



RACO Manufacturing and Engineering Co., 1400 62nd St., Emeryville, CA 94608 (510) 658-6713 800-722-6999 FAX (510) 658-3153

DIALER SPECIFICATION - CHATTERBOX[®] MODEL CB-4

June 25, 1992

Description & Phone Number Dialing:

1. The dialer shall be a solid state component capable of dialing from one to eight phone numbers, each up to 16 digits in length. Phone numbers are to be entered via the system's keyboard. Standard pulse dialing or Touch Tone DTMF dialing shall be selected at the keyboard.

Additional Field Programming Capabilities:

2. The user may optionally elect to alter the following parameters from their standard normal default values via keyboard entry. The built-in voice will guide and confirm the following programmable features.
 - ** User Programmable Speech: Alarm and normal messages for each channel shall be programmable from a standard 230 word vocabulary.
 - ** Remote Programming: The dialer shall permit user to change any user entered programming (except speech messages) from any touch tone phone. User shall also be able to cause a ninth phone number to be called on command to test system and phone line integrity.
 - ** Alarm response delay: .1 to 999.9 seconds.
 - ** Delay between alarm call outs: .1 to 99.9 minutes.
 - ** Alarm reset time: Programmable 0.1 to 99 hours or "NO RESET".
 - ** Incoming ring response (answer) delay: 1 to 20 rings.
 - ** Number of message repetitions: Programmable 1 - 20 repetitions of the message.
 - ** Station ID number.
 - ** Input alarm criteria: Each channel shall be independently configured for "Alarm On Open Circuit", "Alarm On Closed Circuit", or "No Alarm" - report on inquiry only, or in lieu of alarming, accumulate equipment running time.
 - ** Autocall Test: When enabled, the unit shall place a single round of test calls, both at the time this function is enabled and also at regular subsequent intervals until this function is disabled at the keyboard. The voice shall identify these calls as test calls.
 - ** Run Time Meter: Each channel shall be keyboard programmable to accumulate and report the number of hours that its input contacts have been closed.

Nonvolatile Program Memory Retention:

3. User-entered programming shall be kept intact even when all power is removed for up to ten years.

Acknowledgement:

4. Acknowledgement of an alarm phone call is to be accomplished by pressing a Touch Tone@ "9" as the alarm call is being received, and/or by returning a phone call to the unit after receiving an alarm call, at the user's choice.

Synthesized Voice:

5. The Automatic Telephone Dialer is to communicate via a highly intelligible solid state voice synthesizer (magnetic tape loops will not be used) with an identification of its location and the specific alarm conditions(s) that exist.

Input Monitoring Function:

6. The unit shall continuously monitor the presence of AC power and the status of four contact closure inputs. AC power failure, or violation of the alarm criteria at any input, shall cause the unit to go into alarm status and begin dial-outs.

Alarm Message:

7. Upon initiating an alarm phone call, the system is to “speak” only those channels that are currently in “alarm status”.

Inquiry Message and Function:

8. Inquiry phone calls can be made directly to the unit at any time from any telephone, locally or long distance, for a complete status report of all variables being monitored, including power status. Further, by pressing the Touch ToneR "0" ,the user may hear all user-entered programming and diagnostic counts (Cumulative counts of Call In Count, Dial Out Count, Acknowledged Alarm Count, Power Off Alarm Count). All this information shall be available by keyboard inquiry at the unit as well.

Power Battery Backup:

9. Normal power shall be 105-135 VAC, 15 watts maximum. The product is to contain its own gel cell rechargeable battery which is automatically kept charged when AC power is present. The battery is to be capable of keeping the product operating, and user programming intact, for a minimum of six continuous hours in the event of power failure. Shorter backup time shall not be acceptable. The built-in charger shall be precision voltage controlled, not a “trickle charger” to minimize recharge time and maximize battery life available.

Phone Line:

10. The dialer is to operate on a standard rotary pulse or Touch Tone “dial-up” phone line (direct leased line not to be required) and is to be F.C.C. approved. A regular private line is to be provided. Connection to the telephone is through an industry standard 4-pin modular jack (RJ-11).

