

## Mediumistic Systems

.....through continuously repeated stages

## Experimental Part 1

### COMMENT

It seems a paradox when we speak of an individual having excellent reception and speak of prominent receiving systems and at one and the same time, say the reception problem has not been solved. So it would be appropriate, especially for those who are relatively new to this field, to clarify this situation as well as possible.

As most already know, there are Transmediums, -- and then there are the rest of us. Why there is better quality reception in the presence of TMs is still a matter of debate. Some of the possible reasons are: 1) They have tried harder, 2) They are more highly developed spiritually, 3) They have better equipment, 4) Transmediumship is a talent like playing the piano, 5) It is the result of a rare genetically caused chemical balance of the brain, 6) It is the result of interests and abilities developed in past Lives, 7) The Spirits have selected only certain individuals to communicate with, 8) Etc., Etc. The list could go on and on, so take your choice or think up your own reason.

Two of the above which are not true is that Transmediums have tried harder and that they have better equipment. There are some who are not TMs who have tried much harder than the great majority of TMs have ever had to try, and have never had even close to the same reception quality. And non-mediums using the same type, sometimes the very

same equipment, used by a Transmedium, do not get the same quality reception. Another of the above that does not appear to be true is that the Spirits have selected only certain individuals with which to communicate. In so far as is known, TC is open to anyone who has the patience and persistence to learn how to perceive and understand what is received.

The most prominent, best known receiving systems have become prominent because they have worked exceptionally well. But the catch is, they have worked well only for the person who assembled the system. And in each and every case this person was a very strong Transmedium who had a great deal of faith in the system they themselves had built. Although this may have occurred, I do not personally know of any instance in which any of these systems has been of significant benefit to anyone other than the person(s) who built the system. (If any of our readers know of any such instance, I would appreciate knowing about it.) Because these systems, no matter how well they have worked, have not been of benefit to other researchers, they are curiosities, not solutions.

When we speak of reception quality in TC research we are speaking in relative terms. Because of the terrible signal to noise ratio, voices which we consider of excellent quality in TC, in any other area of audio work would be considered "awful". Another problem is that even strong TMs, with one possible

exception, have to record and play back in order to understand what is said. Even though reception is of better, more understandable quality for the TM, they can no more carry on a reasonable, normal radio or telephone type conversation with the Spirit

World than the rest of us can. The bottom line is that the reception problem has not been solved for either non-medium or Transmedium, and the need for more efficient receiving equipment remains acute.

Translation by courtesy of Mr Hans Heckmann June 10, 1991

TRANSLATION FROM "TRANSKOMMUNIKATION" JOURNAL FOR PSYCHOBIOPHYSICS AND INTERDIMENSIONAL COMMUNICATION SYSTEMS, Vol 1, No. 2 1991

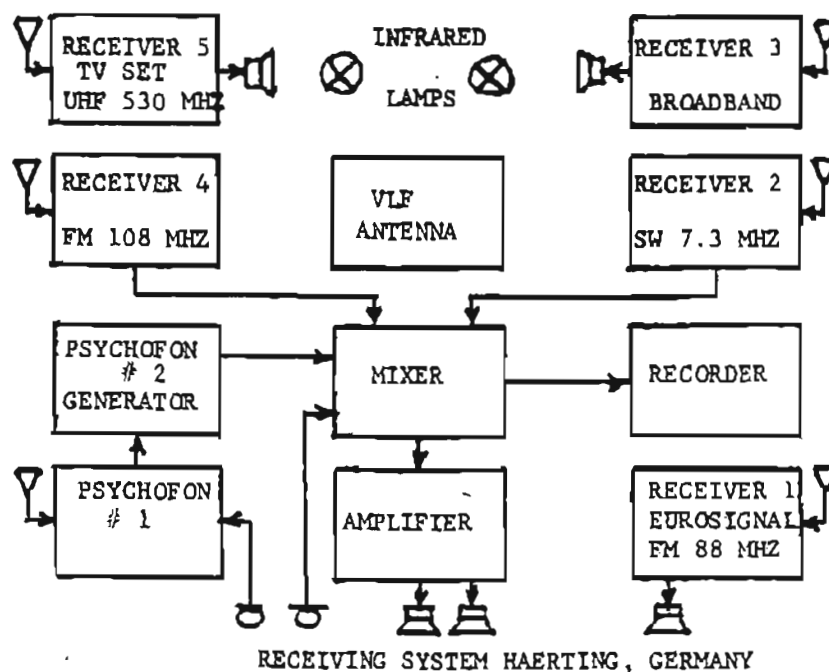
Overview of equipment setup for direct T.C. Contacts  
by Ernst Senkowski

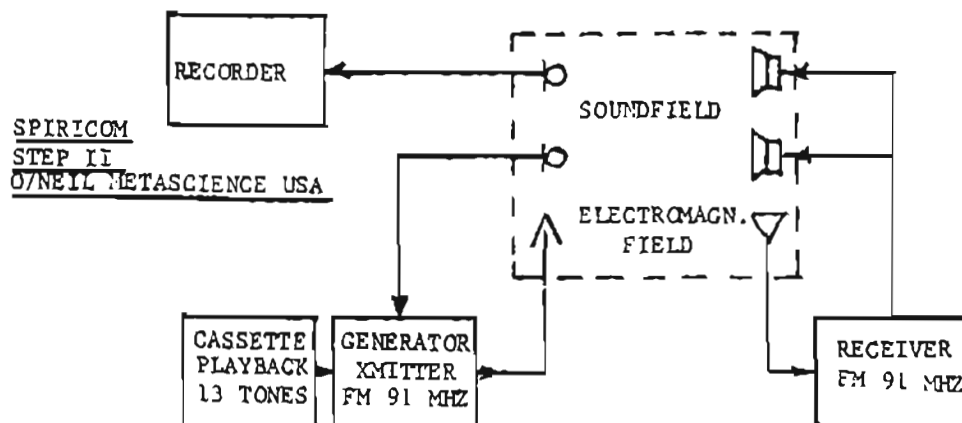
Many readers have requested technical details of the arrangement of equipment used in direct T.C. contacts. We shall gladly oblige by publishing the basic equipment setups and by giving a short description of each setup. Further details can be found in my book "Instrumentally Assisted Communication".

Although the builders achieved good and at times unusual results with these systems there can be no assurance that other experimenters will get similar results. It is quite likely that strong personal contributions play an important part in the highly unusual equipment functions and are not necessarily transferable.

Receiving System of Haerting, Germany 1987

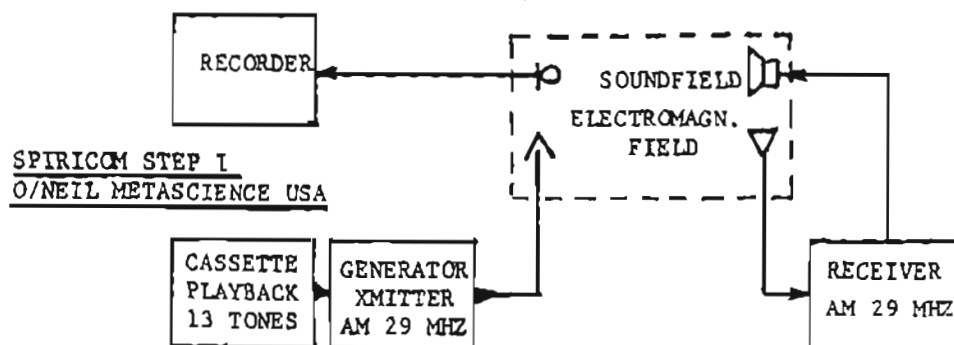
The outputs of up to 7 receivers covering different frequency bands are connected to each other either acoustically or electrically. Also, a tuneable ULF antenna and IR radiators were used but were not directly connected. The voice of ABX JUNG came directly via loudspeaker.





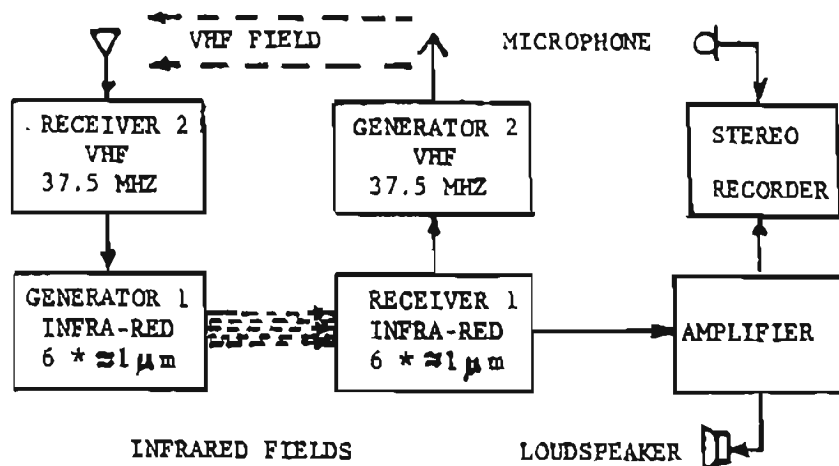
**Spiricom Step II - O'Neil/Metascience USA 1982**

13 tones of a cassette playback modulate the 91 MHz FM carrier of a generator/transmitter. The transmitted signal is received and demodulated across the room by a FM receiver and beamed out by two loudspeakers across the room. It is picked up by a microphone and fed again to the 91 MHz generator/transmitter thereby forming a feedback loop. The main cassette recorder also records the entire sound mixture. With this setup O'Neil carried on approx. 20 hours of dialogue with the departed scientist Dr. George J. Mueller.



**Spiricom Step I - O'Neil/Metascience USA 1980**

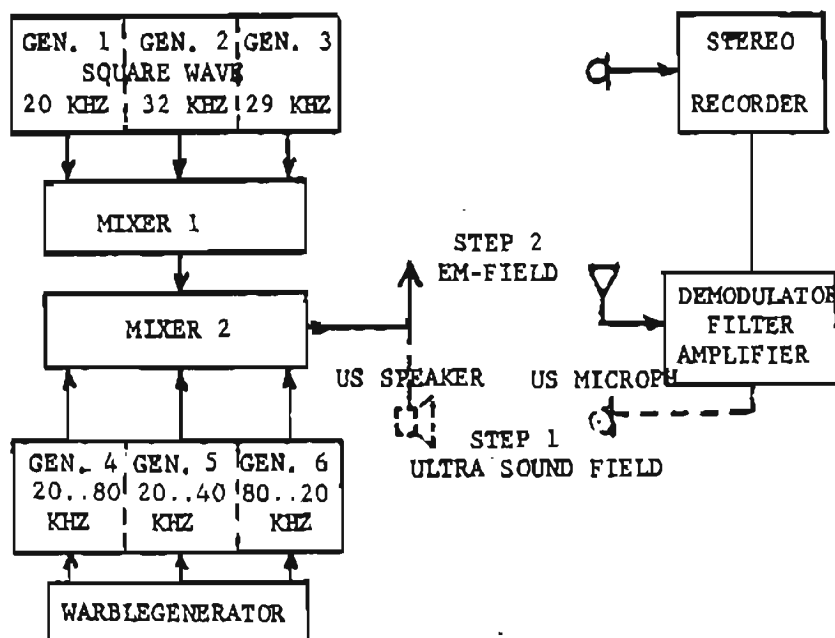
13 tones between 131 and 701 Hz are modulating the 29 MHz AM carrier of generator #1, a small transmitter of the type used for wireless microphones. The transmitted signal is being received and demodulated by a receiver across the room whose loudspeakers beam out the signal to the pickup microphone of a cassette recorder.



INFRARED SYSTEM, KOENIG, GERMANY

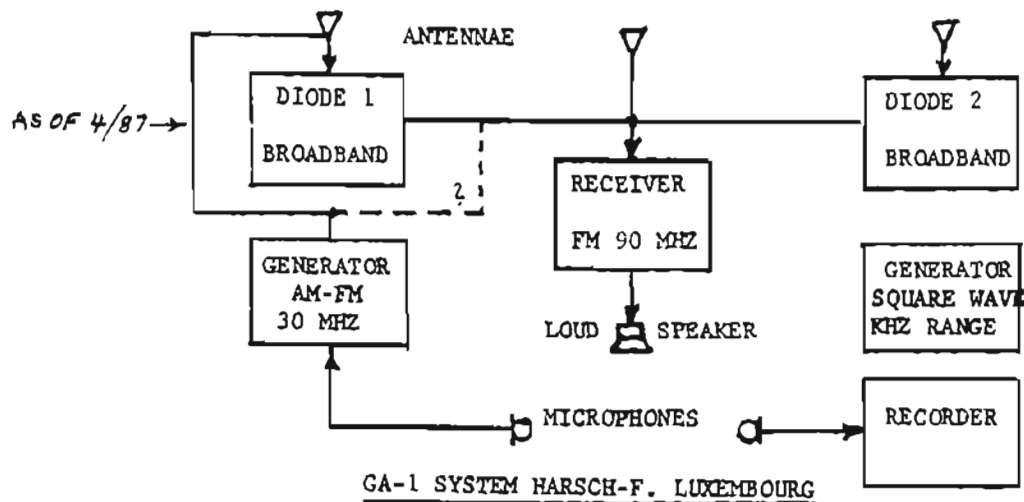
#### Infra-red Generator System - Koenig, Germany 1987

Infra-red signals of generator 1 are sent out across the room to IR receiver #1 where they are demodulated. The result of this demodulation then modulates the 37.5 MHz carrier of UHF generator #2. The carrier is radiated across the room and picked up by receiver #2. The 37.5 MHz demodulation then feeds back into generator #1 forming a feedback loop. The second output of receiver #1 provides amplification for the voices and feeds a stereo tape recorder.



