Rail Scanning Page

As with aviation, many folks are brought into the scanning hobby because they are railroad enthusiasts or *railfans*. For those of us who are scanner nuts and curious about trains, there are a few things to be learned. Visit the page with basic railroad/railfan information and the railroad bibliography when you get the chance. That's what this page is all about. Rail communications are found over a relatively small band (**160.215-161.565**) but much confusion reigns regarding what to listen to. Channel numbers unique to the railroad may be used, or standard AAR channel numbers might be the case. Let's clear out the cobwebs!

Quick & Dirty Listening Tips

The **Road Channel** is the single most important frequency that you need for any rail line. Everything on or at the tracks monitors this frequency for safety reasons. A number of railroads require engineers to self-announce their position, track and direction as they pass each signal along the route. This is a precaution against accidents with stationary trains or work crews along the line.

Automated defect detectors examine passing trains for hot wheel bearings, dragging equiment or overheight/overwidth loads, and report by radio to the train crew on this channel. Conversations between crew members aboard the same train are conducted here. Even if the railroad's dispatcher has a frequency of his own, he will generally use the road channel to hail the train and initiate a conversation.

The **Dispatcher** is the second most useful entity to monitor. The dispatcher acts as the controller for the given rail line, coordinating the movements of all the trains. Depending on the railroad, the dispatcher may have his own frequency or may simply monitor and use the road channel. Trains normally hail the dispatcher by sending a tone signal on the appointed frequency. If the dispatcher needs to talk to a train, he will hail it on the road frequency.

Many railroads have a telephone interconnect available along their busier lines. This normally referred to as the **PBX** (Private Branch Exchange), although Norfolk Southern has opted for **ARN** (Administrative Radio Net). Most function both as phone interconnects and as repeater systems providing long range mobile/mobile communication. Here on the east coast, we don't hear a lot of trains use these. These channels are more for support personnel (track inspectors, maint. of way, police, etc.)

End of Train Devices: Railfans largely use scanners to detect and approaching train and the shortest range method is to monitor for *end of train devices* (EOT'), also known as *flashing rear end devices* (FRED's). These devices are mounted on the rear end of the train to monitor air pressure in the brake lines and transmit the info to the engineer. Most send digital signals (2 watts max.) on 457.9375 MHz, with Norfolk Southern being the exception using 5 watt DTMF devices at 161.115 MHz. Transmissions are brief, and come about twice a minute when brake pressure is constant. When pressure is changing, transmissions become more frequent.

Special Use Frequencies: You can find many of these by just searching the rail band, or trying out frequencies listed in a guide.

- **Yard Channels** - These are used by yardmasters to direct train movements wthin a terminal, usually off of the main line. There may be more than one for a given yard. If you hear the word "Yardmaster" a lot and hear train movements set up, it's a good bet that you've found one.
- **Car Inspector Channels** - If you hear car inspectors and yard masters, but don't hear train movements being set up, you may have found the car inspector's channel. Some yards have this as a separate frequency and some don't.
- **Maintenance of Way** - These are the guys who maintain the track. I never hear much activity on these frequencies, and suspect that most of them are communicating on Road, Dispatcher and PBX channels.
- **Railroad Police** - Hands down, this is he single most overrated frequency in all of scannerdom. Except in the largest terminal cities and Amtrak's Northeast Corridor, you are not going to hear extensive rail police traffic. Listen for 'special agents' on Road, Dispatcher and PBX channels.
- **Shops** - If a facility in your area has locomotive or car shops, you might get a little traffic. Very little of interest to train-watchers, though.

Operational Information Is Proprietary: Unlike aviation and marine activity, each individual railroad operates in its own domain and designs its own communication plans and rules. The most popular source of railroad info for most railfans is the railroad's *Employee Timetable*. It carries radio frequencies, track maps and/or station lists, and all sorts of special instructions. Used and out-of-date employee timetables and rule books are available. Look for ads in train magazines. The largest dealer is probably Carl Loucks.

In recent years, railfans have become more enterprising and some have published railfan timetables, which are similar to employee timetables but often more informative. The most notable publisher of railfan timetables would be the Altamont Press. Railfanning is an information-intensive hobby, and a number of fine web pages have sprung up. Many are hosted by Trainweb. Check them out! Most of what the scannist seeks will be in their railfan section.