

W! the N Screen Grid OWARD Triumph of twenty years In Radio Engineering

WHAT is Screen Grid, anyway?
About it—everybody wants it—but
know what it really is?

In simple language, Screen Grid
employs the new super-amplifying

re fact that a radio receiver does em-
tubs doesn't necessarily make it a
ver. Quite the contrary is true, unless
especially and accurately designed to
tubs properly.

Screen grid tubes amplify four to five
the usual types of tubes makes it abso-
that the receiver of which they are to
tant must be scientifically designed

aneous noises which may be minor
umstances are also amplified to an
e, and the selectivity of the set is

ion Screen Grid eliminates these noises,
antag of the greater amplification and
otional selectivity which has ever been
OWARD quality.

In HOWARD Precision Screen Grid receivers, each of
the four condensers, as well as the screen grid tubes
themselves, are individually shielded.

—and there's where the difference comes in!

—it is the difference between perfect reception and
that which fails to give the listener faithful reproduction
of the broadcast.

1 1 1 1

In the new 1930 Howard, the fullest amplification of
screen grid tubes is obtained without oscillation or dis-
tortion of the tone quality.

Due to the wonderful sensitivity of screen grid tubes
and Howard precision and scientific construction, a very
short aerial permits long distance reception even in local-
ities where many high-powered stations are broadcasting.

You Simply Must See and Hear the New Howard

Always a leader, Howard Radio is today an outstanding
example of what constant progress, honest craftsmanship,
conscientious effort and a thorough knowledge of Radio
science can create and produce.

Again let us say—you must see and hear Howard Pre-
cision Screen Grid Radio. It will be a revelation to you.

The announcement will be of special interest to thousands who now own Howard
Receivers made during the past five years. The new Precision Screen Grid Howard
is Howard's highest achievement. To Howard owners this statement tells more
than all the other words on this page.

EGMAN RADIO CO.

Bldg AND ASSOCIATE DEALERS Lincoln 8928

Playing in the Radio Listeners' Contest. See the Howard to Be Given
Away and the Other Models in the Lyric Ballroom.

RD PRECISION SCREEN GRID Speaks for Itself — You Simply Must See and Hear It

Call for Home Demonstration

Liberal Terms—Liberal Trade-In

on the New

HOWARD

PRECISION SCREEN-GRID RADIO

The Ideal Christmas Gift

C. E. BURKE

Hardware—RADIO—Plumbing

650 E. 49th St.—Near College

HU. 2212

Call for Home Demonstration

on the New

HOWARD

PRECISION SCREEN-GRID RADIO

So That You May Know Perfect
Radio Reception—Call Us for a
Demonstration Before You Buy!

FEDERAL

AUTO SUPPLY CO.

515 N. Capitol Ave.

LI. 2863

Call for Home Demonstration

You Should See and Hear the

HOWARD

PRECISION SCREEN-GRID RADIO

In cabinets that grace a home as
a beautiful piece of furniture. The
tone is what you would expect
from so beautiful an instrument
and the price is no higher than so-
called "cheap sets."

Broeking Furniture Co.

"The Irvington Furniture and Radio Shoppe"

5614 E. Washington St.

IR. 4133

Call for Home Demonstration

Liberal Terms—Liberal Trade
on the New

HOWARD

RADIO

Precision building of Radio means
perfect Reception. Howard is really
Precision built.

MAPLE ROAD SERVICE

MAPLE ROAD AT COLLEGE AVENUE

WA. 4000

Engaged?



Doris Hill

HOLLYWOOD, Cal., Dec. 4.—The engagement of Doris Hill, motion picture actress, to James L. Sunston of Kentucky, was rumored here today. The actress soon will announce the date of the wedding, it was said.

RECEIVE LETTERS

Cathedral High Will Give
Play and Program.

Monogram night, when football
players receive letters, will be cele-
brated at Cathedral high school to-
night. The Cathedral Dramatic Club
will present "The Goose Hangs
High," a play in three acts.

The play cast includes the follow-
ing characters: Robert Mobley, Rob-
ert Loonan, Jack Connor, John
Stunkard, Arthur Hearn, John
Scherer, John Hahn, Vincent Meun-
ner, Herbert Kistener, Robert Moy-
nahan, Tom Biggans, Charles Mc-
Dermott and Paul Hoffman.

Monogram sweaters will be award-
ed the following football players
after the play: George Pfeiffer, Joe
Spalding, Joe Bingham, Paul Lo-
gan, Al Smith, Steve Bubic, Joe
Ford, Robert Sweeney, Robert Min-
ton, Jerry Shine, John Ashcraft,
John McCreary, John Ford, Jim Gu-
etti, Nicholas Connor and William
Gaughan.

DETROIT FACES CRISIS- IN AUTO DEATH TOLL

Mayor Calls on Citizens to Help
Reduce Traffic Fatalities.

DETROIT, Dec. 4.—This motor
capital of the world, which owes its
prosperity to the automobile indus-
try, faces a crisis brought by the
same vehicle, Mayor John Christian
Lodge declared in calling upon all
citizens to help reduce automobile
fatalities.

"When traffic deaths mount from
26 to 72 a month with 1,371 per-
sons maimed and cut in 3,482 ac-
cidents, as was the case last month,
the combined resources of money,
industry and education should unite
to bring the increase of traffic
slaughter to a stop," Mayor Lodge
declared.

