Introduction

MORE INFORMATION
We at Universal think an informed customer is a satisfied customer. We want to provide you with all the information you need to make your next communications purchase. This catalog is a first step towards this goal. We have specification sheets on most large items and will send them to you upon request. A great deal more technical information and full color photos of our products are available at our website:

www.universal-radio.com

You can also reach this same website by typing:

www.RFfun.com

USED EQUIPMENT
Universal offers a fine selection of used equipment for the communications enthusiast. Every piece of used equipment that we take in is thoroughly tested before being released for resale. All our used equipment carries a sixty day parts and labor limited warranty (unless specifically stated otherwise). Whether you are a new hobbyist on a budget, or an advanced DXer looking for a "standby" set; check our inventory of used gear! We publish a complete list of used equipment every month! Go to our website to sign up for our newsletter. We publish this list twice weekly:

www.universal-radio.com

Universal Radio has recently added a Used Equipment Sold Archive on our website. This resource provides technical information, and valuations for many older radios and accessories.

TRADE-INS
Yes, we do take trade-ins! If you would like to trade your present gear in for a newer or even another piece of used gear, let us know. Please contact us indicating what you wish to trade-in.

Indicate the condition of the equipment and whether you have the box, manual, etc.

WE BUY RADIOS
Do you have radio equipment that you are no longer using? Turn it into cash. Contact Universal for a preliminary quote (subject to inspection).

LAY-AWAY
Universal offers a convenient layaway plan. To place any new item in layaway for up to sixty days, a 33% deposit is required. 33% more is required at 30 days. The balance is required at 60 days (or sooner). The item will be shipped after full payment. There are no service or interest charges.

BENCH TEST
Universal offers a selection of receivers second to none. Upon request, we will inspect and test any radio prior to shipment at no extra charge. This typically adds one day before shipping.

FACTORY DIRECT DISTRIBUTOR
Universal Radio is a direct authorized distributor for all the major communications lines. We can therefore give you objective advice on all brands of equipment.

ESTABLISHED OVER 75 YEARS
Universal has been serving the amateur and listening community since 1942. You can be assured that we will be here in the future for support and advice.

SHOWROOM DISPLAY
Universal is one of only a few stores in the country with a working showroom. Our location is open six days a week and features a wide selection of communications equipment for the ham, shortwave listener and scanner enthusiast. The most popular models are on display and operational! If you travel through Central Ohio, please stop in and listen to our excellent selection of communications products. We are only 20 minutes from downtown Columbus or the airport.

LOW PRICES
You will find our prices very competitive and we do not add a surcharge to your order if you are using a credit card. Since we do buy direct from the manufacturers, we can offer you favorable prices.

Universal was founded in 1942 by F.R. "Gibby" Gibb WBJ. Universal Service, as it was then called, was located on North Third Street in downtown Columbus, Ohio. Universal carried all the major lines of the time including Millen, Drake, Collins, Hammartund, Hallicrafters, Johnson and National. Most of the brands have changed, and so has our location. But the same dedication to customer service and satisfaction that our company was founded upon over sixty years ago, still remains. As one of the oldest retail radio stores in the country, we are grateful for the support provided to us by the radio community over these many decades. We will continue to offer the finest in new and used communications equipment at competitive prices. This catalog has been designed to introduce you to the newest and best in communications equipment. As you get to know us, we think you will want to become one of our valued customers.

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INTRODUCTION

UNIVERSAL RADIO COMPANY POLICIES

PAYMENT: We accept Visa, Mastercard, Discover, money orders, cashiers checks and personal checks. Phone order customers please be ready to provide card number, expiration, issuing bank, billing and shipping address plus home & work phone. We request this information for your protection. Personal checks and money orders require time to clear from unestablished customers and/or for large purchases.

MINIMUM ORDER: We have no minimum. Your order is important to us whether it is for $5 or $500.

SHIPPING: We ship most in-stock items within 48 hours (UPS Next Day and Second Day Air orders are shipped within 24 hours). Our normal method of shipment is UPS surface or Priority Mail. We do not ship C.O.D. We ship Monday through Friday. You may request shipment by other means such as UPS Next Day Air, UPS Second Day Air or Air Freight for export orders. Equipment is packed very carefully and sent insured. Please provide a full shipping address. UPS cannot ship to a Post Office box. Flat-rate shipping amounts are for the continental U.S.A. only. Large antennas, tower and coax runs over 201 feet are extra. We can provide shipping quotes for international customers.

PRICES: Prices and specifications are subject to change! Prices shown are accurate at printing time. We are not responsible for typographical errors. We suggest you call to confirm prices on larger items. Please call toll free: 800 431-3939. For technical questions please call: 614 866-4267.

BACK ORDERS: Universal carries an extensive inventory to minimize “back ordered” items. Because of manufacturer shortages, backorders do occasionally occur. You may cancel any backordered item at any time for any reason and receive a prompt and full refund. On credit card orders we will not bill your card until we actually ship.

