

TC-1104 Translation Terminal

Overview

The TC 1104 Translation Terminal provides functions typically required for simultaneous language translation or other applications for radio or television broadcast commentators. The unit provides for monitoring three (3) mono high level, balanced audio sources that can be selectively mixed to either or both ears of the connected stereo headphones. There are three switched high level outputs, A, B and Talkback. All outputs are all electronically balanced, low impedance. The switching functions for the talk paths are microprocessor assisted and have three (3) available switching modes. The talkback function is always momentary and will mute either A or B output if active. A mic on/off switch will turn off the mic signal to the A or B path, whichever is active. The "Mute" or "Cough" button will momentary and will mute either A, B or both as selected. An external control port is available that will selectively mimic individual front panel button functions based on the operating mode selected. Switching modes and remote definitions are dip switch selectable on the rear of the unit. DC power to the unit is provided by a UL approved, table top external power supply with a 120 VAC 60 hz. input. A Power supply is furnished with each unit.

Monitoring Functions

Input signals for Channel 1, Channel 2 & Aux Input, are applied to the respective female XLR connectors on the rear panel. These inputs are balanced, bridging with a nominal 20K Ohm impedance. Signal input levels should not exceed a nominal +4 DBU. Stereo headphones are plugged into the ¼ connector on front of the unit. Sufficient drive is available to accommodate a wide range of headphone impedance. Headphones with a 600 ohm to 2K ohm impedance will yield the best results. Each monitor channel has an individual level control that has a "minimum setting" at full CCW so that it cannot be completely turned off. If desired, this can be defeated by installation of a jumper on the underside of the PC board. (see schematic). Each of the three channels has a front panel switch labeled " L B R " just to the left of the volume control. This allows the user to direct each channel signal to the left ear, both ears or right ear of the headphones. The level controls allow the user to "mix" the input signals as desired.

Switched Input and Outputs

The signal to be switched by the TC-1104 is applied to the "Mic / Line Input". If a dynamic microphone source is applied to the TC-1104, dipswitch "G" should be in the down position for a mic level input. In the "mic" position, the gain range is aprox. -50 dbu to -10 dbu. Use the "gain adjust" to provide gain as required to make a nominal +4 DBU peak signal at the switched outputs.

If a line level signal will be applied to the input, set dip switch "G" to the up position. The signal level should be a nominal "0" to + 4 DBU peak. In line level, the gain range is aprox. -10 to +4 DBU. Typically, the gain pot should be fully CCW for a line level input source.

For either a mic of line input, the gain structure must be properly adjusted or distortion can occur. This gain setting can be best accomplished by using an extended range VU / PPM meter such as a Ward Beck M-405 or McCurdy ATS-100 or other peak indicating device. VU metering devices do not accurately indicate what the real peak levels are. Adjust the gain as required to yield a nominal +4 DBU peak at the switched A or B output.

Switch Modes & External Control

(Refer to Figure 1 & 2 Below)

Switching functions for the TC-1104 are set by the dip switches on the rear of the unit (Figure 1). One of the three (3) possible modes must be selected. If both mode switches are in

the off position, there will be no functionality of any of the front panel buttons. The three possible switching modes are, A / B Toggle, A and B momentary or, A and B latching. These functions are selected by the first two dip switches A and B. The available external function varies for each respective switching mode. The available external functions are shown to the right of the mode switches. (figure 2)

The Mic on-off button will toggle the mic signal on or off (*latching action*) unto the selected A or B outputs in all three switch modes. This is useful to turn the mic off if the switching mode selected is A / B Toggle. Pressing the Mute button (*momentary action*) will mute the A and B outputs in all three modes as long as it is depressed. Pressing the talkback button (*momentary action*) will always mute the signal at the A and B output and will always present the input mic signal to the TB output regardless of the state of the mic on-off button. All button tally to a brighter state when active. Upon boot up, a lamp test is conducted and the pattern of the flashing of the buttons indicate which mode and which remote function s programmed. During boot, all outputs remain muted until the boot up is complete. The unit will always go through a boot sequence when powered up.

