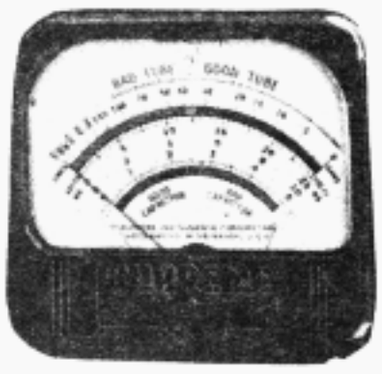


# SUPREME

## TEST INSTRUMENT BULLETIN

RTMA MEMBER · RADIO-TELEVISION MANUFACTURERS ASSOCIATION

Our 26th Year | Greenwood, Mississippi, U.S.A. | Second Quarter 1953

## FEWER MODELS — BETTER DELIVERY

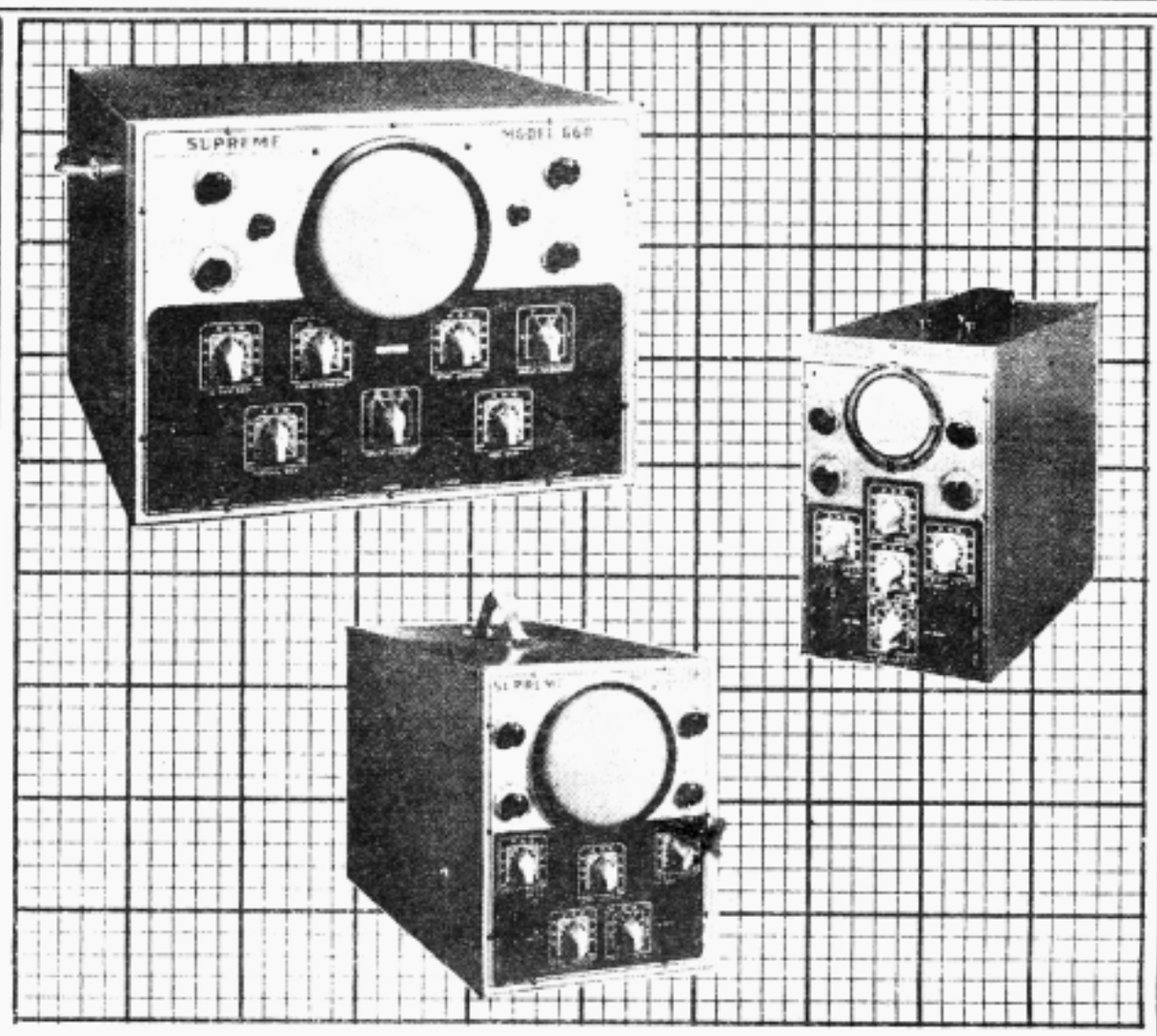
Quality materials necessary to build test instruments worthy of the name SUPREME have been, and still are, under rigid government control. Therefore, Supreme instruments for commercial distribution have been extremely limited. Only defense activities and utilities have been able to extend adequate priority ratings for quantities of critical materials which are required to produce Supreme quality instruments in volume.

