

THE CPIRC NEWS



Unitas World Acquired The Canadian Private Investigators' Resource Centre

Unitas World Business Development is proud to announce the acquisition of The Canadian Private Investigators' Resource Centre. "It has been in the making for several months now," says John Farinaccio Founder and Director since 1999.

Unitas says that CPIRC will maintain its name, management, and continue to operate independently to serve its members as it sees fit. "What Unitas brings to the table is the financial backing to allow us to grow in the right direction. The next few years are going to be very exciting for everyone. We have new ideas and we will celebrate the new year with a fresh new website!" says John Farinaccio who will remain CPIRC's acting director.

From Everyone at The Canadian Private Investigators' Resource Centre to all of you, have a happy and safe New Year.

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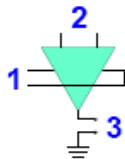
Screen shot of the new CPIRC website released on January 24, 2007 which will include hundreds of new resources and greater exposure to our members.

The Basic Anatomy of a Telephone Tap



This article is a continuation of previous articles on telephone threat concerns and will provide a brief description of the basic anatomy of a phone line tap. While it is impossible in this newsletter to provide a lengthy technical description of different tap configurations, this article attempts to provide an introduction to the basics and a better understanding of tap detection methods. It is important to note that these phone tap descriptions could be utilized to attack both analog and digital telephone systems (using commercially available digital phone decoders, digital audio can be recovered from a digital system using these tapping methods).

Below is a basic general circuit diagram for a tap where the Green triangle represents an amplifier circuit. The leads labeled #1 represent the power supply to the tap circuit, the leads labeled #2 represent the actual tap onto the line, and the leads labeled #3 represent the means of transferring the signal to some other source.

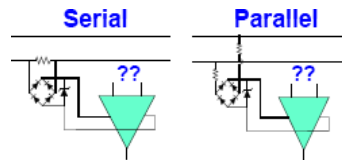


Each of these connections to the tap circuit provides a potential opportunity to detect and locate the tap.

Power Supply Taps

If the tap draws power from the existing telephone line, then the tap is referred to as a "Parasitic" tap and is relatively easy to detect simply because when the tap is operating the circuit will draw power from the phone line. This drop in power may be measured using a simple Digital Multi-meter. There are 3 common types of test that will reveal this type of tap by measuring Voltage, Current, or Loop resistance. The figures below show two con-

figurations of parasitic taps: a series parasitic (meaning that the power is drawn from a single line) and a parallel parasitic (meaning that the power is drawn across the pair).



If the Tap draws power from another source (Non-Parasitic) such as a battery or external supply, then Multi-meter type methods for detecting the tap are much less reliable mainly because it is relatively easy to extract the signal from a phone line without drawing enough power from the line or changing the impedance of the line to detect the tap with multimeter methods. Therefore, better testing methods are required for non-parasitic taps.

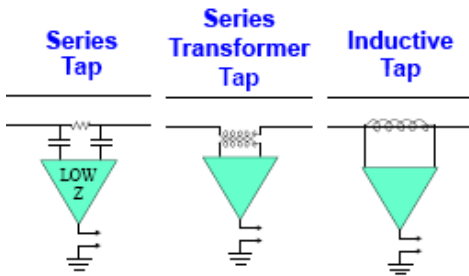
Tapping Methods

There are many tapping methods. Some of the basic methods are broken into categories below for a brief discussion.

Series Taps

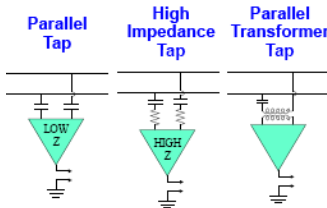
The following diagrams show different types of series taps. The first example requires that an in-line resistor is added to the line. This version (Series Tap) is typically easier to detect due to the voltage drop on the line. However, the Series Transformer Tap and Inductive Tap are more difficult to detect with multi-meter resistance measurements simply because multi-meter testing is based on a Direct Current test, and transformers and inductors basically look like a low ohm short circuit in this type of testing. In other words, the line resistance is changed very little. Therefore, to see the series transformer tap and the inductive tap requires more sophisticated testing methods that rely on a higher frequency measurement of the line impedance.

A TDR provides increased reliability, but detection is not guaranteed.



