

INTERTEK TESTING SERVICES

**EXHIBIT 11
INSTRUCTION MANUAL**

INTERTEK TESTING SERVICES

11.0 Instruction Manual

Attached is a preliminary copy of the Instruction Manual.

Please note that the required FCC Information to the User can be found at the front of this manual.

This manual will be provided to the end-user with each unit sold/leased in the United States.

FCC INFORMATION

Important: Do not open your radio to make any internal adjustments. Your radio is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the radio to exceed those limitations. Any adjustments to your radio must be made by a qualified technician using the proper test equipment. To be safe and sure:

- Never open your radio's case.
- Never change or replace anything in your radio except the batteries.

Your radio might cause TV or radio interference even when it is operating properly. To determine whether your radio is causing the interference, turn it off. If the interference goes away, your radio is causing it. Try to eliminate the interference by:

- Moving your radio away from the receiver
- Calling your local RadioShack store for help

If you cannot eliminate the interference, the FCC requires that you stop using the radio.

Commercial Grade FRS 21-1810 User Interface Guide

1. General Product Description

This is a portable hand held transceiver with LCD display operating at half duplex and frequency range of 462 MHz to 467 MHz. The unit incorporates 14 channels and 38 CTCSS sub-tones to identify user group to avoid unwanted signal interference.

The unit is ruggedized to take heavy daily use and accidental abuse. Intelligent CALL Ringer provides a dual tone ringer with volume that can be independently adjusted. This avoids missing calls when the voice volume of the unit is set low. (Only available when operates with units compatible to the 21-1810. Otherwise, the CALL function will be the same as any other FRS units.)

The unit also features a Channel and CTCSS lock pin hidden in the battery bay. Removal of the pin will lock the Channel and CTCSS settings to avoid any unauthorized alterations to the settings.

2. Control Description

- Power On/Off to turn the unit On and Off
- Mode to toggle the unit between 4 modes for setting. These 4 modes are Channel; CTCSS tones; Volume; Intelligent Call Ringer. (For a detail description of Intelligent Call Ringer, please see Section 8.)
- Call to page users in the group. The Call button when pressed will transmit a dual signal tone to other users' units. An audio feedback is also generated to indicate a tone is being sent. The tone will stop as soon as the Call button is released, and the tone will also stop automatically 5 seconds after the Call button is continuous pressed. If further call signal is needed, the user will have to release and press the Call button again.
- Rotary Switch used to perform selections in the various modes. **Unless disabled, the Rotary Switch is in the voice volume default mode.** Rotating the switch any time will cause the VOL icon to flash and the voice volume level can be adjusted. About 5 seconds after the voice volume is adjusted, the LCD display goes back to showing Channel icon and Channel number.
- PTT Push to talk for transmit and receive in half duplex.

- Monitor

press to disable the squelch function so that weak signal can also be received. The monitor function will only be activated for as long as the Monitor button is pressed.

3. LCD Description

- 2 Numeric digits

to display channel number, CTCSS sub-tone number, voice and ringer volume level from 1 to 8 levels

- Vol icon

flashing when voice volume control mode is activated

- Channel icon

flashing when channel select mode is activated

- Quiet icon

flashing when CTCSS select mode is activated

- bell icon

flashing when Call Ringer adjust mode is activated

- Battery Strength icon

Battery strength is indicated in four levels

- a. battery icon totally fill up - battery is full
- b. battery icon 2/3 fill up - battery is approximately 2/3 full
- c. battery icon 1/3 fill up - battery is approximately 1/3 full
- d. battery icon flashing - battery is almost depleted

(When the battery icon is flashing, operation of the unit will stop, and except the flashing battery icon, all other display will be turned off .)

- LOCK icon

on when the voice volume is locked.

4. External Jack

- Combination Jack for use with external earbud

5. Internal Channel and CTCSS LOCK pin

- a plastic pin, accessible inside the battery bay is provided to lock the Channel and CTCSS settings. (Please see Section 9 for details.)

6. Battery Installation

The unit is designed to operate with either 3 AA size batteries or optionally a custom designed NiMH re-chargeable battery pack. (Both not supplied with the unit.)

An optional charge base is also available. The charge base can accept the unit and an extra battery pack.

The unit and the re-chargeable battery pack is designed in such a way that the charge circuit in the unit will only be connected when the re-chargeable battery pack is installed. Installing batteries other than the custom re-chargeable battery pack in the unit will disconnect the internal circuit to avoid charging non-rechargeable batteries by mistake.