For the present, Supreme has reduced the number of models in production to make the best use of those critical materials which are available for commercial testers. By concentrating on fewer types, it has been possible to give better delivery schedules on popular testers such as the Models 542, 543, 665 and 655.

## ARRL CONVENTION

Of interest to amateurs, especially those residing in the fifth district, is the Seventh National ARRL Convention to be held in Houston, Texas on July 10, 11 and 12. This is the first national convention to be held in the South, and the Houston Amateur Radio Club is going "all out" to make this an outstanding event.

Further information on the program and activities can be obtained by writing a card to Box 907 Houston 1, Texas.



## VOLTMETERS FOR TELEVISION

The oscilloscope is rapidly becoming one of the technicians most essential pieces of test equipment. Previously in many shops, this useful instrument had been allowed to sit idle a good part of the time. Now, with the ever increasing volume of TV work, it is being made to "earn its board and keep".

Peak-to-peak signal voltages in the video, sync, and sweep circuits of TV sets are normally measured with an oscilloscope. In fact, most TV service data now includes these voltages along with the proper waveform. Your Supreme oscilloscope can be calibrated to measure these peak-to-peak signal voltages.

### Calibration

To calibrate a scope for peak-to-peak voltage measurement, a source of known voltage is required. An ideal source of this voltage is the filament supply of a Supreme tube tester. Since filament voltages are normally listed as RMS values, our chart has converted them to peak-to-peak values.

Using a lined screen on the face of the CR tube as a scale, the following procedure can be used in calibrating the scope to the filament voltages of the tube tester:

1. Plug tube tester into AC line and set "line adjust" control as specified in the instruction manual.

(Continued on page 2, column 1)

## FEATURE "X"

Wouldn't it be wonderful if a new test instrument could be selected by using a formula as simple as Ohm's law? Such a formula might read: *IDEAL TEST INSTRUMENT = FEATURE A + FEATURE B + FEATURE C + "X".*

### Solving For "X"

It's not too difficult to pick out the real worth-while features of an instrument described on the catalog sheet of a reputable manufacturer. The problem is - how to select an instrument which will create pride of ownership and confidence. Actually, it is no more than finding the real value of "X" which is based on the manufacturer's experience, facilities and services rendered after warranty.

### Test Of Time

Supreme's 26 years of building quality test instruments have generated a wealth of experience and know-how. Supreme's extensive facilities put it way above the class of an assembly operation. We manufacture practically everything peculiar to test instruments including meters, transformers, cases, etc. The services rendered to owners, even years after the original sale, is the thing a Supreme owner appreciates most. We have hundreds of letters to testify that our service is SUPREME BY COMPARISON in every respect.

### Tube Setting Service

Take tube testers for example. Every technician knows that no tube tester is more modern than its tube data. Supreme supplies up-to-date data periodically--even for tube testers that were manufactured 10 years ago. Thousands of Supreme owners are taking advantage of this tube setting service.

(Continued on page 2, col. 1)

SUPREME TUBE SETTING SERVICE, BOX 6552
GREENWOOD, MISSISSIPPI

Enclosed is $1.25. Please forward by air mail latest edition of roll chart for my SUPREME Model _____ Tube Tester. The number of my old chart is _____.

Name _____

Address _____

City _____ State _____

Be sure to give number on old chart!

No C.O.D.'s please!

# VOLTMETERS FOR TELEVISION

*(Continued from page 1, column 2)*

2. Set the tube tester controls as follows:

| Models | Settings |
|---|---|
| (A) 600 and 616 | 0 A 1 Vf 8 |
| (B) 589, 599, 504-A,B | 1 Vf 0 A 8 |

Settings for control marked Vf are given in the table.

3. Connect leads from the vertical input of oscilloscope to pins 1 and 8 of the octal socket.
4. Adjust vertical gain of scope until height of pattern is the number of vertical squares recorded in column 2.
5. Record setting of vertical gain control in column 3 of table.
6. When settings have been recorded for each range, remove leads from tube tester. The calibration is completed.

