

ALTHOUGH most short-wave listeners tune to the short-wave broadcast or amateur bands, there is another type of DX'ing which is growing in popularity—listening to the “air/ground” voice channels in the aeronautical bands.

Airline and government stations operat-

Listeners can add many new countries to their logs on the aero bands, in countries that have no short-wave broadcasting stations . . . for example . . . in the Americas—Guadelupe, Martinique, Curacao, and the Cayman Islands . . . in Europe—Malta and Ireland . . . in the Pacific—Canton

DX'ing the Airlanes

NANDI

Nandi Airport, Fiji Islands

This confirms your reception of this station in radiophone transmission on 5641.5 kc. on Dec. 27, 1955

H. J. Anderson
Station Communications Officer,
Nandi Area Communications Centre.

By
ROGER LEGGE

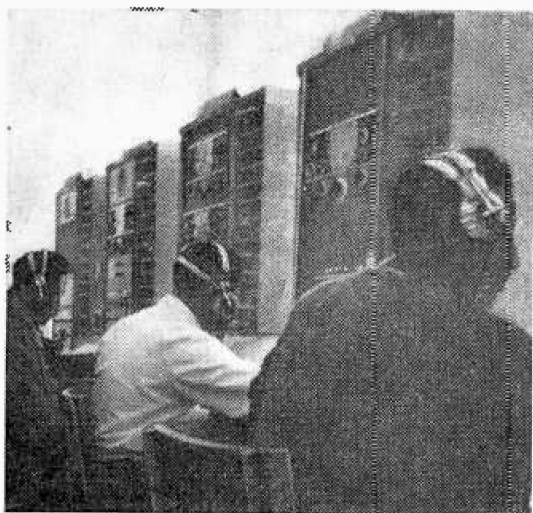
ing in these bands are located at airports and check points throughout the world. They provide weather and other information. Airplanes in distant parts of the world can also be heard, advising stations along their route of position and ETA (estimated time of arrival).

Island, Guam, Midway, Wake, and Norfolk Island.

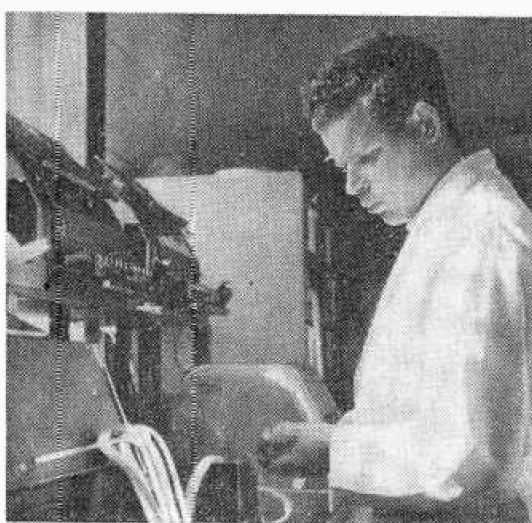
The aeronautical bands are divided into “route” and “off-route” sections. “Route” bands are used by planes on the world civil air routes and airport stations on these routes which contact planes. “Off-route”

