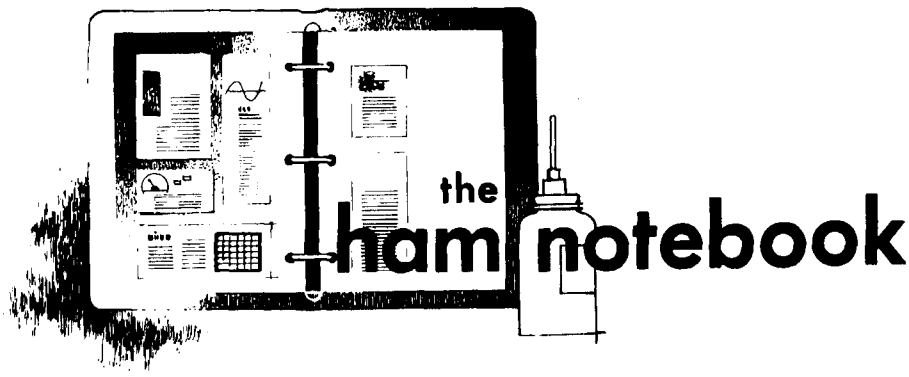


RTTY oscilloscope input using line transformers

Here's how to use line transformers ("ouncers") for inputting an RTTY signal to a monitor scope without using any active stages, yet still provide enough gain to produce a picture one and a half inches high.

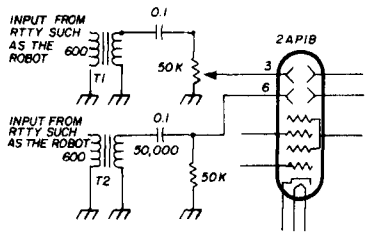


fig. 1. Small line transformers called "ouncers" provide sufficient amplification of RTTY signal to monitor scope input.

The lack of inexpensive monitor scopes for RTTY makes it worthwhile to modify some of the older one- and two-inch oscilloscopes. (Check the surplus market for bargains.) This circuit (**fig. 1**) was applied to an old Millen AM monitor scope. (Circuits for oscilloscopes can be found in the handbooks.[1])

reference

1. *ARRL Handbook*, American Radio Relay League, Newington, Connecticut, 1964, page 544.

Ed Marriner, W6XM

prerecorded messages help the hearing impaired

It's easy to devise a system that enables hearing-impaired persons to communicate with fire, police, ambulance, and other emergency services having TTY or TTY-type-equipment.

Using the TTY machine of the service to be addressed, and a portable cassette tape recorder, record the name, address, phone number, and nature of the emergency to be communicated. Record this data *at least twice* to ensure that all essential information will be transferred, and mark the tape and its container with the name of the emergency described: fire, burglary or assault, or medical emergency, and the phone number of the appropriate service. (If the individual has a particular medical condition, it might be a good idea to prepare an additional tape naming that condition, so that the service can be prepared to respond appropriately in the event of an emergency requiring specialized care.)

This is how it's done:

1. Enter the necessary data into the TTY machine at the headquarters of the emergency service.

2. Set your cassette recorder on "record" and dial the number of the telephone to which data from the TTY will be transmitted. (Do not use the telephone used on the TTY machine.)

3. Hold the microphone near the earphone of the telephone, or attach an inexpensive suction-cup pickup. Record the data from the TTY machine.

4. After recording, send the data back to the TTY machine. Be sure to verify successful transmission.

In an emergency, all the hearing-impaired person needs to do is dial the number, hold the tape recorder to the mouthpiece of the phone and push the "PLAY" button as soon as the call is answered. (To confirm that the phone has been answered, the individual places a fingertip on the diaphragm of the mouthpiece and feels the vibrations of the rings.)

In areas in which TTY facilities are not yet available, the same system can be applied, using prerecorded vocal messages instead of TTY transmissions.

J.W. Dates, W2QLI

modified Bobtail

A modification of the standard Bobtail curtain shown in **fig. 1A** provides good performance on four bands (75, 40, 20, and 15). Center fed with coax, it uses additional lengths of wire placed as shown in **fig. 1B**. The center 66-foot leg can be folded as required if the antenna is lower than 66 feet.

