1 Q. And only if 5 feet above the roof results in an
2 ultimate height of more than 30 feet, is a 30-foot height to
3 be used. Is that correct?
4 A. That is what it says.
5 Q. So if the house is at 28 feet and the rooftop
6 antenna, adding five feet, would be 33, in that type of
7 circumstance, under these procedures, use 30 feet of height,
8 right?
9 A. Yes.
10 Q. But if the house was at 10 feet, you would test at
11 15 feet. Is that correct?
12 A. That appears to be the procedure.
13 Q. Now, let me direct your attention to Page 3 of this
14 document, under the paragraph headed "Procedure." And the
15 first sentence says, "The purpose of the procedure set forth
16 below is to independently replicate the receiving environment
17 atop the household roof." Do you see that?
18 A. Yes.
19 Q. Do you think that that is an appropriate way to
20 test for signal strength to determine the eligibility of a
21 satellite subscriber under the Satellite Home Viewer Act?
22 A. No.
23 Q. So you disagree with the statement that your firm
24 made in Defendant's Exhibit 76, on Page 3. Is that correct?
25 A. This procedure was developed in conjunction with

1 negotiations that were ongoing with the satellite carriers.
2 I was not directly involved in any of these negotiations.
3 But I understand that there were some compromises suggested
4 as to the procedure. But I believe we have set forth in our
5 December and February testing the procedure we believe to be
6 correct.
7 Q. Now, someone in your firm -- whatever the
8 circumstance may have been -- suggested that it would be a
9 good idea, when testing under the Satellite Home Viewer Act
10 in particular, to independently replicate the receiving
11 environment atop the household roof. Is that correct?
12 A. That is what it says. Again, as I mentioned, it
13 was part of an industry -- or a Satellite Home Viewer Act
14 negotiation. So I do not know what the background of this
15 document would be.
16 Q. And what you are telling the Court is you think
17 that is a bad idea?
18 A. Yes, I believe it is in the context of determining
19 the field strength available at -- median field strength
20 available at any given household.
21 MR. SCHWARTZ: Your Honor, may I approach the
22 board?
23 THE COURT: Yes, sir.
24 BY MR. SCHWARTZ:
25 Q. Now, Mr. Treanor showed you, during your direct

1 examination, this excerpt from the Satellite Home Viewer Act.
2 Do you remember this?
3 A. I do not recall seeing that during my examination.
4 Did I? Maybe I did, yeah.
5 Q. You are not sure?
6 A. I guess I recall seeing it now, yes.
7 Q. Why don't you take a second and review 17 U.S.C.
8 Section 119 d 10. And perhaps it would be helpful if I
9 read portions of it to you. There is a definition here,
10 "Unserved Household," right?
11 A. Right.
12 Q. Have you seen that before today?
13 A. This section here?
14 Q. Yes.
15 A. I have seen that, yeah.
16 Q. And the definition reads, "Unserved household with
17 respect to particular television network means a household
18 that cannot receive through the use of a conventional outdoor
19 rooftop receiving antenna an over-the-air signal Grade B
20 intensity as defined by the FCC of a primary network station
21 affiliated with that network." Right?
22 A. Yes, correct.
23 Q. "Through the use of a conventional outdoor rooftop
24 antenna," right?
25 A. It does say that.

1 Q. And as we discussed before, the focus is on
2 household, a particular household, as opposed to an area,
3 right?
4 A. Yes.
5 Q. Now, having had a chance to review that statutory
6 language, do you still think that the procedure proposed by
7 your firm, whereby it suggested independently replicating the
8 receiving environment atop the household roof, is a bad idea
9 when it comes to testing for eligibility under the Satellite
10 Home Viewer Act?
11 A. Yes.
12 Q. Take a look, if you would, at page -- I guess it is
13 Figure 1, the second to the last -- third to the last page of
14 this exhibit.
15 A. Yes.
16 Q. And do you see the truck there with a mast and the
17 antenna and the indication of it being five feet above what
18 appears to be the highest point of the roof of this house
19 that is depicted here?
20 A. Yes.
21 Q. Now, when you did your testing in this case, you
22 didn't do anything like this at all, did you?
23 A. As far as what?
24 Q. Did you ever pull your truck into anybody's
25 driveway?

