



# THE INSTITUTE OF RADIO ENGINEERS

INCORPORATED

## SECTION CORRESPONDENCE

PLEASE ADDRESS  
REPLY TO

Mr. R. J. Farber  
c/o Hazeltine Research Corp.  
59-25 Little Neck Parkway  
Little Neck 62, 1960  
8200-60-R3274  
June 14, 1960

Mr. Vincent J. Mancino  
Engineering Dept.  
Cornell-Dubilier Electronics Corp.  
1605 East Rodney French Blv.  
New Bedford, Mass.

Dear Mr. Mancino:

Thank you for your letter of June 10, 1960. We were looking for you at our Committee 27 meeting on June 8; but with your recent change in status, I can understand why you did not make it. I will pass along to Committee 15 your estimate of completion of the three standards your subcommittee has under consideration. To the extent that it is possible, I should like to ask that the work be speeded up since it appears that Committee 15 is being held up by this work.

Incidentally, with regard to your standard on spurious emission at the antenna terminals, I recall some conversation about it but do not believe that it was ever formally presented to Committee 27. If there is anything that we can do to help push this along, please let me know.

Thank you for your cooperation.

Sincerely yours,

*Rich Farber*

R. J. Farber

Chairman, Committee 27

RJF:sjc

THE INSTITUTE OF ELECTRIC ENGINEERS

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**GENERAL**  **ELECTRIC**  
COMPANY

**INDUSTRIAL ELECTRONICS  
DIVISION**  
COMMUNICATION PRODUCTS DEPARTMENT  
TECHNICAL PRODUCTS OPERATION

ELECTRONICS PARK, SYRACUSE, NEW YORK . . . TELEPHONE GRanite 6-4411

IRE Committee 27.4

File: IRE 27.4

July 11, 1960

Mr. Vincent Mancino  
Cornell-Dubilier Electric Corp.  
1605 French Rodney Blvd.  
New Bedford, Mass.

Dear Mr. Mancino:

In accordance with our recent conversation, enclosed please find several copies of the Proposed Standards on Measurement of Spurious Transmitter Output which I believe represent the final draft on this portion of the work of Subcommittee 27.4

I have talked with Mr. J. F. Proper regarding his continued membership in 27.4. Mr. Proper is now in another department and is undecided at the moment. I suggest you contact him directly. His address is - General Electric Company, HME MDS Engineering, Court Street Plant, Syracuse, New York.

I would also like to suggest as a possible member Mr. E. R. Radford, General Electric Company, HME RAD. COMP. ENGR., Bldg. #15, Electronics Park, Syracuse, New York. Mr. Radford is normally engaged in making Spurious Output Measurements and I am sure he could make a valuable contribution to this Subcommittee.

I would like to wish you success in your new position and luck in your IRE Committee work.

*J. F. Proper, Ext 8609*

Sincerely yours,

*W. F. Goetter*  
W. F. Goetter, Consultant  
Transmitter Engineering  
Technical Products Operation

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**CORNELL-DUBILIER ELECTRONICS DIVISION**

FEDERAL PACIFIC ELECTRIC COMPANY · 1605 RODNEY FRENCH BLVD., NEW BEDFORD, MASS.

October 17, 1960

Institute of Radio Engineers  
1 East 79th Street  
New York 21, New York

Attention: Miss M. Kane

Subject: Minutes of IRE Sub-committee 27.4 Meeting of  
September 23, 1960

Please find attached a draft of the minutes of the  
subject meeting.

Also please note the correct membership listing of  
Sub-committee 27.4. The listing printed in the  
October issue of the IRE is wrong.

Very truly yours,

~~V.J. Mancino~~  
V.J. Mancino, Chairman  
Subcommittee 27.4

VJM:js

THE INSTITUTE OF RADIO ENGINEERS, INC.  
1 East 79th Street, New York 21, New York

60 IRE 27.4 M1

MINUTES OF THE MEETING OF  
SUBCOMMITTEE 27.4  
HELD AT IRE HEADQUARTERS  
SEPTEMBER 23, 1960

PRESENT:

V. J. Mancino, Chairman

H. R. Butler  
W. F. Byers  
R. V. Faris  
A. W. Silverstein

ABSENT:

H. S. Walker

The meeting was convened at 10:00 A.M.

An agenda for the present meeting was discussed briefly. It was agreed that we should review the "Proposed Standard on Methods of Measurement of Spurious Output from Transmitter Output Terminals" and then proceed to the "Proposed Standard on Methods of Measurement of Transmitter Cabinet Radiation".

