

Program Worksheet (FS17)

Customer: _____

Address : _____

Telephones: _____

No Of UCMs (Location 1672) _____ (0-8) (Needs RESET)

No of DoorStations (Location 1674) _____ (0 to 3) (Needs RESET)

No of Keypads (Location 1675) _____ (0 to 8) (Needs RESET)

Engineer Sign-in Code _____

System Control Number (7,4,3) _____

Date of Installation _____

Refer to Installation Manual Section 3.6 "How to Use the Worksheet" for a detailed guide to this Worksheet.

Many of the programming settings will require changing values in Locations. The Locations menu is in Engineer Menu 7,4,1.

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 Firmware: Version Entry 4.178

Table 1 - System Settings (7)

Menu	Parameter	Range	Value	Remarks
(7,1)	Pulse Dial	Yes/No	No	Set ON for pulse dialing, OFF for tone dialing
(7,2)	PABX Option	Yes/No	No	Set ON if connected as an extension of a PABX
(7,2,1)	PABX Digit	0-9,*	9	Key to access outside line on a PABX (if PABX Option is set to ON). Do not program the PABX access key in the telephone number.

Table 2 - Status LED Output Assignments (Location Menu 7,4,1)

Outputs can be used to indicate the following system status.

Status LED	Location	Output (1-16)	Note
Armed/Alarm	45		Steady = Armed. Flash = Alarm
Off/Trouble	46		Steady = Off, Flash = Trouble
Dialout in progress	1693		ON = Dialout in progress
Not Used	1695		Unused V4.71

Table 3 - Away Arming Method (Location Menu 7,4,1)

There are 3 methods of (local) arming to Away Mode.

Away Arming Method	Location 1692	Remarks
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Final Door Arm	0 (Default)	Arm after Final Door closed
Arm After Exit Delay	1	Arm after exit delay and all zones closed
Exit Terminator (UK Only)	2	Arm after Exit Terminator push button

Table 4 - Zone Settings (1)

Zone	Description (4 words max.)	Word 1	Word 2	Word 3	Word 4	Zone Type	Entry Path	Zone Resp	Off Resp
		0-255	0-255	0-255	0-255	0-31	yes/no	0-127	0-127
		Press 1				Press 2	Press 3	Press 5	Press 6
1	Front Door	22	178			2	1		
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

 **24 Zones are available only with the 16 zone LEM which contains no outputs, so only 8 outputs are available in such systems.**

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Table 5 -Output Assignments (Information only)

Output	Appliance	Output	Appliance
1		9	
2		10	
3		11	
4		12	
5		13	
6		14	
7		15	
8		16	

 If the 16 Zone LEM is used, only 8 outputs are available in the system

Table 6 - X10 Assignments (Information only)

Appliance	X10 Address	Appliance	X10 Address

Table 7 - Infrared Codes (Information only)

IR Code	Appliance/Function	IR Code	Appliance/Function
1		13	
2		14	
3		15	
4		16	
5		17	
6		18	
7		19	
8		20	
9		21	
10		22	
11		23	
12		24	

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Table 8 - Zone Types (Security Mode Assignments) - Needs RESET