Integral Surge Protection:

11. Gas tube and solid state surge protection is to be provided on all inputs, including power, phone and signal lines. These protectors are to be integrally incorporated into the main circuit board for maximum protection. Protectors mounted external to the main circuit board shall not be an acceptable substitute. The installer shall provide a good electrical ground connection point near the unit to maximize the effectiveness of the surge protection.

Warranty:

12. The dialer shall be covered by a two (2) year warranty covering parts and labor performed at the Factory.

Modular Upgrades:

13. The system shall include expansion connectors to accommodate field upgrades for additional dry contact inputs, remote supervisory control, remote reprogramming, analog input, and communication with serial printers.

Additional Features: Sealed Switches, LED Indicators, Alarm Disable Warning, Talk-Through:

14. All keyboard and front panel switches shall be sealed to prevent contamination. Front panel LED's shall indicate: Normal Operation, Program Mode, Phone Call in Progress, Unacknowledged Alarm, Acknowledged Alarm, AC Power Present, AC Power Failure, and Low or Discharging or Recharging Battery. On any Inquiry telephone call or On-Site status check, the voice shall provide specific warning if no dialout phone numbers are entered, or if the alarm switch is in the “disable” position, or if AC power is off or has been off since last reset. A built-in microphone shall allow anyone at a remote phone to listen to local sounds and to have a two-way conversation with personnel at the dialer.

Special Order Items:

15. The following options shall be available on specific order:
- a) NEMA 4X (sealed) enclosure.
 - b) 425 word user programmable speech (19.5 more than standard).
 - c) 4, 8, 16, or 24 extra contact channels (8, 16, 24, or 32 respectively, total).
 - d) 1 analog channel.
 - e) 24 hour battery backup life (6 hours standard).
 - f) Thermostatically controlled heater.
 - g) Local data logger.
 - h) Radio communications interface.
 - i) Remote supervisory control (4 or 8 outputs).

Specifications subject to change without notice.

DIALER SPECIFICATION - CHATTERBOX® MODEL CB-16, CB-24, CB-32
June 25, 1992

Description & Phone Number Dialing:

1. The dialer shall be a solid state component capable of dialing from one to eight phone numbers, each up to 16 digits in length. Phone numbers are to be entered via the system's keyboard. Standard pulse dialing or Touch Tone DTMF dialing shall be selected at the keyboard.

Additional Field Programming Capabilities:

2. The user may optionally elect to alter the following parameters from their standard normal default values via keyboard entry. The built-in voice will guide and confirm the following programmable features.
 - ** User Programmable Speech: Alarm and normal messages for each channel shall be programmable from a 425 word vocabulary.
 - ** Remote Programming: The dialer shall permit user to change any user entered programming (except speech messages) from any touch tone phone. User shall also be able to cause a ninth phone number to be called on command to test system and phone line integrity.
 - ** Alarm Grouping: Each channel may be linked to a selected group of the phone numbers, thereby dialing different numbers from the eight programmed phone numbers for different channel alarms.
 - ** Alarm channel readout: When the dialer is called and issuing a special Touch Tone command, it shall provide a report of all channels in alarm, both acknowledged and unacknowledged.
 - ** Alarm response delay: . 1 to 999.9 seconds.
 - ** Delay between alarm call outs: .1 to 99.9 minutes.
 - ** Alarm reset time: Programmable 0.1 to 99 hours or "NO RESET".
 - ** Incoming ring response (answer) delay: 1 to 20 rings.
 - ** Number of message repetitions: Programmable 1 - 20 repetitions of the message.
 - ** Station ID number.
 - ** Input alarm criteria: Each channel shall be independently configured for "Alarm On Open Circuit", "Alarm On Closed Circuit", or "No Alarm" - report on inquiry only, or in lieu of alarming, accumulate equipment running time.
 - ** Autocall Test: When enabled, the unit shall place a single round of test calls, both at the time this function is enabled and also at regular subsequent intervals until this function is disabled at the keyboard. The voice shall identify these calls as test calls.
 - ** Run Time Meter: Each of the last eight channels shall be keyboard programmable to accumulate and report the number of hours that its input contacts have been closed.