1 A. Typically, no.
2 Q. Did you pull it into anyone's driveway?
3 A. Not for the court -- Not for the purpose of making
4 measurements.
5 Q. And did you ever measure to see where your antenna
6 height was relative to the top of the roof of the household
7 that you were attempting to test?
8 A. No.
9 Q. Do you still have your original report in front of
10 you?
11 A. Yes.
12 Q. Now, the testing methodology that you used in this
13 case -- in contrast to the one your firm proposed in February
14 '96 -- is set forth at Tab C of your original report,
15 correct?
16 A. Yes.
17 Q. And when you developed this methodology, it was
18 geared specifically to your engagement by Dow Lohnes for
19 purposes of this litigation, right?
20 A. My recollection is that we developed this
21 methodology as a general methodology to be used in the
22 industry.
23 Q. Have you ever used it anywhere else, other than in
24 this case, for testing particular households?
25 A. This is the only testing that we have done.

1 Q. And when you developed your methodology for
2 purposes of this case, you contemplated that you would test
3 at a height 20 feet above ground level. Isn't that right?
4 A. Yes.
5 Q. You didn't do that in this case, did you?
6 A. There are no locations where -- where the
7 methodology would have prescribed a 20-foot height above
8 ground measurement.
9 Q. Now, you would agree with me, and with Mr. High as
10 well, that the higher the antenna, the stronger the signal,
11 in all likelihood?
12 A. Well, as a general matter, as you go -- as you
13 increase an antenna height that the signal will increase,
14 although it will vary.
15 Q. I am sorry, I didn't quite hear your answer.
16 A. As a general matter, as an antenna is increased in
17 height above ground, the signal -- receive signal, or the
18 signal level received -- or the signal will be higher.
19 Q. So, just by way of example, if you test one given
20 location at 30 feet --
21 A. Right.
22 Q. -- you are likely, as a general matter, to get a
23 greater reading than as at 20 feet, right?
24 A. Yes.
25 Q. And you knew that when you developed this

1 methodology, right?

2 A. Yes. That is known.

3 Q. And you were here when Mr. High testified, correct?

4 A. I was present.

5 Q. You heard all of his testimony?

6 A. Most of it.

7 Q. And did you hear him say that in the Texas

8 Panhandle for a variety of reasons it is commonplace for

9 antennas to be located just 15 feet above ground level?

10 A. Yes, I heard that.

11 Q. And did you know that before this trial started?

12 A. No.

13 Q. And what is the radius --

14 MR. SCHWARTZ: May I approach the board, please?

15 THE COURT: Yes, sir.

16 BY MR. SCHWARTZ:

17 Q. What is the radius of the Grade B contour level as

18 predicted in 1977 for KAMR TV's main transmitter radius of

19 Grade B contour? Do you know?

20 A. Not offhand. I can quickly turn to one of the

21 exhibits and get an estimate.

22 Q. Why don't you do that.

23 A. It would be on the order of 70 to 75 miles.

24 Q. Why don't you assume 75 miles. Do you have any way

25 of calculating the number of square miles occupied within

1 PROCEEDINGS FOR NOVEMBER 17, 1997

2 MORNING SESSION

3 (The following took place in open court.)

4 MR. SCHWARTZ: May I proceed Your Honor?

5 THE COURT: Counsel.

6 LOUISE ROBERT du TREIL, JR ,

7 being recalled as a witness in behalf of the Plaintiff,

8 testified as follows:

9 CROSS-EXAMINATION (Continued)

10 BY MR. SCHWARTZ:

11 Q. Good morning Mr. du Treil.

12 A. Good morning.

13 Q. When we finished up on Friday afternoon, we had

14 established that if there were 1300 Prime Time 24 subscribers

15 currently in KARM-TV's predicted Grade B contour, that would

16 amount to approximately one every 13 square miles. Is that

17 right?