OSCILLOSCOPE CALIBRATION TABLE

| CALIBRATION | | APPLICATION | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| Vf Setting (A) (B) | Pattern Height (Vert. Squares) | Scope Vert. Gain Setting | Multiply Squares By |
| 4 3 | 7 | *(40) ( ) | 1 |
| 8 7 | 7 | *(29) ( ) | 3 |
| 11 9 | 7 | *(21) ( ) | 10 |
| 13 11 | 7 | *(18) ( ) | 20 |
| 15 16 | 6 | *(17) ( ) | 50 |
| 15 16 | 3 | *(16) ( ) | 100 |

**Settings in parenthesis are for example only. In the space provided, record your settings. Afterwards, disregard example. Readings on various models and series will vary considerably.*

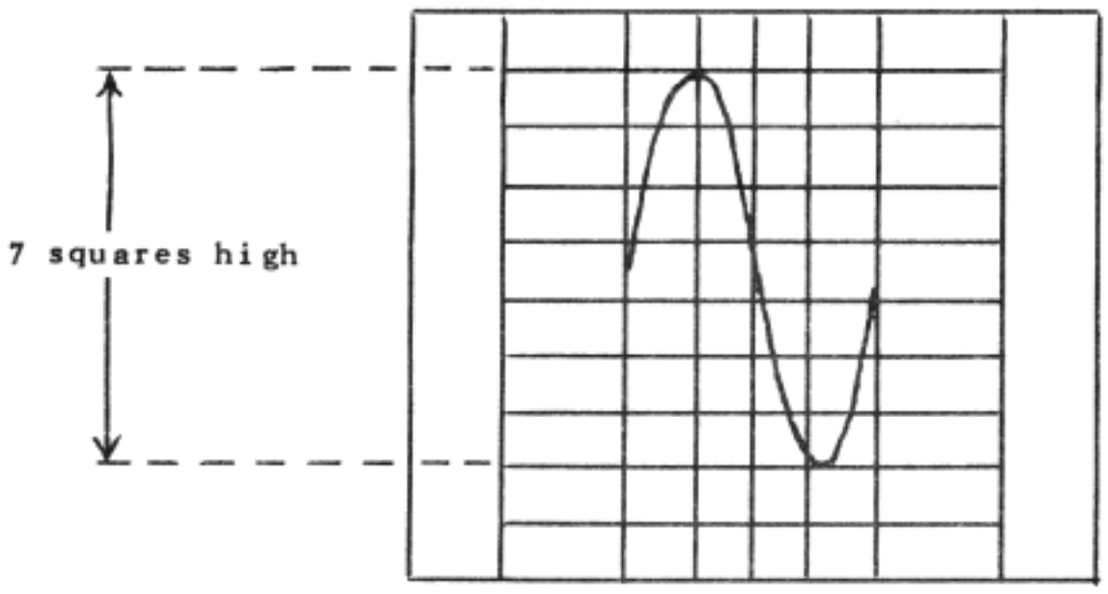



*Fig. 1 Sine wave from filament supply of tube tester adjusted to a height of 7 squares on screen.*

### Measuring Voltages

It is easy to make peak-to-peak readings with the calibrated scope. Simply use the following procedure:

1. Observe waveform with calibrated oscilloscope at point in TV set to be checked.
2. Adjust vertical gain control on scope to one of your recorded settings which gives satisfactory deflection.
3. Multiply the height of the pattern in squares by the number listed in column 4. This is the peak-to-peak voltage.

