

OWNERS MANUAL

# MODEL 5106

**BASE MASTER**

**SIGNALCRAFTERS TECH, INC.**

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### 1. FUNCTION

The 5106 Base Master provides for both DTMF encoding and decoding over wireline, radio links, dial-up or microwave audio paths. Replacing the Models 2106 and 2107 Base Masters it sends commands to Signalcrafters controllers/loopback receivers and decodes commands returned from them.

For alarm, status and analog applications up to 70 site addresses may be decoded and converted to plain text printouts. All reports are date and time stamped via the associated computer.

When used in an alarm status configuration the computer terminal should be dedicated to this function.

Model 5106 is compatible with following Signalcrafters (Ledex) equipment.

Models 2109 & 5109 (Status)

Models 2212 & 5212 (Loopback)

Models 2110, 2222 & 5222 (Analog/Status)

Model 2493 & 5493 (Modem)

## 2. COMPONENTS OF THE SYSTEM

The Model 5106 system consist of a desk/wall mount case, a DTMF modem module (Model 5493), regulated AC to 24 Vdc adapter, software, computer to modem interface cable and instruction manual(s). A computer terminal is required and may be supplied by Signalcrafters as part of the system or supplied by the user. See hardware section for suggested computer configurations when not supplied with system.

## 3. HARDWARE (COMPUTER)

Basic computer terminal requirements are subject to the users purpose and application. As a guide, the following is recommended for the various operating systems when the terminal is not supplied as part of the system.

### DOS (3.3 or higher)

- 486-25 or higher processor
- 3.5" Floppy Drive
- VGA Graphics/Monitor
- 4 MB RAM or higher
- 1 MB of Hard Drive space
- 1 Serial Port
- 1 Parallel Port
- 101 Enhanced Keyboard
- Dot Matrix Printer

### Windows 95, 98, ME, XP Home

- P-75 or higher
- 3.5" Floppy Drive
- VGA Graphics/Monitor
- 32 MB RAM or higher (64 MB preferred)
- 5 MB of Hard Drive space
- 1 Serial Port
- 1 Parallel Port
- 101 Enhanced Keyboard
- Dot Matrix and/or laser, inkjet Printer
- CD ROM
- Sound card (annunciate alarms)

### Windows NT 4.0, 2000, XP

Same as Windows 95 & 98 with the following changes:

- 64 MB RAM or higher (128 MB preferred)
- No sound card is required. (alarms annunciated through computer speaker)

## 4. SOFTWARE TYPES

Software is supplied on 3.5" floppy disk(s). A CD may be supplied if it was requested at the time of order. Any reference herein to inserting a disk will be for either storage media and not differentiated.

Programs for both DOS and Windows operating systems are supplied. While the DOS version is functional the Windows version is more versatile. Choice of operating system used is up to the user and the terminal available if not supplied with the system.

DOS operating systems require version 3.3 or higher be loaded on the computer terminal.

Windows version of the software is written for use on: Windows 95, 98, NT 4.0 or 2000 of which one must be loaded on the computer terminal.

## 5. GETTING STARTED/INSTALLATION

5.1 Upon receipt inspect the equipment for any possible shipping damage. If damage is found, immediately file a claim with the carrier. If the equipment has been in storage re-inspect it prior to installation. Do not operate equipment with obvious or known damage, broken wires, etc. until they are repaired by trained personnel. Standard safety procedures must be adhered to and only qualified technical personnel should work on this equipment.

5.2 Case: The case may be either wall or desk mounted in a horizontal or vertical plane. It is suggested that the Model 5106 label be mounted facing upward, left or right (not down) on wall mount installations. First select the location for the case keeping in mind a (6) six-foot (1.83 m) cable is supplied with the terminal to connect to the computer and the AC adapter (same length as cable) needs to plug into an AC outlet. Line connections (wireline or other audio paths) will also be made to the case.

Desk Mount: Place the case on a stable flat surface with enough room around it to make connections. Do not stack papers or other items on or near the case. Four rubber feet are provided on the base to prevent scratching the surface. There are four mounting holes on the bottom of the case if attaching it to the flat surface is desired. (See wall mounting and removing the cover details below—screws for mounting are **not** provided)

Wall Mount: See Removing the Cover first. There are four mounting holes on the bottom of the case for attaching the case to a vertical flat surface. The case is shipped with four (4) rubber feet for desktop use. When wall mounting these feet may be removed, if desired, to allow the case to be flush mounted. Four (4) mounting screws (**not** supplied) of a suitable type for the material of the wall/panel on which the case will be mounted are required.