No	Type	Security Off	Away Mode	Night Mode	Day Mode	Location	Value
		Inactive = 0 Alert=1 Perim=2 Instant=3	Inactive = 0 Alert=4 Perim=8 Instant=12	Inactive=0 Alert=16 Perim=32 Instant=48	Inactive=0 Alert=64 Perim=128 Instant=192		
1	Door/window	Inactive=0	INST=12	INST=48	INST=192	1300	252
2	Entry Door	Inactive=0	INST=12	INST=48	INST=192	1304	252
3	Alert Night/Away	Inactive=0	Alert=4	Alert=16	Inactive=0	1308	20
4	Alert Away	Inactive=0	Alert=4	Inactive=0	Inactive=0	1312	4
5	Instant Away/Night	Inactive=0	INST=12	INST=48	Inactive=0	1316	60
6	Alert Vibration	Inactive=0	Alert=4	Alert=16	Inactive=0	1320	20
7	Vibration, armed	Inactive=0	INST=12	INST=48	Inactive=0	1324	60
8	Switch (N/O)	Inactive=0	Inactive=0	Inactive=0	Inactive=0	1328	0
9	Monitor (N/O)	INST=3	INST=12	INST=48	INST=192	1332	255
10	Fire N/O	INST=3	INST=12	INST=48	INST=192	1336	255
11	Gas N/C	INST=3	INST=12	INST=48	INST=192	1340	255
12	Panic	INST=3	INST=12	INST=48	INST=192	1344	255
13	Tamper, Armed	Inactive=0	INST=12	INST=48	INST=192	1348	252
14	Perim Night/Away	Inactive=0	Perim=8	Perim=32	Inactive=0	1352	40
15	Glass Break	INST=3	INST=12	INST=48	INST=192	1356	255
16	Perim Vibr Night/Away	Inactive=0	Perim=8	Perim=32	Inactive=0	1360	40
17	Monitor (N.C.)	INST=3	INST=12	INST=48	INST=192	1364	255
18	INST Away	Inactive=0	INST=12	Inactive=0	Inactive=0	1368	12
19	24 hr Vibr	INST=3	INST=12	INST=48	INST=192	1372	255
20	24 hour Tamper	INST=3	INST=12	INST=48	INST=192	1376	255
21	Doorbell	Inactive=0	INST=12	Inactive=0	Inactive=0	1380	12
22	Not Assigned	Inactive=0	INST=12	INST=48	Inactive=0	1384	60
23	Fire N/C	INST=3	INST=12	INST=48	INST=192	1388	255
24	Switch N/C	Inactive=0	Inactive=0	Inactive=0	Inactive=0	1392	0
25	Vibration 100 ms , armed	Inactive=0	INST=12	INST=48	Inactive=0	1396	60
26	24 hr Zone (N.C.)	INST=3	INST=12	INST=48	INST=192	1400	255
27	24 hr Zone (N.O)	INST=3	INST=12	INST=48	INST=192	1404	255
28	Vibr 50 ms Away/Night	Inactive=0	INST=12	INST=48	Inactive=0	1408	60
29	Vibration 20 ms armed	Inactive=0	INST=12	INST=48	INST=192	1412	252
30	Not Assigned					1416	
31	Not Assigned					1420	

Zone Type Security Mode assignments define the behavior of the zone type in each of the security modes: Security off, Away, Night and Day. Instant means instant activation of the alarm type. Alert means activation puts the system into Alert state, where the activation of another Alert, Instant or Perimeter zone within 10 minutes will trigger an Intruder Alarm. Perimeter means activation of the zone type will put the system into Perimeter state, where activation of an Alert or Instant zone within 10 minutes will trigger an Intruder alarm. Inactive means activation of the zone will not result in any alarm, but will still activate the Zone Response if programmed. See Engineer Menu figure 3.2 for the flowchart.

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Table 9 - Zone Types (Alarm Type Assignments) - Needs RESET

