application to : FCC Part 15, Subpart C  
Name of Appliance : 900 MHz Low Power Communication Device Transmitter  
Model No. : KX-MC1CS  
FCC Identifier : ACI96NKX-MC1CS  
Original Grant Date : April 27, 1999

To improve this unit's RF characteristics, we would like to change its antenna from an internal fixed type to an external flexible type.

Please be advised that the base unit's RF circuitry basic design is not modified, rather its antenna was changed.

The differences between the basic and the revised units are as followings.

### 1. Antenna:

Internal Fixed Type

External Flexible Type

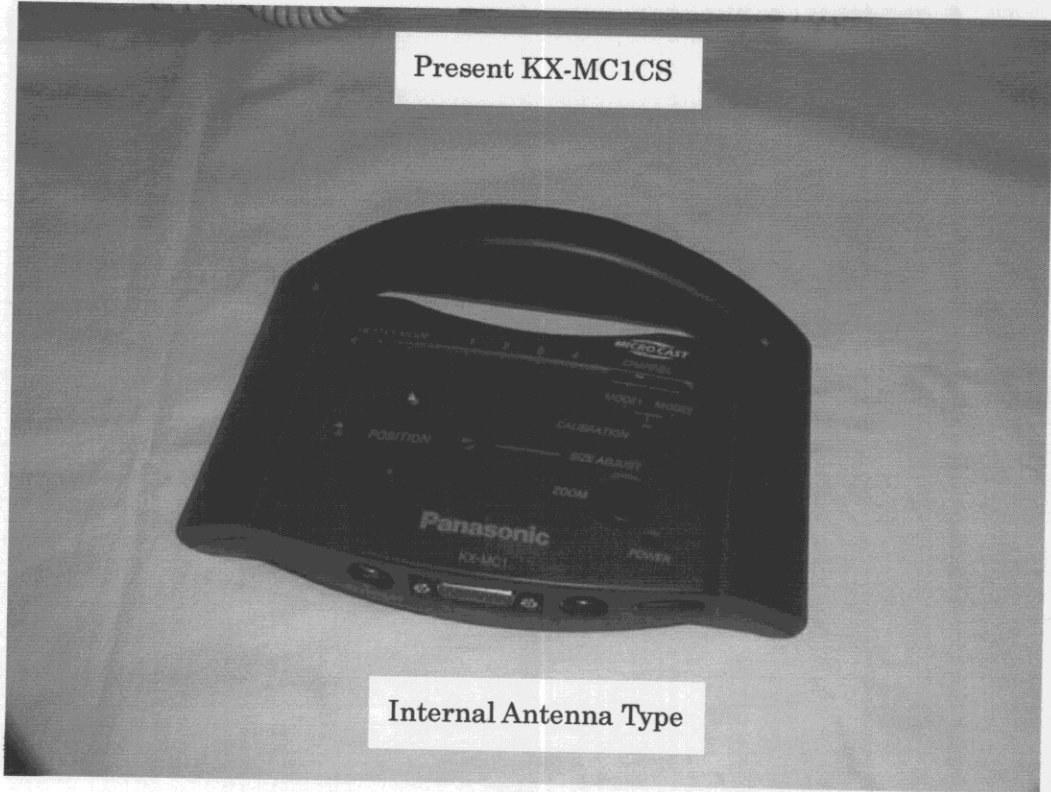
Accompanying with changing the antenna, some components' values are also changed (as shown below) to re-adjust the impedance matching.

### 2. RF Circuit:

|      |            |    |           |
|------|------------|----|-----------|
| L714 | : None     | to | 18nH      |
| C755 | : None     | to | 1.5pF     |
| C730 | : 43pF     | to | 39pF      |
| R723 | : 68K ohms | to | 39 K ohms |
| R727 | : 91 ohms  | to | None      |
| R728 | : 68 ohms  | to | None      |
| R729 | : 91 ohms  | to | None      |

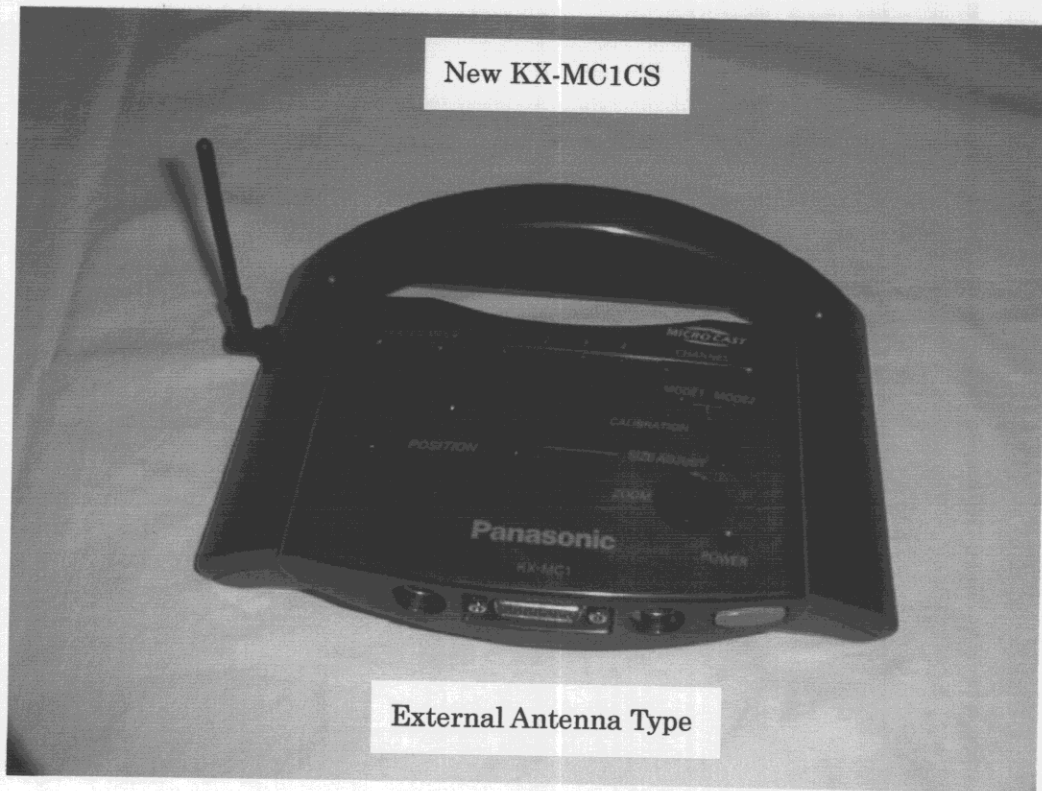
Please refer to the revised schematic diagram attached.