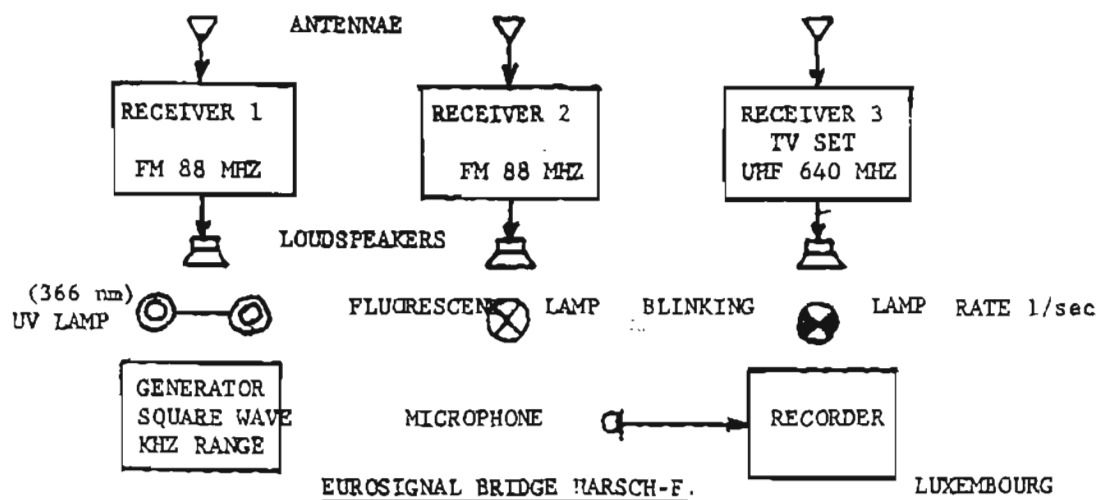
#### Ultra Sound Generator System - Koenig, Germany 1985

The signals of square wave generators 1-2-3 are mixed by mixer 1. Mixer 2 further mixes these signals with the frequency modulated outputs of generators 4-5-6. The resulting mixture is partly audible because of the beat frequencies and modulating warble tones. Beaming it across the room for demodulation and recording is accomplished by an Ultra Sound speaker (Step 1) or antenna (Step 2).



#### GA-1 System, Harsch, Luxembourg 1987

The antenna of a SW/FM receiver is connected to 2 diode circuits and the output of modulated generator (Translator). Occasionally a square wave generator is used. 2-way conversations with directly audible voices were possible.



#### Eurosignal Bridge, Harsch, Luxembourg, 1986

Two Short Wave/FM receivers and a B/W TV together with two UV lamps, a fluorescent lamp plus one incandescent blinking lamp make up the system. Occasionally a square wave generator is added. The radio receivers are tuned near the EUROSIGNAL (88 MHz). The TV set operates on a free channel near 470 MHz. The voices from the radio sets could be heard directly and recorded by microphone.

INTERVIEW - UNIDUE  
 INTERVIEW - HENRICH  
 SENKOWSKI APRIL 87

BATTERY POWERED FLUORESCENT  
 LAMP + INCANDESCENT BLINKING  
 LAMP - PERIOD: ABOUT 1 SEC

PM-RECEIVER 1  
 (82 - 104 MHz)  
 (86 - 87 MHz)

MICROPHONE  
 (HAND-HELD DURING  
 COMMUNICATION)

SQUARE-WAVE  
 FIELD-GENERATOR  
 (ABOUT 5 kHz)

FLUORESCENT GROUP  
 (LETZEBUERG)  
 PM-RECEIVER 2  
 (82 - 104 MHz)  
 (86 - 87 MHz)

CB-FILTER MONOCOR  
 + SPEAKER 3

ADDITIONAL:

ELECTRIC TORCH SHINING  
 FROM OPPOSITE SIDE OF  
 ROOM ONTO SHELF WITH  
 PM - RECEIVERS 1 + 2  
 PM - RECEIVER IN ROOM 2.

TO CASSETTE RECORDER  
 (PHILIPS D 6920)

UV-  
 LAMP 1  
 366 nm

LOW-FREQUENCY  
 PARAMETRIC FILTER

LOW-FREQUENCY  
 AMPLIFIER

AC POWER  
 DISTRIBUTOR

UV-  
 LAMP 2  
 366 nm

HARSCH-FISCHBACH  
 Route de Thionville, 409  
 6807 HESPERANGE  
 Grand-Duché de Luxembourg  
 TEL: 36 94 33

RECORDING MICROPHONE  
 INPUT TO PHILIPS D 6920 CASSETTE DECK

TWO-WAY SYSTEM GA-1  
SCHEMATIC - RELIANT  
SERVO-CONTROL - APRIL 67

LAST CHANGE:  
DASHED LINES



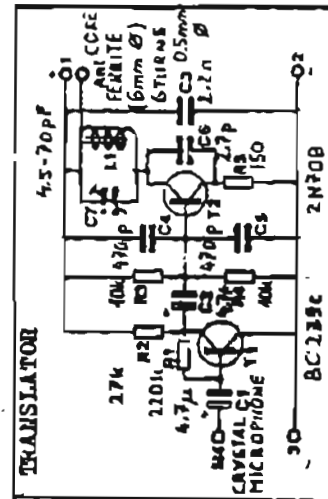
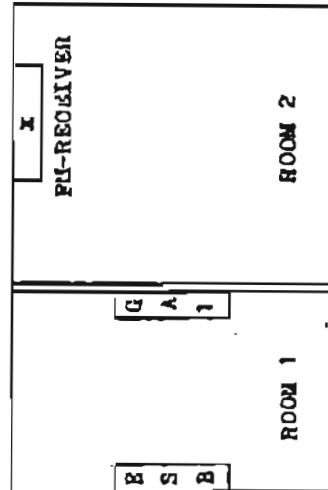
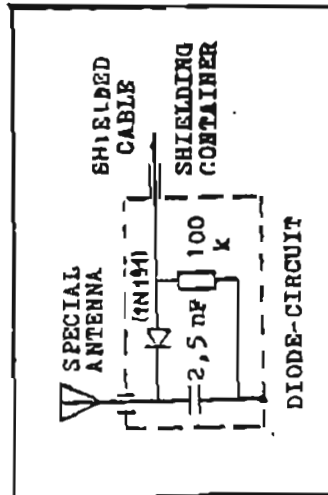
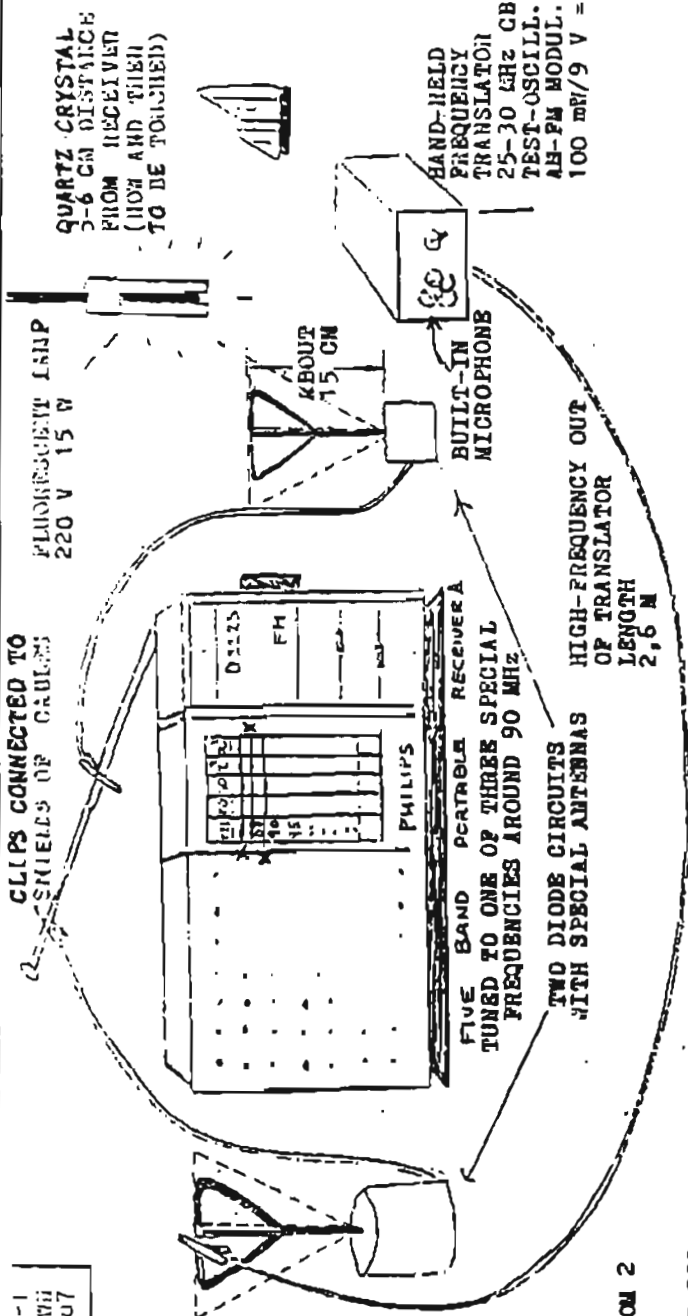
CERCLES D'ETUDES SUR  
LA TRANSMUNICATION  
S.A. 1

ADDITIONAL:

PM-RECEIVER IN ROOM 2

OPTIONAL:

FIELD-GENERATOR OF ESB  
(HAND-HELD)



End of translation by Hans Heckmann

All of us here in the English speaking world, owe a debt of gratitude to Dr Senkowski and Mr Heckmann for making this material available.

#### ANALYSIS

In the crystal set days of radio there were hundreds of different detector, amplifier and associated circuits, antenna arrangements and combinations thereof, etc., devised by dozens of radio pioneers. As time went on, the more efficient of these were further developed and eventually incorporated in modern communication systems. Systems which today are far beyond what early radio amateurs could have imagined in their wildest dreams. In retrospect, even though some of these early systems may have been considered the "ultimate" in their day, we now see them as only of historical interest. In these early days everything was in a state of flux, and in reality there was no such thing as a "finished" or "final" system.

Today, in Transcommunication, we are again experiencing the "crystal set" days in yet another field of communication. And again we see a state of flux in which the "ultimate" systems of today are destined to be tomorrow's history. To go back to our analogy of a development mountain, each of these systems is following it's own individual development trail up the side of the mountain. Although these systems represent most (but not all) of the best known and most prominent, and although some have progressed somewhat further up their respective trails than others, because none (that I know of) have been of significant benefit even to other researchers, let alone the general public, none have progressed to anywhere near the top of the mountain, i.e., anywhere near the efficient, universal system that is so sorely needed for the enlightenment of Humanity.

Although none of the described systems has proven to be of universal benefit, and therefore none are likely to be anywhere near the best system possible, this does not mean they are without value, -- far from it. Again, in the early days of radio, among the myriad configurations, there were certain common denominators which were of benefit and which were further developed and incorporated in more sophisticated designs. It behooves us then to look very closely at existing systems to see if there are any such denominators which might possibly be of universal benefit, and therefore warrant more extensive experimentation. (For purpose of this discussion it is considered that there are 3 Koenig systems, - step 1, step 2, and infrared)

- 1) 100% Use of one or more radio receivers
  - A) 50% Use of single receiver
  - B) 50% Use of 2 or more receivers
  - C) 38% Use of AM receiver only
  - D) 25% Use of FM receiver only
  - E) 25% Use of both AM and FM receivers
- 2) 50% Use of radio transmitter
- 3) 50% Use of speaker/microphone coupling to voice recorder
- 4) 50% Use of audio carrier generators



- A) 25% Use of Multitone voiceband
- B) 25% Use of ultrasound (harmonics partly audible)
- 5) 25% Use of feedback principle
- 6) 25% Use of square wave generator
- 7) 25% Use of TV receiver
- 8) 25% Use of lighting effects

Used in one system only

If a device/circuit/configuration, etc., is used in only one system, it could mean one of two things. Either it is unnecessary, or the person who built the system knows something the rest of us don't. So it is interesting to take a closer look at these single arrangements:

- 1) Use of acoustic coupling within the feedback loop.
- 2) Use of direct feedback

Of the above the acoustic coupling used in the O'Neil system would cause considerably more distortion than the direct feedback used in the Koenig system. It seems the latter should be far more efficient.

- 3) Use of two in-series stages

The two stage series arrangement used in the Koenig infrared system is a step in the direction of: --"continuously repeated stages" as recommended from the Spirit world.

