



The Alabama Historical Radio Society Newsletter

November 2017

NOTE FROM PRESIDENT TOM

Hello, All!

The Society's fiscal year was changed in last year's By-laws amendments to run the same as a calendar year, from January through December. Prior to that change, the fiscal year was July 1 through June 30 of each year. This change moved the election of Officers and Directors from the Annual Meeting in June (during the fourth quarter) to the Annual Meeting in December (during the new fourth quarter). The Nominating Committee (Article 4.3) has recommended the following candidates for Officer and Board of Director positions set for election at the Annual Meeting:

Officers (One Year Terms):

President: Dave Johnson
Vice President: Steven Westbrook
Treasurer: Mike Woodruff
Recording Secretary: Dee Haynes

Board of Directors (Three Year Terms):

Dave Cisco, John Outland, Charles McCrary

Nominations will be taken from the floor at the Annual Meeting prior to the election. This will be the first Annual Meeting that coincides with the Society Christmas Party on December 28 at the Shop, beginning at 6 p.m. The business part of the evening should be short, and we can get into the fellowship of our annual Christmas Party. The Party will be well attended, with plenty of food for the masses!

The Program at the monthly Monday night meeting in October was presented by member, Mack White, on commercial broadcast microphones. Mack collects and refurbishes broadcast microphones and is the go-to-expert on them. He brought several examples to show the members present.



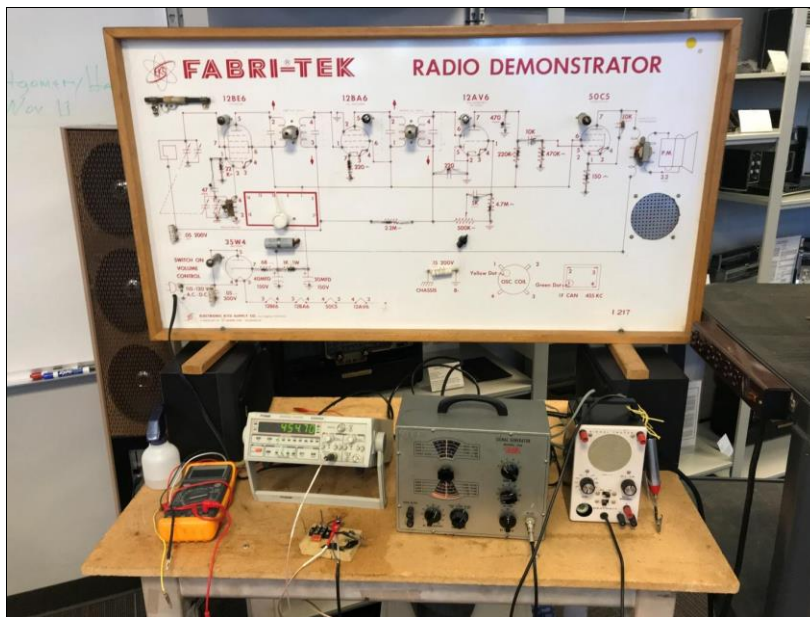
Mack White presenting the October Monday Night Program on Broadcast Microphones.



Mack White taking questions on broadcast microphones at the meeting.

The November Monday Night meeting will be held on November 28 at the Shop in Birmingham beginning at 6 p.m. After a brief business meeting, the program will be given by Dave Cisco on the 45th Anniversary celebration held at the MFJ Headquarters in Mississippi attended by several of our members. The past anniversary events at MFJ have been memorable, and this one did not disappoint!