Present KX-MC1CS

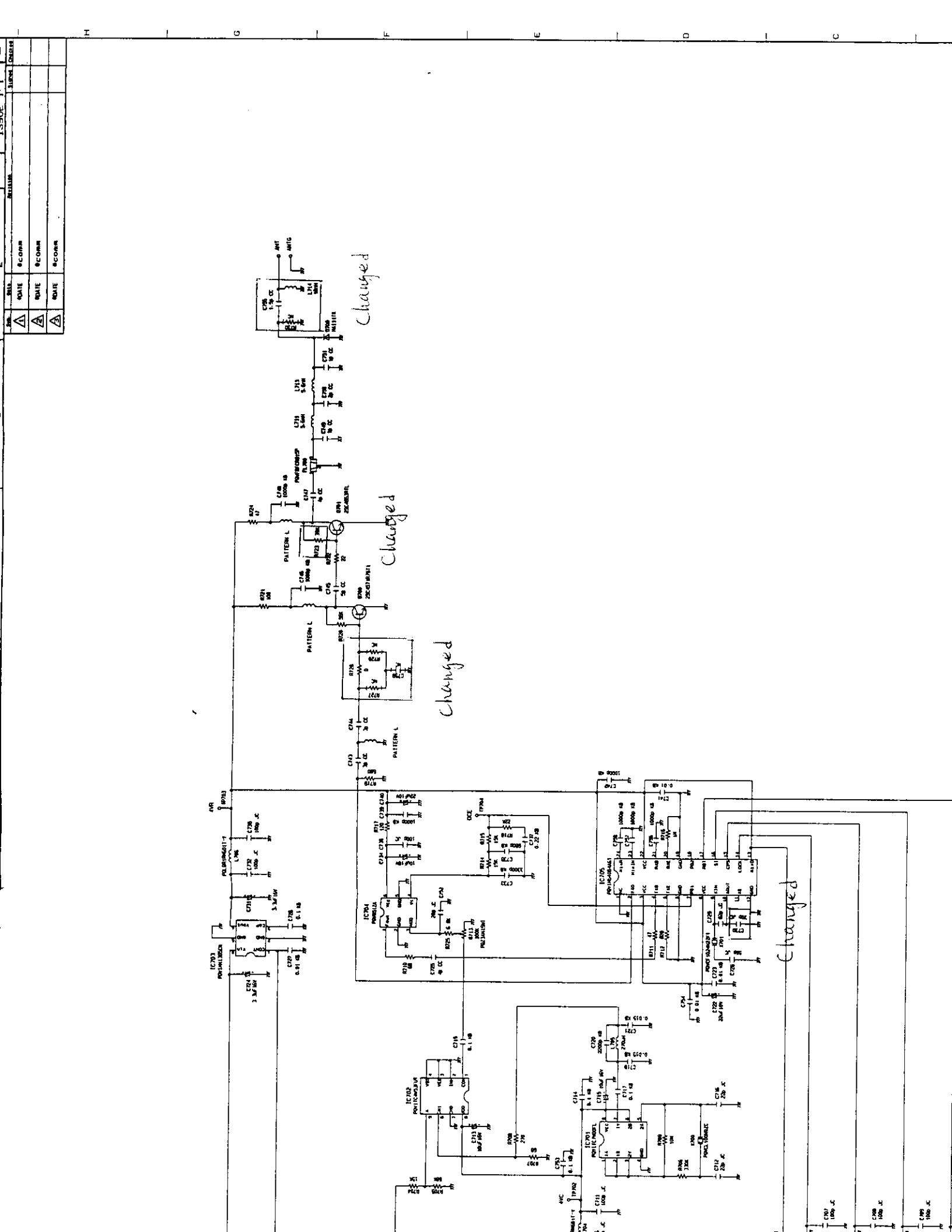


Internal Antenna Type

New KX-MC1CS



External Antenna Type



|        |        |        |        |
|--------|--------|--------|--------|
| RECORD | RECORD | RECORD | RECORD |
| RECORD | RECORD | RECORD | RECORD |
| RECORD | RECORD | RECORD | RECORD |
| RECORD | RECORD | RECORD | RECORD |

Changed

Changed

Changed

Changed