I CAN'T HEAR A THING!

I THINK I SEE YOUR PROBLEM.
Voice Grade Telephone Cable

Main Types - Outdoor

Heavy Duty Type, Weatherproof, Sun Protected, Mechanical protection from damage. Some types can be buried in the ground. Cable jacket normally black.

Main Types - Indoor

Light Duty Type, Used Indoor only, not weatherproof, can be run in conduits, cable trays etc., can be fixed surface. Cable jacket White or Beige.

CABLE CONSTRUCTION

Basic Cable is One Set of 2 Wires Called A ñTwisted Pair ñ

PVC jacket
Telephone Cable is Manufactured in standard sizes ie 1 pair, 2 pair, 3 pair, 4 pair, 6 pair, 10 pair, 15 pair, 20 pair, 30 pair, 50 pair, 100 pair

A Standard colour code is used to identify each pair. The colour code is repeated through each size of cable. ie

BLUE
ORANGE
GREEN
BROWN
SLATE (grey)

Matched with a ñTrace Colourñie WHITE

BLUE / WHITE
ORANGE / WHITE
GREEN / WHITE
BROWN / WHITE
SLATE / WHITE

ñFirst 5 pairs ñ

RED

BLUE / RED
ORANGE / RED
GREEN / RED
BROWN / RED
SLATE / RED

ñSecond 5 pairsò

This is a 10 Pair Cable
Standard telephone installations normally require ONE PAIR for each telephone, so a cable is selected to suit the job. Ex. 22 phones use 30 pair with some spare pairs for additional telephones which may be added. PLEASE NOTE some telephone systems use TWO pairs for each phone i.e. voice & data.
Krone (pronounced "krona") Module Types

Connect Module
Solid connection through module pins

Disconnect Module
Switched connection through module pins, allows testing without cable removal

Hi-band Module
For Ethernet network cabling ie. jointing, patching etc.

Infinity Cabling
KRONE TELEPHONE CABLING BLOCKS

**Connect Module 20** 20 Position Block (10 Pairs)
Point to Point Connection (Limited test options)

**Disconnect Module** 20 Position Block (10 Pairs)
Point to Point Connection (Full test options)

Building Wiring

Normal Connection

Building Wiring

pabx

Test equipment

All wiring available for testing without removing cable from krone block

4 Pin Test Plug Inserted

Building Wiring

Building Wiring

pabx

INFINITY CABLING
KRONE (Pronounced "Krona") Disconnect Module

Termination Block for 10 Pairs Telephone Cable

10 pairs
20 pairs
30 pairs
40 pairs
50 pairs
60 pairs
70 pairs
80 pairs
90 pairs
100 pairs

10 blocks = 100 pairs

Typical 400 Pair MDF
(Main Distribution Frame)
# Telephone Cable Colour Code

## PRIMARY COLOURS x 5

<table>
<thead>
<tr>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUE</td>
</tr>
<tr>
<td>ORANGE</td>
</tr>
<tr>
<td>GREEN</td>
</tr>
<tr>
<td>BROWN</td>
</tr>
<tr>
<td>SLATE (Grey)</td>
</tr>
</tbody>
</table>

## TRACE COLOURS X10

<table>
<thead>
<tr>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHITE</td>
</tr>
<tr>
<td>RED</td>
</tr>
<tr>
<td>BLACK</td>
</tr>
<tr>
<td>YELLOW</td>
</tr>
<tr>
<td>WHITE / BLUE STRIPE</td>
</tr>
<tr>
<td>RED / BLUE STRIPE</td>
</tr>
<tr>
<td>BLACK / BLUE STRIPE</td>
</tr>
<tr>
<td>YELLOW / BLUE STRIPE</td>
</tr>
<tr>
<td>WHITE / ORANGE STRIPE</td>
</tr>
<tr>
<td>ORANGE / RED STRIPE</td>
</tr>
</tbody>
</table>

## EXAMPLE FIRST 10 PAIRS

<table>
<thead>
<tr>
<th>Primary</th>
<th>Trace</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUE</td>
<td>WHITE 1</td>
</tr>
<tr>
<td>ORANGE</td>
<td>WHITE 2</td>
</tr>
<tr>
<td>GREEN</td>
<td>WHITE 3</td>
</tr>
<tr>
<td>BROWN</td>
<td>WHITE 4</td>
</tr>
<tr>
<td>SLATE</td>
<td>WHITE 5</td>
</tr>
<tr>
<td>BLUE</td>
<td>RED    6</td>
</tr>
<tr>
<td>ORANGE</td>
<td>RED    7</td>
</tr>
<tr>
<td>GREEN</td>
<td>RED    8</td>
</tr>
<tr>
<td>BROWN</td>
<td>RED    9</td>
</tr>
<tr>
<td>SLATE</td>
<td>RED    10</td>
</tr>
</tbody>
</table>

10 x 5 = 50 PAIRS
INFINITY CABLING

Telkom Infrastructure

Telcom Trunk lines

Third Floor

Local DP 3

Second Floor

Local DP 20

First Floor

Local DP 10

Building Ground Floor

Local DP Go

Telephone Exchange (SA TELKOM)

Underground Cable

PBX System

PBX Services
Exts, Night bells etc

User Devices
(Office Wiring)

PBX Cables

Jumper Cable

Infinity Wiring

Phones, FAX, adsl etc.

Krone Connection Block

Private Infrastructure

PBX- Private Branch Exchange
PABX- Private Automatic Branch Exchange
DP- Distribution Panel

TYPICAL BUILDING DISTRIBUTION
Ratio of Telkom lines to extensions is determined by user requirements, however PBX Systems are supplied with a specific number of lines/extension. System should be chosen carefully with upgrade options available for expansion.
Private Automatic Branch Exchange

PABX Equipment
Company Premises

Incoming Telkom Lines from Exchange

Cell Phone Routers
(Quantity chosen by Pabx User)

Building Cabling

User Extensions

Extension call to cell number, \textit{routed} to cell network directly
To bypass Telkom system to save cost on connection charge
Digital Enhanced Cordless Telecommunications

Called "Cordless Phones, Wireless Handsets etc"

Basic System
- DC Power
- Telecom Line
- Base Station/Battery Charger
- DECT Handset

Typical Unit

This Phone is a fixed line system with a Wireless handset (range +/- 30 mtrs)

DECT Enabled Pabx system
- PABX/PBX
- Telecom Lines
- Wired Handsets
- DECT Base Station
- DECT Handsets

Example Siemens BS2/2 DECT Base Station

Multiple Handset System
- Base Station
- Chargers
- Answering Machine, intercom, call holding etc.
Basic Tone Generator Operation

Amplified Probe
(Detects magnetic field and generates an audible tone)

The probe will amplify all signals detected on cable including voice conversation, noise, data etc. This may cause the generated tone not to be heard.
FLUKE Intellitone Tone Generator Operation

Amplified Probe
Detects data word and turns on green Sync light. As the probe gets physically closer to cable being searched for an audio tone is generated and signal strength lights turn on.

The Fluke Probe only listens for a specific code and ignores all other signals present on cables.
Standard ADSL Installation

Additional Telephone Outlets

Network Cabling if Multiple PCs on single ADSL Router/Switch

ADSL
Asynchronous Digital Subscriber Line