18 A. That is correct.

19 Q. And if it turned out there were not 1300, but 650

20 Primetime 24 subscribers located in that predicted Grade B

21 contour, you would agree with me that the calculation would

22 mean or result in one every 26 square miles. Is that right?

23 A. Yes.

24 Q When the Federal Communications Commission first

25 developed the concept of the Grade B contour, it did so based

1 MR. SCHWARTZ: May I approach, Your Honor?
2 THE COURT: Yes, sir.
3 MR. SCHWARTZ: Thank you.
4 BY MR. SCHWARTZ:
5 Q. I am going to hand you, sir, a copy of a document
6 entitled "Satellite Home Viewer Act TV Signal Measurement
7 Methodology." It is our on your firm's letterhead, and dated
8 February 27, 1996, as a Deposition Exhibit No. 187, which
9 you can disregard. This is Defendant's Exhibits 76 at trial.
10 And you will recall, this is a document that your
11 firm created roughly a year before you conducted tests in
12 this case, and it had this schematic reflecting that the
13 truck should be in the driveway of a house and the antenna
14 should be elevated to a height five feet above the top of the
15 roofline. Do you remember that document?
16 A. Yes.
17 Q. And this was the document that had your firm
18 suggesting that those who were doing field testing for signal
19 strength at particular households should try to replicate the
20 conditions of the roof of the house. Do you remember that?
21 A. Yes, I remember where it indicated that, although I
22 would say that it would not be the preferred method for
23 making measurements. And I think the objective would be to
24 determine the median field strength. You know, 30 foot above
25 ground level.

1 Q. In fact, far from being a preferred method, you
2 testified on Friday it would be a bad idea to do what your
3 firm suggested in February 1996, correct?
4 A. It is -- This cluster procedure is definitely a
5 less, you know, preferable method. You know, the hundred
6 foot is a much preferable method for determining median
7 measured field strength.
8 Q. And I don't want to quarrel over semantics, but I
9 do remember correctly that you said Friday it was a bad idea
10 to do it the way your firm recommended in February 1996,
11 correct?
12 A. I believe those are your words.
13 Q. You didn't agree with that statement on Friday?
14 A. You asked, "Do you agree with that first sentence?"
15 and I responded, "No."
16 Q. Didn't I ask you if it was a bad idea?
17 A. Well, my response is that I don't think it is a
18 good idea to -- the cluster measurements, because the -- you
19 know, the -- if you are determining the median measured field
20 strength at a location, the hundred foot mobile run is far
21 preferable for determining that median and having a, you
22 know, a reliable, repeatable measurement.
23 Q. Have you changed your mind over the weekend as to
24 whether the procedure your firm recommended in February, 1996,
25 was a bad idea?

1 A. No.
2 Q. Let me direct your attention to Page 3 of
3 Exhibit 76?
4 A. Yes.
5 Q. And you see in the heading, procedure, the first
6 sentence is the one we focused on Friday that says, "The
7 purpose of the procedures set forth below is to independently
8 replicate the receiving environment atop the household roof,"
9 right?
10 A. That is what it says.
11 Q. And I have read that correctly, haven't I?
12 A. Yes.
13 Q. All right. Now, if you skip one sentence and then
14 read the third sentence, it says, "A location should be
15 chosen as close to the household as possible," correct?
16 A. Yes, that is what it says.
17 Q. Do you think that is a good idea?
18 A. Yes.
19 Q. And there has been a 15 step, step-by-step
20 procedure that your firm recommended in February, 1996, right?
21 A. Yes.
22 Q. And step number 6 --
23 MR. SCHWARTZ: May I approach again, Your Honor?
24 THE COURT: Yes.
25 MR. SCHWARTZ: Thank you.

1 BY MR. SCHWARTZ:

2 Q. Step number 6 reads, "Elevate the receiving antenna
3 until the antenna is located five feet above the roof peak as
4 shown on Figure 1." And this area is Figure 1 we have got up
5 on the board, right?

6 A. Yes.

7 Q. And only if the roof height is excessive, should
8 the antenna be elevated to 30 feet above ground level,
9 correct?