No	Type	Normal Alarm		Alarm, Zone Trouble, Armed	
		Alarm Type	Location	Alarm Type	Location
1	Door/window	1, Intruder	1302	1, Intruder	1303
2	Entry Door	1, Intruder	1306	1, Intruder	1307
3	Alert Night/Away	6,Alert	1310	1, Intruder	1311
4	Alert Away	6,Alert	1314	1, Intruder	1315
5	Instant Away/Night	1,Intruder	1318	1, Intruder	1319
6	Alert Vibration	6,Alert	1322	1, Intruder	1323
7	Vibration, armed	1,Intruder	1326	1, Intruder	1327
8	Switch (N/O)	0	1330	5,Trouble	1331
9	Monitor (N/O)	14, Family Care	1334	5,Trouble	1335
10	Fire N/O	12,Fire	1338	5,Trouble	1339
11	Gas N/C	13,Gas	1342	5,Trouble	1343
12	Panic	9,Panic	1346	11, Tamper	1347
13	Tamper, Armed	11,Tamper	1350	11, Tamper	1351
14	Perim Night/Away	15,Perimeter	1354	11, Tamper	1355
15	Glass Break	1,Intruder	1358	11, Tamper	1359
16	Perim Vibr Night/Away	15,Perimeter	1362	11, Tamper	1363
17	Monitor (N.C.)	14, Family Care	1366	5, Trouble	1367
18	INST Away	1,Intruder	1370	11, Tamper	1371
19	24 hr Vibr	1,Intruder	1374	11, Tamper	1375
20	24 hour Tamper	11,Tamper	1378	11,Tamper	1379
21	Doorbell	25,Doorbell	1382	5,Trouble	1383
22	Not Assigned	14,Family Care	1386	5, Trouble	1387
23	Fire N/C	12,Fire	1390	5,Trouble	1391
24	Switch N/C	0	1394	5,Trouble	1395
25	Vibration 100 ms , armed	1,Intruder	1398	1, Intruder	1399
26	24 hr Zone (N.C.)	1,Intruder	1402	11, Tamper	1403
27	24 hr Zone (N.O)	1,Intruder	1406	11, Tamper	1407
28	Vibr 50 ms Away/Night	1, Intruder	1410	11, Tamper	1411
29	Vibration 20 ms armed	1,Intruder	1414	11, Tamper	1415
30	Not Assigned	0	1418	0	1419
31	Not Assigned	0	1422	0	1423

The Trouble condition Alarm Type is activated when a non-Null (Instant, Alert or Perimeter) zone is in trouble condition (short circuit or open circuit) when the system is armed. When the system is not armed, the Zone Trouble alarm as programmed in the Non Detector Alarms is activated. For example, if the wiring for a door magnetic contact is broken or cut, in SECURITY OFF activates a Trouble Alarm, while in Away mode activates an Intruder Alarm as specified in the table above.

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Table 10 - Zone Types (Miscellaneous Settings) - Needs RESET

No	Type	Entry door	Normally Open	24 Hr	Sensitivity Number (ms)	Location	Value
	Add Value	Add 64	Add 32	Add 16	Add 0 to 7		
1	Door/window	No	No	No	6 (500)	1301	6
2	Entry Door	Yes	No	No	6 (500)	1305	70
3	Alert Night/Away	No	No	No	6 (500)	1309	6
4	Alert Away	No	No	No	6 (500)	1313	6
5	Instant Away/Night	No	No	No	6 (500)	1317	6
6	Alert Vibration	No	No	No	2 (50)	1321	2
7	Vibration, armed	No	No	No	2 (50)	1325	2
8	Switch (N/O)	No	Yes	No	6 (500)	1329	38
9	Monitor (N/O)	No	Yes	No	6 (500)	1333	38
10	Fire N/O	No	Yes	Yes	6 (500)	1337	54
11	Gas N/C	No	No	No	6 (500)	1341	6
12	Panic	No	No	No	6 (500)	1345	6
13	Tamper, Armed	No	No	No	6 (500)	1349	6
14	Perim Night/Away	No	No	No	6 (500)	1353	6
15	Glass Break	No	No	No	6 (500)	1357	6
16	Perim Vibr Night/Away	No	No	No	2 (50)	1361	2
17	Monitor (N.C.)	No	No	No	6 (500)	1365	6
18	INST Away	No	No	No	6 (500)	1369	6
19	24 hr Vibr	No	No	No	2 (50)	1373	2
20	24 hour Tamper	No	No	No	6 (500)	1377	6
21	Doorbell	No	Yes	No	4 (200)	1381	36
22	Not Assigned	No	No	No	6 (500)	1385	6
23	Fire N/C	No	No	Yes	6 (500)	1389	22
24	Switch N/C	No	No	No	6 (500)	1393	6
25	Vibration 100 ms , armed	No	No	No	3 (100)	1397	3
26	24 hr Zone (N.C.)	No	No	No	6(500)	1401	6
27	24 hr Zone (N.O)	No	Yes	No	6(500)	1405	38
28	Vibr 50 ms Away/Night	No	No	No	6(500)	1409	6
29	Vibration 20 ms armed	No	No	No	1 (20)	1413	1
30	Digital NC	No	No	No	3 (100)	1417	139
31	Digital NO	No	Yes	No	3 (100)	1421	171