POPULAR ELECTRONICS

ROUTE	FREQUENCIES (kc.)	STATIONS
North Atlantic	5626, 5641, 8862, 8913, 13,264	Bermuda ("Kindley"), Gander, Goose Bay, Lisbon, London, Moncton, New York, Reykjavik, Santa Maria (Azores), Shannon (Ireland)
West Europe	4689, 6582, 8871	Amsterdam, Copenhagen, Frankfurt, London, Vienna
South Europe, North Africa	3467, 5551, 8930	Algiers, Barcelona, Casablanca, Geneva, Istanbul, Lisbon, Madrid, Paris, Rome, Tunis
Mediterranean	2854, 5589	Ankara, Athens, Beirut, Cairo, Damascus, Istanbul, Malta, Rome
South Atlantic	6612, 8879, 13,274	Dakar, Las Palmas ("Canarias"), Montevideo, Recife, Rio de Janeiro, Sal (Cape Verde Islands)
West Africa	5521, 8820, 13,304	Accra, Brazzaville, Casablanca, Dakar, Kano (Nigeria), Las Palmas, Leopoldville, Roberts (Liberia), Sal (Cape Verde Islands)
East Africa	5506, 8956, 13,335	Addis Ababa, Aden, Asmara, Hargeisa, Johannesburg, Kampala, Khartoum, Nairobi
Middle East	5604, 8845, 13,334	Ankara, Baghdad, Bahrain, Beirut, Bombay, Cairo, Damascus, Dhahran, Karachi, Teheran
Far East	5611, 8871, 13,284	Bangkok, Brisbane, Calcutta, Darwin, Djakarta, Manila, Perth, Rangoon, Saigon, Singapore, Sydney
West Pacific	5506, 8862, 13,354	Guam, Hong Kong, Midway, Manila, Okinawa, Taipei, Tokyo, Wake
South Pacific	5641, 8845, 13,344	Auckland, Brisbane, Canton Island, Honolulu, Nandi (Fiji Islands), Sydney
North Pacific	5521, 8939, 13,274	Anchorage, Cold Bay, Shemya, Tokyo, Vancouver
Central Caribbean	6537, 8837, 13,344	Barranquilla, Camaguey, Ciudad Trujillo, Curacao, Grand Cayman, Havana ("Boyeros"), Kingston, Maracaibo, Miami, Port-au-Prince
East Caribbean	5566, 8871, 13,344	Bermuda ("Kindley"), Havana, Kingston, Miami, Nassau, Port-of-Spain ("Piarco"), San Juan
Southeast Caribbean	5499, 8837, 13,344	Antigua, Barbados ("Seawell"), Caracas ("Maiquetia"), Granada, Guadeloupe, Martinique, Port-of-Spain, San Juan, St. Kitts, St. Lucia
Central America	5619, 10,021, 13,294	Belize, Guatemala City, Managua, Merida, Mexico City, Panama, San Jose, San Salvador, Tampico, Tegucigalpa
Western South America	6664, 8820, 13,314	Asuncion, Buenos Aires, Cali, Esmeraldas (Ecuador), Guayaquil, La Paz, Lima, Panama, Santiago
Eastern South America	5581, 8845, 13,344	Belem, Caracas, Cayenne, Georgetown ("Atkinson"), Montevideo, Paramaribo, Port-of-Spain, Rio de Janeiro, Sao Paulo
Military Air Transport Service	4724, 6730, 11,228, 13,215	
Atlantic Area		Croughton (England), Goose Bay (Labrador), Harmon (Newfoundland), Keflavik (Iceland), Kindley, (Bermuda), Lajes (Azores), Ramey (Puerto Rico), Sidi Silmane (Morocco), Thule (Greenland), Wheelus (Libya)
Pacific Area		Guam, Hickam (Hawaii), Johnston Island, Kwajalein, Midway, Okinawa, Tokyo



Radio communications room above is in Lima, Peru, and is set up in accordance with the standards of the International Civil Aviation Organization, an agency of the United Nations. At right is a technician inside the Gufunes Receiving Station at Reykjavik, Iceland.



Typical of Pan American Airlines radio rooms all over the globe is the one shown above, where a communicator keeps contact with airplanes en route.

bands are employed for off-route operations.

"Route" bands, used more extensively than the "off-route" frequencies, are: 2850-3025, 3400-3500, 4650-4700, 5480-5680, 6525-6685, 8815-8965, 10,005-10,100, 11,275-11,400, 13,260-13,360 and 17,900-17,970 kc. Aircraft and ground stations on each of the international air routes (for example, the South Pacific route) are assigned a "family" of frequencies, usually one each in the 2-, 5-, 8-, and 13-mc. bands. The 8-mc. channels provide the most productive DX'ing at present, followed by 5 mc. and 13 mc.

Assignments by frequency and route for the international airways are shown in the tables on pages 85 and 113. Some stations in these groups do not operate on 13 mc., but most of them use the 5- or 6-mc. and 8-mc. channels.

Since most aero stations operate with relatively low power (usually 0.5 to 2 kw.), the best time to DX is when there is darkness on all or most of the path between the transmitter and your receiving location.

Stations in Europe and Africa are heard best during the late afternoon and evening hours in the United States, stations in the Americas during the evening and dawn periods, and those in the Pacific and Far East areas in the early morning and after sunrise, up to about 8 a.m., local U. S. time.

Airports and aircraft on U. S. domestic air routes will also be heard, but these generally operate on lower frequencies, usually 5 or 8 mc. during the day and 2 or 5 mc. at night.

Ground stations generally identify themselves by the city or island name, but some use the airport name, such as Maiquetia (Caracas), Boyeros (Havana), and Piarco (Trinidad). Aircraft are generally identified by the company name or initials, followed by the flight number, for example, KLM 781. Although most contacts are in English, occasionally French, Spanish or Portuguese can be heard.