5.3 Removing the Cover: The top cover and the base of the case are inter-wired. Care should be taken not to put stress on either when the cover is removed. The cover is held in place with by two retainer latches located on each side of the cover near the front to back center. An arrow on the latch indicates the latch position. To open, use a flat head screwdriver to turn the latch so the arrow faces towards the center of the case and repeat this for the other latch. Gently pick up the lid from the front (Model 5106 sticker side) towards the back. The electronics and mounting holes will be exposed. The module may be removed by sliding it out the front (avoid static contact if the module is removed and placed on a surface—use the module handle to carry the module). After mounting the bottom of the case carefully replace the module and cover insuring that the wiring is within the case. Tighten the two latches by turning them with a flat head screwdriver so the arrows face outwards.

5.4 Power Supply: The standard regulated AC adapter provided with the system has an operating range of 90 to 264 VAC and a line frequency range of 47 to 63 Hz. Its output is 24 Vdc at 18 W. Agency listings: UL 1950, CSA 22.2, TUV EN60950; MITI. Adapter lead length is approximately 6' (1.83 m).

Connecting the power supply: Insure the AC adapter is compatible with the AC outlet type, voltage, frequency and mechanical specifications. Plug the 24 Vdc end into the case first at the jack marked "24 VDC INPUT" then plug the AC adapter into an approved outlet.

**Grounding Note:** The case of the Model 5106 may be grounded if desired. However, the +/- 24 Vdc must be isolated from ground.

5.5 Computer Interface: A six (6) foot (1.83 m) cable (DB9M to DB9F) is provided to connect the unit to the Computer terminal. The male end of the cable mates with the Model 5106 connector at the connector marked "COMP. INT.". On the opposite end connect the cable to the Serial Communications Port (COMM PORT) of the computer terminal. Note the comm. port for future reference when setting up the software.

USING COMM PORT # \_\_\_\_\_

5.6 Terminal Connections: Model 5106 can be used with both an audio line as well as a PSTN (Public Switched Telephone Network). When used with a PSTN a registered coupler (Signalcrafters Model 2945) is often required and mandatory (Check with your local telephone provider for requirements). Connections made depend on the application and all connections may not be required. Refer to Figure 1.

**When used as a Model 5106 not connected to the PSTN** the Transmit out terminals should be connected to the line (TB2-1 & TB2-2) going to the remote receiver. Receive in terminals (TB2-3 & TB2-4) should be connected to the line coming from the remote transmitter.

No further connections are required. If this is a special application additional information will be provided as an addendum at the end of this manual.

