HARRIS

Network Support Division

CITS®21 Caller Identification Test Set

next level solutions

User Manual

User Manual

NOTICE

Harris Corporation makes no warranties about this document. Harris Corporation reserves the right to make hardware and software changes to the product described within this document without prior notice and without obligation to notify any person of such revision or change.

TRADEMARKS

CITS21 is a registered trademark of Harris Corporation.

REGULATORY INFORMATION

WARNING: This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the installation manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15, Subpart J of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of the equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

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General Information

WARNING:

Good safety practices prohibit the connection of the CITS®21 and similar test sets to 117 Volts AC commercial electrical power. Should the unit be connected to commercial power, all warranties are immediately voided.

The Harris Caller Identification Test Set (CITS®21) employs the latest technology in integrated circuit design to provide caller identification to the telephone craftsperson. The CITS21, which can be carried on a technician's belt, also provides for last call memory and display. The compact, battery-powered CITS21 is designed for use in both the inside and outside plant environments.

Description

Physical Characteristics

The physical characteristics of the CITS21 are shown in Figure 1.

The housing (A) is injection molded of high impact polycarbonate. The case is designed to meet basic outside plant environmental requirements of humidity, altitude and rain.

The LCD display (B) has two rows with 16 positions each, for displaying complete incoming telephone number, time of day and directory name of calling party.

The recall button (C) allows for activating the LCD display to display the last message retained.

The female RJ-11 jack (D) allows for attaching a line cord or external clip with male RJ-11 plug on one end. A rubber plug is attached (not shown), to be inserted into the jack for protection from weather when the unit is not in use.

The battery compartment (E), accessed from the back of the case, houses the battery which powers the unit. The battery compartment is opened by loosening the screw with a small slotted screwdriver.

The belt clip (F) allows for convenient attachment to a craftsperson's belt.

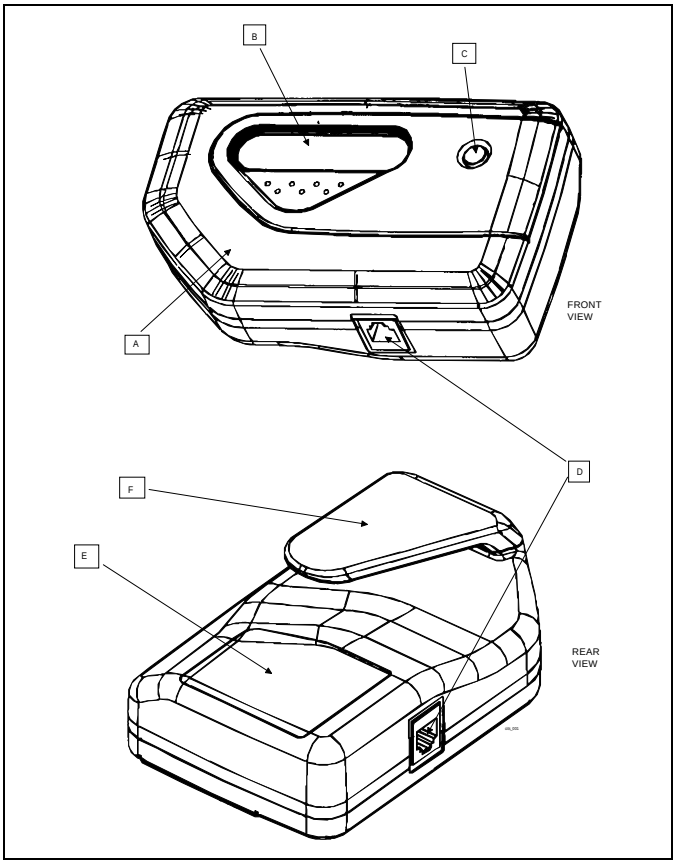

Figure 1. Physical Characteristics

LCD Display

The CITS21 is capable of displaying the complete incoming telephone number, date, time, and name of calling party. For areas offering number only service, the CITS21 will automatically detect and switch to that format to display: complete incoming telephone number, date, and time. The unit displays this information in a 2 x 16 (2 row by 16 position) LCD panel. The message is displayed for 10 seconds.