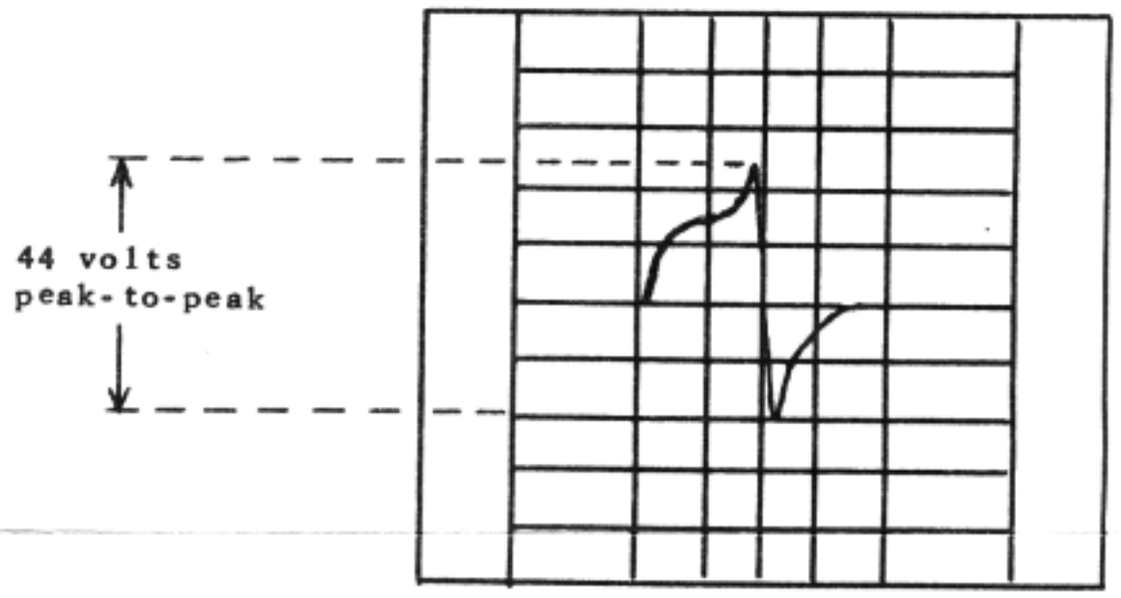



*Fig. 2 A typical complex wave from a TV set. Peak-to-peak voltage reading shown was obtained by multiplying pattern height in vertical squares by 10.*

When calibrating or making measurements, the horizontal gain control on the scope can be reduced to "0" if only a vertical line is desired.

Once the gain control settings for the different peak-to-peak voltage ranges have been recorded, it is not necessary to recalibrate unless some component in the vertical amplifier circuit of the scope is changed.

# NEW SETTINGS FOR SUPREME TUBE TESTERS

| For Models 600 and 616. | | | For Models 589, 599 & 504-A,B. | | |
|---|---|---|---|---|---|
| 3B7 | (18) | 55 B 4 2 138 | 3B7 | (18) | 4 1 55 B 138 |
| 3B7 | | 55 B 4 2 168 | 3B7 | | 4 1 55 B 168 |
| 12V6 | | 23 C 2 9 78 | 12V6 | | 2 8 23 C 78 |
| 5654 | (27) | 56 B 3 7 247 | 5654 | (27) | 3 6 56 B 247 |
| REVISED SETTINGS | | | REVISED SETTINGS | | |
| 3Q4 | (256) | 35 C 5 2 17 | 3Q4 | (256) | 5 1 35 C 17 |
| 6C4 | | 28 C 3 7 47 | 6C4 | (15) | 3 6 28 C 47 |

# FEATURE "X"

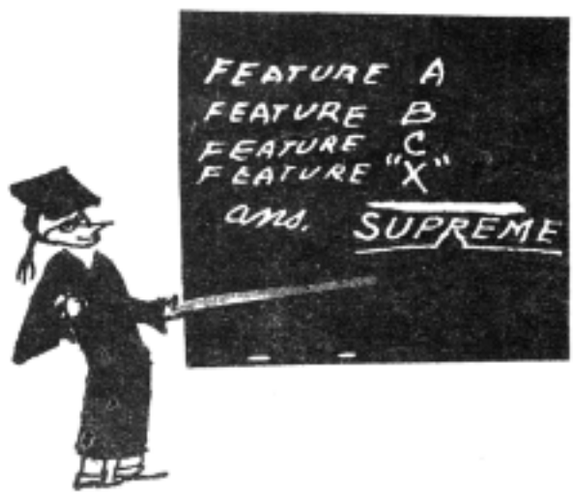
*(Cont'd from page 1, col. 4)*

### Repair Service

If an instrument fails to perform satisfactorily, our service department stands ready to offer suggestions for correcting the difficulty. Ten authorized repair stations throughout the United States and Canada offer prompt and efficient service on Supreme instruments.

### Solution

Yes, when feature "X" is considered, along with all the features listed on a catalog sheet, the answer comes out SUPREME every time. It is this feature that has made the name SUPREME known to technicians everywhere.




# AROUND THE LAB

Those electronic technicians who like to work with good test instruments really have something to look forward to.

Suggestions from so many competent technicians have played a great part in developing a new tube tester that has been in the lab for almost seven years. Extensive performance tests have shown it to be a real "Supreme By Comparison" job. Another item in the design processes is an electronic multi-meter which overcomes the difficulties pointed out to us in letters from users of present day types. Yes---instrument users and Supreme engineers are really "struttin' their stuff" to bring about better test instruments than ever before.

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