- A. 1. In paragraphs 1., 2.2, and 2.3, "radio transmitter" was changed to "radio frequency transmitter" to make this correspond to the IRE definitions.
2. The following sub-paragraphs were added to paragraph 3.

General:

3.3	<u>Measuring Instruments</u>
3.3.1	<u>Monitoring</u>
3.4	<u>Broadband Spurious Output Measurement</u>
3.5	<u>CW Spurious Output Measurements</u>
3.6	<u>Arrangement</u>
3.6.1	<u>Dummy Antennas</u>

3. Paragraphs 4.3.1.4, 4.3.1.5, and 4.3.1.6 were re-written to incorporate a caution note concerning receiver spurious responses caused by receiving overloading. This revision was accepted as submitted by Mr. Butler except that the caution note was put in paragraph 4.3.1.4 instead of 4.3.1.1.



4. The note "minimum attenuation of the variable attenuator" was added in parenthesis at the end of the first sentence.
5. In paragraph 4.3.1.10, which was previously 4.3.1.13, the clause "Although the Standard Method described above is preferred, since the accuracy is dependent only upon the accuracy of a calibrated signal generator" was deleted. The remaining portion of the sentence was placed in paragraph 4.3.2.1.
6. In what was formerly paragraph 4.3.2.3, the last sentence was deleted and this paragraph was made a part of paragraph 4.3.2.2.
7. Paragraph 4.3.2.3 (formerly 4.3.2.4) was rewritten as follows:  
"If necessary insert a carrier rejection filter between the sampling device and the measuring equipment input terminals. In this event if the carrier rejection filter produces any additional loss, a correction should be applied to the results of 4.3.2.2".
8. The above concluded the committee's review of "The Proposed Standard on Methods of Measurement of Spurious Output from Transmitter Output Terminals".

B. At this point the committee reviewed the writer's submission for "Proposed Standards on Methods of Measurement of Transmitter Cabinet Radiation".

1. The words "and External Wiring" were deleted from the title since it is desired to measure only the cabinet radiation.
2. Paragraphs 6.3.1, 6.3.1.3, 6.3.1.4, 6.3.1.7, 6.3.1.9, and 6.3.1.12, were made paragraphs 3.3, 3.4, 3.5, 3.3.1, 3.6, and 3.6.1, respectively after revisions to make compatible with the rest of the specification.
3. Paragraph 6.3.3 was changed to 6.3.1 and adopted as the Standard Method. The accompanying note was changed to read: "The standard method measures the absolute radiated power of the spurious signal".
4. The second sentence of paragraph 6.3.1.1 was changed to: "It should be noted that the pickup device must be located in the radiation field of the transmitter".
5. The first sentence in paragraph 6.3.1.6 was modified to: "A calibrated signal generator or other suitable source of controlled oscillation is now used in conjunction with an appropriate radiating device to supply the substituted power".

C. It was decided that the next meeting will be December 2, 1960. Prior to that meeting, Mr. R. V. Faris and the writer will attempt to write a draft of the Proposed Standards on Methods of Measurement of External Wiring Conducted Spurious Output.

The meeting was adjourned at 4:00 P.M.

Respectfully submitted

MINUTES ISSUED:  
October 20, 1960

V. J. Mancino, Chairman

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THE INSTITUTE OF RADIO ENGINEERS, INC.  
1 East 79th Street, New York 21, New York

60 IRE 27. M2

MINUTES OF THE MEETING OF  
THE RADIO FREQUENCY INTERFERENCE COMMITTEE  
HELD AT IRE HEADQUARTERS  
JUNE 8, 1960

PRESENT:

R.J. Farber, Chairman (27)  
S.J. Burruano, Vice Chairman (27)

H.R. Butler (27)	S.I. Cohn (27 & 27.7)	R.M. Showers (27)
W.G. Chaney (27.7)	F.G. Cole (27 & 27.3)	F.R. Wellner (27)
E.W. Chapin (27)	C.W. Frick (27 & 27.5)	
J.F. Chappell (27 & 27.7)	S.F. Meyer (27.7)	

ABSENT:

K. Backman (27.7)	W.F. Goetter (27)	N. Shepherd (27.7)
W.M. Cagney (27.7)	G.G. Hall (27)	W.A. Shipman (27)
K.A. Chittick (27)	V. Mancino (27)	B. Short (27.7)
L.E. Coffey (27)	J.B. Minter (27)	R.C. Stinson (27.7)
H.E. Dinger (27)	J.R. Neubauer (27.7)	
E.C. Freeland (27)	W.E. Pakala (27)	

The combined meeting of Committee 27 and Subcommittee 27.7 was convened at 10:00 A.M. on June 8, 1960.