Status and Error Message

"*Ring*". This message is displayed when the first ring signal from a call is received. It is not displayed on subsequent rings.

"Caller ID Data Not Present". This message is displayed if Caller ID data was not sent between the first and second rings. This could indicate that the Caller ID service has not been activated for the line under test.

"* Error *** Corrupted Data".** This message is displayed if some of the Caller ID data was not received correctly. This message could indicate problems with the transmission characteristics of the line such as excessive noise, taps, loading coil anomalies, or incorrect signal levels.

"Missing or Unexpected Data". This message is displayed if the Caller ID data is interrupted or excessive line noise is present during data transmission.

"Unable to Sync - Noisy Line". This message is displayed if the CITS21 is unable to acquire data due to the presence of severe line noise.

"*Privacy*". This message is displayed if the calling party has blocked Caller ID data for privacy concerns.

"*Out of Area*". This message is displayed if the calling party resides outside the Caller ID service area.

"*AC Termination Disabled*". This confirmation message is displayed after the user has configured the CITS21 not to apply an AC termination impedance during data reception. If configured as such, this message is also displayed during ringing with the "*Ring*" message.

"*AC Termination Enabled*". This confirmation message is displayed after the user has configured the CITS21 to apply an AC termination impedance during data reception.

Recall Button

After the 10 second message display, the CITS21 powers down for battery conservation. The last message remains in memory. Pressing the recall button re-activates the LCD Display, and displays the last data retained, as long as sufficient battery charge is available. The recall button will also activate display of a secondary screen to display directory name information. If the recall button is pressed and held for more than 5 seconds, the AC Termination mode will be toggled (enabled or disabled).

Accessories

A 9 Volt alkaline battery (NEDA 1604A) is included.

Optional accessories (see Table 1) are available and may be ordered by calling Harris Customer Service at 1-800-437-2266.

Table 1. Accessories

Accessory	Part Number
Line Cord, Modular Plug to Angled Bed-of-Nails Clips	P3224-022
6-Wire Banjo™ Adapter	10220-100
RJ-11 Extension Cord (5 to 6 ft.)	*
RJ-11 Duplex Adapter (RJ-11 Plug to Dual RJ-11 Jacks	*
*Available at any telephone accessory store	

Connections

The CITS21 interfaces to Tip and Ring via a standard RJ-11 modular jack. Figures 2 through 5 show four possible connection configurations.

Connect the CITS21 to a wall jack using a male-to-male RJ-11 cord (see Figure 2).

Connect the CITS21 to the Tip and Ring of a terminal block using one of the line cords listed in Optional Accessories (see Figure 3).