#### Modifications

Thanks to Dr Senkowski, we have not only diagrams of these systems as they are now configured (as far up to date as this information goes), but in addition we also have earlier configurations on three of these systems. For these systems we have in effect, "snapshots" in time showing modifications made as each system made one or two incremental advances along it's own particular trail of development. Although, in so far as I know, none of these modifications was made as the result of blind comparison experiments, we cannot discount the fact that all of these people are/were very experienced, and we can assume, would not have made such modifications unless they believed there was very good reason to do so. We should therefore pay special attention to exactly what modifications these very talented and experienced people made to their systems in order to improve the quality of reception. (four modifications are considered here: O'Neil 1-2, Koenig 1-2, Koenig 2-3, and Harsch 1-2)

#### Added to system

- 1) The first and most obvious of these modifications (50%) is the incorporation of the feedback principle (O'Neil, Koenig 2-3) Other additions are:
- 2) EM coupling (Koenig 1-2)
- 3) FM receiver (O'Neil)
- 4) IR coupling (Koenig 2-3)
- 5) 2nd stage in series (Koenig 2-3)
- 6) Multifrequency AM transmitter (Koenig 1-2)
- 7) Untuned diode radio receivers (Harsch)

8) Modulator (Harsch - listed as 30 MHz AM-FM generator)

Eliminated from system

- 1) AM receiver (O'Neil)
- 2) Acoustic coupling (Koenig 1-2)
- 3) Wobble generator (Koenig 2-3)
- 4) Ultrasonic generators (Koenig 1-2, In step 2 these could now be considered low frequency RF generators since they now work into an EM rather than acoustic coupling)
- 5) Lighting effects (Harsch)
- 6) FM receiver (Harsch - 1 used instead of 2)
- 7) UU lamp (Harsch)
- 8) TV receiver (Harsch)

One other thing might be mentioned before we leave the subject. Our imaginary development mountain is cone shaped. This in effect means that although the various trails may be very far apart at the foot of the mountain, as they progress upward they will, of necessity, gradually draw closer together until they converge into a single trail near the peak. This of course, means that as various systems progress further and further along their respective development trails, they will gradually come closer and closer to resembling each other. If we compare the latest version of these three systems, we see that between them there is considerable difference. But if we compare the three latest versions with the three earlier versions, we see that the difference between the earlier versions is even greater. In other words it is already becoming apparent that there is a trend in the general direction of design convergence.

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".....THROUGH CONTINUOUSLY REPEATED STAGES"

As has been mentioned before, in 1975 Mary received the message "Feedback through continuously repeated sections (stages)", from her Grandfather in the Spirit world. The message was given telepathically in the Cherokee language. As the message was given to her, Marys' Grandfather, Chief Buckeye, (English "nickname"), appeared clearly directly in front of her. (Normal room lighting) Mary is absolutely certain this message was given to her by her Grandfather.

Where did this message originate? This we do not know, but we are certain it did not originate from Marys' Grandfather. But there are some pertinent facts that should be mentioned. First, although Marys' Dad was an Electronics Engineer employed for many years by IBM, neither Mary nor her Grandfather know anything whatsoever about electronics. Second, Chief Buckeye was respected as a man of integrity, both within the Tribe and within his own family. In short, not the kind of man who would have given this information to us unless he himself was certain it had come from knowledgeable Authority.

Unlike most (but not all) of the various information received by different researchers, vague references to mysterious black boxes, high frequencies, etc., the information we have received over the years, including two visions Mary has had, although quite incomplete, is very precise. And as much of it as can be verified mathematically, is in fact mathematically verifiable. There is a very strong indication here that if this information is valid, which we will know in the due course of time, then the source Authority, who ever they may be, know precisely what technology is required to clarify voice reception.

I once read that Edison and his helpers, had to do nearly a thousand experiments before they succeeded in creating the electric light. This was of course a very tedious process that involved blowing a bulb from molten glass, attaching an element to a base, attaching and sealing the bulb and then removing as much air as possible with a crude vacuum pump. There were no options. There were not a dozen different ways, or even two or three different ways to make a light bulb. There was one way, and one way only. It had to be right. In like manner we are told from the Spirit world, that there is one way and one way only that voice reception can be clarified. There are no options.

How much is the enlightenment of Humanity worth? Is it worth as much effort as learning how to light up mans' living quarters? I think so, --- and much more if necessary. Over the years there have been some researchers who have given up because they were not able to clarify reception. A few may even have come to the conclusion that clarification might not be possible by technical means, even though the field is still wide open with thousands of possibilities still untied. Thank God Edison did not reach any such conclusion after a few dozen, or even after many dozen failures. If he had, we would be getting our monthly utility bill from our local Candle Stick Maker instead of from the power Company.

When we first received this initial message from the other side, I had more questions than answers. Exactly what did they mean by "continuously (endlessly) repeated stages"? It would not be very practical to build some kind of experimental circuit and then duplicate this stage until one had PC boards stretched across the workbench, out the front door, and across the street. There had to be some kind of finite number. But if there was a finite number, then how could they be endlessly repeated? The answer is that one can create a string of endlessly repeated stages in the same way they can create an endless piece of string, which is simply by tying the ends together. In electronic terms this means applying or feeding back the output of the last stage to the input of the first stage. In this arrangement, even though there is some finite number of stages, a signal within the circuit would "see" an infinite number of identical stages ahead.

The next question then, was how many stages? This initial information not only gave no clue as to what the stages should consist of, but also gave no clue as to how many there should be, or even whether or not there was an optional number. This remained a mystery until March 1977. At this time while working on a system

which by chance contained seven stages, it was indicated to Mary, by my younger Brother who entered the Spirit world when he was 20, that this was the right number of stages. (This information was published by Mr Davis Peck in the Survival Research Foundation newsletter, March 1979)

In 1980 Marys' Grandfather showed her the first vision of a Transreceiver. In this vision, Mary saw what she described as a topless box shaped container filled with electronics. The most prominent feature was a series of upside down "U" shaped elements. Mary feels her Grandfather drew her attention to these elements. She is certain there were seven.

At this point we had been told by my Brother that seven was the right number of stages, and this had been reaffirmed at a later date by Marys' Grandfather. Later on this information was verified by an outside source when Dr Senkowski wrote that a Gentleman in Italy, a Radio Engineer if I recall correctly, had been independently told that seven sections were necessary.

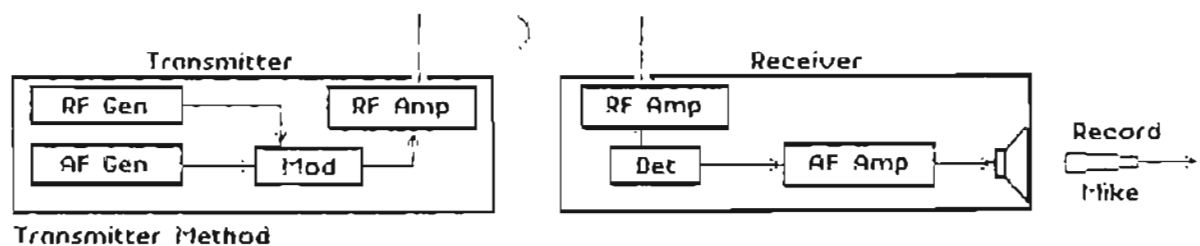
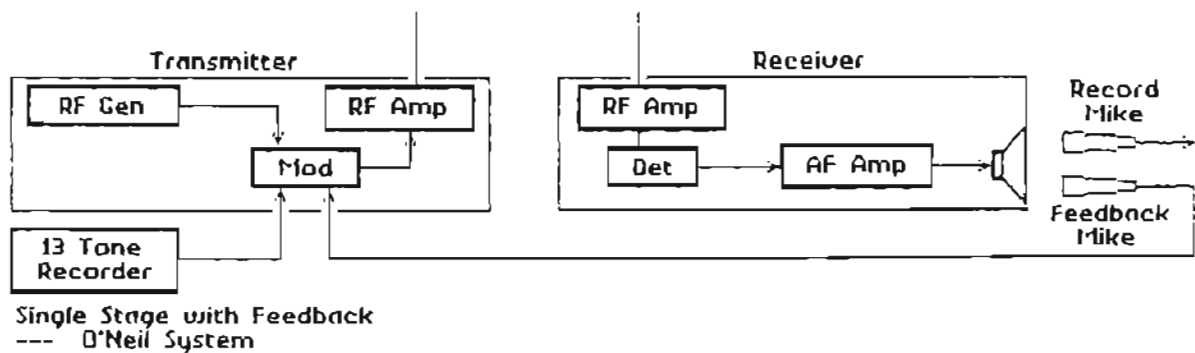
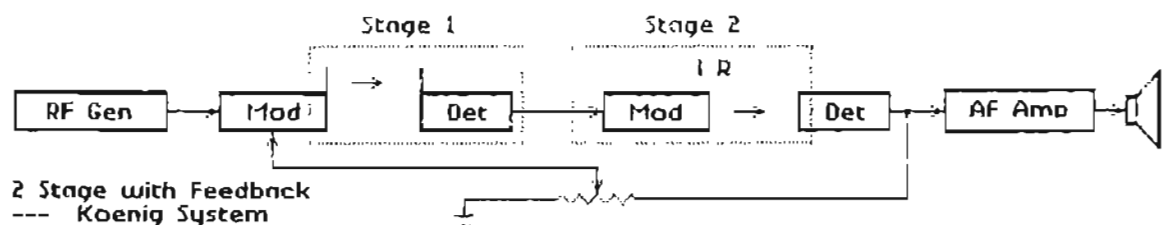
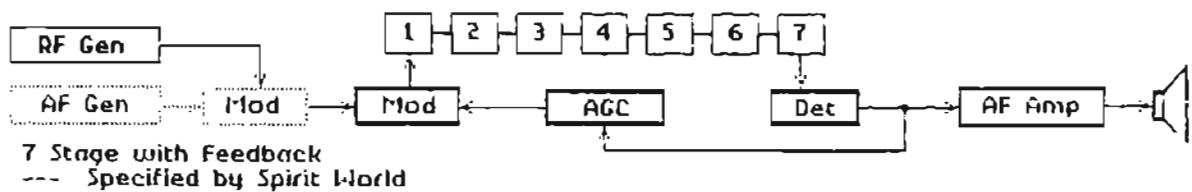
Why the number seven? Why not six or eight or three or fifteen, or any other number? This still remains a mystery. We might however speculate that this is probably the optimal balance between benefit and distortion for the special type of stages necessary, --- whatever they are. Since all electronic circuits, no matter how well engineered, generate a certain amount of noise and distortion, the more stages there are in series, the more the signal would deteriorate before it is returned to the input and probably the lower would be the percentage of usable feedback. On the other hand, since in theory the modulation percentage would be accumulative in a series configuration, a large number of stages would be advantageous. We might speculate then that the Spirits are telling us seven is the best compromise.

As mentioned, this information has been given to researchers through at least three different people on three separate occasions. Through my Brother, my Wifes' Grandfather, and through one or more of the Transpartners of the Gentleman in Italy. At least to me, this strongly indicates that the source Authority knows precisely what is necessary to clarify reception. In writing this I am reminded of an old saying:

"After all else has failed, as a last final resort, --- try reading the instructions."

As can be seen from the accompanying table, using multiple stages makes good sense from a mathematical standpoint. If for example, we assume a voice modulation percentage of 0.1% in a single stage non-feedback configuration, then our final modulation percentage is of course, 0.1%. As was discussed in the last issue, this can be considerably improved by adding feedback in the system. In this case if we assume 0.1% voice modulation and are able to use 50% feedback, the resulting modulation percentage as seen at the detector has doubled to 0.2%. If we then go further and add 6 more stages, the resulting modulation percentage raises to 1.41%, or over 7 times the single stage modulation percentage.

File- 50 10 Stages  
 and Heisenale



As can be seen from the chart, this relationship holds for different percentages of feedback. The final modulation percentage using 7 stages is always somewhat over 7 times the percentage resulting from use of only a single stage. Although not shown, this relationship also holds true for different levels of initial voice modulation. If for example, the Spirits are able to cause an individual stage modulation of 1% instead of 0.1%, and we assume 50% feedback, then a single stage results in only 2% modulation which, depending on the carrier, would be very difficult to hear. On the other hand with a seven stage system this would result in a 14.1 modulation percentage which, again depending on the carrier, should be quite easy to understand.

In ordinary radios we use special "tuning techniques" such as tuned tanks or crystals, beat frequencies, filters, etc., in order to improve the S/N ratio. It is my belief that those who are the source of this information are telling researchers that the feedback effect and the multistage configuration are two of the "tuning techniques" that are necessary to improve the Transcommunication signal to noise ratio.