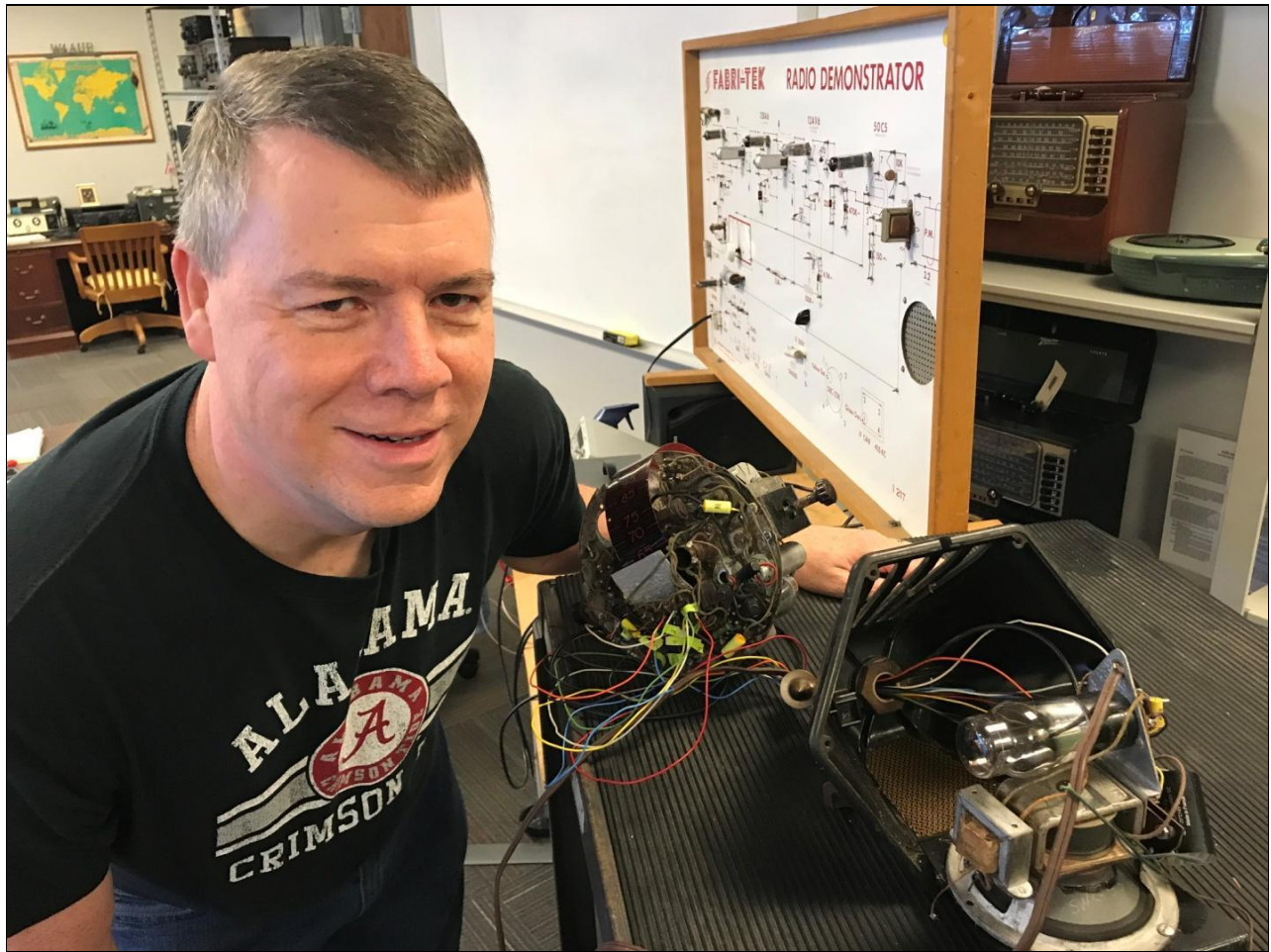
The November Radio Class, held on the first Monday in November, was taught by member, Joe Minor. Joe continued with the review of the All American Five (AA5) radio circuits and how to troubleshoot various problems and their possible causes in the AA5. Member student, Ron Studdard, brought a Globe 700 radio that he has been working on for some time for help in troubleshooting its problems. I have included several pictures of the class, and I encourage any current or future member to attend these classes to learn the proper way to repair an old radio.



Joe Minor's teaching setup for the November Radio Class.



Joe sending a calibrated signal through Ron's Globe 700 radio.