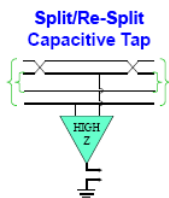
Parallel Taps

The following diagram provides some examples of parallel type taps. These tap examples will not be seen by conventional voltage or resistance testing because the in line capacitors block any DC testing of the line. Therefore, more sophisticated testing methods that rely on higher frequency testing to penetrate the blocking capacitors are required for detection. A TDR will work in many cases, however, the Capacitive coupled, high impedance tap will still provide little response to a TDR and still be difficult to detect at longer ranges.



Split/Re-split Tap

In the following diagram, the tap is not directly connected to the main pair that is carrying the information.



To understand this tap, it is important to understand the concept of a balanced pair. A balanced pair means that the 2 conductors that make up the pair are twisted together. This twisting ensures that the internal induc-

tive and capacitive effects of the wires effectively cancel each other out so that the wire can carry higher frequency signals for much greater distance with minimal signal loss. In the diagram above, the green brackets indicate the balanced pairs that the phone system is designed to expect. However, if 2 conductors of the pair are not twisted with each other, but are twisted with other conductors, then these other conductors will absorb much of the signal information due to the capacitive coupling of the twisting. In most cases, the phone system will continue to function properly, but the result is that an unused pair in the cable bundle will now have a good signal level and can be tapped for information. This type of coupling is easily achieved by intentional miswiring the connectors on both ends of the cable. Furthermore, in older buildings that were wired using flat cable, an unused pair may pick up enough signal from the main pair that the unused pair can easily be tapped for information. This type of signal leakage is often referred to as "Cross Talk". In summary, this type of tap will not be detected with Multi-meter or TDR testing methods of a single main pair. The TDR may give some indication that the pair is not properly balanced, but detection is not clearly indicated in the one pair because the actual tap is present on other conductors. This type of tap can only be detected by testing all wiring combinations. For example if there are 8 conductors in a cable bundle, there will be 36 total combinations of potential pairs: (1/2, 1/3, 1/4, 1/5, 1/6, 1/7, 1/8, 2/3, 2/4, 2/5, 2/6, 2/7, 2/8, 3/4, 3/5, 3/6, 3/7, 3/8, 4/5, 4/6, 4/7, 4/8, 5/6, 5/7, 5/8, 6/7, 6/8, 7/8) or it is calculated as $(7+6+5+4+3+2+1=28)$ and then it is important to test each individual conductor to ground. This adds another 8 pairs to the test.

In summary there are other variations of line taps that are described above and there are certainly additional types of phone threats that are not covered in this article. This article is only intended to provide some of the basics. The main point is that to reliably detect different types of taps, there are many types of tests that should be conducted on many combinations of conductors.

This article was prepared by REI.

New stories and Publications of Interest that you'll find in the Resource Centre

- Industrial espionage made easy
- WestJet apologizes to Air Canada over spying
- Bugging the boardroom
- Canadian Prime Minister Harper announces upgrade of the RCMP Training Academy
- One in three UK directors steals company secrets