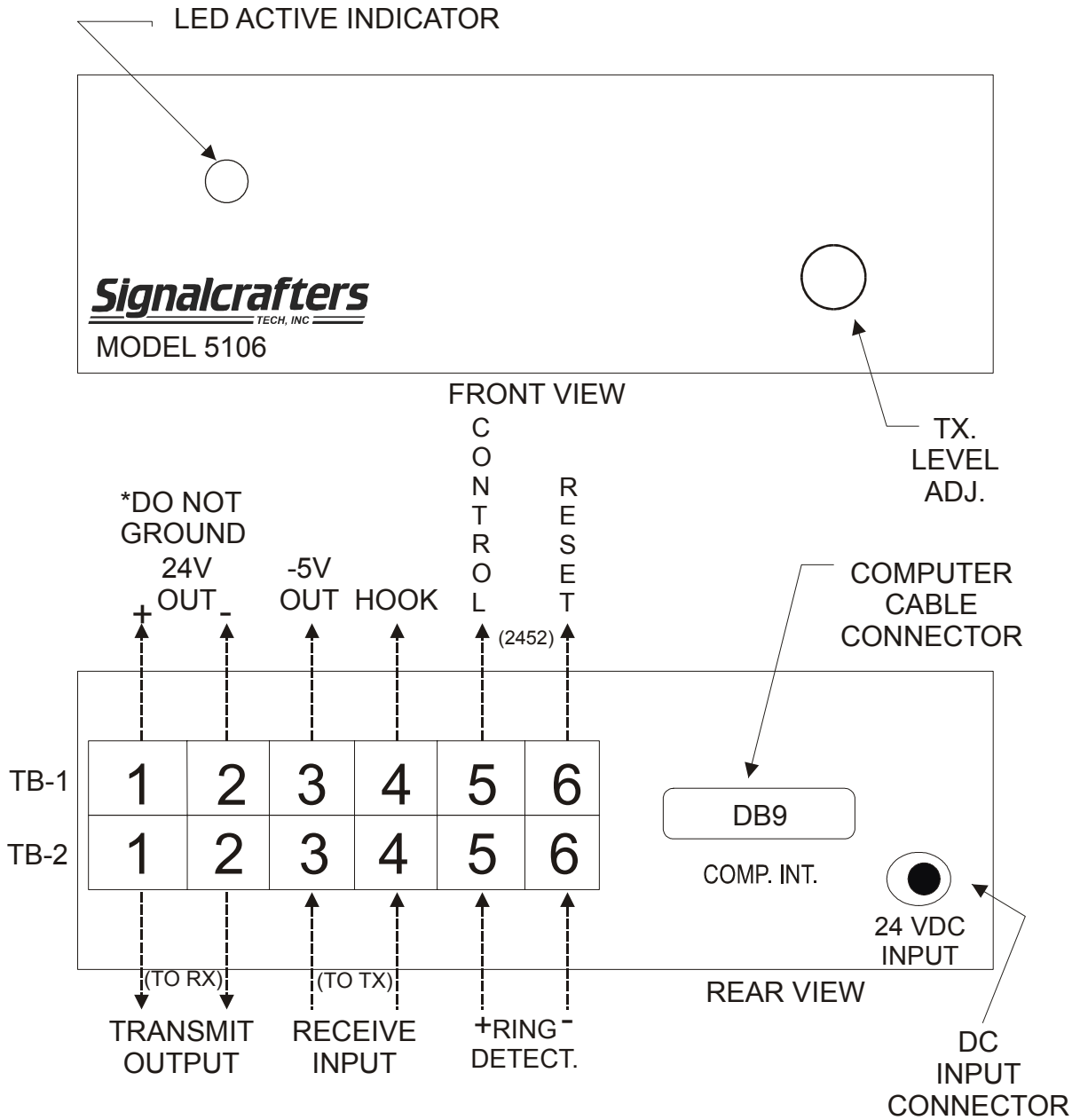


Figure 1 FRONT/REAR VIEW

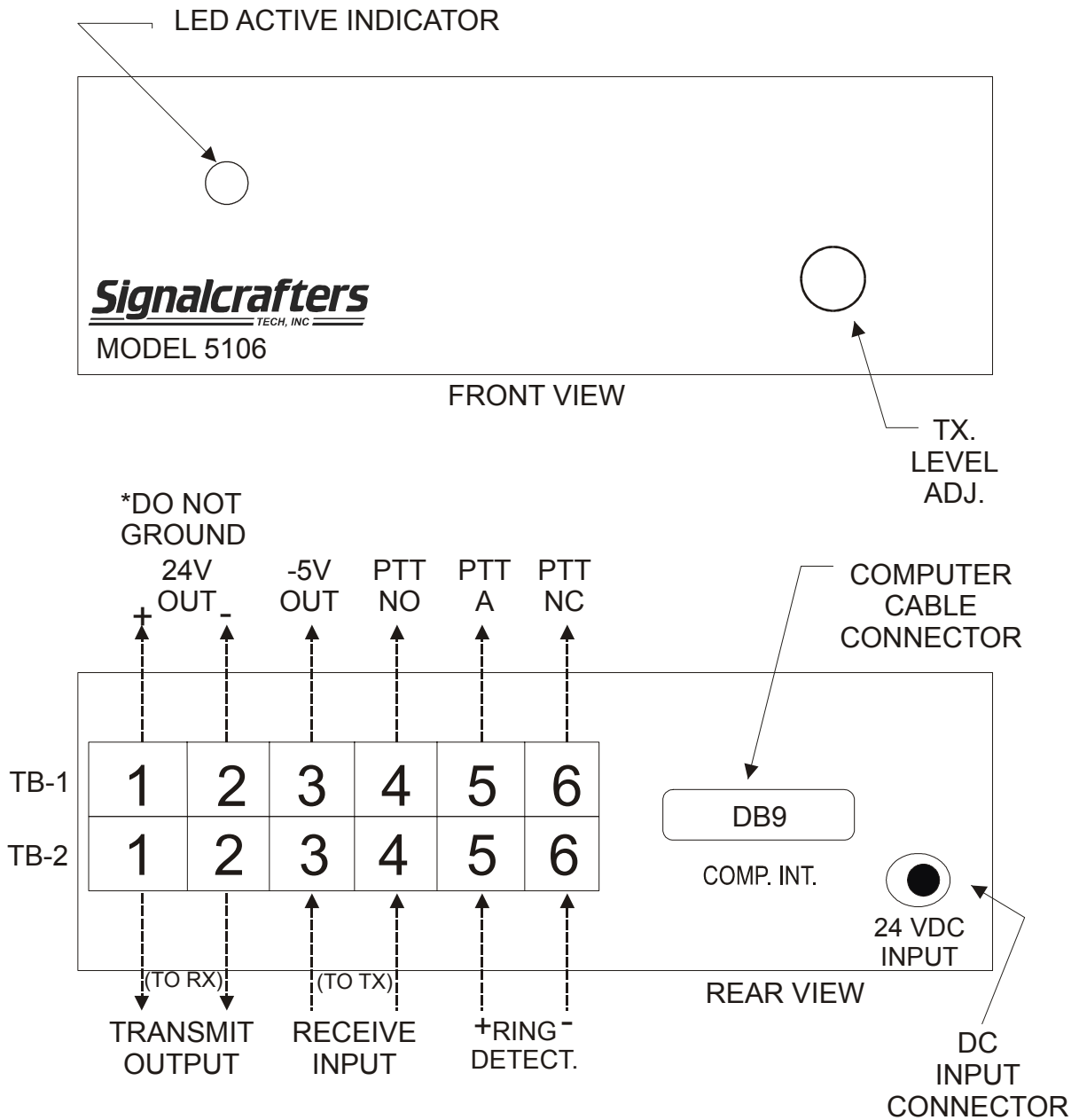


Figure 2 FRONT/REAR VIEW

**When used as a Model 5106 connected to a PSTN and Signalcrafters telephone coupler (Model 2945) is used the following connections are to be made. A Model 2945 contains a DB-9 connector that connects to the 5106 Base Master. When supplied as a system a cable will be provided to connect from the terminal blocks on the 5106 to the DB-9 connector on the Model 2945. DO NOT CONNECT THIS CABLE TO THE COMP. INT DB-9 ON THE MODEL 5106.**

This completes the connections required to operate the standard Model 5106.

5.7 Software: There are two versions of software supplied with the Model 5106, DOS and Windows. To install the software follow the instruction in the STATUS MONITOR SOFTWARE manual for Windows or the DOS version manual.

5.8 Controls and Indicators: (Refer to Figure 1)

On the front panel of the Model 5106 there is a LED Active Indicator. When the modem (5493) inside the case is exchanging information it will show red. It is not a power indicator and will not be lit at all times. Its purpose is only to show activity of the unit without removing the case cover.

Also on the front panel is an access hole for the front panel level control of the transmit output level to the wire line. The equipment is shipped set to 0dBm. The test tone may be turned on by the computer terminal and checked with an appropriate meter connected to the Transmit Output terminals. The commands for this can be found in the Model 5493 manual ( Pg. 6, Sect. 5.11). Use command ABCA04 that starts at 1004 Hz and steps upward. You may have to repeat this several times because the tones last approximately 2 seconds each.