10 A. That is correct. But you will see that the -- from
11 the illustration that the height is about 30 feet above
12 ground level.

13 Q. In this particular case of Figure 1?

14 A. Yes.

15 Q. And how is it that you have arrived at that
16 statement?

17 A. It appears to be a two-story home with a peak roof,
18 I would estimate to be about 20, 25 feet above ground, with 5
19 foot above that would put you about 30 foot above ground
20 level.

21 Q. Now, how many homes did you actually purport to
22 test here in Amarillo during your two rounds of tests?

23 A. 215, I believe is the total.

24 Q. Well, that was the second time around. How many
25 did you do the first time around?

1 A. Oh, the first time we did 57.
2 Q. So you did something in the vicinity of 273 or so
3 tests?
4 A. No, there are 215 -- Yes, I guess that would be
5 right, yeah. Okay.
6 Q. And of the 272 or 273 homes that you purported to
7 test, how many of them had two stories, as are depicted --
8 like the depiction here on Figure 1?
9 A. I don't know any exact numbers. But a number of
10 them did have roofs at least that height and higher.
11 Q. And what percentage do you think of the homes you
12 have tested in the Amarillo trade area had two stories?
13 A. I don't know an exact percentage, but I would
14 estimate less than a quarter.
15 Q. Less than a quarter?
16 A. Yeah, about 25 percent or less.
17 Q. So your best guess is that three-quarters of the
18 homes had just one story; is that right?
19 A. That is my impression from what I saw, yeah.
20 Q. Let me ask you to take a look, if you would,
21 please, at Figure 2 of this Exhibit 76.
22 A. Yes.
23 Q. By the way, just to take a half step back, you
24 actually -- or somebody working with you -- photographed the
25 273 homes you were purporting to test, right?

1 A. We photographed every location measured, correct.
2 Q. Would it be helpful to you to take a look through
3 the photographs to see how many single story homes there were
4 as compared to multiple story homes?
5 A. From what I saw of those reproductions, it would be
6 very difficult to make a reasonable judgment.
7 Q. That is because the pictures just aren't
8 decipherable?
9 A. They didn't copy very well.
10 Q. Who actually took those pictures?
11 A. I did.
12 Q. And when you took them, did you get out of your
13 truck?
14 A. Yes.
15 Q. Now, let me direct your attention to Figure 2. Do
16 you have that in front of you, sir?
17 A. Yes.
18 Q. And you see here in February 1996, your firm is
19 recommending that there be five signal measurements taken in
20 effect in the driveway of the home to be tested?
21 A. Yes. It is intended to be in the driveway, if
22 there is space for that, yeah.
23 Q. And then five tests to be taken in a driveway,
24 right?
25 A. Yeah, they are. But according to the diagram, you

1 need about 18 feet between -- I think from end to end on
2 these measurements. You know, that can be difficult to
3 obtain in a driveway.
4 Q. So you would need a driveway that was in effect for
5 two cars. Is that right?
6 A. It looks like, yes.
7 Q. And you didn't go into any driveways in the 273
8 places that you were testing, right?
9 A. Not for measurement purposes.
10 Q. Quite apart from you picking five tests in a
11 driveway, you didn't pick any?
12 A. Correct.
13 Q. I direct your attention, please, to the last page of
14 Exhibit 76, if you would, please.
15 A. Yes.
16 Q. And that appears to be a television field strength
17 measurement work sheet, right?
18 A. Yes.
19 Q. And this is a work sheet that in February, 1996,
20 your firm was proposing to be used for signal strength
21 testing of particular households as more generally described
22 in Exhibit 76, right?
23 A. Yes.
24 Q. And you didn't use this work sheet when you did
25 your work in this case, did you?

1 A. No.

2 Q. And if you would take a look in the first segment

3 of Exhibit 76, do you see there there is a line that reads,

4 "Description of present television receiving antenna at

5 household."

6 A. Yes.

7 Q. And it is fair to say, isn't it, that the authors

8 of Exhibit 76 at your firm were suggesting that those who

9 went out in the field to test signal strength would take note

10 of and record the present television receiving antenna, the

11 condition of the present television receiving antenna at the

12 particular household, right?