Nonvolatile Program Memory Retention:

3. User-entered programming shall be kept intact even when all power is removed for up to ten years.

Acknowledgement:

4. Acknowledgement of an alarm phone call is to be accomplished by pressing a Touch Tone[®] "9" as the alarm call is being received. and/or by returning a phone call to the unit after receiving an alarm call, at the user's choice.

Synthesized Voice:

5. The Automatic Telephone Dialer is to communicate via a highly intelligible solid state voice synthesizer (magnetic tape loops will not be used) with an identification of its location and the specific alarm condition(s) that exist.

Input Monitoring Function:

6. The unit shall continuously monitor the presence of AC power and the status of sixteen, twenty-four, or thirty-two contact closure inputs. AC power failure, or violation of the alarm criteria at any input, shall cause the unit to go into alarm status and begin dial-outs.

Alarm Message:

7. Upon initiating an alarm phone call, the system is to "speak" only those channels that are currently in "alarm status".

Alarm Status Indicators:

8. Individual alarm status indicators for each channel shall give immediate visual indication of which channels are in alarm. Unacknowledged alarms shall be indicated by a flashing light; acknowledged alarms shall be indicated by a continuous light. Lights shall remain on until the alarm is reset by the Alarm Reset Timeout or by clearing the alarms at the front panel. Alarm lights shall flash at a distinctively different rate if AC power fails.

Inquiry Message and Function:

9. Inquiry phone calls can be made directly to the unit at any time from any telephone, locally or long distance, for a complete status report of all variables being monitored, including power status. Further, by pressing the Touch Tone[®] "0", the user may hear all user-entered programming and diagnostic counts (Cumulative counts of Call In Count, Dial Out Count, Acknowledged Alarm Count, Power Off Alarm Count). All this information shall be available by keyboard inquiry at the unit as well.

Power Battery Backup:

10. Normal power shall be 105-135 VAC, 15 watts maximum. The product is to contain its own gel cell rechargeable battery which is automatically kept charged when AC power is present. The battery is to be capable of keeping the product operating, and user programming intact, for 24 continuous hours in the event of power failure. If all 32 indicator LEDs are indicating alarm condition, this may be reduced to 8 hours. The built-in charger shall be precision voltage controlled, not a "trickle charger" to minimize recharge time and maximize battery life available.

Phone Line:

11. The dialer is to operate on a standard rotary pulse or Touch Tone "dialup" phone line (direct leased line not to be required) and is to be F.C.C. approved. A regular private line is to be provided. Connection to the telephone is through an industry standard 4-pin modular jack (RJ-I 1).

Integral Surge Protection:

12. Gas tube and solid state surge protection is to be provided on all inputs, including power, phone and signal lines. These protectors are to be integrally incorporated into the main circuit board for maximum protection. Protectors mounted external to the main circuit board shall not be an acceptable substitute. The installer shall provide a good electrical ground connection point near the unit to maximize the effectiveness of the surge protection.

Warranty:

13. The dialer shall be covered by a two (2) year warranty covering parts and labor performed at the Factory.

Modular Upgrades :

14. The system shall include expansion connectors to accommodate field upgrades for additional dry contact inputs, remote supervisory control, remote reprogramming, analog input and communication with remote printers and computers.

Additional Features: Sealed Switches. LED Indicators. Alarm Disable Warning. Talk-Through:

15. All keyboard and front panel switches shall be sealed to prevent contamination. Front panel LED's shall indicate: Normal Operation, Program Mode, Phone Call in Progress, Unacknowledged Alarm, Acknowledged Alarm, AC Power Present, AC Power Failure, and Low or Discharging or Recharging Battery. On any Inquiry telephone call or On-Site status check, the voice shall provide specific warning if no dialout phone numbers are entered, or if the alarm switch is in the "disable" position, or if AC power is off or has been off since last reset. A built-in microphone shall allow anyone at a remote phone to listen to local sounds and to have a two-way conversation with personnel at the dialer.

Special Order Items:

16. The following options shall be available on specific order:
 - a) NEMA 4X (totally sealed) enclosure.
 - b) 8, or 16, extra contact channels (24, or 32 respectively, total).
 - c) 1 analog channel.
 - d) Thermostatically controlled heater.
 - e) Local data logger.
 - f) Radio communications interface.
 - g) Remote supervisory control (4 or 8 outputs).

