



# Models: LT-2, CD-2 and CD2-CAR

## COMMUNICATIONS DECODERS

### PURPOSE

The CD-2 and LT-2 are very useful service tools (*and snoopers*) which can be connected to any receiver, service monitor or scanner and allow you to quickly identify operating codes on conventional or LTR® trunked repeater systems.

### MODEL LT-2 LTR DECODER

The LT-2 decodes all LTR® subaudible data and DTMF on the repeater input or output channel you are monitoring. The front panel display shows the User ID and home repeater of the current user on channel. All LTR decoded data is output on the rear panel RS-232 serial port.

#### LT-2 Installation

Decoding LTR subaudible data requires a direct connection to the FM detector of your receiver (*De-mod output on your service monitor*). An internal pre-amp with level control allows using input levels from 10 MV to 4 volts. Internal jumpers allow set-up options such as selecting LTR code polarity.

#### LT-2P Software

The optional LT-2P PC compatible software allows your PC to accumulate and display/print any of the following using convenient menus:

#### When Monitoring an LTR® Output Channel:

- History of System Usage
- User ID and Home Repeater
- Hand-off information
- More

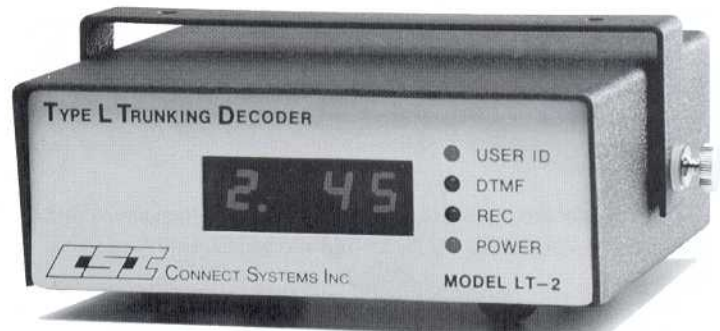
#### When Monitoring an LTR® Mobile Direct:

- User ID and Home Channel
- DTMF originating from mobile
- More

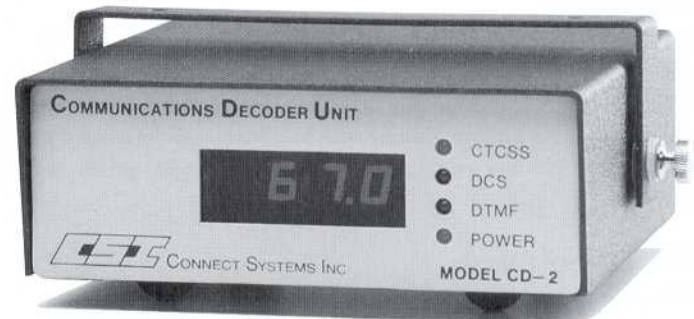
#### Statistics

- Usage Time and Date per User
- Hits per User
- More

**Note:** Some information is limited to users homed on the repeater being monitored.



Model LT-2. For monitoring LTR® data and DTMF.



Model CD-2. For monitoring DCS/CTCSS and DTMF.

Model CD2-CAR. For reading ANI codes.

### MODEL CD2-CAR ANI READER

Model CD2-CAR displays the ANI codes of mobiles in a fleet (*such as taxis*) so that the dispatcher can visually identify which mobile is transmitting. ANI recognition saves airtime, eliminates clowning and can reveal a driver in trouble (*such as a holdup*) by identifying an unmodulated signal.

An internal display control jumper gives the choice of showing the last received ANI until another is received, or to only show an ANI for 25 seconds after receipt.

The optional CD-2P software can be used to log the time and date of each ANI occurrence.

ANI codes are limited to four digits. The CD2-CAR does not read CTCSS/DCS codes. A CD-2 can be converted into a CD2-CAR or vice versa with change of firmware. Please inquire.

# MODEL CD-2 DECODER

The CD-2 quickly and accurately decodes and displays the following conventional codes:

- 51 CTCSS Codes
- 112 DCS Codes
- 16 DTMF Digits

CTCSS and DCS codes are displayed continuously while being decoded. If a DTMF code is sent the display of CTCSS/DCS is temporarily suspended. The DTMF is then displayed in real time, stored to memory and replayed slowly a second time enabling you to read high speed ANI or memory dialers. The display of CTCSS/DCS resumes after display of DTMF is completed.

High performance is assured because the CD-2 uses the same proprietary CTCSS/DCS decoding algorithms used in our repeater tone panels. No competing product decodes all 112 DCS codes or can match the decoding speed, weak signal performance or voice falsing immunity found only in the CD-2!

The CD-2 may also be used to remotely display user programmed data from our TP-154, TP154-PLUS, TP-163 and Model 8300 Repeater Tone Panels.

All decoded data is available on the rear panel RS-232 serial port.

## Installation

Decoding DCS requires a direct connection to the FM detector of your receiver (*De-mod output of your service monitor*). If you only wish to decode CTCSS and DTMF, a connection to the speaker leads will function with many scanners. An internal pre-amp with level control allows using input levels from 10 MV to 4 volts. Internal jumpers allow set-up options such as selecting DCS polarity.

## CD-2P Software

The optional CD-2P PC compatible software allows your PC to store hits, time and date of all received CTCSS, DCS and DTMF codes. Graphical displays show channel loading etc. Convenient menus allow you to view or print any of the following decoded data which has accumulated in your computer:

- CTCSS
- DCS
- DTMF
- Hits per DCS/CTCSS Code
- Airtime per DCS/CTCSS Code
- Time and Date per usage
- Download and print all programming data from your TP-154 and TP154-PLUS repeater tone panels
- More!

## The CD-2 decodes and displays the following codes:

### 51 CTCSS Codes:

63.0	88.5	118.8	159.8	186.2	225.7
67.0	91.5	123.0	162.2	189.9	229.1
69.4	94.8	127.3	165.5	192.8	233.6
71.9	97.4	131.8	167.9	196.6	241.8
74.4	100.0	136.5	171.3	199.5	250.3
77.0	103.5	141.3	173.8	203.5	254.1
79.7	107.2	146.2	177.3	206.5	
82.5	110.9	151.4	179.9	210.7	
85.4	114.8	156.7	183.5	218.1	

### 112 DCS Codes:

006	072	172	271	431	606
007	073	174	274	432	612
015	074	205	306	445	624
017	114	212	311	446	627
021	115	214	315	452	631
023	116	223	325	454	632
025	122	225	331	455	654
026	125	226	332	462	662
031	131	243	343	464	664
032	132	244	346	465	703
036	134	245	351	466	712
043	141	246	356	503	723
047	143	251	364	506	731
050	145	252	365	516	732
051	152	255	371	523	734
053	155	261	411	526	743
054	156	263	412	532	754
065	162	265	413	546	
071	165	266	423	565	

### 16 DTMF digits:

1	2	3	A
4	5	6	B
7	8	9	C
*	0	#	D

### MECHANICAL (All Models)

Height: 1.8 in.  
Width: 4.9 in.  
Depth: 4.6 in.  
Weight: 0.8 lb.

### POWER (All Models)

12 - 15 VDC



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