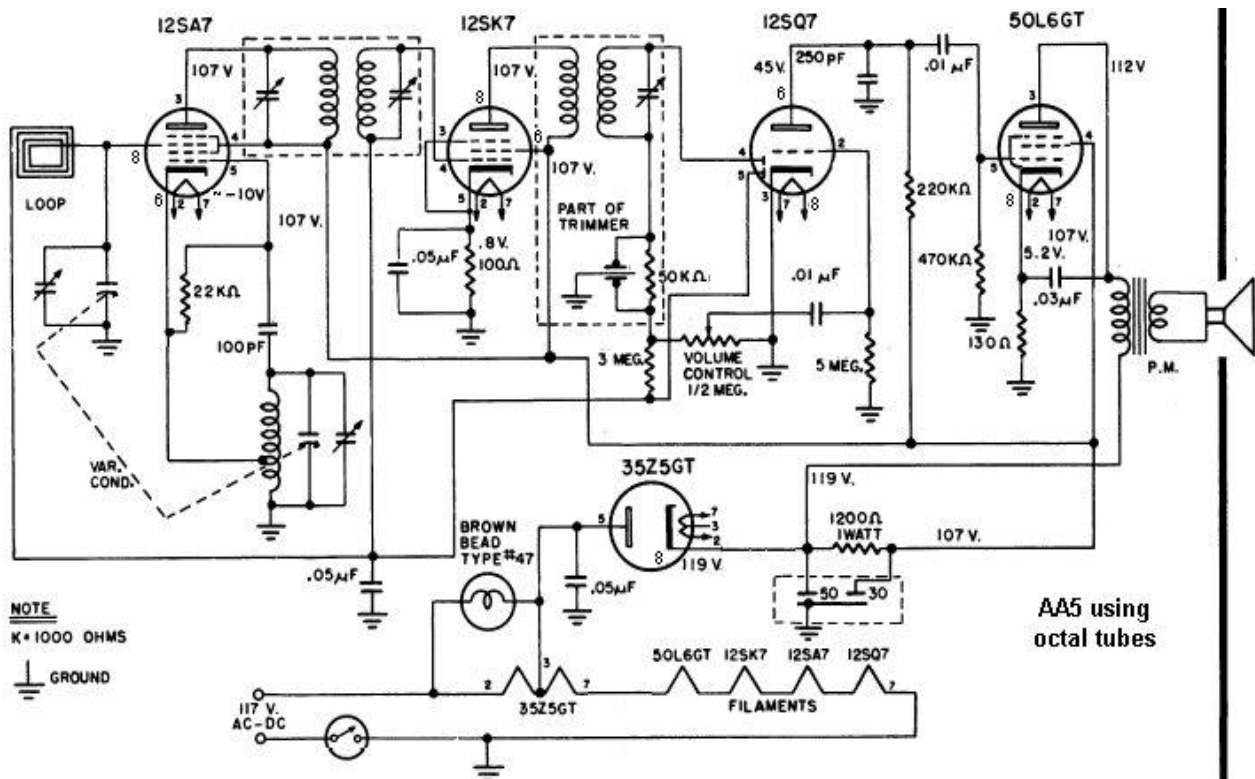


Ron Studdard with his Globe 700 Radio. He has been working on this for some time.

The December Radio Class will be held on December 2 at the Shop in Birmingham, beginning at 9 a.m. Instructor Joe Minor will continue the circuit review of the AA5 radio, with emphasis on the detection and audio output sections. Bring your project radio to class for help troubleshooting its circuit problems.

Joe Minor has put together an article on radio repair for those who cannot attend class. I have included it on the next page.

Using the Signal Generator and Signal Tracer to isolate problem section of the AA5 Radio or The Poor Man's Oscilloscope



JOE MINOR, K4JOE, ON RADIO REPAIR (continued)

The function of each stage of the All American Five (AA5) radio should be understood to use a signal generator and signal tracer or oscilloscope to find the inoperative stage of the radio. Each section is tested (traced) until no signal is heard, then one can deduct that the problem lies in that stage before going on to the next stage. Let's review the stages of an AA5 Radio.

RF Stage

The function of the RF stage is to receive energy from the antenna, tunes this signal by a tuned circuit of the antenna coil and ganged air variable antenna tuning capacitor. This stage may or may not have an RF amplifier tube. This energy or signal is then passed to the converter stage.

Converter Stage:

The converter stage consists of 2 sections, the Mixer and Oscillator.