Specifications subject to change without notice.

UPS 230 USER PROGRAMMABLE SPEECH
 VOCABULARY LIST
 (Standard Vocabulary for Chatterbox® Model CB-4, CB-8)
 December 1, 1988

CODE WORD	CODE WORD	CODE WORD	CODE WORD
000 0	059 DTMF 0	118 line	177 seventh
001 1	060 DTMF 1	119 listen	178 sewage
002 2	061 DTMF 2	120 local	179 side
003 3	062 DTMF 3	121 low	180 silence 40 msec
003 4	063 DTMF 4	123 lower	181 silence 80 msec
005 5	064 DTMF 5	123 m	182 silence 160 msec
006 6	065 DTMF 6	124 main	183 silence 320 msec
007 7	066 DTMF 7	125 meter	184 site
008 8	067 DTMF 8	126 million	185 sixth
009 9	068 DTMF 9	127 minus	186 smoke
010 a	069 e	128 minutes	187 south
011 access	070 cast	129 mode	188 *speed*
012 acknowledged	071 eighth	130 monitor	189 ss (plural sound)
013 air	072 electric	131 more	190 standby
014 alarm	073 emergency	132 motor	191 station
015 alert	074 empty	133 n	192 supervision
016 all	075 enter	134 no	193 Supply
017 and	076 entered	135 normal	194 switch
018 are	077 equipment	136 north	195 system
019 *area*	078 er (suffix)	137 not	196 t
020 at	079 exceeded	138 now	197 tank
021 auto	080 *explosive*	139 number	198 temperature
022 b	081 f	140 o	199 test
023 bad	082 failure	141 off	200 the
024 battery	083 fault	142 on	201 third
025 bearing	084 feet	143 open	202 this
026 been	085 fifth	144 out	203 thousand
027 between	086 fire	145 over	204 time
028 booster	087 first	146 p	205 to
029 *building*	088 flooded	147 percent	206 tone (the world)
030 by	089 flow	148 personnel	207 total
031 c	090 for	149 phase	208 touch
032 call	091 fourth	150 phone	209 tower
033 caution	092 fuel	151 plant	210 treatment
034 channel	093 full	152 point	211 trip
035 check	094 g	153 police	212 u
036 chlorine	095 gallon	154 power	213 unit
037 circuit	096 goodbye	155 present	214 up
038 clear	097 *ground*	156 pressure	215 upper
039 closed	098 h	157 program	216 v
040 code	099 has	158 pulse	217 valve
041 communication	100 high	159 pump	218 Vault
042 compressor	101 hours	160 put	219 voltage
043 condition	102 hundred	161 q	220 w
044 control	103 i	162 r	221 warning
045 count	104 in	163 reading	222 waste
046 d	105 intrusion	164 ready	223 water
047 danger	106 is	165 remote	224 well
048 data	107 it	166 reservoir	225 west
049 date	108 j	167 reset	226 wet
050 degree	109 k	168 *right*	227 x
051 delay	110 l	169 ring	228 y
052 dial	111 lake	170 room	229 z
053 *diesel*	112 leak	171 run	230 400 HZ Tone
054 disabled	113 *left*	172 s	231 DTMF *
055 door	114 level	173 safe	232 DTMF #
056 down	115 lift	174 second	
057 *drive*	116 *light*	175 security	
058 dry	117 limit	176 set	