13 A. Well, apparently, yes. But let me just say that,

14 you know, this was in connection with the industry

15 negotiations that were going on at that time.

16 Q. And do you think it will be a bad idea when you

17 were out in the field to make note of the present television

18 receiving antenna, to describe it for purposes of your field

19 notes?

20 A. If it was relevant.

21 Q. Well, you tested 273 houses, or you tested points

22 somewhere generally in the vicinity of 273 houses in this

23 case, right?

24 A. Yes.

25 Q. And was the condition of the present television

1 receiving antenna at any of those households relevant to you?
2 A. No.
3 MR. SCHWARTZ: Your Honor, at this point I would
4 move the admission of Defendant's Exhibits 76.
5 THE COURT: I am sorry, counsel, I don't know
6 what 76 is.
7 MR. SCHWARTZ: Oh, I am sorry, Your Honor. This
8 is the document that his firm authored in February 1996.
9 May I approach the board?
10 THE COURT: Yes.
11 MR. SCHWARTZ: It has the suggestion of the
12 testing five feet above the roofline, and has other of the
13 test procedures that are recommended that the testimony has
14 shown are included in the criteria he has used in this case.
15 MR. TREANOR: Your Honor, I would simply renew my
16 objection that those documents were generated back and forth
17 in a process between both sides of the issue on what might
18 be an acceptable compromise, and agreed methodology, and as
19 such I believe should not be admitted.
20 THE COURT: Admitted.
21 MR. SCHWARTZ: Your Honor, may I again approach
22 the board, please?
23 THE COURT: Yes, sir.
24 MR. SCHWARTZ: Thank you very much.
25 BY MR. SCHWARTZ:

1 measurements of antenna heights when I was in the field. I
2 was simply looking around and really not paying a lot -- a
3 heck of a lot of attention to it.
4 Q. You didn't pay a heck of a lot of attention to
5 where the antennas were, right?
6 A. That is correct.
7 Q. And, in fact, when you created the field work
8 sheets to be used in this case, you didn't do what your firm
9 had recommended in February, 1996, and have a data point to
10 make an entry regarding the antenna, right?
11 A. Correct, we did not make any specific notations
12 with regard to the antenna, if there was even one at the
13 home. There may not -- There were many instances where
14 there wasn't even an antenna.
15 Q. And that is because you consider the entire issue
16 of the antenna, or the conventional outdoor rooftop receiving
17 antenna, as those words are used in the Satellite Home Viewer
18 Act, to be irrelevant, and you said, on Friday?
19 A. They are irrelevant for the purpose of knowing what
20 the median measured field strength based on the FCC's
21 definition would be.
22 Q. And you also think it is irrelevant in determining
23 whether a particular household can get a signal of Grade B
24 intensity using a conventional rooftop antenna, right?
25 A. Well, I don't really have a particular opinion

1 method. That is set forth in 73.686, right?

2 A. Yes.

3 Q. And you see -- You say the FCC measure method has

4 two parts. One for determining the measured contour of the

5 station by measuring along radials, right?

6 A. Yes.

7 Q. And another method for determining the median

8 signal level over a community using the grid method, right?

9 A. Yes.

10 Q. And as we discussed Friday -- and I won't go into

11 this in detail -- you didn't use either the radial method or

12 the grid method, right, in this case?

13 A. Well, the radial method is used for establishing a

14 measured contour and the grid method is used for establishing

15 a median over a community. So we only used the section of --

16 Section 73.686 that pertained to the individual measurement

17 locations.

18 Q. So basically the FCC contemplates two different

19 kinds of measurements. One for determining a contour and one

20 for determining a median signal level over a community,

21 right?

22 A. Those are the measurement analyses methods or

23 procedures described in that section.

24 Q. And if you went to 73.686, or indeed if you read

25 the entire federal register, you would never find a Satellite

du Treil, Lundin & Rackley, Inc.
A Subsidiary of A.D. Ring, P.A.