1. Approval of Minutes: The minutes of the February 24, 1960 meeting were unanimously approved as issued.

2. Correspondence:

a. Mr. Farber read a copy of a letter from L.E. Coffey concerning the nature of an ignition spark (letter attached). This letter was referred to Mr. S.I. Cohn for consideration by Subcommittee 27.7.

b. A letter from Mr. R.T. Haviland, Chairman of the IRE Symbols Committee was read and was concerned with the abbreviation "dbmc" for "decibels above 1 microvolt per megacycle bandwidth," (letter attached). This letter was also referred to Subcommittee 27.7 for consideration.



c. A letter from Mr. M. Kant was also read and was concerned with the comments on the CISPR documents.

3. Report of the Subcommittees:

Subcommittee 27.1 - Basic Measurements - Dr. R.M. Showers, Chairman

Dr. Showers brought up the subject of cooperative effort in areas of standardization between AIEE and IRE. Limited discussion was held concerning the AIEE power transmission area, and methods of interference measurement concerning this area. Dr. Farber stated that there was no conflict between AIEE and IRE since this is not a Committee 27 area of interest. Mr. Chappell brought up another future possible area of conflict, that of industrial, scientific, and medical instrumentation. It was noted that AIEE has a measurement standard for ISM equipment. It was also noted that AIEE may specify a new piece of equipment with a bandwidth of 1 kc for transmission work. They have issued a standard for measurements above 300 mc which is their publication No. 951.

The 3-meter and 100-foot methods of measurements for radiating devices was another area discussed. It was pointed out during the discussion that the FCC rules accommodate both methods.

Subcommittee 27.3 - Radio and Television Receivers - Mr. F.G. Cole, Chairman

There were no comments on Document 60 IRE 27 PSI on conducted measurements for FM and TV receivers.

Subcommittee 27.5 - Industrial Electronics - Mr. C.W. Frick, Chairman

A lengthy discussion was held on the definition of shielding effectiveness for the standard on the measurement of shielding effectiveness of shielded enclosures.

Subcommittee 27.7 - Mobile Communications Equipment - Dr. S.I. Cohn, Chairman

A discussion was held on the specification for vehicular measurements. Letters from Mr. Neubauer and Mr. Coffey were read. Mr. Chappell noted that other British work is going on in this area and he noted that this work indicated that ignition interference is not limited to a single pulse but an actual train of pulses. Mr. Chapin noted the new Kaehne ignition system which is being tested for possible marketing. It was proposed that the new vehicular standard include a statement to the effect that it applies to conventional systems, but can be used for new systems as a tool or guide.

All changes made in the standard have been noted on the copy held by Dr. Farber. A motion was made and carried to approve the final draft of Committee 27.7 document for transmission to the Standards Committee.

4. Date of Next Meeting: The date of the next meeting was left to the call of the chair.

Meeting was adjourned.

Respectfully submitted,

SJB:ck

R.J. Farber, Chairman (27)

Attachments: (Letter - L.E. Coffey)  
(Letter - R.T. Haviland)

MINUTES ISSUED:  
November 14, 1960

RECORDING SECRETARY:  
S.J. Burruano

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THE INSTITUTE OF RADIO ENGINEERS, Inc.  
1 East 79th Street, New York 21, New York

60 IRE 27.4 A2  
November 17, 1960

TO: Members of Subcommittee 27.4  
FROM: V. J. Mancino, Chairman  
SUBJECT: Meeting Notice

There will be a meeting of Subcommittee 27.4 on Friday,  
December 2, 1960 at 10:00 A. M. at IRE Headquarters, 1 East 79th Street,  
New York 21, New York.

Please fill out and return the enclosed attendance card.

Enclosure

V. J. Mancino, Chairman  
Subcommittee 27.4



INSTITUTE OF RADIO ENGINEERS, Inc.

Gentlemen:

I  shall attend the meeting of the  
Subcommittee 27.4 on Friday, December 2, 1960 at 10:00 A.M.  
at IRE Headquarters, 1 East 79th Street, New York 21, N.Y.

.....  
Date

V. J. Mancino

.....  
Signature

MAN AND