Modulation % after 100 feedback cycles  
Generator output 1 V      Test Voice Modulation 0.1 %

| FB % | 1 Stage | 2 Stage | 4 Stage | 7 Stage |
|------|---------|---------|---------|---------|
| 10   | .111    | .222    | .445    | .781    |
| 20   | .125    | .250    | .501    | .879    |
| 30   | .143    | .286    | .573    | 1.01    |
| 40   | .167    | .334    | .670    | 1.18    |
| 50   | .200    | .401    | .804    | 1.41    |
| 60   | .250    | .502    | 1.01    | 1.77    |
| 70   | .334    | .670    | 1.35    | 2.38    |
| 80   | .502    | 1.01    | 2.04    | 3.61    |
| 90   | 1.01    | 2.04    | 4.16    | 7.49    |
| 91   | 1.12    | 2.27    | 4.64    | 8.40    |
| 92   | 1.26    | 2.56    | 5.25    | 9.54    |
| 93   | 1.45    | 2.93    | 6.04    | 11.1    |
| 94   | 1.69    | 3.43    | 7.10    | 13.1    |
| 95   | 2.03    | 4.13    | 8.68    | 16.0    |
| 96   | 2.51    | 5.15    | 10.8    | 20.7    |
| 97   | 3.26    | 6.72    | 14.3    | 27.4    |
| 98   | 4.49    | 9.30    | 20.0    | 39.2    |
| 99   | 6.61    | 13.8    | 30.2    | 60.6    |
| 99.1 | 6.90    | 14.4    | 31.5    | ----    |
| 99.2 | 7.21    | 15.1    | 33.0    | ----    |
| 99.3 | 7.53    | 15.8    | 34.6    | ----    |
| 99.4 | 7.88    | 16.5    | 36.3    | ----    |
| 99.5 | 8.25    | 17.3    | 38.1    | ----    |
| 99.6 | 8.65    | 18.2    | 40.0    | ----    |
| 99.7 | 9.07    | 19.0    | 42.1    | ----    |
| 99.8 | 9.52    | 20.0    | 44.3    | ----    |
| 99.9 | 10.0    | 21.0    | 46.6    | ----    |