Mixer:

The function of the mixer is to mix the incoming signal from the antenna with a signal from the oscillator. When this mixing happens, four signals are produced: the original signal of the incoming signal, the sum of the oscillator, the difference of the incoming signal and oscillator and, of course, the oscillator signal. The one we are looking for is the difference of the incoming signal and the oscillator, which is usually 455 kc's. This is the IF frequency. Be sure to check schematic for correct IF Frequency.

Oscillator

The oscillator section function is to produce a signal that is usually 455kc's above the incoming signal. This signal is converted in the mixer to the IF frequency, which is usually 455kc's. A negative voltage will be on pin 5 of the 12SA7 if the oscillator is functioning correctly. In this example, it is – 10 volts.

IF Stage:

The function of this stage is to filter all signals but the IF signal (usually 455kc's). This signal is then amplified by the IF amplifier tube and filtered by the second IF filter, and then passed to the next stage.

Detector/AVC/1st Audio Stage:

The function of this stage is to demodulate the signal, amplify the signal and develop the AVC voltage. This signal is then passed to the next stage.

Audio Amplifier or Output stage:

The function of this stage is to amplify the signal and pass it through an audio output transformer then to the speaker.

AC Power supply:

The function of the AC power supply is to furnish voltages to the receiver. The "A" supply furnishes AC voltage to the filaments of the tubes. The "B" supply furnishes DC voltages to the plates of the tubes (B+). And the "C" supply furnishes DC voltages to the grids of the tubes. The power supply may be batteries or household lines. In case of the 110-volt AC main lines, the power supply uses the rectifier tube (or diode) to rectify (changes AC to DC) the voltages to the necessary ones used in the radio. Some have transformers, and some are transformer-less power supplies. The resulting DC is pulsating,

therefore, coils (or resistors) and electrolytic capacitors are used to smooth out this voltage, so it can be used by the tubes.

One can start testing at either end or in the middle, it does not matter. I like to start at the RF Stage, then proceed to the next stage, making sure each stage is working before going to the next.

A signal may be input into the antenna by a signal generator, or a signal off the air. Keep the signal as low as possible, so as not to let the AVC circuit function. Or one can disconnect the AVC capacitor. Then a Signal Tracer or an oscilloscope may be used to trace the signal. This article will be using the Signal Tracer.

Now for the Signal Tracer Procedure.

One should use an auto-transformer (Variac) with an isolation transformer. Be careful, High Voltages are present in the radio. Turn the radio on and let it warm up for a few minutes.

RF Stage: Ground the signal generator to the chassis of the radio. Use a capacitor to isolate the DC from the signal generator. I use a 0.1 uF for this purpose. Ground the signal tracer to the radio. Test the grid of the RF amplifier tube (if one is in the circuit) with the probe of the signal tracer. A weak signal should be heard. If a signal is heard, continue to the next step. If no signal is heard, the problem could be in several areas, such as the antenna coil, open A.V.C. capacitor, tuning capacitor or trimmer, grid leak to ground or bad tube.

Check for a signal on the plate of the RF amplifier. No signal may be caused by many problems, some of which are a bad tube, or wrong or absence of plate voltage. If the plate voltage is absent, then one should check the power supply with a voltmeter to make sure it is operating correctly.

Converter

Next check the input grid of the converter. No signal may be caused by a bad coupling capacitor. A leaky or shorted capacitor may cause bad distortion on the audio signal.

Next is the Plate of the converter. No signal may be caused by a bad tube, incorrect or no D.C. voltage, absence of oscillator voltage, I.F. transformer open or tuned to incorrect frequency, or Oscillator operating at an incorrect frequency.

I.F. Amplifier

Check for a signal at the input grid of the IF amplifier and then at the plate of the IF amplifier. A no signal may be caused by a bad tube, incorrect or no plate voltage or bad or mistuned I.F. Transformer, incorrect B+ voltage, bad capacitor or other factors.

Detector/AVC/1st Audio Stage:

Check for a signal at the input grid of the detector. A no signal may be caused by a defective or misaligned I.F. Transformer. Then check for a signal at the plate. A no signal may be caused by a bad tube, or incorrect or no plate voltage (check power supply), or by an open coupling capacitor, or other components.