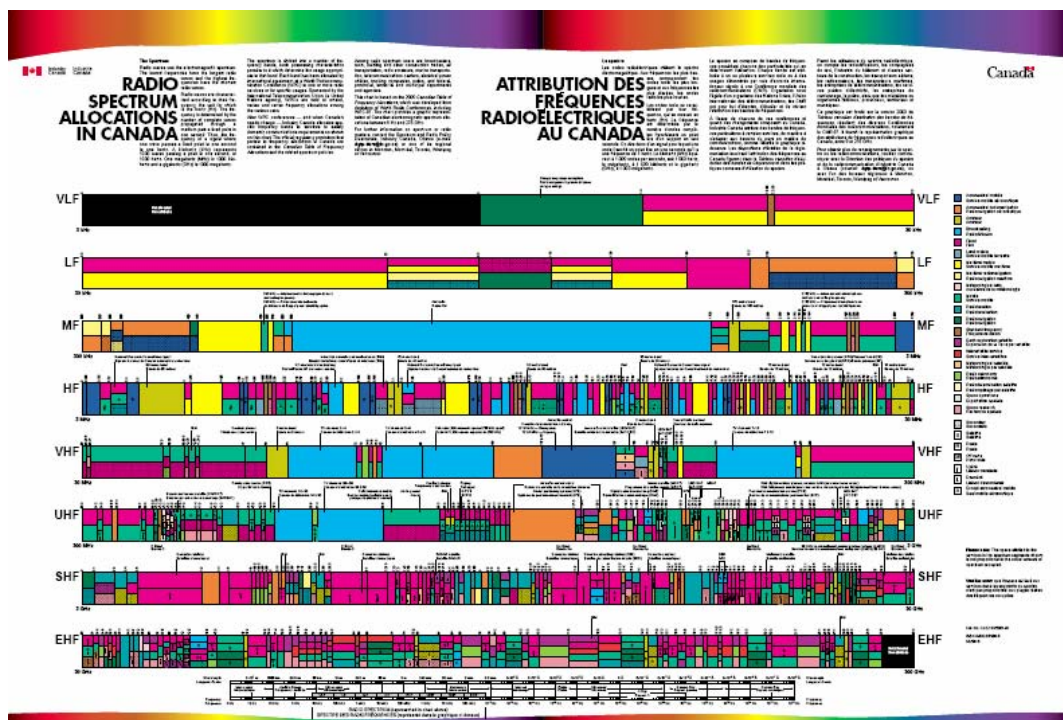
The Complete Al-Qaeda Training Manual

While many sites have previously published small excerpts from this terror bible, we now present the entire 180-page volume, a remarkable window into bin Laden's network of cold-blooded fanatics.

Radio Spectrum Allocation Chart

Download Your Free Copy Of The Radio Spectrum Allocations in Canada, U.S.A. and Australia Chart

This Canadian chart is based on the 2000 Canadian Table of Frequency Allocations, which was developed from decisions of World Radio Conferences. The chart provides a graphic representation of Canadian electromagnetic spectrum allocations between 9 and 275 GHz.



Special Announcement!

After months of questions ALSET has filed for bankruptcy. The American Society of Law Enforcement Training was an educational and professional association consisting of law enforcement trainers, educators, and administrators from not only across the United States but world-wide.

"I was at the Bankruptcy Meeting on August 23rd and the trustee seems willing to pursue damages, but the main problem is that ASLET's total assets are about \$16,000.00 and their debts total over \$200,000.00, so the trustee doesn't have enough money left to pursue current litigation or other damages unless we can find an attorney willing to work on a contingency basis, in which case the trustee has the authority to authorize costs." says Phil Messina, ASLET Treasurer.

The ASLET website is down. For up-to-date information visit <http://www.asletupdates.com/>

Common Errors in Evaluating a Suspect's Truthfulness

Over the years we have been consulted on cases in which an investigator was absolutely convinced that a particular suspect was lying when, in fact, the person was telling the truth. In other instances guilty suspects were able to get through an interview without having their lies detected. Behavior symptom analysis is certainly not 100% accurate. However, if proper techniques are employed in eliciting and evaluating a person's behavior, an investigator's accuracy at detecting deception can far exceed chance levels. On the other hand, if no specific procedures or protocols are followed, studies have consistently reported low accuracies in detecting deception based on observing another person's behaviors.

For those who have attended our seminars this web tip will be a reminder of the importance of being aware of variables that may affect a suspect's behavior. For investigators who have not received training in behavior symptom analysis, it should serve as a warning of how easily a person's behavior can be misinterpreted. To increase the accuracy of detecting deception through behavior symptom analysis an investigator should:

(1) Establish the subject's baseline behaviors at the beginning of an interview

On several occasions investigators have reported that the reason they believed a suspect was lying was because of poor eye contact. When these suspects were subsequently interviewed in our office we found that many of them failed to exhibit normal eye contact even when asked non-threatening background questions. In some instances the suspect's poor eye contact could be attributed to cultural differences. In most cases, however, the cause for the suspect's poor eye contact was not readily apparent. It could have been the result of a shy or submissive personality or perhaps an underlying neurological problem. Perhaps the suspect was frightened by the fact that they were dealing with authority figures. Regardless, when a suspect does not establish normal eye contact when spelling their last name or giving their address, the investigator should not use the suspect's poor eye contact as an indication of guilt when the suspect is later asked about the crime under investigation.