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10 GOTO 50 :Rem          MULTISTAGE FEEDBACK TO SINGLE MODULATOR
20 REM                  C-128D, 80 COLUMN
30 REM                  BILL WEISENSALE
40 REM
50 SCNCLR:CLR:COLOR5,4:COLOR6,7
60 PRINT:PRINTTAB(22)"M U L T I S T A G E   A N A L Y S I S":PRINT
70 PRINTTAB(28)"A F FEEDBACK TO MODULATOR":PRINT:PRINT
80 PRINTTAB(31)"D A T A   I N P U T":PRINT
90 INPUT"              GEN OUTPUT VOLTS P-P = ";G:PRINT
100 INPUT"              TEST VOICE MODULATION % =
";M:PRINT:M=M/100
110 INPUT"              NUMBER OF STAGES = ";S:PRINT
120 INPUT"              TEST FEEDBACK % =
";F:PRINT:F=F/100
130 INPUT"              # OF CYCLES = ";C
140 PRINT:PRINT:PRINTTAB(32)"ANALYZE- A":PRINT:PRINT
150 PRINTTAB(20)"RESET- R"TAB(50)"STOP- SPACE"
160 GET AS:IF AS=""THEN160
170 IF AS=CHR$(65)THEN220
180 IF AS=CHR$(82)THEN10
200 IF AS=CHR$(32)THEN STOP
210 GOTO160
220 SCNCLR
230 I1=G:I2=G+(G*F1)
240 IF S=1 THEN280
250 FOR V=1 TO S-1
260 I2=I2+(I2*M)
270 NEXT V
280 D1=I1:D2=I2+(I2*M):D=D2-D1:F1=(D/G)*F:MF=((D2-D1)/D1)*100:X=X+1
290 IF X=>C THEN310
300 GOTO230
310 SCNCLR:PRINTTAB(22)"M U L T I S T A G E   A N A L Y S I
S":PRINT:PRINT
320 PRINTTAB(29)"D A T A   E N T E R E D":PRINT
330 PRINTTAB(28)"GEN OUTPUT = "G" VOLTS P-P"
340 PRINTTAB(17)"TEST VOICE MODULATION = "M*100" %"
350 PRINTTAB(22)"NUMBER OF STAGES = "S
360 PRINTTAB(25)"TEST FEEDBACK = "F*100" %"
370 PRINTTAB(22)"NUMBER OF CYCLES = "C:PRINT:PRINT
380 PRINTTAB(33)"A N A L Y S I S":PRINT
390 PRINTTAB(25)"DETECTOR INPUT= "D2" V"
400 PRINT:PRINTTAB(24)"DETECTOR OUTPUT= "D" V"
410 PRINT:PRINTTAB(25)"FEEDBACK LEVEL= "F1:MF=((D2-D1)/D1)*100
420 PRINT:PRINTTAB(23)"FINAL MODULATION= "MF" %"
430 PRINT:PRINT:PRINTTAB(20)"RESET- R"TAB(50)"STOP- SPACE"
440 GET AS:IF AS=""THEN440
450 IF AS=CHR$(82)THEN10
460 IF AS=CHR$(32)THEN STOP

```

Since I am just a "re-cycled" Air Force Radar Technician, after first analyzing the feedback effect as was described in the last issue, I ask for criticism of the analysis from certain other researchers, two of whom replied. One of these people was Mr Hans Heckmann, who's opinion was published in the last issue. The other

was Mr Alexander MacRae. As some of you know, Mr MacRae is a Scientist and Engineer who has worked for some years on audio research for NASA at the SRI research center, before returning to Scotland to open his own Electronics Company. Mr MacRae had the following comment to make:

"I found your letter and technical analysis very interesting, and I have some comments coming through on that - so stand by!

You are definitely on the right lines."

Mr MacRae also enclosed a copy of a paper he had written which in part pertains to this subject and gives a more scientific explanation. To wit:  
(In part)

Laboratory Notebook No. 2

The Unquestioning Beliefs of Science.

(1) It is astonishing how few scientists ask themselves -

"What ACTUALLY IS a physical law"?

(2) It is saddening to the point of despair how few scientists ask themselves -

"How do physical "laws" GET COMMUNICATED to all the things they control"?

A physical "law", (as we call it), is a HUMAN STATEMENT. It is a statement of maximum probabilities. In most cases, these maximum probabilities are Certainties ... apples fall down from trees, not UP; electrons repel other electrons, not ATTRACT; south poles attract north poles ... etc; statistical certainties - probabilistic maxima.

There are reasons why such maxima exist - and these are dealt with elsewhere - but for the moment what we need to take on board is the concept that it is these probabilistic maxima that - as a group - determine the characteristics of the physical universe.

The way it is normally put is that it is "PHYSICAL LAWS" that - as a group - determine the characteristics of the physical universe.

However there aren't "physical laws" as such - there isn't a Great Lawbook in the Sky from which instructions are sent to everything in existence to tell it how to behave ... Of what material would such laws consist? If they were to control material existence then they would have to consist of something beyond materiality. Anyone using the term "physical Laws" in defense of rationality is treading on insubstantial ground.

The characteristics of the physical universe are reflected in probabilistic maxima, in these Certainties.



**The Exclusion Cage.** However, this also Makes the physical universe a sort of informational "exclusion cage."

We have seen that what is going to happen is determined by strong probabilities ... but what is NOT GOING TO HAPPEN is also determined by these strong probabilities.

So, apples shall fall down, but not UP ... ; electrons shall repel each other, not ATTRACT ... ; thou shalt not LEVITATE nor SEE THE FUTURE nor be in any way paranormal - which is to say, UN-USUAL ... of LOW PROBABILITY.

However, it is possible to "weaken" probability, locally.

**Weakening Probability.** Probability is at its lowest where the sequence of events, locally, is random - where the sequence of events is unpredictable. Thus you find "paranormal" phenomena are often associated with random events. White noise, atomic decay, tea-leaves, the I Ching yarrow stalks, even earlier, the cracks produced in turtle shells by heat, all random processes. Note that paranormal simply means beyond normal, or improbable.

One can, however, lower probability by determinate means, and this occurs in most of the workable EVP methods. It is, I suggest, the meaning behind Weisensale's received message to use many repetitions.

**The Delta.** Taking up this point, some years ago I developed the Delta method. This used 4 loudspeakers connected as an acoustic bridge, and acting interactively as microphones also, in a highly reverberant small enclosure. Such were the number of repeated wavefronts that probability was already low due to the complexity of determination. This was further reduced by the "probabilistic feedback loops" introduced by interactions.

**Probabilistic Feedback Loops.** If a factor A is determined by three other factors B, C, D; and if B is likewise determined by three factors - A, C, and D ... then you can see that the state of A is partly determined by B, which is itself partly determined by A. Thus B affects itself, as does A, and the end result of this is to introduce probabilistic "interference fringes" - a sort of "banding" or binary distribution, much as in Chaos Theory effects, whereby probability may be minimal local?"

The breakdown of probability now puts subtle and otherwise unseen influences on the same footing as normal effects within the Exclusion Cage - that is, Information can "seep into" the normal, (usual), Physical universe that is normally excluded by Certainties.

We know from a correspondent that both the Koenig (early system --Ed) and the Alpha systems use swept-frequency signals. A swept-frequency signal is for most of the time an entirely predictable sequence. But one cannot sweep the frequency in one direction forever ... a transition point arrives ... and it is here that the signal becomes instantaneously indeterminate.

## **EXPERIMENTAL PART 1**

### **TC TRANSMITTER**

One of the reception methods that is most attractive from an experimental standpoint, is the radio -transmitter method. This method uses a local, low power, wireless microphone, type transmitter. Since there is every indication that Transcommunication is amplitude modulation, this type of experimentation of course, requires an AM transmitter. Although numerous wireless microphone type transmitters are available through Radio Shack and other sources, all of these transmitters are FM rather than AM.

Some time ago I was able to locate a schematic for a low power AM transmitter (SU-i0/19). This transmitter has an effective range of only a few feet, which is ideal for TC research. It will put out a clean RF signal which can be AF Modulated by an electronic white noise generator (SU-9/21), a built in tone generator for alignment as shown, or can be configured to accept an external AF carrier such as the signal from a carrier recorder, etc. A rotary switch is used to select the Modulation input or select RF only. The unit can be battery powered or powered by a small dual voltage supply. If a power supply is used it should be in a separate enclosure as the noise generator is quite sensitive to EM, especially 60 Hz hum. The tuner is a standard capacitor used in shall broadcast band receivers. The coil is 100 turns of coil wire, center taped at 50 turns, wound on a 5/16" ferrite rod. A replacement Radio Shack telescoping antenna is used, but an ordinary piece of hookup wire will do.

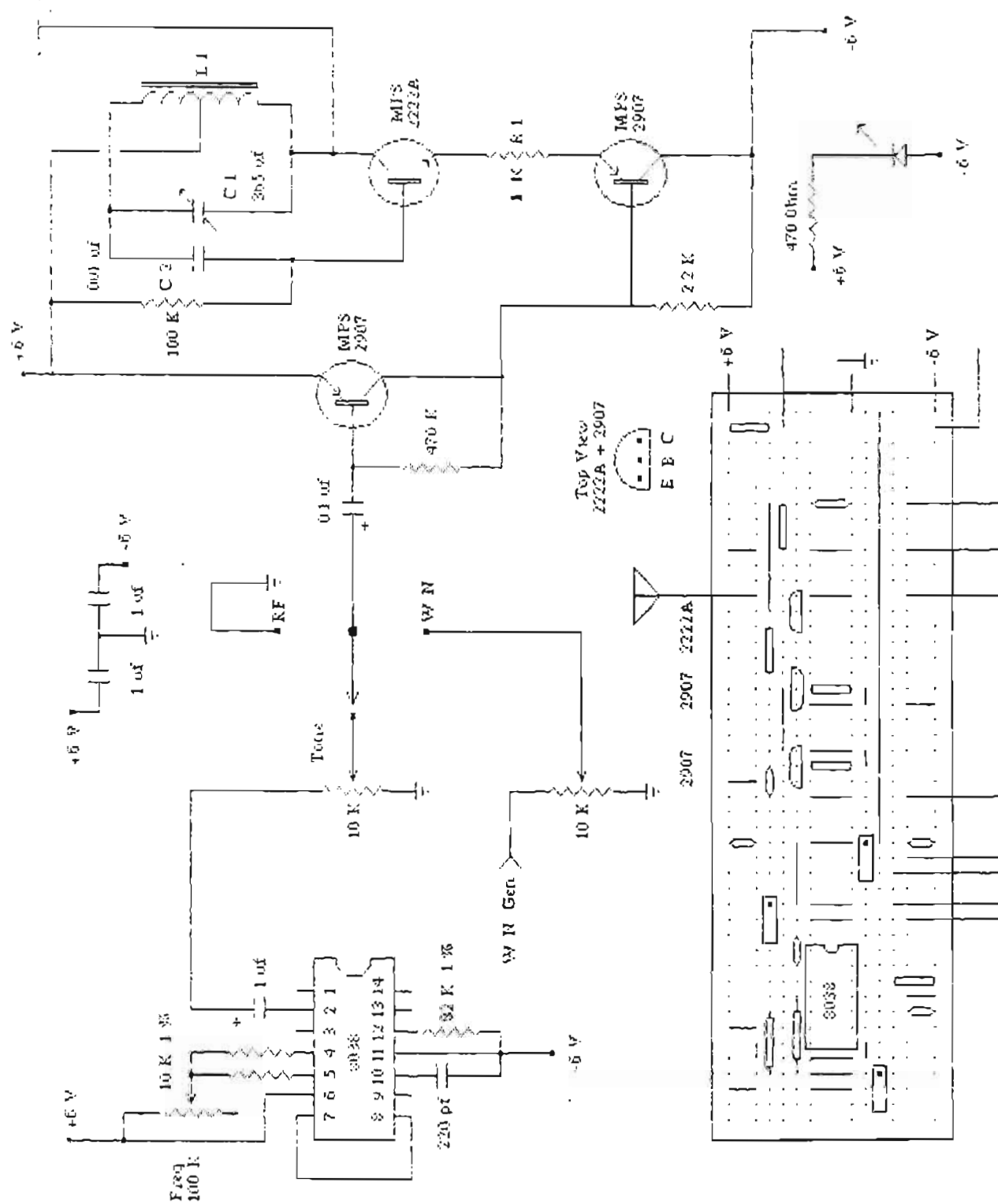
In blind comparison experimentation, this transmitter with a shall portable broadcast receiver, was approved over the Airband Method although there was no noticeable improvement in absolute reception quality.

### **A STARTING POINT**

In the "cats whisker" days of radio, Hobbyists, later to be known as radio Amateurs, started with the very simplest of crystal receivers and worked upward through trial and error. During these early days there was a great deal of experimentation with a large variety of circuits. As time went on circuits which proved to be of benefit were further refined and incorporated into more advanced designs. Others that did not work as well, were simply dropped by the way side and became history.

There is no reason why Transreceiver technical development should not follow the same path. In fact, to a certain extent it already has, and it is probably inevitable it will continue to do so. The only real difference being that with the existence of modern electronics, sophisticated test equipment, manufactured components, computer Modelling, stereo recorders, etc., TR development should be much faster than was the early development of radio. Just as one example, if it had been possible in crystal set days, to stereo record reception from the same transmitter

Carrier Transmitter  
Tone Gen./Mod./Transmitter



simultaneously through two slightly different crystal sets, and then later compare and study the difference, it would have been much easier to detect subtle quality differences between two different designs.

As was mentioned previously, where one starts in TC electronics experimentation is pretty much immaterial. Any place around the base of the mountain will do. All trails lead upward. From the discussion of methods in SU-9 it is quite apparent any number of blind comparisons could be used as a starting point.

One possibility which appears, at least to me, to be the most logical, is to start with nothing and add only what is necessary. That is, to begin with the absolute minimum circuit, add first of all what is obviously necessary, and then add whatever else is approved by the other side through blind comparison experimentation. Obviously this is not the only way to start, but it is the only method that has the advantage of not dragging along excess baggage in the way of unnecessary circuits. For example, we know radio receivers are capable of voice reception. But we also know that the TC reception process is something entirely different from the reception of a radio signal. So which circuits in a radio are necessary to the TC reception process, and which are irrelevant? The only way we can find out is through experimentation.

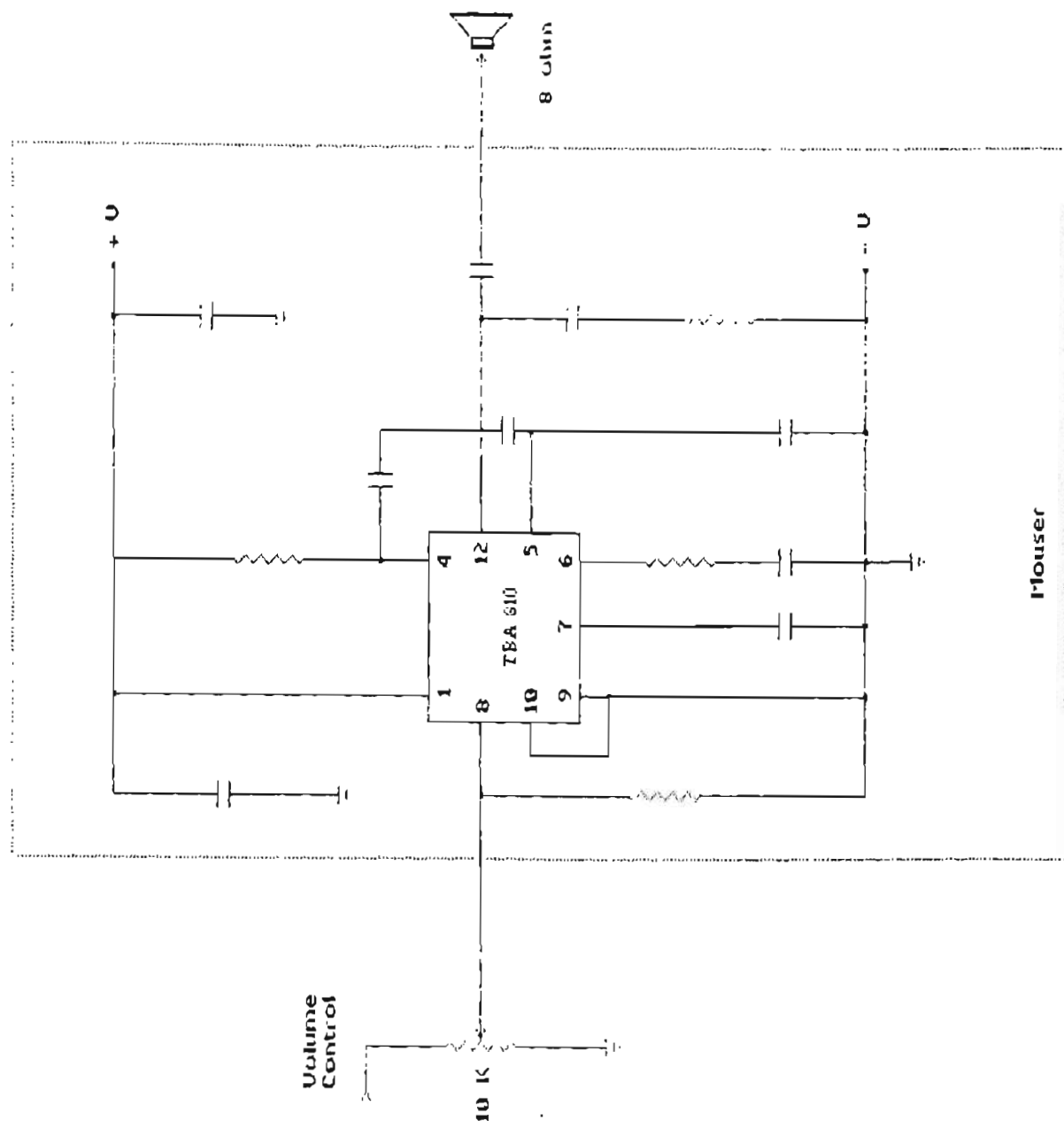
There is also another reason to begin with the simplest possible and work upward, and this is because of equipment size and complexity, not to mention expense. If for example, one wished to experiment with 7 transmitter / receiver stages and each stage consisted of a standard portable radio, and a small transmitter about the size of a portable radio, it would literally require a whole room full of equipment. Not only would this be cumbersome and impractical, but it would be unduly expensive as well.

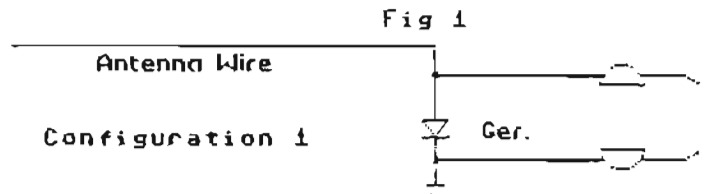
Our ultimate goal of course, is to learn how to design a Transreceiver which is not only efficient but which can also be built into a single cabinet of practical size. And the best approach to this problem would be to begin with the absolute minimum and add only what is necessary until the maximum possible in reception quality is reached. The final result of such development could turn out to be a relatively simple circuit configuration, or it could turn out to be far more complex than anything thus far built by anyone, or even imagined. But in either case the resulting ultimate design will (down the road) provide the highest quality reception possible, and at the same time will include no circuits which are not necessary for it's efficient operation.

We might begin then by asking just what is the simplest circuit capable of voice reception? We already know from the discussion in SU-9 that a radio receiver alone is capable of receiving voices, so in theory then, the simplest possible radio receiver would, at the same time, also be the simplest possible Transreceiver. Or to put it another way, there is no reason known why it would not be. As you know, the simplest possible radio receiver consists of only three components, a length of wire, a diode, and a set of earphones. (Fig 1) Unless one lives on the moon, this arrangement will simply

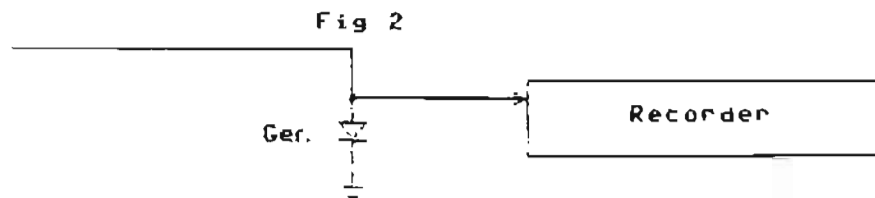
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 Aug 17, 1991

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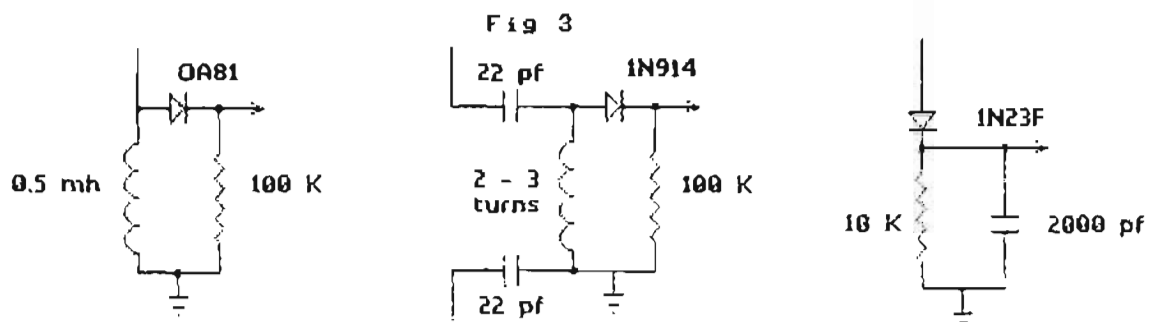


pick up the strongest AM signal in whatever area the experimenter happens to live. Or if there is no relatively strong transmitter near by, it will pick up nothing at all. If a transmitter can be picked up, broadcast, Police, etc., then this circuit should be capable of voice reception by using the standard radio station



method.

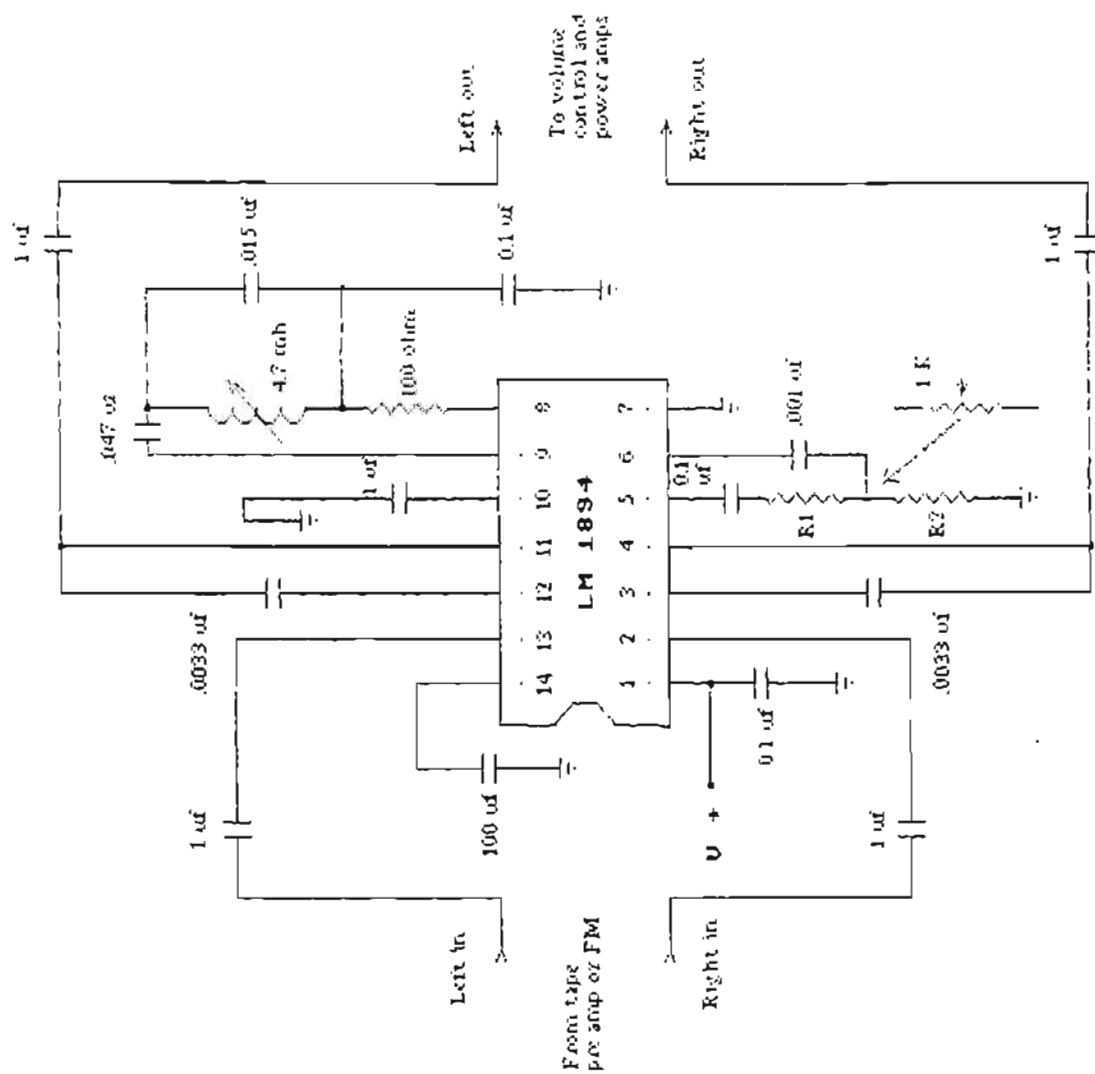
As is apparent from the schematic, rectified RF energy is applied directly to the earphone coils. If the earphones were capable of responding at RF frequency nothing could be heard because the output would be RF rather than audio. However because of the weight and inertia of the coil / diaphragm combination, the diaphragms follow only the AF frequency variations in the RF pulse peaks, effectively filtering out the RF and reproducing only whatever audio modulation is carried by the signal.



Another way to use this circuit in TC experimentation would be to connect it directly to the input of a recorder. (Fig-2) However in this case we would be applying an RF signal directly to an AF amplifier which does not work well. The solution to this is to filter out the RF, i.e., demodulate the signal before it reaches the recorder. This can be done by using either a resistor / capacitor

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 Bill Weisensale  
 Nov 8, 91

D N R  
 LM11894M / LM11894N  
 Dynamic Noise Reduction System  
 National Semiconductor



combination to set up an RC time constant, or a resistor / inductor combination to set up an RL time constant. Either of which would filter out the RF by responding only to the audio. Such circuits were in fact experimented with by Konstantin Raudive, and became known as the diode method. From the book Breakthrough, there were three variations of this circuit. (Fig 3)