JOE MINOR, K4JOE, ON RADIO REPAIR (continued)

Audio Amplifier

Check the input grid of the Audio Amplifier. A no signal may be caused by a bad coupling capacitor. Next check the plate of the audio Amplifier. No signal may be caused by a bad tube, incorrect or no plate voltage (check power supply) or open primary of output transformer. If a signal is heard, but no audio at the speaker, look for a bad speaker.

Power supply

The output of the power supply should be checked for correct voltages. The B+ (high voltage) and the heater voltage should be checked.

Once the inoperative stage is isolated, then one can concentrate on that stage to troubleshoot the radio. The first thing I do to troubleshoot a radio is to remove all tubes. Check the Power transformer with an ohm meter. Then I check the IF filters with an ohm meter and next the audio transformer with an ohm meter. Next, I replace all electrolytic capacitors and wax capacitors with new capacitors. Then clean the tube pins and sockets. Then I plug the radio into an isolated Variac and bring the voltage up slowly to operating voltage and observe all components while doing so. These radios have voltages that are lethal, and one should always be aware of safety precautions while working on these radios.

Want to learn more, come on down to class the first Saturday of each month. See you there,

Joe – K4JOE

ACTIVITY AROUND THE SHOP

There has been some activity around the Shop since we last met. I recorded some of that activity in pictures.



Dee Haynes replacing parts in a teletype drive unit at the Shop.



Jim Cawthon working on a noise problem in the Rumore mixer amp with James Deese and Dave Johnson looking on.



Jimmy Clanton welding on a horn used in a crank phonograph from the Arlington Antebellum Home in Birmingham. There will be more on this restoration in the December Newsletter.

Please continue to support your Society and come see us on Tuesday and Saturday mornings and on the fourth Monday night of each month (except in December when the Monday night meeting will be combined with the Annual meeting - Christmas Party on Thursday, December 28).

Thank you for your continued support of your Alabama Historical Radio Society!

Come see us when you are in our area!

President Tom

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OLD TIME RADIO BITS

Let's start this month with a couple of small questions. How many of you remember the newspaper's weekly magazine listing all the television programs that were to be broadcast in the coming week? How many of you remember life before "The Internet"? I would think that most of you would raise your hand in response to both questions.

For all its faults and promises, the internet does provide us numerous resources that we can use in pursuit of our hobbies. Before the internet's ascension, these resources were hard to obtain. Obviously Old Time Radio is one of my hobbies. However, I'm not just interested in the broadcasts, but material associated with the shows. One of those areas would be magazines related to radio.

A great source of old magazines is the website AmericanHistoryRadio.com. The purpose of this site can be found on Frequently Asked Questions page:

"There is so much printed material about radio and television that is becoming harder and harder to find. Libraries are discarding (often to the recycle bin) many titles. Other collections are very limited in access, so "the rest of us" can't find information we want. The site began over a decade ago when I found I was often being asked questions I could answer from my own library. So, I went digital for all to see!"

Check out the site and you will find more magazines than you can read in a year. The subjects range from entertainment to technical (*Radio Electronics* anyone), from industry to consumer.

One magazine that I find entertaining is the [Radio Mirror](#) – also called the *Radio and Television Mirror*. This leads me back to the two questions I asked initially. Having addressed the internet, let's now look at the radio program listings. To illustrate the tie-in with OTR, I have chosen the January 1940 issue and have included a page from the magazine on the following page. The page may be a little hard to read so you may need to use your zoom controls to make it larger. What you will see are the listings for the Sunday programs. Notice there are only four networks CBS, NBC Blue, NBC Red and MBS (Mutual). Also on the page are the highlights for the upcoming month of December. Even though this is the January 1940 issue, it was obviously published in November of 1939.