It only takes a few minutes at the outset of an interview to establish a suspect's normative behaviors by asking non-threatening background questions. Examples of questions that can be asked include:

"Please spell your last name for me."

"What is your first name?"

"What do most people call you?"

"What is your current address?"

"How long have you lived there?"

"Who do you live there with?"

When the suspect is answering these introductory questions the investigator should carefully observe the suspect's eye contact (normal, poor, forced), communication style (articulate, difficulty comprehending or speaking English, slow or rapid response delivery) and emotional state (composed, unconcerned, frightened, angry, withdrawn). Once these baseline behaviors are established the investigator will be in a much better position to evaluate specific behavior symptoms that occur later during the interview when the suspect answers questions about the issue under investigation.

(2) Clearly define the purpose for the interview A common cause for misleading deceptive behavior symptoms occurs because an innocent suspect experiences anxiety as a result of some transgression unrelated to the issue under investigation.

Consider a situation where a police officer approaches a man in an airport and pulls the man aside for questioning. The officer is interested in determining whether the man is a terrorist but never explains the purpose for questioning him. The man is not a terrorist but does have a number of unpaid parking tickets as well as a pending court appearance for failure to make support payments. If the officer asks general questions without clearly identifying the purpose for the interview, it would be perfectly natural for the man to exhibit apparent deceptive behavior symptoms.

In the airport example, it would be appropriate to explain that the man had been randomly selected for additional screening to verify his identity. During the formal interviews our staff conducts on individuals suspected of possible criminal conduct, after the initial background questions are asked, the purpose for the interview is clearly identified and the subject is then asked to state a position on that issue. One possible statement would be as follows: "John, this afternoon I'll be asking questions about (issue under investigation). Some of the questions I'll be asking I already know the answer to. The most important thing is that you be completely truthful with me before you leave today. Before we go any further, let me ask you, did you (commit issue?)

(3) Question a suspect in a non-accusatory and non-threatening manner

Many behavior symptoms associated with deception represent the suspect's efforts to reduce anxiety or occur from the fear of being caught lying. However, an innocent person may exhibit these same behaviors if he experiences anxiety as a result of intimidation or fear of not being believed. If an investigator appears aggressive in his posture (sitting three feet from the suspect with a forward lean) asks questions in an accusatory tone ("You're the pervert who did this, aren't you?") or asks questions in a rapid-fire approach, forcing the suspect to answer quickly, the innocent suspect is bound to become protective nonverbally (put up barriers, break frontal alignment, exhibit little or forced eye contact), be verbally guarded or defensive and may become confused and offer inconsistent answers.

It is critical that a suspect's behavior be interpreted in the context of the interaction with the investigator. For example, there are a number of behavior symptoms which, if they occur during a non-accusatory interview, are associated with deception. However, these exact same behaviors may be an indication of truthfulness if they occur during an accusatory interrogation. To achieve the greatest accuracy in assessing whether or not a suspect is telling the truth the investigator should evaluate that person's behavior during a non-accusatory interview. An accusatory interrogation should be reserved for suspects whose guilt has been reasonably established.

(4) Elicit a sufficient sample of the subject's behavior

It is amazing how people will listen to a 30 or 60 second segment of an interview on a television news broadcast and form hard and fast judgments about the subject's truthfulness. In most circumstances it is not possible to accurately detect deception based on analyzing a minute or two of a person's behavior. No professional detection of deception examiner would ever render an opinion of a person's truthfulness based on analyzing an interview that lasted only a few minutes.

The interviews our staff conduct last approximately 30 minutes in length and involve dozens of questions relating to the issue under investigation. Many guilty suspects are able to lie convincingly if they are only asked two or three questions about the crime they committed. However, it becomes increasingly more difficult to lie successfully if 15 or 20 questions are asked relating to a crime the suspect committed. An innocent suspect, of course, has no difficulty answering an unlimited number of questions about a crime he did not commit.

An interview designed to assess a person's credibility should incorporate both investigative questions as well as behavior provoking questions. Investigative questions cover such things as the suspect's opportunity and access to commit the crime along with their motivation and propensity to commit the crime. Behavior provoking questions, on the other hand, are designed to elicit different responses from innocent or guilty suspects. For example, when innocent suspects are asked how the investigation will come out on them they tend to express much more confidence than when guilty suspects are asked that same question.