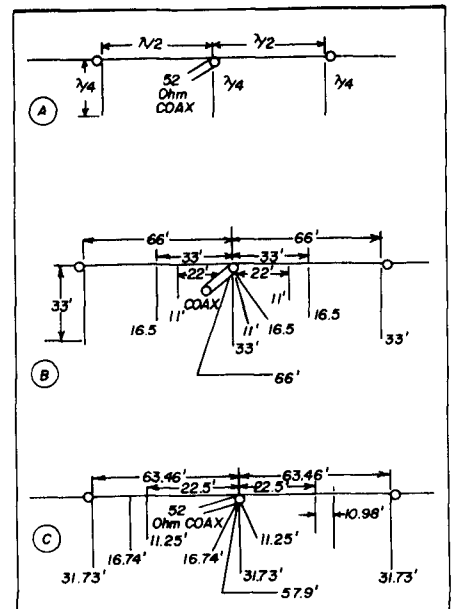


fig. 1. Modified Bobtail curtain.

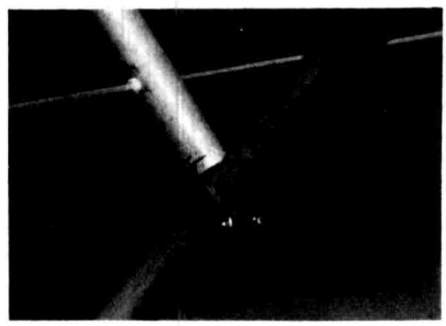
A Navy MARS version of this same antenna is shown in **fig. 1C**. The design — for 4.04, 7.375, 13.975, and 20.8 MHz — requires a height of at least 40 feet above ground. The 57.9-foot radiator for 4.040 MHz, which must be folded at low heights, will require considerable adjustment to resonate on the desired frequency, with the folded portion supported just a few feet above ground level.

The advantage of this experimental antenna is a power gain much higher than a simple dipole on all frequencies above 75 meters, on which the 4.040 MHz radiator functions as a simple upside-down quarter-wave vertical. The center radiators must be kept separated to avoid excessive interaction. The center radiator is fed with 52-ohm coax, preferably through an antenna tuner.

Cliff Francis, WØMBP

fastening Trigon reflectors to VHF antennas

My EME array for two meters uses the method shown below to fasten the Trigon reflectors. It might be well to cut a small V in the rear of the main boom in areas subject to extreme winds. (This was not done on my antenna.) There is no indication of loosening after several windstorms.



The slots through which the hose clamp passes were cut with a saber saw; an ordinary hacksaw blade isn't quite thick enough to provide a slot wide enough to permit easy passage of the hose clamp.

George N. Chaney, W5JTL

VIC-20 printer

It's easy to build an inexpensive printer for the VIC-20 using an ASR-33 teletype machine and the interface illustrated in **figs. 1A** and **1B**.

The printer, which produces typewriter-quality text, won't do everything that an expensive printer will do, but it will allow data listing and, in general, enhance your ability to communicate with your VIC-20. ASR-33's can be found for as little as $50 to $75; other materials can be found in your junkbox or acquired at little cost. The cost of the entire project should not exceed $100.00.

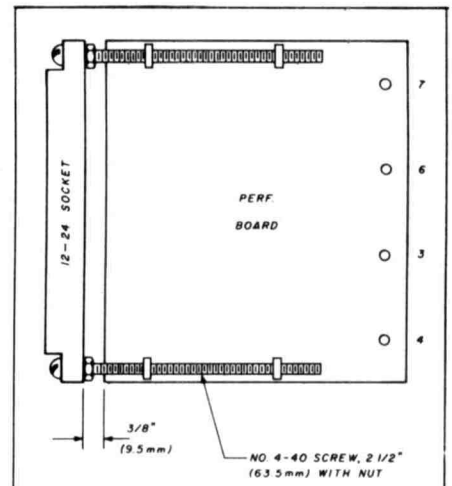


fig. 1A. Interface circuit uses multi-pin edge connector to match VIC-20 requirements.

The interface is inserted into the user's port of the VIC-20, and joined to the ASR-33 by means of a four-wire cable. A simple program (**fig. 2**) provides instructions to the VIC-20.