Eastern Standard Time

PACIFIC STANDARD TIME	GENERAL STANDARD TIME	8:00 NBC-Blue: Peerless Trio
		8:00 NBC-Red: Organ Recital
		8:15 NBC-Blue: Treasure Trails of Song
		8:15 NBC-Red: Four Showmen
		8:45 NBC-Red: Animal News
		9:00 CBS: Today in Europe
		9:00 NBC-Blue: White Rabbit Time
		9:00 NBC-Red: Turn Back the Clock
		9:15 NBC-Red: Tom Terriss
		9:30 CBS: Wings Over Jordan
		9:30 NBC-Red: Sunday Drivers
		9:00 10:00 CBS: Church of the Air
		9:00 10:00 NBC-Blue: Tene Pictures
		9:00 10:00 NBC-Red: Radio Pulpit
		9:10 10:10 CBS: March of Games
		9:10 10:10 NBC-Blue: Morning Musical
		9:10 10:10 NBC-Red: Children's Hour
		10:05 11:05 NBC-Blue: Alice Hanson
		8:15 10:15 11:15 NBC-Blue: Neighbor Nell
		8:30 10:30 11:30 CBS: MAJOR BOWES FAMILY
		8:30 10:30 11:30 NBC-Blue: Southernaires
		8:30 10:30 11:30 NBC-Red: News
		8:45 10:45 11:45 NBC-Red: Vernon Crane's Story Book
		9:00 11:00 12:00 NBC-Blue: RADIO CITY MUSIC HALL
		9:00 11:00 12:00 NBC-Red: Walter Logan Music
		9:30 11:30 12:30 CBS: Salt Lake City Tabernacle
		9:30 11:30 12:30 NBC-Red: On the Job
		10:00 12:00 1:00 CBS: Church of the Air
		10:00 12:00 1:00 NBC-Blue: Ted Malone
		10:00 12:00 1:00 NBC-Red: Music for Moderne
		10:10 12:10 1:10 NBC-Blue: Metropolitan Moods
		10:10 12:10 1:10 NBC-Red: From Hollywood Today
		11:00 1:00 2:00 NBC-Blue: Great Plays
		11:00 1:00 2:00 NBC-Red: Snake Dreams
		11:30 1:30 2:30 NBC-Red: University of Chicago Round Table
		12:00 2:00 3:00 CBS: N. Y. Philharmonic
		12:00 2:00 3:00 NBC-Red: I Want a Divorce
		12:15 2:15 3:15 NBC-Blue: Bookmen's Notebook
		12:30 2:30 3:30 NBC-Blue: H. Leopold Spitalny
		12:30 2:30 3:30 NBC-Red: News from Europe
		12:45 2:45 3:45 NBC-Red: Bob Becker Dog Chats
		1:00 3:00 4:00 NBC-Blue: National Vespers
		1:00 3:00 4:00 NBC-Red: Jimmy Dorsey Orch.
		1:20 3:20 4:20 NBC-Blue: Roy Shield's Orchestra
		1:20 3:20 4:20 NBC-Red: The World is Yours
		8:00 4:00 5:00 CBS: Hobby Lobby
		8:00 4:00 5:00 NBC-Blue: Steelmakers
		8:00 4:00 5:00 NBC-Blue: Neylan Sisters
		8:15 NBC-Blue: Four Star News
		9:00 4:30 5:30 CBS: Ben Bernia
		9:00 4:30 5:30 NBC-Blue: Met Opera Auditions
		9:00 4:30 5:30 NBC-Red: The Spelling Bee
		9:00 5:00 6:00 CBS: Silver Theater
		9:00 5:00 6:00 NBC: Listen America
		9:00 5:00 6:00 NBC-Red: Catholic Hour
		9:30 5:30 6:30 CBS: Gateway to Hollywood
		9:30 5:30 6:30 NBC-Red: Grouch Club
		4:00 6:00 7:00 CBS: European News Roundup
		4:30 6:00 7:00 NBC-Red: Jack Benny
		4:30 6:30 7:30 CBS: Screen Guild Theater
		4:30 6:30 7:30 NBC-Blue: Mr. District Attorney
		4:30 6:30 7:30 NBC-Red: Fitch Bandwagon
		7:00 7:00 8:00 CBS: Orson Welles
		7:00 7:00 8:00 NBC-Blue: Festival of Music
		7:00 7:00 8:00 NBC-Red: RUDY VALLEE, EDGAR BERGEN
		6:00 8:00 9:00 CBS: Ford Symphony
		6:00 8:00 9:00 NBC-Blue: Walter Winchell
		6:00 8:00 9:00 NBC-Red: Manhattan Merry-Go-Round
		9:15 8:15 9:15 NBC-Blue: The Parker Family
		8:15 8:30 9:30 NBC-Blue: Irene Rich
		8:30 8:30 9:30 NBC-Red: American Album of Familiar Music
		8:45 8:45 9:45 NBC-Blue: All Stern Sports Review
		7:00 9:00 10:00 MBS: Goodwill Hour
		7:00 9:00 10:00 CBS: Elsie Queen
		7:00 9:00 10:00 NBC-Red: Hour of Charm
		7:30 9:30 10:30 NBC-Blue: Chorus
		7:30 9:30 10:30 NBC-Red: Primrose Quartet
		10:00 10:30 11:00 CBS: Paul Sullivan
		8:00 10:00 11:00 NBC: Dance Orchestra