Such circuits are quite insensitive and require a very strong signal for anything to happen. If silicon diodes are used a minimum signal of approximately 1 V P-P is required to reach the diode threshold. (.5) This can be somewhat improved by using a Germanium diode which has a lower threshold of .2. This means in effect that if an incoming signal carries a 33% modulation, even with a Germanium diode, the signal would have to develop a P-P voltage in excess of .6 V on the antenna, in order for demodulation to occur. (The signal required here would be approx. 100,000 times stronger than the .000,006 V signal we are told is required for demodulation in our radio telephone) This of course, would require either a very strong or a very close transmitter, especially if an extremely short antenna of only 6-10 CM (approx 2.5-4 inches) is used, as was used by Raudive.

Nowhere in any TC literature I have ever read, has it ever been explained just how the Spirits, in their non-material realm, are supposed to go about building the equipment to send us such a "sledgehammer" electromagnetic signal, or for that matter, any kind of electromagnetic signal at all. (There is of course certain evidence they can modulate such signals which we supply from here on this side.) If the Spirits were capable of sending electromagnetic signals to us the first and most obvious means of communication would be for them to simply build simple wireless microphone type circuits (there are tens of thousands in the Spirit World who know how to do this), and talk to us, loud and clear, through most any radio receiver. Since such circuits are very simple and since the Spirits do not do this, I take this to be very strong evidence that it is impossible for them to construct electronic circuits of any kind, in their non-material realm. (Personally, when I hear of the Spirits using mysterious "transmitters" and "electronic black boxes", etc., to communicate with us, especially if this information has come through a Channeler, I reach for the salt shaker.)

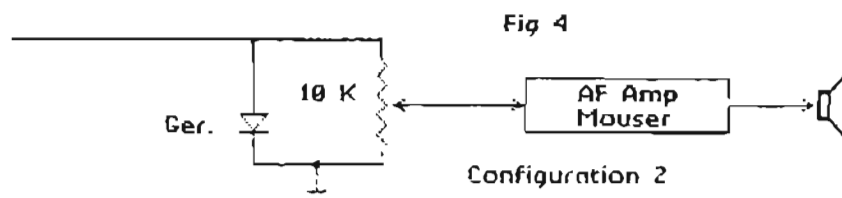
It should be mentioned at this point there is some evidence that in a few cases a radio signal may be present. In these cases, when using the radio static method, there is a decrease in background noise which I once believed to be a positive indication of AGC activation by an incoming radio signal. In the past few years I have come to believe there may be other explanations for this effect, which I won't try to go into here. If in these few cases there actually is an EM signal present, we may be dealing with a different phenomenon, such as reception from a UFO or from a parallel material dimension, if such there is, where the physical means would be available to transmit such signals.

In any case Raudive and at least one or two others evidently did get decent reception using these crude diode circuits. However I don't personally know of anyone since who has reported anything



but the most mediocre results, or more often no results at all, even though dozens of researchers, (myself included) have probably tried this method. It should be remembered here that Raudive was a strong Transmedium and for strong Transmediums most anything works, more or less. To my knowledge, no attempt was made to determine whether the voices actually arrived in the diode circuits or whether they arrived in the recorder itself. Since it was probably not known at that time that a recorder with no microphone or other input, is capable of voice reception, it was more likely just assumed the voices arrived in the diode circuit in the form of a radio signal.

As mentioned, these circuits were connected directly to the input of the recorder. As seen from the discussion in SU-9,



connecting the carrier source to the voice recorder via patch cord, is not the best method. If one is to experiment with detector circuits, then the next requirement is an audio amplifier and speaker. (Fig-4) Not only is the speaker / microphone coupling slightly more efficient in the reception process, but it also allows the operator's comments to be recorded. And allows the operator to hear exactly what is being recorded including any voices which may be of good enough quality to be understood directly from the receiver.

For this purpose virtually any small audio power amplifier, such as the 7 watt Hi-Fi Mouser unit shown (SU-10/21), is suitable. About the only requirement being that it be compact enough so as not to take up much space in whatever cabinet you plan to use for your experimental TRs.

At this stage what we have, in essence, is simply a very crude, untuned radio receiver. It might be ask, ~ why bother to do all this when for just a few dollars one can buy a far more sophisticated receiver at Radio Shack? There are several reasons: First, what we are working on is an experimental "Transreceiver", not a radio, even though at this stage the circuit would be capable of receiving radio signals. Second, the detector circuit, which we will need to experiment with, consists of a few parts on a breadboard, where it is very easy to modify. And third, the circuits that are present are only the ones that are actually necessary, we have no excess baggage in the form of unneeded circuits.  
(To be continued.....)

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## LETTERS

The following letter was received from Mr G Smith, retired Electronics Engineer. Although Mr Smith is quite new to the TC field, his letter is so interesting and informative it certainly deserves to be included in this issue.

(In part)

"One of the most surprising things to me was that I had quite inadvertently discovered EVP back in the 1930's and didn't have the wit to realize what was going on. Also, of course, the technology was not available in the 30's to record and review what I had heard. I had only one shot at it, in real time, and could only ask plaintively, "What was that? What was he saying?"

I had these experiences while playing around with superregenerative receivers in an era when there were still very few stations on the air and lots of wide open spaces in the ether. Of course, in those days I used vacuum tubes, but who knows whether comparable effects could be obtained with solid state technology? You might want to give it a whirl.

I have observed that where people get in trouble and expose themselves to public ridicule is not in reporting some phenomenon, but in trying to sell the public on some particular reason why the phenomenon is occurring. When you say TC are from the deceased, 99% will pooh-pooh it. If you said they were from Mars, maybe only 89% would ridicule it. If you said the transmissions were from some unknown pirate radio station you were trying to locate and identify, less than 1% would doubt you.

There's a case in point right here in Princeton. There's a fine laboratory where scientific studies are being made of the effect of mind on such things as the output of a random number generator. If they had stated publicly that they were studying psychokinesis, the experimenters would have been laughed out of town. But they were smart. They called their work the study of engineering anomalies, and they are highly respected.

(Love that paragraph! I wonder how many other studies of "Engineering Anomalies" are going on around the world because our civilization is not yet ready for such studies! -Ed)

I can think of a couple of ways that EVP could be cloaked in greater scientific respectability, at least to social scientists. Nearly everyone agrees, some readily, some with a considerable degree of reluctance, that we have access to a tremendous amount of information via the unconscious. And those of a Jungian persuasion (including me) view the collective unconscious as the repository of virtually an infinite amount of additional information.

One of the most reliable ways of accessing the personal unconscious is by means of the Rorschach inkblot test. And I can't help wondering whether white noise (or the random noises of rain, wind or waterfalls) isn't the auditory equivalent of the visual stimulus of inkblots. The inkblots trigger the unconscious to produce for us visual images of personal significance. Perhaps white noise

triggers the unconscious to produce word sounds of personal significance.

A good way to test this proposition would be to give half a dozen people copies of the same tape and have each one decode it without consulting the others. If they all came up with precisely the same message, it would blow the above theory out of the water. If there was not complete agreement, then it would be appropriate to call in a crew of clinical psychologists to ferret out the explanations.

The other possibility I had in mind is more or less inspired by the Princeton engineering anomalies studies. There is now incontrovertible evidence that some people are able to effect the output of the RNG by thought alone, to a statistically significant degree. And it's my understanding that the heart of the RNG is a noise diode.

Your amplifier with no microphone connected and the gain wide open is doing the same thing as the noise diode in the RNG. And we know that thought can affect the noise generated by the noise diode. There are voluminous technical studies and thousands of pages of statistical tables to back that up. So why couldn't the operator's unconscious be affecting the output of his amplifier to a statistically significant degree? But here we have a double whammy; the unconscious is influencing BOTH the signal and the interpretation of the signal. This might even explain why psychics get clearer reception."

Reply

The experience you had in the 30's, I think, was extremely rare but not unique. Others have reported similar incidents, even the reception of unexplained messages on teletype. You certainly did have the wit to realize and remember this as inexplicable incidents. I think it probable most such incidents were rationalized away and forgotten.

I would agree with Jung that there is a collective unconscious. I know for a fact telepathy is real because it has happened to Mary and I personally. It is not too difficult then to hypothesize that some or all humans are connected by a kind of unconscious telepathic network. I do not however believe this can explain TC voices which are clearly from very individual, conscious, intelligent entities.

If I recall correctly, Jung was a student of Freud. Freud, in later life, became very interested in Spiritualism and is said to have made the statement that had he his life to live over, he would have investigated Spiritualism rather than studying the mind. Although Jung and Freud went their separate ways, it occurs to me that Jung may also have reached a similar conclusion about Spiritualism without making his beliefs public. Perhaps in using the term "collective unconscious" Jung was calling Spiritualism an "Engineering abnormality" in order to make it more acceptable to his Peers. --- Just a thought.

Indeed listening to various AF carriers is the auditory equivalent of the Rorschach inkblot test. I have no doubt what so

ever that on occasion the mind does form a voice out of noise where in fact no such voice exists. This argument applies however, only to the very weakest voices. As the voices become louder, this argument becomes null and void. Many, many researchers have recorded voices that can be examined on an oscilloscope. And an oscilloscope doesn't have much imagination.

In laboratory studies it has been found that ordinary human voices can be understood even at several DB BELOW the noise level. Understandability however, drops off rapidly until at about -6 DB only about 10% of what is said can be understood. This minus DB area is the level which I have been calling non-mediumistic, and is the level at which I have reason to believe the Spirits can effect the equipment directly without the help or even the presence of an Operator. Coincidentally, when I ask how much I understand, I was told I only understand about 10% of what they actually say. The real challenge in TC communication, is to improve equipment sensitivity to the point that negative DB reception is brought up to a positive DB level so that TC communication is more available to everyone.

In my early work, because the voices were so weak, I was quite concerned that they may simply be my imagination. For this reason I frequently ask Mary to listen to recordings. I would tell her only that I thought there might be a voice at a certain count, but not what I heard. We almost always agreed on gender and had a high, over 50%, agreement about what was said. Even where we did not agree, about half the time there was close similarity, such as one of us hearing "We are here" and the other hearing "Three are here". Later we further refined this technique, and still had the same results. I would listen to the recording, write down what I heard and tell Mary nothing. Mary would then do the same. Only after we were both finished would we compare what we had written down.

Even on high quality voices there is not always 100% agreement on what is said. For example, because of differences in individual hearing sensitivity, etc., two people can listen to a weak but ordinary radio broadcast and come up with two different interpretations. The important point, I think, is not that there be 100% agreement, but rather the basic fact that human voices which cannot be explained by science, are appearing in our receiving systems.

I do believe, as you say, that in the case of Transmediumistic reception, it is indeed the Operator's unconscious mind which is effecting the receiving system to a significant degree. And there is a certain amount of evidence to back this up. Some years ago in a Laboratory here in California, Livermore I believe, a Mr Ingo Swann was able to effect the intensity of an underground magnetic field associated with some kind of particle detector. On another occasion, this same Gentleman, in tests at the New York City College, effected the temperature as registered by a thermocouple sealed in a thermos bottle. Whether he actually effected the magnetic field and temperature or, as I think far more likely, effected the electronics or gauges, is an open question. But something was effected.

Mr. Uri Geller (if I'm spelling his name correctly) the Gentleman who can bend metal by concentration and has taught others to do the same, I think has amply demonstrated that the mind can indeed effect matter. If we use a lot of electricity we can weld two pieces of metal together, if we use a little bit we can carry on a conversation through phone lines. My guess is that the same is true of psychokinetic energy. If we use a lot it can bend solid metal. If a little bit is used it can facilitate TC communication.

When formal Science finally pulls it's head out of the sand, and recognizes the existence of TC, the argument will not be about the existence of TC voices, because their existence is an undeniable fact. What they will argue about is their origin.

In Transmediumistic reception we have an effect on matter (electronics) by a mind (presence of the Transmedium). By definition then, TC communication is a psychokinetic effect. The real argument then is whether the voices originate in the Operator's subconscious, or whether the Operator's subconscious is used as a "relay transmitter" in the same sense as such transmitters are used in Amateur radio communication to receive, amplify, and retransmit a signal. In this case a telepathic signal received from a Spirit, which is then "amplified" and "rebroadcast" as a psychokinetic signal which effects the electronics. For what it is worth, it is my opinion, and the opinion of everyone I know of who has had personal experience with TC communication, that although these voices, in most cases, may come through a Transmedium, they originate from external, conscious, intelligent entities.