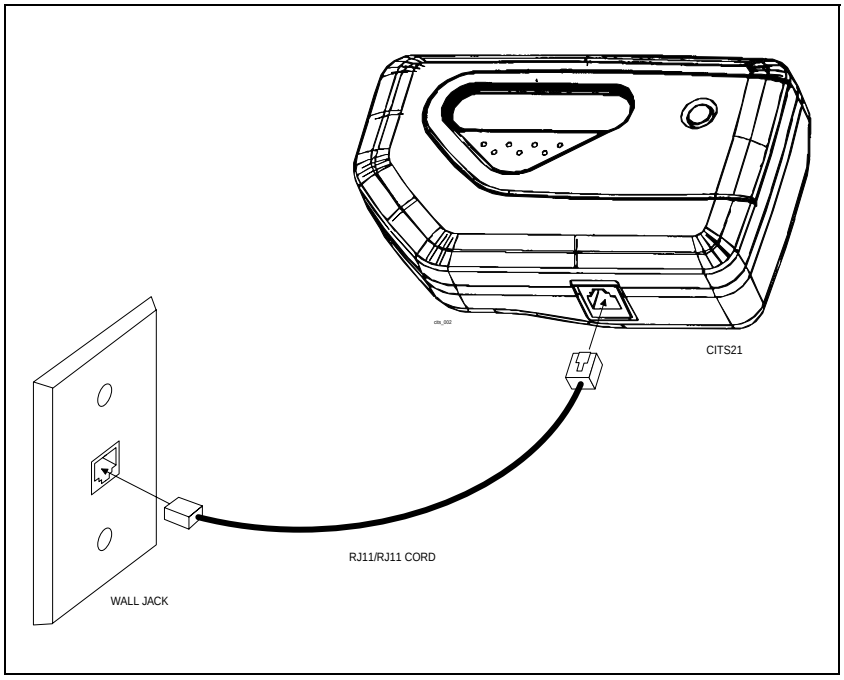

Figure 2. Wall Jack Connection

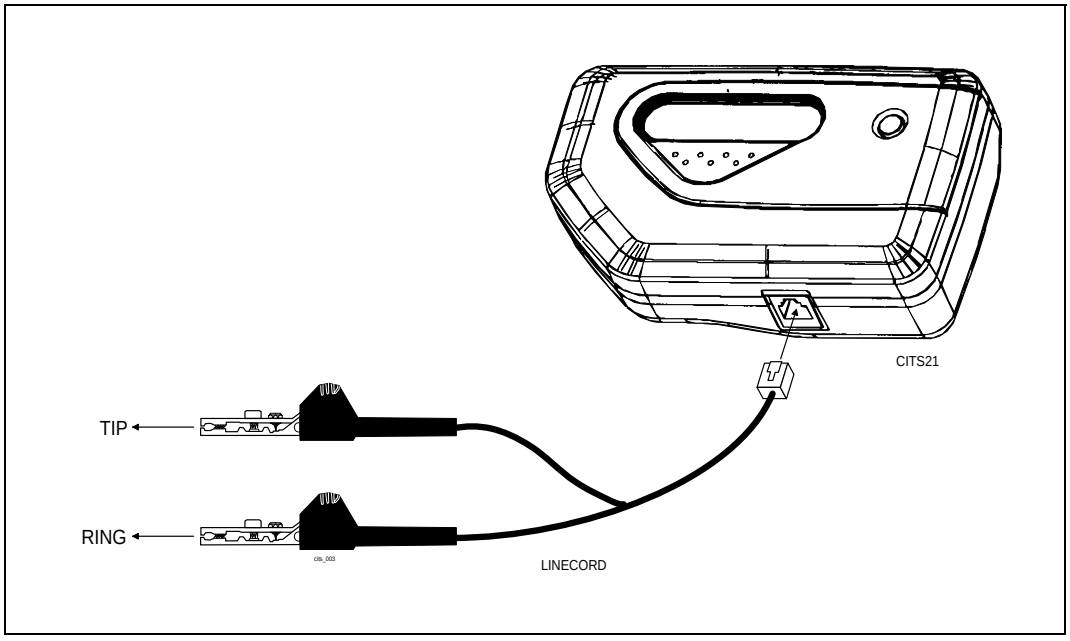

Figure 3. Line Cord to Tip and Ring Connection

Connect the CITS21 and a butt-in test set to the same line, using an in-line modular adapter (Banjo). Line cord connections are to R (Ring) and G (Tip) of the adapter. Connect the other end of the adapter to a wall jack using a male-to-male RJ-11 cord (see Figure 4). The CITS21 will not interfere with the normal operation of the butt-in test set or circuit under test.

Plug an RJ-11 duplex adapter (RJ-11 plug to dual RJ-11 jacks) into the CITS21. Using two male-to-male RJ-11 cords, connect one adapter jack to a wall jack, and the other adapter jack to a subscriber telephone (see Figure 5).