(5) Do not over-evaluate a suspect's nonverbal behavior

It has been said that nonverbal behavior accounts for more than half of the information communicated between two people. This finding does not mean that nonverbal behavior is more representative of a person's truthfulness than verbal or paralinguistic behavior. It merely indicates that there is a tendency to place an inordinate amount of weight on a person's nonverbal behavior.

Of the three channels of communication, the nonverbal channel is the most subject to internal and external influences that have nothing whatsoever to do with a person's truthfulness. During an interview conducted in a controlled environment, the suspect's posture provides perhaps the best insight to that person's level of confidence and emotional involvement. Research indicates that a subject's confidence and emotional involvement are statistically good predictors of truth or deception. The presence or absence of illustrators (the hands moving away from the body) as well as leg and foot behaviors can also provide meaningful information for detecting deception.

Adaptor behaviors (the hands coming in contact with the body, e.g., touching the nose, scratching an arm, wringing the hands) have the most complex origins and are often erroneously associated with lying. Especially when evaluating adaptor behavior, the investigator needs to establish behavioral consistency before considering a particular movement or gesture as an indication of deception. In other words, if a suspect scratches his neck one time when answering a question about committing a crime the behavior is probably meaningless. However, if a suspect establishes a pattern where he frequently scratches his body when denying involvement in a crime, the consistency of that behavior indicates that it is significant.

In conclusion, detecting whether or not a person is lying based on observing that person's behavior is not a simple manner of identifying certain telltale symptoms of deception. Indeed, there are no unique behaviors that reliably indicate if a person is telling the truth or lying. However, if the preceding guidelines are followed when conducting an interview and interpreting the subject's behavioral responses to interview questions, an investigator can achieve accuracies far above chance levels.

The topic covered in this web tip is derived from information covered during our advanced course on interviewing and interrogation. If you have attended our basic course and are ready to enhance your ability to detect deception and elicit confessions, check our course calendar for the location of the advanced course nearest to you.

For further information on interrogation or interviewing techniques consider attending our advanced course on interviewing and interrogation. All CPIRC members get discounts on Reid seminars.

This article was prepared by John E. Reid and Associates, Inc. as their Monthly Web Tip and was reprinted on our web site with their permission. For additional Monthly Web Tips, go to www.reid.com and click on "Helpful Info".

Resource Centre Roundup



Money Launderer's Haven

When people think of money laundering most think of offshore Caribbean countries as havens. The fact is that most Caribbean countries along with Switzerland are no longer the money launderers paradise they used to be. Every year more and more countries co-operate with the Financial Action Task Force (FATF) to adopt new anti-money laundering measures.


To read the [2005-2006 Annual Review of Non-Cooperative Countries and Territories](#) click on the link found in the "Business Name Search/Land Titles/Personal Property" category in the Resource Centre.

North American Directory of Regulatory Boards and Colleges



Want to verify if your subject requires a provincial or state professional license? For a complete list of links to professional associations including accountants, dentists, engineers, physiotherapy, physicians and surgeons and many more click on the [North American Directory of Regulatory Boards and Colleges](#) link found in the "Business Name Search/Land Titles/Personal Property" category in the Resource Centre.

Canadian Prescription Drugs

 MediResource is a source for easy-to-use information on Canadian prescription drugs. Just type the drug name (or part of the name) in the search box and find the following:


- how your medication works
- the right way to take it
- when you shouldn't take it
- possible side effects
- what drugs shouldn't be taken together
- and more

Portable Encryption



Anytime you take work on the road, you should secure the information from thieves. A great way to do this is through encryption. Even if you lose your thumb drive, your documents will be unreadable. Visit our Resource Centre and download the encryption software that can encrypt everything on your thumb drive.

Wireless Internet Guide to 218 US Airports

 If you're planning a trip and are making a stop over in the U.S. see the list of U.S. airports that have Wi-Fi available, and on which concourses. That will take the guesswork out of finding a connection.

Click on the [Wireless Internet Guide to 218 US Airports](#) link found in the "Planes, Trains & Automobile" category in the Resource Centre.



"Knowledge is Power"

www.cpirc.com

Canadian Private Investigators' Resource Centre

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