The mayor has appointed a com-
mittee of prominent citizens to co-
ordinate in lowering traffic deaths.

CHINA WILL OUTLAW OLD LUNAR CALENDAR

Documents to Be Illegal, Unless New
Dates Are Used.

SHANGHAI, Dec. 4.—Documents
dated by China's old-style lunar
calendar will not be valid after Jan.
1, 1930, according to a mandate is-
sued by the national government.

It is hoped that if the government
can compel business houses to fol-
low the "foreign style calendar," the
general public will do so likewise.

Previous efforts at modernizing
the calendar have met with scant
success, and Chinese New Year was
duly celebrated throughout the coun-
try this year in spite of official pro-
hibition.

Woman Wins Sales Honor

GREENCASTLE, Ind., Dec. 6.—
Miss Mary Case of the local Chev-
rolet sales force is the first woman
in Indiana and second in the
United States to qualify for the
Hundred Car Club, membership in
which requires the sales of 100
cars.

RADIO FADING IS NOT CAUSED BY VOLT VARIATION

Breaking Tube Filaments
Usually Are to Blame
For Trouble.

BY JOHN T. HAWKINS
Times Radio Editor

Many complaints have been re-
ceived by this department lately re-
garding excessive fading on radio
sets at night. The theory has been
advanced that voltage variations on
the Indianapolis Power and Light
Company circuits are responsible.

This is true in some localities of
the city, where at times the voltage
falls so low as to fail to light an
ordinary light bulb to normal bril-
liance, but is not responsible for
the greater amount of program
fading.

Two Routes Used

As far as is known in radio en-
gineering, radio waves are propa-
gated or transmitted by two dis-
tinct routes. The first is the
ground wave, the signal that fol-
lows the ground and which is ex-
tremely limited in range. The other
is the ether route, making use of
that intangible quantity in space
called ether.

Transmission in this medium, ac-
cording to present beliefs, is de-
pendent on the Heaviside layer, a
strata of complex composition in
the upper atmosphere. This
Heaviside layer is supposed to act
as a great reflecting mirror for
radio waves in the same manner as
an ordinary mirror is to sunlight.

The whole theory of fading in
radio receivers is based on the re-
flecting properties of this layer in
the upper atmosphere. It can be
seen readily that if the Heaviside
layer is in such position as to be
reflecting a radio signal at a cer-
tain spot, the signal will vary in
strength as the layer moves up or
down.

In other words, your antenna will
be out of focus, if the term may
be used, as the radio signal is re-
flected back and forth by the move-
ment of the Heaviside layer.

Layer More Pronounced

At certain seasons of the year
and during changing weather con-
ditions, this layer seems to be more
pronounced in its movement and
at the present time it seems to
have reached a peak in its activity.

This explanation of fading does
not take into account, however,
those individual cases where defect-
ive heater type a. c. tubes are
being used in the radio set.

Laboratories of the Radio Cor-
poration of America during the last
six months have brought out five
different designs in the familiar
UX 227 heater type vacuum tube.
The reason for this is breaking of
the filament in use due to strains
imposed on it. The tubes appar-
ently will be functioning all right
and then the filament will go out.

The elements in the tube will cool
slightly and the tube again will
light, repeating this cycle of opera-
tion as long as the set is turned on.
The broadcast listener notices only
one thing however, the program
keeps coming in and dying out.

The action of the tube in this
case is due to the filament expand-
ing and breaking its connection and
the cooling and making the con-
nection again.

SODA FOUNTAINS GET \$700,000,000 YEARLY

Statistics Show Decline of Heavy
Lunches Among Men and Women.

NEW YORK, Dec. 4.—Americans
spend \$700,000,000 annually at the
soda fountains. Approximately
\$250,000,000 more is spent each year
at these counters for sandwiches
and lunches, representing a little
more than 2 per cent of this coun-
try's retail trade. These figures have
just been made public by William J.
Baxter, director of the chain store
research bureau of New York City.

New York City consumers alone
eat approximately 2,000,000 sand-
wiches a day the report continues.
The chain stores now report from
50 to 60 per cent of fountain sales in
luncheon items. People don't eat as
they did ten or fifteen years ago,
especially at noon, this research
bureau concludes. The sandwich and
salad are fast replacing the steak
and pudding.

The number of men eating a
heavy noon meal has decreased. The
number of women eating their noon
meal outside the home has greatly
increased, due to their employment
in industry.

BRITISH LIKE DOLORES

Del Rio Favorite Screen Actress;
Colman Leads Men.

NEW YORK, Dec. 4.—They have
their own ideas about who's who in
the movies over in merry old Eng-
land. Photoplay Magazine this
month publishes the results of a
London film popularity contest in
which 25,000 fans voted. In the order
of their popularity, the stars se-
lected are: Actresses—Dolores Del
Rio, Betty Balfour (English), Clara
Bow, Esther Ralston, Vilma Banky,
Florence Vidor, Mary Pickford.
Actors—Ronald Colman, Richard
Dix, Douglas Fairbanks, Adolph
Menjou, Syd Chaplin, Charles
Chaplin.

FOR CHRISTMAS

CROSLEY

Screen Grid Radio

"The Newest in Radio at
New Reduced Prices"

See Your Nearest CROSLEY Dealer