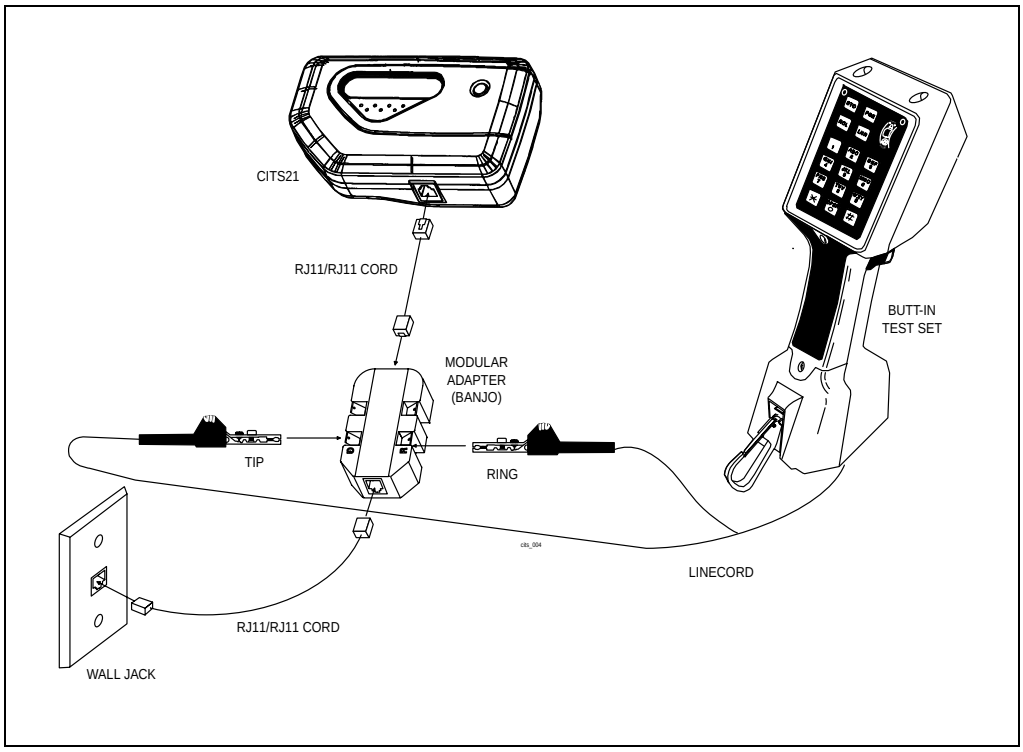

Figure 4. Connection for Butt-in Test Set

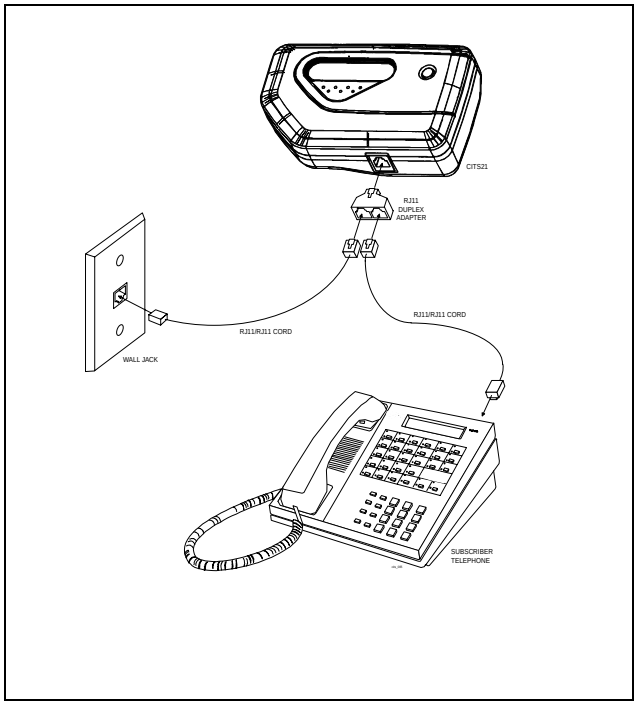

Figure 5. Connection for Subscriber Telephone

Operation

Procedure

1. Choose a connection configuration as described above and make the connections.
2. Use the butt-in test set or subscriber telephone to place a call to the Central Office (CO) or other known number and request a Call Back.
3. Place the butt-in test set in monitor mode, (on-hook), or hang up the telephone.

A "*RING*" message will be displayed during the first ring.

The main message is then displayed: date, time, and calling number. The message is displayed for approximately 10 seconds.

If a directory name is sent by the CO, the name can be viewed on a secondary screen by pressing the recall button. Pressing the recall button toggles between the primary (date, time, number) and secondary (number, name) screens. Presence of directory name information is indicated by an arrow (">") to the right of the calling number.

Last Message Display

Press the recall button. The last message will be displayed for approximately 10 seconds.