The best way to log aero stations is to

(Continued on page 112)

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Squawk with the Transihorn

(Continued from page 77)

You could substitute a "standard" paging trumpet (such as a University Type MIL-45) for the "Cobra." An ordinary loudspeaker might be used for indoor applications, provided the speaker has a 45-ohm voice coil. A loudspeaker or paging trumpet with a low-impedance coil will do if you connect its leads to the transformer *secondary* (rather than across the blue and brown primary leads as in the schematic.)

Other transistors can be used in the circuit, such as the CBS-Hytron 2N256, Sylvania 2N307, or RCA 2N301. However, it may be necessary to experiment with bias resistors *R1* and *R2*, trying values from 47 to 120 ohms for best operation.

You can change the tone quality of the signal by substituting different-value coupling capacitors for *C1* and *C2*, or by connecting a capacitor (0.02 to 0.5 μ fd. at 400 volts) across the transformer primary. Almost any 6-volt battery will do.

—30—

DX'ing the Airlanes

(Continued from page 86)

tune across the 5-, 8- or 13-mc. bands until you find an active channel, then leave your receiver set on this frequency for a while, and log the various stations as they come on and go off. Most transmissions are short.

When stations call each other, they give the ID (identity) of the calling station *last*. For example, Wake will say "Guam from Wake," or simply "Guam—Wake." Since the ID's are brief, it sometimes takes a while to identify weak signals. However, an ID is usually given at the beginning and end of each contact. Using a tape recorder can be helpful; transmissions can be played back if station identification is missed.

Sometimes a rare country can be logged by studying airline schedules to determine when a plane is landing or taking off. For example, as there are only a few planes landing at the Cayman Islands, the airport station there is seldom in operation. But there is a flight leaving Miami for the Caymans on Saturday at 8 a.m. EST (Eastern Standard Time). By checking Cayman's 6537-kc. frequency at that time, Cayman can be heard contacting Miami to receive information on the plane's departure.

During the period around dawn, interesting reception can be picked up on: 8845 kc.,

from the South Pacific, including Auckland (N.Z.), Canton Island, Nandi (Fiji Islands) and Sydney (Australia); 8862 kc., from the West Pacific, with stations such as Guam, Okinawa, Taipei, and Wake; and 8871 kc., the Far East route (India to Australia), which is used by Bangkok, Darwin, Djakarta, Rangoon and Singapore. The 13,344-, 13,354- and 13,284-kc. channels of these groups are also in use at times during this

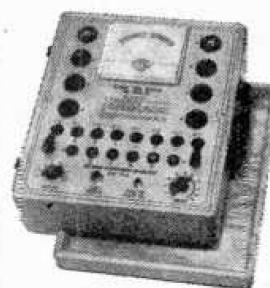
FREQUENCIES (kc.)	AREAS
5499	Southeast Caribbean
5506	East Africa, West Pacific
5521	West Africa, North Pacific
5536	West Pacific
5551	Europe, East Pacific
5566	East Caribbean
5581	Eastern South America
5589	Europe, Mediterranean
5604	Middle East, East Pacific
5611	Far East
5619	Central America
5626	North Atlantic
5641	North Atlantic, South Pacific
5671	North Atlantic
6537	Central Caribbean
6567	Caribbean, Europe
6582	Europe
6612	South Atlantic
6664	Western South America
8820	West Africa, Western South America
8837	Caribbean
8845	Middle East, South Pacific, Eastern South America
8862	North Atlantic, West Pacific
8871	East Caribbean, Europe, Far East
8879	South Atlantic, East Pacific
8888	North Atlantic
8913	North Atlantic
8930	Europe, East Pacific
8939	North Pacific
8956	East Africa
10,021	Central America
11,299	Europe
13,264	North Atlantic
13,274	North Pacific, South Atlantic
13,284	North Atlantic, Far East
13,304	West Africa, East Pacific
13,314	Western South America
13,324	North Atlantic
13,334	East Africa, Middle East, East Pacific
13,344	Caribbean, Eastern South America, South Pacific
13,354	West Pacific



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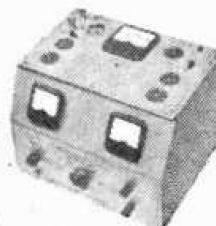


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