RETURNS: Returned items must be received by us in original, as shipped, condition including the original box, manuals, accessories, copy of sales receipt and warranty card. Note: Do not send in the warranty card until after 10 days, and you are certain that the product will suit your needs. Returns must be within 14 days of purchase. Returned items are subject to a 15% restocking fee. Please contact us for a return authorization number. Shipping is not refundable. Outdoor antennas, rotors, headphones, software and custom cables are not refundable.

FOREIGN ORDERS: Universal Radio is currently exporting only to Canada and/or established customers. The exception is books which ship worldwide. Please email for details.

DAMAGED SHIPMENTS: If you receive a damaged parcel from UPS, note this with the driver and refuse the shipment. It will be returned to Universal and we will replace it for you at no additional cost.

COUPONS: Many amateur manufacturers run “instant” coupon promotions. You do not need the physical coupon in most cases. Contact Universal to see what coupons are currently available.

TO PLACE AN ORDER:

Universal to:

Universal Radio
651 Lakeview Plaza Blvd. Ste. B
Worthington, OH 43085-4774

E-mail: dx@universal-radio.com

Phone: 800 431-3939 Orders & Prices
614 866-4267 Technical Info.

We accept phone orders Monday through Friday from 9:30 A.M. to 5:30 P.M. Eastern Saturday from 9:30 A.M. to 3 P.M. Eastern

SHOWROOM HOURS: Sun Mon Tue Wed Thr Fri Sat
Closed 10-5:30 10-5:30 10-5:30 10-5:30 10-5:30 10-5:30 10-3:00

FLAT RATE SHIPPING

Our simplified flat rate shipping for U.S.A. customers (except AK, HI, PR) is:

Up to $50.00 .................................. $6.95
$50.01 to $100.00 ...................... $8.95
$100.01 to $500.00 ................... $9.95
$500.01 to $1000.00 ............... $14.95

Flat-rate charges are based on the total order of the initial shipment. The total order is pre-coupon and pre-tax. The flat-rate charges include adequate insurance. Call for orders over $1000.

USED LIST

To receive our monthly list of used equipment please send us one or more self-addressed stamped envelopes. Our used gear is checked in our service shop and carries a 60 day limited warranty. Our used list may also be viewed at:

www.universal-radio.com

PURCHASE

If you have equipment you are not using, why not turn it into cash? Universal will purchase good clean used equipment. Please write, email or call and let us know what you have to sell.

“DEMO” SALE

Universal will not sell returned or demonstrator units as new! From time to time we have such items and can usually offer them at up to 20% off our regular price. Please call to check availability.

TRADE-INS

For trade-in quotes, please call or write us listing the items you wish to trade including any accessories. Indicate condition and whether you still have the original box and manual. Universal will accept trade-ins towards: new, used, higher or lower value equipment. We accept trade-ins from within the U.S. only. Allow 7 days for the trade-in evaluation.

SHIPPING TO UNIVERSAL

Please contact Universal for an authorization number prior to shipping your service, return, purchase or trade-in item. When you ship your equipment it is important that it is packaged properly. Use the original box and packing material if possible. If you do not have the original box, wrap the equipment well with bubble wrap then place this in a box with adequate packing material. All equipment should then be placed in a second box with packing material to help ensure its safe arrival to us. Be sure to insure your package for its value. Universal Radio will not be responsible for equipment that is damaged in shipment.

GIFT CERTIFICATES

Gift certificates are available in any dollar amount. When ordering a gift certificate indicate your name and address plus the recipient’s name & address.
INTRODUCTION TO SHORTWAVE

Listening to shortwave, or world band, radio is an exciting and educational form of entertainment. With a moderate investment, anyone can listen to a variety of broadcasts from around the world.

WHAT IS SHORTWAVE RADIO?
The standard AM broadcast radio band extends from 540 to 1700 kHz. Shortwave radio starts where the standard AM band ends and extends to 30000 kHz or 30 MHz (1000 kHz = 1 MHz). Unlike medium wave signals, shortwave signals will reflect (refract) off the invisible layer above the earth called the ionosphere. While worldwide shortwave reception can occur during the day, best reception is usually during the evening.

WHAT CAN I HEAR?
The shortwave spectrum is vast. There are potentially thousands of stations that can be heard. The major types of stations are:

- **International Broadcast Stations**
  - Many major countries in the world, as well as many small countries, have English transmissions that can be heard in North America. These English broadcasts can be anywhere from 1/2 hour to several hours in length. Some countries beam their transmissions directly to North America to enhance reception for Canadian and American listeners. Some of the easier English broadcasts to hear come from:
    - **BBC London**
    - **Radio Argentina**
    - **Radio Japan**
    - **Vatican Radio**
    - **Radio Romania**
    - **Radio Nigeria**
    - **Radio Thailand**
    - **Voice of Korea**
    - **Radio Ukraine**
    - **Radio Cairo**
    - **Channel Africa**
    - **Radio Tirana**

- **Citizen Band (CB)**
  - CB stations can be heard on most general coverage receivers. CB transmissions can be found between 26 and 28 MHz.