AC Termination Mode

The default status on initial power up (install battery) is for the CITS21 to apply an AC termination load (650 Ω) across the line during the reception of data. The load is removed from the line once the Caller ID data is received. The user can disable the automatic application of this load by holding the recall button for 5 seconds. The message "AC Termination Disabled" is displayed as a confirmation and it will also be displayed during the ring interval as a reminder that the termination will not be applied. To re-enable the AC termination, the user holds the button for 5 seconds. The message, "AC Termination Enabled" is displayed, indicating the changed status. This message is not displayed during the ring interval. The AC termination mode (enabled or disabled) is toggled each time the button is depressed and held for 5 seconds. The last setting remains in effect until changed by the user or the unit's battery is removed.

Maintenance

The CITS21 is designed to meet basic outside plant environmental requirements, and requires little maintenance. The rubber plug attached to the case should be inserted into the RJ-11 jack when the unit is not in use.

Battery Replacement

If the display does not appear when the recall button is pressed, the battery may need replacing. The 9 V Alkaline (NEDA 1604A) battery is accessed by loosening the screw on the battery compartment with a small slotted screwdriver.

Cleaning the Housing

Clean housing with nonabrasive soap and water. (Prevent LCD window from being scratched).

CAUTION:

Do not use CRC Cable Clean® or any similar chlorinated solvent on the CITS21. Doing so will damage the test set.

Warranty

Harris Corporation warrants that its products are free from defects in material and workmanship for the following periods:

- Test Sets – 18 months from date of manufacture.
- Line Cord and Accessories – 90 days from date of purchase.

This warranty constitutes the sole and exclusive warranty for products sold by Harris Corporation's Network Support Division and is in lieu of any other warranty, express, implied, or statutory, including the warranty of merchantability and fitness for a particular purpose. In no event shall Harris be liable for any special, incidental, indirect, or consequential damages arising out of the use of any product or from any other cause.

This warranty shall not apply to products which have been subjected to mishandling, abuse, misuse, negligence, or accident, nor to products which have been modified, altered, or repaired by personnel not authorized by Harris.

Return or Repair of Equipment

The return of any products for credit, other than for warranty service, is done at the sole discretion of Harris Corporation. Before any product is returned, including for warranty service, a Return Authorization ("RA") number must be obtained from the Customer Service Department by calling 1-800-437-2266. If the RA number is not clearly marked on the shipping label, the package will not be accepted by Harris. All authorized returns must be shipped, with shipping charges prepaid, f.o.b. destination, and addressed as follows:

Harris Corporation
Network Support Division
809 Calle Plano
Camarillo, California 93012-8516
United States of America
Attn: Customer Support, RA# xxxxx

Ordering Information

Table 2 lists ordering information for the CITS21.

Table 2. Ordering Information

Description	Model Number
CITS21, with Angled Bed-of-Nails Line Cord	26005-009
Replacement Line Cord	P3224-022
6-Wire Banjo™ Adapter	10220-100

Specifications

Table 3 lists the specifications of the CITS21.

Table 3. Specifications

Parameter	Working Limits
ELECTRICAL	
Power Requirements	9 Volt Alkaline Battery (NEDA/ANSI 1604A)
Typical Battery Life	6 Months
DATA RECEPTION INTERFACE	
Data Format	Serial, binary, asynch
Mark Frequency	1200 ± 12 Hz
Space Frequency	2200 ± 22 Hz
Received Signal Level 1200	Between -32 and -12.5 dBm
Received Signal Level 2200	Between -36 and -12.5 dBm
Signal to Distortion Ratio	≥ 25 dB
AC Impedance	650 Ω, 1μF (nominal during data reception) >120 kΩ (idle, or AC Termination Disabled)
Ringer Equivalence No.	0.03B
PHYSICAL	
Length	5 5/8 inches
Width	3 7/16 inches
Height	1 1/2 inches
Weight	9 ounces
ENVIRONMENTAL	
Temperature	Operating: -25 to +60° C Storage: -40 to 66° C
Relative Humidity	5 to 95%
Altitude	Up to 10,000 feet
Rain Resistance	RainSafe™
Drop Survival (concrete surface)	6 feet, DropSafe™
Specifications subject to change without notice.	

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