SUNDAY'S HIGHLIGHTS



■ Robert S. Allen and Drew Pearson go over their script.

Tune-In Bulletin for November 26, December 3, 10, 17 and 24!

November 26: Marion Anderson, famous American contralto, is the guest star on the CBS Ford Hour at 9:00—and something you shouldn't miss. . . . The New York Philharmonic Orchestra, CBS at 3:00, is playing works by Berlioz, Elgar, Weinberger and Beethoven—a quartet of immortals.

December 3: Tonight at 8:00 is your last chance to hear Rudy Vallee as master of ceremonies on the Chase and Sanborn Hour, NBC-Red. . . . The composers represented on this afternoon's New York Philharmonic concert, CBS at 3:00, are Weber, Respighi, Wagner and Tschalkowsky. . . . Grace Moore is the guest star on the Ford Sunday Evening Hour.

December 10: Birthday greetings to two of today's stars—Dorothy Lamour of the Chase and Sanborn Hour (to which Don Ameche should be returning tonight) and Jean Dickenson of the American Album of Familiar Music, NBC-Red at 9:30. . . . John Charles Thomas is the guest on the Ford Hour.

December 17: Gladys Swarthout sings on the Ford Hour, CBS at 9:00.

December 24: It's Christmas Eve, and the air will be full of holiday good spirits. . . . Most eagerly awaited program is Shirley Temple's debut on the Screen Actors Guild program, CBS at 7:30. . . . Marion Anderson sings again on the Ford program.

ON THE AIR TONIGHT: Listen, America, featuring Drew Pearson and Robert S. Allen in Washington's Merry-Go-Round, Gracie Barrie and Erno Rapee's orchestra—on the Mutual network at 8:00, E.S.T.

The reason the paragraph above doesn't tell you who sponsors Listen, America, is that the show has a different pay-roller everywhere it's heard. In some towns it even doesn't have a sponsor at all.

Having several different sponsors makes Listen, America, a radio engineer's nightmare. Everything has to be timed to the split second. A day or so before the show goes on the air a cue-sheet has to be sent to all the stations carrying the show, so they'll know when to cut the program out and insert their own commercial announcements. Some stations that carry the program don't have a sponsor for it, so they don't cut into the show, and for their sake Erno Rapee and the orchestra have to play a musical "bridge" to fill in the time while the other stations are reading their commercials. And all the commercials must fit into the same reading time, so the program can get under way

again, all across the country. Complicated? It's too feeble a word.

Drew Pearson and Robert S. Allen, who twice during the program bring you news and predictions from Washington, are two of the United States' smartest reporters. Their reports are gossipy and rosy.

Gracie Barrie, the little musical comedy and revue star who is getting her first big network break in Listen, America, was scored to death her first few broadcasts because she'd never worked with such a highbrow bandleader as Erno Rapee. She was afraid he'd go Toscanini on her and scold her for holding a note half-a-second too long—but now that she's got to know him better she's not so nervous.

Listen, America, doesn't have a studio audience. It is broadcast from a small studio in New York because Mutual's big playhouse atop the New Amsterdam Theater is occupied during the half-hour just preceding and the one just following Listen, America. Besides, Pearson and Allen talk from Washington, and wouldn't be visible to the studio audience even if there were one.

SAY HELLO TO . . .

DENIS DAY—the tenor who's been on Jack Benny's program (NBC-Red at 7:00) only a few weeks but has already made his song and comedy dialogue something to look forward to. Denis was born in New York in 1916 and went to Manhattan College. After graduation he studied music, although he really intended to be a lawyer until his air success. This is his first sponsored show.