7. Operation Flow

- a. Power On - The unit can be turned on and off by press and hold the Power switch for about 1 second.
- b. Default Screen - The unit's screen will come on showing the following:
- * battery icon is on showing battery status
 - * channel icon is on and the 2-digit display indicates previously set channel number (factory default setting is Channel 1 and CTCSS code 0)
 - * Quiet icon, Vol icon, Bell icon and Lock icon (if not previously locked) are off
- c. Mode select - **press the Mode key once**
- * The Channel icon and Channel number will flash indicating that the user can adjust Channel using the Rotary Switch. The 2-digit display shows the previously set Channel number. Rotate the Rotary Switch clockwise and anti-clock to select Channel. The 2-digit display will stop flashing and show the new channel selected.
- press the Mode key one more time**
- * The Quiet icon and CTCSS code number will flash indicating that the user can select CTCSS sub-tone. The 2-digit display shows the previously set CTCSS code number. Rotate the Rotary Switch clockwise and anti-clockwise to select different sub-tone codes. The 2-digit display will stop flashing and show the new CTCSS code selected.
- press the Mode key one more time**
- * The Vol icon and voice volume level will flash indicating that the user can set voice volume. The 2-digit display shows the previous voice volume setting. Voice volume has 8 levels from level 1 to level 8. Rotating the Rotary Switch clockwise will increase voice volume and vice versa. When voice volume indicates level 8, further rotation will not change the reading. Anti-clockwise rotation will bring the voice volume level down. Similarly when the voice volume indication is level 1, further

rotation of the Rotary Switch anti-clockwise will have no effect on the voice volume.

press the Mode key one more time

* The Bell icon and ringer level will flash indicating that the user can set ringer volume. Rotate the Rotary Switch to adjust the ringer volume from 1 to 8. (Note that the ringer volume will only work when receiving Call signals from units compatible with the C-186. Call tones received from other units will be heard at the same level as the voice volume.)

When in the select mode, if no key input is detected for 5 seconds, the unit will automatically returned to the default screen showing the selected channel number. To perform selection, the mode key will have to be pressed again and the process will start from the beginning.

Press and hold the Mode key anytime for 2 seconds will toggle the LOCK icon on and off. When the LOCK icon is on, the Voice Volume is locked and rotating the Rotary Switch will not cause any change in voice volume.

d. Monitor

The Monitor button when pressed will disable the squelch function and enable the user to listen to all broadcast at the same channel. The Monitor button is active for as long as the button is kept pressed. Releasing the button will return the unit to its original squelch setting.

e. Push to Talk

The Push to Talk (PTT) switch toggles the units between transmit and receive to enable communication in half duplex.

f. Last Settings Recall

A build in EEPROM will memorize all settings before the unit is powered off. When the unit is turn on again, all settings will remain unchanged. The memory contents will not be affected with the battery removed for any length of time.

8. Intelligent Call Ringer (ICR)

Normally when a unit's voice volume is set to low, all CALL tones received will be generated at the same low level, and the call tone may not be heard. Intelligent Call Ringer provides a dual tone call ringer with level that can be independently adjusted. Please note that Intelligent Call Ringer works only with units having this build in function.

When the Call button of a unit with ICR is pressed, the Call signal sent out is encoded. The receiving unit will decode the signal as a call signal and generates an audio dual tone with an appropriate volume according to the following conditions:

- a. When the Ringer volume is set higher than the voice volume, the ringer will start at an level equal to the voice volume and gradually increase to the Ringer volume selected.
- b. When the Ringer volume is set lower than the voice volume, the ringer will be sounded at the set Ringer volume.
- c. When a Call tone is received from a unit without ICR, the call tone will have a volume the same as the voice volume.

9. Locking the Unit

a. Volume Lock

For discreet use at low volume, the volume setting can be locked by simply press and hold the Mode key at any time for 2 seconds. The LOCK icon will turn on. Rotating the Rotary Switch will have no effect on the volume level. To unlock, simply press and hold the Mode key at any time for 2 seconds. The LOCK icon will turn off and the Rotary Switch will return to its default Volume mode.

b. Channel/CTCSS Lock

Channel and CTCSS settings can be locked by simply removing the plastic pin located inside the battery bay. To lock, select the desire Channel and CTCSS settings. Turn the power off, remove the battery cover and pull out the plastic pin located inside the battery bay. Restore the battery cover and turn on the unit. The Channel and CTCSS are locked at the desire settings. Please note that the LOCK icon which is used solely to show Volume lock will not turn on. Pressing the Mode key will show successively the Channel and CTCSS settings, but the Rotary Switch will have no effect under these modes. Otherwise everything else will be the same.

To unlock, turn the unit off, open the battery bay and restore the plastic pin. Turn the unit back on. Channel and CTCSS control will resume.

10. Key Tone

When the Mode and the On/Off key is pressed, a 0.1 second beep is generated. There will be no key tone for the Rotary Switch, the Monitor key and the Push to Talk key.

In the case of the Call button, a feedback dual tone will be generated for as long as the Call button is pressed. Since a 5 second time-out is build in when the Call button is pressed, the feedback tone will also last for a maximum of 5 seconds.

11. Back light

Every time when the Mode key, the Call button, the On/Off key and the Rotary Switch is operated, the back light to the LCD will turn on automatically for 10 seconds.

Operating the PTT and Monitor key will not turn on the back light.