February 27, 1996

DEFENDANT'S EXHIBIT 76

SATELLITE HOME VIEWER ACT
TV SIGNAL MEASUREMENT METHODOLOGY

The field strength test procedure outlined below is in response to the Satellite Home Viewer Act (SHVA) to enable the determination of an "unserved household." An unserved household is defined as a location not receiving a minimum Grade B intensity signal from an over-the-air television network affiliated station. An unserved household would qualify to receive network programming from a direct broadcasting satellite (DBS) service.

Background

While measuring a television station's field strength may initially appear to be elementary, the effect of multipath (or signal reflections) must be considered. In urban areas, the field strength deviation, or difference between the maximum and minimum values, is typically several decibels over a 100 feet horizontal distance if measured continuously. A higher field strength deviation is usually pronounced at UHF channels. An independent procedure evaluating multiple measurements is therefore required to determine the received field strength of an over-the-air television station at the household.

EXHIBIT 187 3/27/97 ST

The field strength measurement procedure to be used is similar to the "cluster" procedure outlined in Section 73.686(b)(2)(viii) of the FCC rules. For each cluster measurement set, five field strength measurements are completed. The corrected median field strength of the measurements, accounting for receiving antenna gain, receiving antenna transmission line loss and antenna factor is calculated.

Required Test Equipment

The following equipment is recommended for the measurement procedure:

- Vehicle with a telescoping mast or some other means of elevating the receiving antenna to five (5) feet above the highest point of the home's roof-top level. If the roof height is beyond the maximum height of the mast, elevation of the antenna to thirty (30) feet above ground level is acceptable.
- Field Strength Meter with either a 75 ohm or 50 ohm input impedance. The field strength meter can be any radiofrequency voltmeter unit capable of accurately indicating the peak amplitude of the synchronizing signal (peak-of-sync) in the visual carrier.
- Channel Master Channel King 3646 UHF/VHF Receiving Antenna. Other makes of outdoor rooftop receiving antennas are possible so long as the gain for the specific channel being measured has been accurately established.
- 300 ohm to 75 ohm balun transformer.
- RG-59U transmission line cable with foam polyethylene insulation and 95% percent bare copper braid shield coverage.

Procedure

The purpose of the procedure set forth below is to independently replicate the receiving environment atop the household roof. A set of five individual measurements shall be made at each satellite home viewer household. A location should be chosen as close to the household as possible and free of overhead power lines. The measurement area, such as the home's driveway, should be large enough to permit a cluster of 5 measurements taken at locations similar to a "5" on a dice; or at the corners of a square and in the middle of the square.

At each individual measurement location, the receiving antenna shall be elevated to 5 feet above the highest point of the household's roof as illustrated in Figure 1. If for some reason it is not possible to place the receiving antenna at the desired height, then use a height of 30 feet above ground level.

A sketch showing the 5 measurement positions is shown on Figure 2. If possible, the individual "corner" measurements should be spaced at least 18 feet apart for Channels 2 through 6 or at least 10 feet apart for channels 7 through 69.

A step-by-step procedure is outlined below:

1. Locate the vehicle with the antenna centered at the first measurement location.
2. Attach the Channel Master King 3646 VHF/UHF antenna to the top of the collapsed mast on the vehicle.
3. Connect the 300 ohm port of the balun to the antenna.
4. Connect the RG-59/U cable to the 75 ohm port of the balum.

5. As a safety consideration, confirm the antenna will not elevate into an overhead obstacle such as a power line.
6. Elevate the receiving antenna until the antenna is located 5 feet above the roof peak as shown on Figure 1. If the roof height is excessive, elevate the antenna to 30 feet above ground level.
7. Connect the cable from the receiving antenna to the field strength test instrument.
8. Orient the antenna for a maximum signal strength.
9. Visually confirm that the antenna is oriented towards the direction of the broadcast station's transmitter.
10. If required, calibrate the field strength meter.
11. Note the reading of the field strength meter.
12. Collapse the antenna mast.
13. Relocate the vehicle so the antenna is centered at the next measurement location as noted on Figure 2.
14. Repeat steps 7 through 15 for the next four measurements.
15. Complete the worksheet to determine the corrected measured field strength.