UPS 425 USER PROGRAMMABLE SPEECH

Standard Vocabulary for Chatterbox® Models CB-16M, CB-24M, CB-32M

Optional Vocabulary for Chatterbox® Models CB-4, CB-8

Underlined words are included in addition to UPS 230

December 1, 1988

CODE WORD	CODE WORD	CODE WORD	CODE WORD
000	0	018	are
001	1	019	area
002	2	332	<u>armed</u>
003	3	333	as
004	4	334	<u>assistance</u>
005	5	020	at
006	6	335	<u>attention</u>
007	7	021	auto
008	8	336	<u>automatic</u>
009	9	337	<u>available</u>
300	<u>10</u>	338	<u>average</u>
301	<u>11</u>	022	b
302	<u>12</u>	339	<u>back</u>
303	<u>13</u>	023	bad
304	<u>14</u>	340	<u>base</u>
305	<u>15</u>	341	<u>bath</u>
306	<u>16</u>	024	battery
307	<u>17</u>	025	bearing
308	<u>18</u>	026	been
309	<u>19</u>	342	<u>below</u>
310	<u>20</u>	027	between
311	<u>30</u>	343	<u>boiler</u>
312	<u>40</u>	028	booster
313	<u>50</u>	344	<u>brake</u>
314	<u>60</u>	345	<u>broken</u>
315	<u>70</u>	346	<u>brush</u>
316	<u>80</u>	029	building
317	<u>90</u>	347	<u>burglar</u>
010	a	348	<u>burst</u>
318	<u>able</u>	349	<u>busy</u>
319	<u>abort</u>	030	by
320	<u>aborted</u>	031	c
321	<u>above</u>	032	call
011	access	350	<u>capacitor</u>
012	acknowledged	351	<u>carrier</u>
322	<u>activate</u>	033	caution
323	<u>active</u>	352	<u>cell</u>
324	<u>advise</u>	353	<u>celsius</u>
325	<u>after</u>	354	<u>center</u>
326	<u>again</u>	034	channel
013	air	035	check
014	alarm	036	chlorine
015	alert	037	circuit
016	all	355	<u>city</u>
327	<u>alternate</u>	356	<u>clarifier</u>
328	<u>ammonia</u>	038	clear
329	<u>an</u>	039	closed
017	and	040	code
330	<u>answer</u>	357	<u>cold</u>
331	<u>approaching</u>	358	<u>comminutor</u>
		359	<u>common</u>
		041	communication
		042	compressor
		360	<u>computer</u>
		043	condition
		361	<u>conductivity</u>
		362	<u>connection</u>
		363	<u>console</u>
		364	<u>contact</u>
		044	control
		365	<u>converter</u>
		366	<u>cool</u>
		367	<u>coolant</u>
		368	<u>correct</u>
		045	count
		369	<u>current</u>
		046	d
		370	<u>dam</u>
		371	<u>damage</u>
		047	danger
		048	data
		049	date
		050	degree
		051	delay
		372	<u>department</u>
		373	<u>detected</u>
		052	dial
		053	diesel
		374	<u>dis-</u>
		054	disabled
		375	<u>discharge</u>
		055	door
		056	down
		057	drive
		058	d r y
		059	DTMF 0
		060	DTMF 1
		061	DTMF 2
		062	DTMF 3
		063	DTMF 4
		064	DTMF 5
		065	DTMF 6
		066	DTMF 7
		067	DTMF 8
		068	DTMF 9
		069	e
		070	east
		376	<u>-ed</u>
		377	<u>efficiency</u>
		071	eighth
		378	<u>elapsed</u>
		072	electric
		379	<u>elevate</u>
		073	emergency
		074	empty
		380	<u>enabled</u>
		381	<u>energy</u>
		382	<u>engine</u>
		075	enter
		076	entered
		383	<u>entry</u>
		077	equipment
		078	-er (suffix)
		384	<u>error</u>
		385	<u>evacuate</u>
		079	exceeded
		386	<u>exhaust</u>
		387	<u>exit</u>
		080	explosive
		388	<u>external</u>
		389	<u>extreme</u>
		081	f
		390	<u>fahrenheit</u>
		391	<u>failed</u>
		082	failure
		392	<u>fan</u>
		083	fault
		084	feet
		393	<u>field</u>
		085	fifth
		086	fire
		087	first
		088	flooded
		394	<u>floor</u>
		089	flow
		090	for
		395	<u>forward</u>
		091	fourth
		396	<u>freezer</u>
		397	<u>front</u>
		092	fuel
		093	full
		398	<u>function</u>
		399	<u>furnace</u>
		400	<u>fuse</u>
		094	g
		095	gallon
		401	<u>general</u>
		402	<u>generator</u>
		096	goodby