On the right hand side of the case there are two whole covers. Neither needs to be removed on a standard Model 5106.

The Modem board (5493) inside the case is factory set for the application known at time of shipment. If access is required to change program settings not accessible by the computer terminal, first follow the steps in 5.3 REMOVING THE COVER. The program features made on the modem card 5493 can be found in the Model 5493 manual under the programming section (Pg. 3, Section 5).

These setting are normally correct for the application when shipped. When referring to the programming section of **the 5493 manual** keep in mind the **locations of the switches and jumpers are on the MODEM module and not on the 5106 case.**

5.9 This completes the basic installation instructions. See INDIVIDUAL MANUALS below.

## **6. INDIVIDUAL MANUALS**

In addition to this basic procedure, manuals are provided to cover the software and electronics provided. For additional information and schematics (when applicable) refer to those manuals. Typical manuals provided, when purchased as part of the terminal:

MODEL 5106	Technical Manual
MODEL 4002	Status Monitor Software for Windows 95, 98 and NT 4.0
MODEL 4002	Status Monitor Software (DOS Version)
MODEL 5493	DTMF Modem
MODEL 2945	Telephone Coupler
Computer	Supplied if purchased from Signalcrafters
Printer	Supplied if purchased from Signalcrafters.

## **7. WIRING DIAGRAM**

At the end of this manual, an internal wiring (SCT-WD-0014) diagram of the case is provided for your reference.