#### Comments About The SV Series

The following comments have been received from our readers. Since they did not know these comments would be printed, I will print only the comments, not the names.

1) "Was delighted to receive Spirit Voices No 9 that you sent me recently. A lot of good material in it. Especially got a lot out of the article from UTF Post regarding the wobble method of voice generation. Love to see novel circuits in this regard as it stimulates my imagination along similar lines.

It's great to know you are able to produce "Voices" reasonably regularly - I feel it is a very important and needed focus for technical research into EVP."

2) "In closing, let me say that I admire your writing talents very much. I wish I could write as well as you do. Everything is very clear and unambiguous and a pleasure to read (the only thing that bugs me is your insistence on misuse of the apostrophe)."

3) "I was very pleased to receive your two recent copies of "Spirit Voices" and have you become active again as you have a lot to offer. I understand the constraints of family and job and know you must lead a very busy life. We need technical leadership in this country and you seem to be the one to take the job on. I appreciate your "as time permits" and was surprised to have two issues come that seemed close together."

I would like to thank our readers for these comments and others that have been received. Your votes of confidence are very encouraging in what is a very tedious and time consuming job. I have however, no illusions about either my writing ability or technical knowledge. There are others more qualified in both areas than I am to do this. The reason I am doing this is because it needs to be done, and thus far no one else here in the US has stepped forward to volunteer.

However, Transcommunication is an embryo technology. As technical research in this field gains momentum, in the due course of time there will be others more gifted than I, who will begin writing technical papers and newsletters far more sophisticated than this. In a sense then, what I am doing is trying to hold the fort until the Cavalry get here. In the mean time I hope these papers will be of help to you in your own work. I have personally found TC fascinating and awesome, and it is bound to become even more so as time goes on and reception begin to improve. All of you working in this field are pioneers in one of the greatest adventures that has ever been undertaken by mankind.

#### NOTES

1) Clarification--- In the last issue there were two articles reprinted from one of the German newsletters. One of these articles was about the wobble effect, the other article mentioned this effect. Since it was not stated otherwise, the impression was left that it may have been one of these two people who discovered this effect. As was mentioned in Voices of Eternity by Sarah Estep, which probably most but perhaps not all of you have read, it was Sarah who discovered the wobble effect, and should be so credited.

2) 16 year old Taralyn Kent, daughter of Mr Ray Kent, an Electronics Engineer from California, is without a doubt the youngest gifted Transmedium in the USA, and perhaps in the World. Among other things she is the only one I know of who has received a good quality, quite understandable voice, on her first attempt at recording. Taralyn has had good results by using a very soft AF carrier, usually radio static. The radio is placed several feet away, or across the room from the recorder, and the level is set low enough to be barely detectible or not detectible at all on the record level meter.

3) Computer Editing--- A short while back I received a demonstration tape of computer editing from Mr Alex MacRae of Scotland, who originated this technique as applied to Transcommunication. Briefly the technique involves a computer add-on board containing an A/D and D/A converter. A segment of tape is directed to the A/D converter where it is converted to a binary data string and stored in RAM. At this point it can be saved to disk as a data file, and also manipulated in various ways. Under

software control, any part of this string can be replayed through the D/A converter and then directed to an AF amp and/or recorder. This allows the noise leading into the voice, and also the noise trailing the voice to be very accurately trimmed away leaving only the voice itself. This in fact can be done so accurately that even at the highest voice frequencies, a single cycle of the voice can be added or subtracted.

On the demonstration tape, there are several weaker voices which have been edited in this fashion, and it definitely makes them easier to understand. It does not of course clarify reception because at this point it can do nothing about the noise which is included between the beginning and end of the voice, but it does result in very worthwhile improvement, especially where weaker voices are concerned. I think I can say this is the first technique to come down the line that would be of help to everyone. Unfortunately, it requires a computer as well as special software and moderately expensive special equipment. But it is not beyond the range of possibility that somewhere down the line someone may set up a computer editing service where one could send tapes for editing, much as we send in photographic film to be developed. Mr MacRae has this to say about the technique:

(The following is a brief quotation from the original material of LABORATORY NOTEBOOK No. 3, which is unfortunately much too long to entirely reprint in this issue. If any of you would like to have a complete copy, I will be happy to send it to you upon request. -Ed)

"It is not my purpose here to go into full design details, even if space allowed, but rather to give enough basic information to enable the reader to evaluate the goodness, or otherwise, of the computerized design to be described in this article - and indeed to be able to judge other computerized systems the reader may come across.

In this new design the moving parts of a recorder would be replaced by RAM - the audio analog information would be digitised and written into RAM, incrementing the address by one each time a sample was taken. Then on read, ("playback") all you would have to do was specify which address to start reading and which to stop reading to give very precise editing. To sample a waveform then you must take samples fast enough to be able to reconstruct the waveform - at least in rudimentary form from those samples. The slowest sampling frequency that you can have is called the Nyquist frequency, and it is twice the highest frequency that you wish to sample. So, if you wish to sample up to 3.2 KHz, (which is the upper -3db frequency in a telephone quality frequency band), then the Nyquist frequency will be 6.4 KHz, 6400 samples per second.

That covers the frequency, but what of the amplitude of the analog signal. For speech that varies widely, it has a large dynamic range. Suppose that we convert each sample into an 8 digit binary word.

(chart)

The range of positive values goes therefore from a minimum of

decimal 1 to a maximum of the sum of all the decimal values from 1 to 128, that is 255.

So, if we say that 255, or all of the 8 bits equal to binary 1, is 1 volt, for example, then binary 1, or the least significant bit, must be equivalent to  $1000/255$  millivolts, or approximately 4 millivolts.

This is somewhat less than ideal, we would like to have a dynamic range of 60 db, or from 1 volt down to 1 millivolt, to give speech a good reproduction. To do this we would have to add another two bits to our word to make it a 10 bit word. Such a word length, however, does not fit with the standard computer bus systems or RAM data widths. To fit in with that we would have to go to 16 bits, but that is now something of an overkill in terms of quality, for just speech, and also it eats up memory space at a prodigious rate.

Working out memory requirements is easy enough. If the sample rate is 6400 per second and the word size is 8 bits then the typical 2 second EUP utterance will use up 12.8 KBytes of memory space, at a transfer rate of 51.2 Kbits per second. Each utterance is stored as a separate file, should be assigned its own filename, and has a maximum size of 64 KBytes.

#### The System in Use

Due to the above mentioned financial constraints it was not until March of 1991, almost 5 years later, that the first computerized editing system was used.

Tapes were made and sent out. It is something of an indictment of the EUP community - who are ever ready - indeed eager - to condemn "Science", that it took almost 5 years for this advance to appear, when the design was available in 1986 and the matter could have been wrapped up in nine months. (I know exactly what he is talking about. -Ed)

As it is, due to lack of time, the design had to be a compromise, and is largely based on a commercial board.

There is nothing particularly fancy about the board - it plugs into an IBM PS2 expansion slot. It uses an 8 bit ADC, and has a data rate that is adjustable but tied to the clock rate of the PC.

For a 10 MHz clock the transfer rate is 32 Kbits per second, which for a word length of 8 bits gives a Nyquist frequency of 4 KHz, or a barely acceptable top frequency of 2 KHz. However, it is pointed out that at this stage it is just a matter of proving the design. The maximum rate is 64 Kbits per second which gives a Nyquist of 8 KHz and thus a top frequency of 4 KHz, which according to Mil-Std-14720 (Human Engineering) is the minimum acceptable.

The software is largely menu driven and will work with either a floppy or a fixed disk. Prior to installing the software it is necessary to make a directory called VOICE and the actual set of programs can be downloaded quite quickly. The advantage of the fixed disk is that to be operational it is only necessary to call up



what equates to the Autoexec.bat file in the Voice directory.

The software is easily run from the keyboard, and the underlying programming is never seen. However, if one wishes one may write new programs or modify existing ones using either C or BASIC. (Continued next Issue)."

4) DNR--- Back in August Mr Ray Kent brought to my attention that National Semiconductor is now producing a 14 pin dip referred to as a Dynamic Noise Reduction System. This device is not just some kind of filter on a chip, although it does include a filter, but rather a dynamic noise reduction device based on what National refers to as psychoacoustic principles.

These devices are still in short supply, but Ray managed to get two in a sample kit, one of which was sent to me. This was used to build a test line unit for use between recorder and AMP on playback, or between two recorders. The circuit used was as recommended by National for voice and music. (SU-10/23) I have had very little time to work with this circuit and preliminary results are inconclusive. It seems to help, but only to a quite marginal degree and only on some voices, mostly non-mediumistic level voices. The device however has not yet been optionalized for this purpose. It has, among other things, a signal controlled band pass filter which is also user adjustable. The circuit as recommended by National, as mentioned, has been configured for both voice and music. This means that the band pass is wide enough to pass higher music tones. We believe readjusting the passband to voice frequency will help, but there has not yet been time to do this. The device is claimed to have a 10 db effective tape noise reduction, and Ray has been told by a National Engineer that it is capable of doing considerably better. The device is listed in the new National catalog as the LM1894M and LM1894N.

Today, just as I was about to write this, I received a letter from Mr Alec MacRae to whom I had mentioned this device. Mr MacRae has also managed to obtain two of these devices, and looks forward to being able to find the time for experimentation. Incidentally, Alec is writing a Book about TC which will be at least partly technical. This is being done at publishers request, so there is no doubt as to whether it will be published. And it certainly is going to be a "must" for anyone seriously interested in Transcommunication.

Alec also enclosed two pages from a Projects and Modules catalog by the Maplin Co in England. Unfortunately there was no address, but will try to find out. In any case there is an ad for what they call the Stereo Dynamic Noise Reduction Module SM666, listed as a "Soundmaster" Kit. And it is stated that simple modifications can be performed on the basic kit to improve the performance of the system.

Ray recommends use of good quality components, especially low noise metal resistors. The voltage divider R1/R2 should be replaced with a pot., preferably a multiturn with a multiturn calibrated dial. This controls the sensitivity. Just how effective these

devices are going to be in TC reception, still of course, remains to be determined. But I think it almost certain that an optionalized configuration for TC reception will prove to be more than effective enough to justify the modest cost. I'm sure we will be hearing more about these devices, and I will try to keep you up to date on information and results.

S-A) Reverse Voices--- All of us have had the experience of receiving voices which are too fast or too slow, at least relative to the rate at which we experience time. Several hypotheses have been proposed to explain this effect, including the hypothesis that slow voices are from low Spirits and fast voices are from higher Spirits who are supposed to bounce around or "vibrate" faster or something, this despite the fact that when these voices are speeded up or slowed down as the case may be, they turn out to be ordinary Spirits saying ordinary things. Mr Kent has proposed the first hypothesis that makes sense, at least to me. (I cannot say for certain that this hypothesis is original) What Ray said is that since time is something different for Spirits than it is for us, as a number of researchers have been told, it may be simply a matter of synchronization. We of course, simply pass through time at a fixed rate which we rarely even think about because there is nothing we can do to change it. On the other hand, if to Spirits time is variable, that is if they can, at will, change the rate at which they pass through what we perceive as time, then this would mean they would have to make a conscious effort to synchronize with our time in order for their voice to be the proper speed for us. And this could be difficult for them to do.

Further, if for them time is variable, it may also be bidirectional. So that reverse voices may be the result of them not realizing they are traveling in the opposite direction than we are through what we perceive as time. Or if such be the case, then perhaps they deliberately travel in the opposite direction briefly in order to record a reverse voice. After all reverse voices are perhaps the very best evidence we have that TC is for real. No one can say that a reverse voice is just a stray radio signal picked up by our radio or recorder. Is time variable and/or bidirectional for our Spirit friends? Well we don't know for sure, but we do know that time is associated with matter. And we know that spirits live in a non-material realm where they are not subject to other material constraints. Mr Kent has mentioned that it might possibly be of some help to our Transpartners, to place some kind of timepiece, clock or watch with a sweep second hand, near the receiving system, in order to give them a clear visual indication not only of the rate at which we are experiencing time, but also of the direction.