097	ground	128	minutes	450	<u>report</u>	195	system
098	h	129	mode	451	<u>require</u>	196	t
099	has	430	<u>modem</u>	166	reservoir	197	tank
403	<u>have</u>	431	<u>module</u>	167	reset	198	temperature
404	<u>head</u>	130	monitor	452	<u>return</u>	199	test
405	<u>hertz</u>	131	more	453	<u>reverse</u>	478	<u>than</u>
100	high	132	motor	168	right	479	<u>that</u>
406	<u>horizontal</u>	133	n	169	ring	200	the
407	<u>hot</u>	134	no	454	<u>river</u>	480	<u>thermal</u>
101	hours	135	normal	170	room	201	third
408	<u>house</u>	136	north	455	<u>rotor</u>	202	this
409	<u>humidity</u>	137	not	456	<u>route</u>	203	thousand
102	hundred	138	now	171	run	204	time
103	i	139	number	457	<u>running</u>	481	<u>timer</u>
410	<u>ice</u>	140	o	172	s	205	to
411	<u>idle</u>	141	off	173	safe	206	tone
412	<u>immediate</u>	432	<u>oil</u>	458	<u>screen</u>	207	total
413	<u>important</u>	142	on	459	<u>scrub</u>	208	touch
104	in	143	open	174	second	209	tower
414	<u>-ing</u>	433	<u>operator</u>	460	<u>secondary</u>	482	<u>town</u>
415	<u>intruder</u>	144	out	175	security	483	<u>transformer</u>
105	intrusion	145	over	461	<u>sensor</u>	210	treatment
106	is	146	p	462	<u>service</u>	211	trip
107	it	434	<u>page</u>	176	set	484	<u>tripped</u>
108	j	435	<u>panel</u>	177	seventh	212	u
109	k	436	<u>peak</u>	178	sewage	485	<u>un-</u>
416	<u>key</u>	147	percent	463	<u>short</u>	213	unit
417	<u>kilo</u>	148	personnel	464	<u>shut</u>	486	<u>unlock</u>
110	l	149	phase	179	side	214	up
418	<u>lab</u>	150	phone	465	<u>signal</u>	215	upper
111	lake	437	<u>pipe</u>	180	sil 40	487	<u>-uth</u>
419	<u>lamp</u>	151	plant	181	sil 80	488	<u>utility</u>
112	leak	152	point	182	sil 160	216	v
420	<u>leakaze</u>	153	police	183	sil 320	489	<u>vacuum</u>
113	left	438	<u>pool</u>	184	site	217	valve
114	level	154	power	185	sixth	218	vault
115	lift	439	<u>premises</u>	466	<u>slow</u>	490	<u>vertical</u>
116	light	155	present	467	<u>sludge</u>	491	<u>volt</u>
117	limit	156	pressure	468	<u>small</u>	219	voltage
118	line	440	<u>primary</u>	186	smoke	220	w
421	<u>link</u>	441	<u>priority</u>	187	south	221	warning
119	listen	442	<u>process</u>	469	<u>spare</u>	222	waste
422	load	157	program	188	speed	223	water
120	local	158	pulse	189	-ss (plural sound)	492	<u>watt</u>
423	lock	159	pump			224	well
121	low	160	put	470	<u>stair</u>	225	west
122	lower	161	q	190	standby	226	wet
123	m	162	r	471	<u>start</u>	493	<u>wheel</u>
424	<u>machine</u>	443	<u>radio</u>	191	station	494	<u>with</u>
425	<u>magnetic</u>	444	<u>range</u>	472	<u>status</u>	495	<u>working</u>
124	main	445	<u>re-</u>	473	<u>steam</u>	227	x
426	<u>master</u>	446	<u>read</u>	474	<u>storm</u>	228	y
427	<u>mega-</u>	163	reading	475	<u>stream</u>	229	z
125	meter	164	ready	476	<u>street</u>	496	<u>zone</u>
428	<u>micro-</u>	447	<u>receiver</u>	477	<u>suction</u>	230	400 hz tone
429	milli-	448	<u>relief</u>	192	supervisor	231	DTMF *
126	million	165	remote	193	supply	232	DTMF #
127	minus	449	<u>repeat</u>	194	switch		