- **Utility Stations**
  - If you subtract from the shortwave spectrum all the international broadcasters, ham and CB stations, you will be left with a large number of stations loosely labeled “utility stations.” These are commercial, government, military and research stations whose transmissions are not designed for general audiences. Some types of utility stations:
    - **International Aeronautical**
    - International commercial aircraft communicate with distant air centers using shortwave radio. It would not be surprising to hear an AirFrance jet talking to Santiago Control, or a JapanAir flight working Anchorage Control. We are fortunate that the international aeronautical language is English!
    - **Maritime Stations**
      - Shortwave radio remains a secondary link between ships at sea and land. There are hundreds of coastal stations and a great many ships which can be monitored on a shortwave radio capable of SSB and Morse reception. Listening to ship-to-shore channels and distress frequencies can be particularly interesting.
    - **Military Stations**
      - While “sensitive” military traffic is sent via satellites or encrypted, numerous military transmissions can be heard and identified. The following navies can easily be heard with a communications receiver: American, French, South African, British, Argentine and New Zealand.

- **Time Stations**
  - Many countries have stations which send out very precise time transmissions. Most include voice identifications and many can be heard in the USA.

- **Miscellaneous**
  - There remain a number of stations that do not fall neatly into the previous categories. Illegal “bootleg” stations can be heard from time to time. Africa and Asia host several “clandestine” stations run by various rebel factions. They can be heard in the U.S. when they are not being jammed. There are a number of stations which transmit series of numbers without identification. While they are easy to hear, no one has conclusively determined their intent. Even some Russian and American satellites in low orbit can be monitored.

WHERE CAN I LEARN MORE?

- **Radio Amateur Stations (Hams)**
  - There are over 2,000,000 licensed amateur radio operators all over the world. Listening to hams can be interesting and a good way to learn more about ham radio. Hams are assigned to a different set of frequencies than the international broadcasters. If you want to listen to amateur stations, you will need a “general coverage” receiver. In order to transmit greater distances and efficiently use their allocated frequencies, hams transmit in a special voice mode called single sideband (SSB) and also Morse code. Again, it is important to select a radio capable of receiving these modes. Our staff will direct you to radios best suited for this.

- **WHAT DO I USE FOR AN ANTENNA?**
  - A good shortwave reception is possible with a very modest antenna. Portables include a whip antenna which will work quite well. Many portables and all communications receivers provide an external antenna jack (or terminal). Many listeners simply attach a 20 to 40 foot length of regular insulated wire to this jack and then stretch it across the room. This will yield surprisingly good results. However, if you can string the wire outdoors to a tree or pole, still better reception will result. Universal can provide the wire, insulators, Coax-Seal and lead-in cable for your antenna. Other specialized antennas are also available.

- **Caution:** Avoid overhead utility lines when stringing outdoor antennas. Contact with overhead lines can cause electrocution. Outdoor antennas should be grounded to help prevent lightning damage. If you are new to antenna construction please request a free copy of our “Antenna Safety Advisory”.

- **HOW DO I KNOW WHERE TO TUNE?**
  - One of the most exciting aspects of shortwave listening is simply tuning the dial and discovering stations from all ends of the earth. However, there are times when you will want to tune a particular country, perhaps because of an important event occurring there. An excellent book for the shortwave listener is the World Radio TV Handbook. This annual publication will guide you to the proper frequency. If you want to hear the exciting “utility” stations, the book Guide to Utility Stations is a must. The North American Shortwave Association produces an excellent monthly bulletin for shortwave broadcast listeners and DXers called the NASWA Journal. Visit their website to learn about subscribing to this excellent publication:

- **www.naswa.net**

- **WHAT IS U.T.C. or G.M.T. TIME?**
  - In order to avoid the confusion of many time zones, hams and international broadcasters always refer to time at the zero meridian (which runs through Greenwich, England). This time zone is five hours ahead of Eastern Standard Time (4 hours ahead of Eastern Daylight Time). This 24 hour format is referred to as Coordinated Universal Time (UTC). For example 4:00 P.M. EST = 21:00 UTC.

- **WHAT IS THIS I HEAR ABOUT “QSLs”?**
  - Most international broadcast stations like to hear from their listeners. If you send a “reception report” to a foreign broadcast station they will send you a confirmation of your reception in the form of a postcard called a “QSL.” They will also usually send you a program guide and information about their country. A reception report should include the date and time you heard the station (in UTC), the frequency heard, reception quality and 15 to 30 minutes of program content to validate reception. Also tell them how you liked the program! Visit www.DXing.com