INSIDE RADIO—The New Radio Mirror Almanac

OLD TIME RADIO BITS (continued)

Rather than searching through my collection and inundating the reader with many programs, I have chosen one listed in the "Sunday's Highlights" section – The [Chase and Sanborn Hour](#) from December 3, 1939. The host is Rudy Vallee and the guests are Maureen O'Hara and Arthur Treacher. Regulars on the show are Charlie McCarthy and Edgar Bergen. Obviously, this is a variety hour.

Hopefully you will find other magazines that are related to your interest in the many fascinating aspects of radio. Also, just as the radios in our club do not restore themselves, the reclamation of associated resources come from someone's many hours of dedicated work. [AmericanHistoryRadio.com](#) is an example of such a labor of love.

Until we meet again in the theatre of the mind....

Larry Lokey

larry@otronmp3.com

Website - otronmp3.com

SATURDAY MEETINGS

We meet every Saturday (unless a Holiday weekend) at 9:00 a.m., at the one-story AHRS Shop at the corner of 8th Avenue North and 18th Street, (1801 8th Avenue North, Birmingham, AL 35203). Birmingham, AL 35203). Use the rear (Southeast) entrance.

SHOP ON TUESDAYS

The Shop is open on Tuesdays at 9:00 a.m. until around 11:30 a.m. when we go to Marilyn's Deli and Dog for lunch next door. Note that parking can be a problem on Tuesdays, so you may have to find street parking occasionally.

REGULAR MEETINGS

We meet on the fourth Monday night of each month, too, at 6:00 p.m. Please come join us!

FREE ELECTRONICS CLASSES

One more great benefit from becoming a member of AHRs--free Electronic classes!

Classes are taught the first Saturday of each month (except when something special is taking place, then we agree on what Saturday).

We start from the beginning Ohms Law, inductors, resistor and Capacitors color codes, as well as what each component does within the radio circuits. We also teach how to use test equipment used in the repairing of radios. We teach troubleshooting radio troubles, as well as how to read a radio diagram. There are coil winding classes, and one-on-one repair help. Come join these classes!

DUES INFORMATION



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Membership dues are \$25 a year, payable beginning in January. If you have questions about your dues, you can contact Mike Woodruff at 205-823-7204. **Dues can be mailed to AHRs @ P.O. Box 131418, Birmingham AL 35213.**

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2017/2018 HAMFEST AND SWAP SCHEDULE

11/17/2017 | Jackson County ARA Hamfest

Location: Ocean Springs, MS

Type: ARRL Hamfest

Sponsor: Jackson County Amateur Radio Association

Website: <http://www.jcmsara.com/>

12/09/2017 | Pearl River County ARC's 11th Annual Hamfest

Location: Poplarville, MS

Type: ARRL Hamfest

Sponsor: Pearl River County Amateur Radio Club

Website: <http://www.facebook.com/Pearl-River-County-Amateur-Radio-Club-117965401695779/>

12/16/2017 | MARA Annual Christmas Hamfest

Location: Minden, LA

Type: ARRL Hamfest

Sponsor: Minden Amateur Radio Association

Website: <http://www.n5rd.org>

01/26/2018 | Delta Division Convention (Capital City Hamfest)

Location: Jackson, MS

Type: ARRL Convention

Sponsor: Jackson Amateur Radio Club

Website: <http://hamfest.msham.org>

03/24/2018 | Ides of March Hamfest

Location: Union City, TN

Type: ARRL Hamfest

Sponsor: Reelfoot Amateur Radio Club

Website: <http://reelfootarc.com>

10/20/2018 | Tennessee State Convention (Hamfest Chattanooga 2018)

Location: East Ridge, TN

Type: ARRL Convention

Sponsor: Chattanooga Amateur Radio Club

Website: <http://www.w4am.net>

More: [Southeastern hamfests](#); [WA7BNM Contest Calendar](#); [Contest Corral](#); [QRP Contests](#); [State QSO parties](#); [Special Event Stations](#); [North America SOTA events](#); [DX Bulletins](#)