

## BR 6028

### *Barrie*

This 6028 VFT system is a commonly found VFT system using 7 channels of 45 bd to 100 bd Baudot each with 170 Hz shift. Channels are shifted in time, with each channel delayed by 1s. Any channel with heavy interference can be locked out. This is also the reason for signals with less than 7 channels.

The system is also named as "BARRIE", 6028 or USA 7 channel modem.

Channel	Centerfrequency
1	850 Hz
2	1190 Hz
3	1530 Hz
4	1870 Hz
5	2210 Hz
6	2550 Hz
7	2890 Hz

**Table 13: BR6028 channel frequencies**

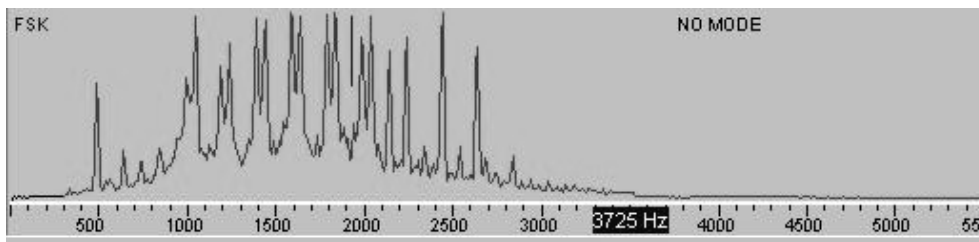
The Pilot tone at 560 Hz is an unmodulated tone.

BR 6028 can be used with different type of modes as long they do not exceed a speed of 100 Bd.

Belgian Diplomatic (MFA Brussels, Embassy Beirut, circuits to South Africa, South America and southern Europe) have been noted using what seems to be a modified BR6028 system where channel 2 never seems to be present.

Another

All channels carry 100 Bd with 170 Hz shift Baudot delayed in time by 0.5 s.



**Picture 35: Spectrum of a BR6028 signal**

## BR 6029C Time Diversity Modem

### *MD-1142/UGC Modem, Time Diversity*

The MD-1142 aka BR 6029C has two modes of operation both are full duplex (the receiver and transmitter sections are fully independent), in the Internal Multiplexer Mode a single TTY signal is fed to 7 different channels. Usually a shift of 85 Hz is used, the baudrate can be up to 110 Bd.

The signal in each channel is time delayed by 1 second from all the other channels. In addition there is a pilot tone at 561.1 Hz.

This mode of operation provides a high probability of getting the message through. In the External Multiplexer Mode each of the 8 channels is fed or receives a separate data stream so it does not have the redundancy of the IMM. In time order the channels are:

Chan #	Center Freq	Delay sec.
3	1530	0
7	2890	1
1	850	2
4	1870	3
6	2550	4
2	1190	5
5	2210	7
8	561	pilot tone

**Table 14: BR6029C channel frequencies**

There is a majority voting circuit so it takes at least 4 seconds of 7 good to work correctly, or a 3 second dropout can be tolerated.