If the corrected measured field strength is below 47 dBu for television channels 2 through 6; below 56 dBu for television channels 7 through 13; or below 64 dBu for television channels 14 through 69, then the measurement location is considered an unserved household. If the measured field strength is equal to or greater than the above values, then the home is considered to be served by the network affiliate, and not eligible for receiving the network service from the satellite carrier.

Figure 1

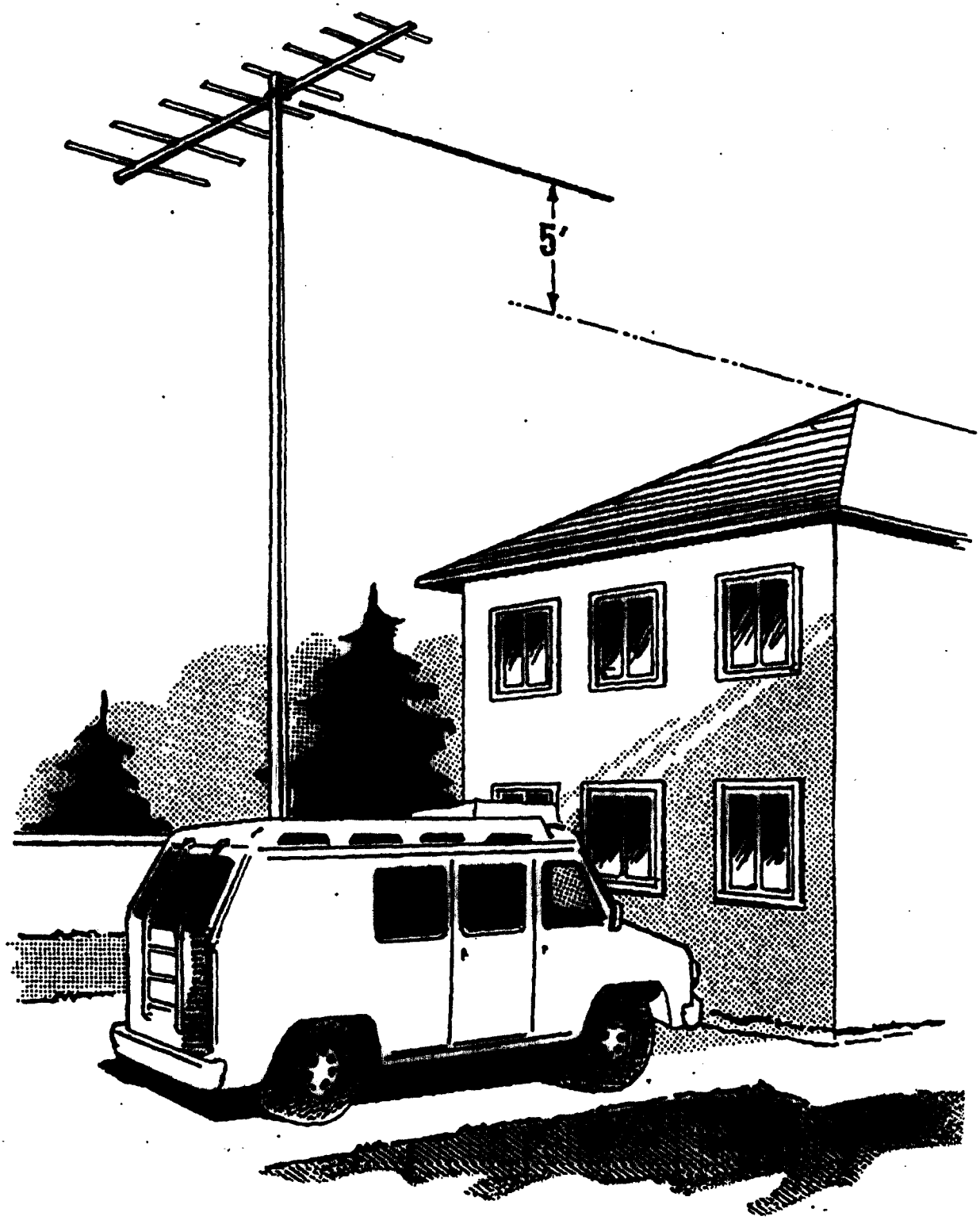
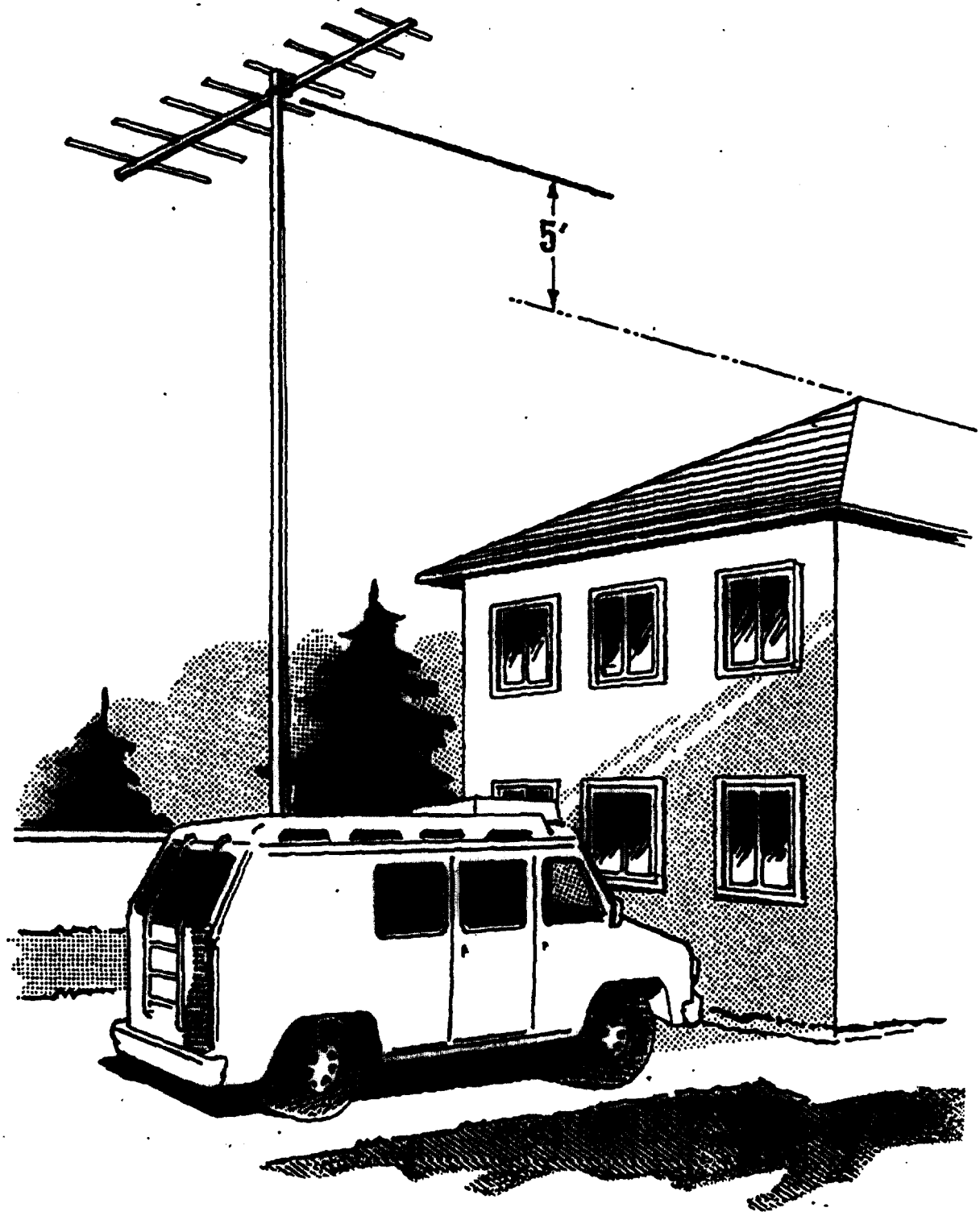
Figure 1