Dip switches C, D, and E select which function will activate upon a momentary closure on the leads of the rear panel remote control jack. External control is available on the ¼ " (Mono wired) jack on the rear. This could be the form of a foot switch or hand held pendant type push button. Providing a momentary dry contact closure will activate the selected function.

Note that dip switch "F" has no function and is reserved for future features. Dip switch "G" selects Mic or Line input sensitivity.

Warning ! Do not apply any type of external voltage potential to the external control port as damage can result. Isolated dry contact closure only !!!

NOTE: The dip switches are read upon initial boot of the internal microprocessor. If any switch is changed while power is applied, a re-boot must be preformed so that the switches can be read again. This re-boot is accomplished by removing power momentarily or pressing the small recessed black "Reset" button next to the dip switch.

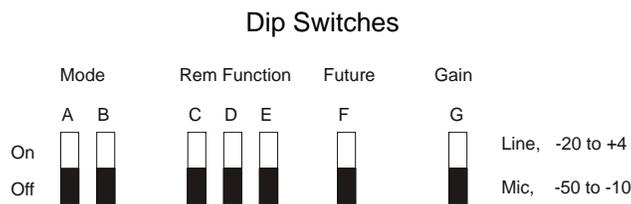


Fig-1

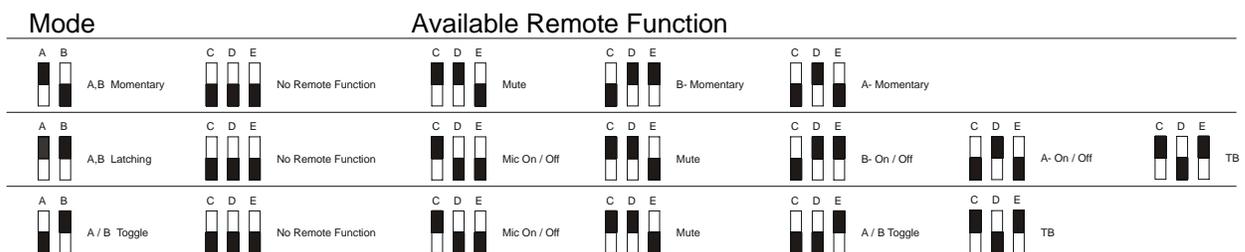


Fig-2

TB Sidetone

The TC-1104 features "sidetone Inject" whenever the talkback function is active. This allows the user to hear their own microphone signal only when the TB button is pressed. The level of side tone injection is set by the recessed pot labeled "ST" on the front panel just to the left of the headphone jack. A selected amount of the mic signal is summed to both channels of the headphone amplifiers. This injection is post of the CH-1, CH-2 and Aux volume controls. If sidetone is not desired, turn the "ST" pot fully CCW.

Warranty

Twecomm Inc. warrants its products to be free from defects in materials and workmanship for a period of 90 days following the date of shipment to the original purchaser. This warranty does not cover products that have been damaged by accident, disaster, abuse, neglect, misuse, improper handling, or incorrect installation. Furthermore, it does not cover products that have been altered, modified or repaired by anyone other than Twecomm Inc. This warranty does not cover products that may be damaged while in shipment to or from Twecomm Inc.

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Twecomm Inc. sole and exclusive liability will be, at it's option, to repair or replace, any such product which fails during the applicable warranty period provided that :

- A Buyer promptly notifies Twecomm Inc. that such product is defective and furnishes an explanation of the deficiency.
- B Such product is returned to Twecomm Inc. with shipping pre paid at Buyer's risk.
- C Twecomm Inc. is satisfied that claimed deficiencies exist and was not caused by accident, misuse, neglect, alteration, modification, attempted repair or improper installation.
(Contd.)
- D If product is indeed found defective, transportation charges for the return of product to buyer within the continental United States will be paid by Twecomm Inc. For all other locations outside the continental United States, the warranty excludes all costs of shipping, customs clearance, and any other related charges. Twecomm Inc. will have a reasonable time to make repairs, or replace the defective product.

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