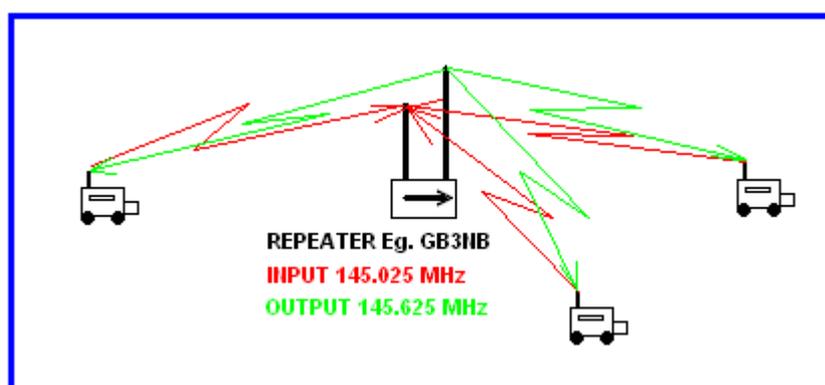# OPERATING TERM : **TALK-THROUGH**

No, not shouting over some-one else, causing QRM to other stations, or having hour long overs, but a system where, like a repeater, signals arrive at a linked pair of radios on one frequency and are re-transmitted in real time on a second frequency. In all other respects it is NOT like a repeater.

A REPEATER operates, normally, with input and output frequencies on the same band, typically for GB3NB, input 145.025MHz, output 145.625MHz. It is, normally, operational continuously, being available for any suitably licensed radio amateur to use. All users transmit on the input frequency, and listen on the output frequency, access is normally by use of 1750Hz tone, or CTCSS.
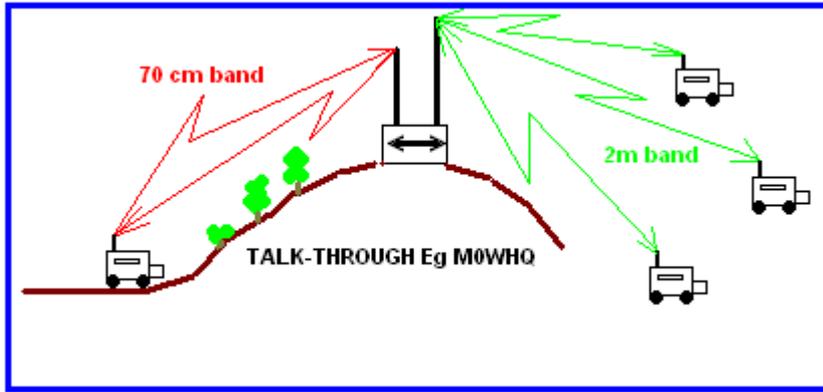

REPEATER Eg. GB3NB
INPUT 145.025 MHz
OUTPUT 145.625 MHz

In contrast, a TALK-THROUGH system operates with input and output frequencies on different bands, typically 2m and 70cm, which gives
    (a) much lower equipment outlay (no cavity filters etc.) and
    (b) much greater flexibility in operation to suit conditions.
It is NOT operational continuously, and needs to be requested in authorised situations by a RAYNET controller, or equivalent. It then operates under a full CLUB licence on frequencies agreed between CONTROL and the system operator. The system operator controls and monitors the system continuously for the time that the system is operational. The system is shut down after CONTROL signals the end of the requirement, unless intervention is needed, by the operator, due to activities not authorised under OFCOM licensing.

TALK-THROUGH is normally used when one, or more, operators are unable to establish reliable communications, from their location, on the main simplex frequency in use. Often these operators may well be able to operate on a different frequency to a location (with better coverage), which can then be used to "relay" the communications. In this situation, the majority of operators will transmit, and listen on the main frequency, the operators in the difficult locations will transmit, and listen on the second frequency. THIS is the main difference between REPEATER and TALK-THROUGH.

NOTE: The communications traffic through a TALK-THROUGH system is bi-directional, unlike the REPEATER which is one way only.

NORFOLK COUNTY RAYNET has a number of portable TALK-THROUGH systems, comprising VHF and UHF radios, power supplies and controller unit, which can be deployed to locations such as COUNTY HALL etc. These have to be accompanied by a full license holder whilst operational, using the location call-sign (eg. G0BRG at BROADLAND D.C.) or the operator's call-sign.
NORFOLK COUNTY RAYNET also has access to a fixed TALK-THROUGH system at WYMONDHAM POLICE H.Q. using the call-sign M0WHQ, which is controlled remotely by either, BOB G8SDU, or MIKE G8EEY, on request.

The recent EXERCISE BROADSTORM was a typical situation benefiting from the use of TALK-THROUGH. The exercise involved a number of mobile, and temporary operational locations, covering a large area of BROADLAND and BRECKLAND. These operators were using 2m as their operating band. The main CONTROL was established at BROADLAND D.C. in the BUNKER, where coverage on 2m is poor. The solution was to establish communications between the BUNKER and M0WHQ at WYMONDHAM on 70cm, and then relay all traffic to, and from, the BUNKER via TALK-THROUGH, as the 2m coverage at M0WHQ is excellent.