S-B) Reverse Voices--- Several month ago Mary and I happened onto part of a TV program that had to do with how certain tricks are done in making Movie and TV films. I'm sure all of you have seen commercials and other things that are simply impossible. As an example someone talking in a commercial while holding a bottle over a glass in which the liquid is pouring itself out of the glass and back up into the bottle. Or a commercial in which a Lady is standing on a carpet holding an empty plate with a piece of pie splattered on the carpet at her feet. While she is talking the pie

gathers itself up and "falls" back up onto the plate. How do they do this? -- Believe it or not, they are speaking backwards.

The sequence is shot forward. The liquid flows from bottle down to glass and the pie falls off the plate onto the floor. But while this is being filmed, the people, who have practiced their lines very carefully, are actually talking backwards. When the segment is then shown backwards the people seem to be speaking normally, while something absolutely impossible happens. How do they learn to do this? By a technique very similar to reverse taping. They say their lines backward on a recorder, which is no mean task as they not only must say the words in reverse order, but must pronounce the phonemes of each word in reverse order, and then they play the tape backwards to see how natural they sound. This process is then repeated until they get it right. It is of course quite tedious and can require several days just to learn a few lines. There are only a few people who are talented at doing this.

What does all this have to do with TC? Just this; perhaps there are Spirits who have also practiced speaking backwards in order to deliberately speak to us in this manner. Many in the Spirit world have gone to great pains to prove to us that they exist, and as was noted earlier, reverse voices are some of the very best evidence we have.

In a recent letter from Mr David Fox, an Electronics Engineer in England, he told me he had received a voice in the reverse mode which he recognized as that of his Father. David's Dad is in the Spirit World, but I would say it is extremely unlikely that he is in some other Universe which is traveling backwards in time relative to our own.

In the TV program we saw, it was mentioned that special recorders were used which were capable of playing the tape backward without flipping it over as of course is necessary with an ordinary recorder. I was not aware that there were such recorders. However, Mr Kent told me that they do indeed exist, and told me about one model which is not only reversible but also variable speed. (As versus 3 speed) And in fact Ray has arranged the use of one of these machines for several weeks to examine voice samples. I do not have the brand name or a distributor address, but if you would like to have one of these machines and have \$1,800 you don't need, I can find out this information for you.

5-C) Reverse Voices--- Dan McKee along with several others have been told by certain voices that the person speaking is in another Material Universe and that we are traveling backward in time relative to them, which is why their voices seem to be backward to us. According to Webster's dictionary the term Universe means everything that exists. It is singular. The phrase "other Universes" is self contradictory. There is only one. By definition there can be only one because the one includes everything that exists. Therefore the entities who are telling us about "other Universes" are feeding us Bull....!, --- Or are they?

There are some who believe there can be more than one Universe

and to an observer in any given one, their own would appear to be the only one because interaction of any nature between Universes is impossible. That is, to the observer within each Universe, their own Universe would, in actual fact, be everything that exists. They further believe that since all interaction between Universes is impossible, that two or more separate Universes could occupy what we would think of as the same "space" at the same "time".

This is a preposterous theory. Who could possibly propose or believe anything like this? Well, lets just list a few: Stephen Hawking-Cambridge University, Alexander Vilenkin-Tufts University, Sidney Coleman-Harvard, Alan Guth-Massachusetts Institute of Technology, Willy Fischler and Joseph Polchinski-University of Texas, Edward Tryon-Hunter College, Lawrence Susskind-Stanford, Steven Weinberg-University of Texas.

5-D) Reverse Voices--- I would like to invite all of you to tell us about your experiences with reverse voices, for publication in one of the next two issues. Of special interest, I think, would be the reverse voice of a friend, relative, or someone else you have known from here. The voice of one or more people, known or Transpartner, who's voice has come through in both forward AND reverse mode. Several researchers have found that in reviewing, in the reverse mode, tapes which had been recorded previously, there were reverse voices on these tapes, even though no such communication had been requested at the time the recording was made. In some cases the operator had not even heard of reverse voices at the time of recording. Have you had this experience? Have any of these reverse voices told you where they are? If so, --where? What is your opinion of these voices? Why do you think there are entities coming through to us in this manner?

6) Very low level voices--- Very low level voice reception, whether one believes it to be extremely weak mediumistic reception, or believes as I do that it is of a non-mediumistic nature, considered from one standpoint, is probably the most important kind of reception. This standpoint is it's frequency. It is, by far, much more frequent and common on voice recordings than is the much better quality and far easier to understand Transmediumistic reception. I cannot recall having ever closely examined a sample tape recorded by anyone (I do not make a practice of doing this because it is too time consuming), on which I have not detected the presence of at least a few such very low level voices, whether I could understand them or not. It seems very probable to me that in time such voices will come to be considered as "normal" TC reception, while at the same time Transmediumistic voices will come to be considered as the exception.

Such non-mediumistic voices are at such low level that, unlike TM voices, they cannot, in most cases, be observed on a scope. In other words the voice has a signal/noise ratio of zero, or as I have long suspected but didn't know for sure until receiving a recent letter from Mr MacRae, may even have a negative signal/noise ratio. Or to use the technical term, the voice is "mask" by noise.

How could we possibly understand any voice that is buried in noise that is as loud as, or even a little louder than, the voice?

Well, in normal conversation we understand words because of two factors. First, because we recognize the pattern of frequencies that constitute the words. And second, because the words are louder than any background noise, which makes the frequency pattern quite easy to hear. Where there is a zero, or negative, signal/noise ratio we have lost the amplitude factor, but the frequency pattern of the words is still present. All of us have had the experience of trying to carry on a conversation with someone in a very noisy

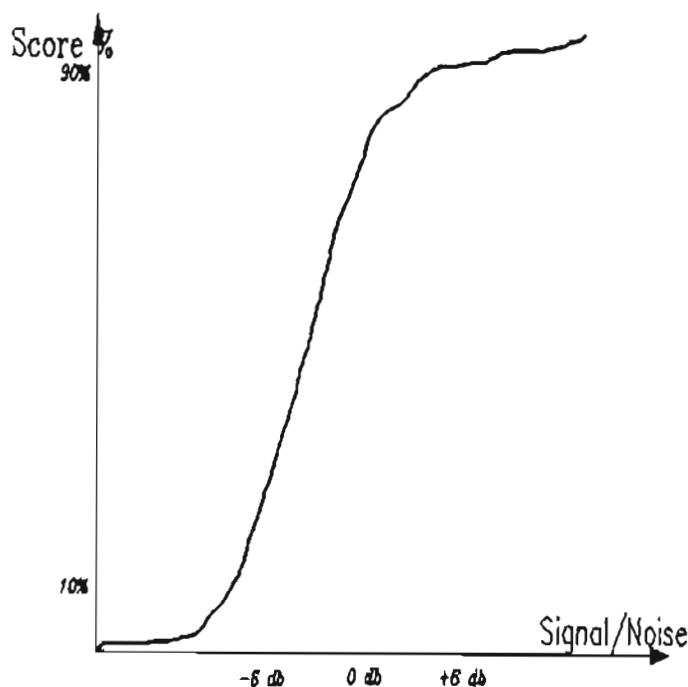


FIG 5

DRAWN BY  
ALEC MACRAE

environment where the background noise is just as loud or even a little louder than the voice of the person talking to us. In these conditions we can still carry on the conversation. And although we may often misunderstand a word, or miss a word entirely, it is still possible to communicate information because our minds are able to recognize voice frequency patterns against a background of louder noise.

According to Mr MacRae, who knows far more about this effect than I, at a S/N ratio of +6 DB about 90% of what is said will be understood. But this falls off rapidly until at -6 DB, even though words can still be understood, it will be only about 10% of what is actually said. Alec has this to say about the masking effect:

"Masking

Masking is where noise masks a signal, preventing it from being heard. In the case of monosyllabic words and white noise if the

Signal/Noise ratio is + 5db then what is heard will be around 90% correct, (for a person with good hearing). If the S/N is - 6db then the score will be about 10%. From 10% to 0% the slope of the %age against S/N curve is shallow, from 90% to 100% the slope is also quite shallow. But between 10 and 90 the curve is steep. (Fig 5)

However, the computer program (computer editing -Ed) does not at present handle continuous white noise. Where it is useful is in reducing the effects of impulse noise. Impulse noise, whether periodic or aperiodic, has a masking effect by (partly) "deafening" the ear, for a matter of milliseconds, disabling it temporarily, so that any syllables immediately following may not be heard. This phenomenon is similar to that of AGC in radio and is due to most of the available population of neurons being simultaneously in refractive mode.

So impulse noise results in two unwanted phenomena characteristic of much EVP, false cueing and masking. If we had a way of slicing out those small sections of time where the impulses occurred then we would go some way toward reducing ambiguities in the interpretation of EVP utterances. But to do that would require millisecond precise editing - a performance not possible with mechanical cue and review systems."

7) On The Horizon--- Alec MacRae has taken what I believe to be a significant step in post reception processing through application of the computer editing technique. But this is not the end of the line. As Alec says this is a first step.

As everyone knows computers are fast. There're dumb, -- but fast. Relative to the clock speed of a modern desktop computer, the highest frequencies of the human voice are traveling at a snail pace. Today's average PC is probably running at 12-16 MHz. Many Businesses and individuals are using machines running at 20-33 MHz. New machines just coming on the market run at 40-50, even as high as 66 MHz. And next generation computers will be in the 100-150 MHz region. On the drawing boards are machines that will be running as fast as 1 GHz.

If we take an ordinary computer of today running at lets say 21 MHz (ain't no such clock speed but I like the figure), and compare this with the highest human voice frequency that we need, we find that the voice frequency is 3,000 cycles per second while the computer is running at 21,000,000 cycles per second. This means in effect, that in the length of time it takes the voice to complete one cycle at it's highest frequency, the computer has completed 7,000 cycles, or 3,500 cycles for each half cycle completed by the voice.

This presents some most interesting possibilities. The main one of which is that a computer can do a LOT of mathematics in 3,500 clock cycles. It could, for example, measure the duration of each half cycle and delete from the data string any half cycles that were found to have a duration of more than 1/600 sec or less than 1/6,000 sec. This in fact could be done so precisely that a frequency of 299 Hz would be totally deleted while a frequency of 300Hz would be

passed at full amplitude. This would then form a bandpass filter whose corners would be absolutely square instead of 3db rolloffs, and whose "slopes" would be vertical. With the proper programming, the two bandpass frequencies could be adjusted to any values at the touch of a few buttons.

But this is only one perimeter, there are probably a dozen others a reasonably fast computer could take a long look at for each half cycle and decide whether it should be included in the data string as part of the voice, or deleted as noise. For example we know that voice is sine wave and noise is random. We also know that when a phoneme is spoken the amplitude of each half cycle gradually increases or decreases relative to previous half cycles. The computer could be programmed to measure and compare each half cycle to an average of say the previous 5 or 10 half cycles, and if it is within say 10% or 20% of that average amplitude then pass it along as part of the voice. If it is 50% or 75% above average, then it would be simply deleted from the data string as a noise spike. There are so many half cycles in each phoneme that a few would not be missed. But when such abnormal half cycles are present, especially of above average amplitude, they definitely make a voice difficult to understand.

As computers become faster, to the point where there will be tens of thousands of clock cycles to each voice half cycle, the amount of mathematical analysis that can be done on each half cycle will become virtually unlimited. If even I can imagine such future possibilities for low level, non-mediumistic, voice clarification, then I am sure those who are knowledgeable in these areas can conceive of more sophisticated possibilities that I cannot even imagine. But don't hold your breath. This is not going to happen tomorrow, or next month. But it will happen. Modern technology, in all areas, is advancing on an exponential curve. The real question then, is not as to whether TC reception will be clarified, but rather how long will it take. If the United States set out to clarify TC reception with the same determination that it set out to put men on the moon, the job would be done in a year or two. As the situation stands it is going to take longer, but the result will be the same.

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8) Are Microphones Really Necessary?--- In the early 1970s Lamoreaux brothers were some of the very first in this Country to be active in EVP research. Among the many experiments they did was to substitute several Radio Shack coils for their microphone. Joe reported that they did get reception by this method, but that it was no better than by using a microphone.

Recently Ray Kent carried this experimentation further by doing direct comparison with a microphone on one channel of a stereo recorder, and a high impedance coil substituted for the microphone on the other. His daughter used this equipment and received at least one good quality voice. This voice was of exactly the same quality on both channels. There was no discernible difference.

9) This issue--- Writing these papers is a very time consuming job which I have to do over a number of weeks because of very limited available time. When I started this issue some time ago, I had no intention of making it anywhere near this long. However, as time went on, more and more interesting information was received which I felt should be included. Consequently this issue became longer and more time consuming, and it was no longer possible to publish it by my "target" date of Nov 1st. I hope you will find the delay justified by the additional material included.

10) Next issue--- I have just finished building a 25MHz, 386 IBM/clone, which I have been working on for over a year as time permitted. This machine is intended to be used for all future publication and other TC work. My task in writing the next issue will be threefold: To configure the system and learn to use a type of computer which is new to me, to learn how to use several software packages with which I am completely unfamiliar, and to write the paper itself. For this reason the next paper will be considerably shorter than this, -- perhaps only a few pages.

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