Note: Inactive Zone types will trigger their ON/ OFF responses but not their alarm types. Thus, switches and other input devices which have no security function should be set to Inactive in all security modes. The only purpose of switches is to activate responses. 24 Hour Zone Types are always active regardless of their Off, Away, Day, Night settings, and cannot be bypassed. Zone Types which are Instant in all modes but have 24 hour setting OFF can be bypassed.

There is normally no need to change the default settings for Zone Types, unless there is a special requirement which cannot be met by the default Zone Types.

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Table 11 - Zone Sensitivity

Sensitivity No	Sensitivity (ms)	Sensitivity No	Sensitivity (ms)
0	10 ms	4	200 ms
1	20 ms	5	70 ms
2	50 ms	6	500 ms
3	100 ms	7	850 ms

Table 12 - Phone Numbers (4,1)

Dial Index	Phone Type (0,1,2,3,4)	Phone Number (max. 20 digits)	Note: Phone Types
1			0 for No Phone, 1 for Voice Phone 2 for Pager 3 for Alarm Voice Message 4 for Monitoring Station (Dial Index 1 and 2 only)
2			
3			
4			
5			
6			
7			
8			

The assignment of phone types must be coordinated with the Dial Settings for the Alarm Types. Determine what phones or pagers are to be programmed for each alarm type, and program the phone types and numbers before programming the Dial settings for the Alarm Types. If an Alarm Type Dial Setting points to an index which has Phone Type 0 (No phone) programmed, no dial-out will be done for that number.

Central Monitoring Station (phone type 4) can be assigned to Dial Index 1 and 2 only. Dial Index 1 and 2 may also be assigned to other phone types if not assigned to CMS

Table 13 - Monitoring Station Settings - Phone Type 4 for Dial Indexes 1 and 2

CMS No.	Monitoring Station Code Account 3 to 4 digits	Monitoring Station Type (CMS Format -see table below)	Phone Number	CMS/Voice Station
Menu Ref.	Press 1	Press 2	Press 3	Press 4
Range	3 or 4 digits	1 to 13	up to 20 digits	ON/OFF
1		13 (Contact ID)		
2		13 (Contact ID)		

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Table 14 - CMS Formats supported

Format	Description	Characteristics
1	Ademco Slow	4x2, 10 pps, 1900 Hz data, 1400 Hz handshake 1400 Hz kissoff, 2 rounds
2	Ademco Slow	4x2, 10 pps, 1900 Hz data, 1400 Hz handshake 1400 Hz kissoff, checksum
3	Ademco Slow	3x1, 10 pps, 1900 Hz data, 1400 Hz handshake 1400 Hz kissoff, 2 rounds
4	Silent Knight	4x2, 14 pps, 1900 Hz data, 1400 Hz handshake 1400 Hz kissoff, 2 rounds
5	Franklin	4x2, 20 pps, 1800 Hz data, 2300 Hz handshake 2300 Hz kissoff, 2 rounds
6	Radionics	3x1, 40 pps, 1800 Hz data, 2300 Hz handshake 2300 Hz kissoff 2 rounds
7	Radionics	4x2, 40 pps, 1800 Hz data, 2300 Hz handshake 2300 Hz kissoff 2 rounds
8	Radionics	4x2, 40 pps, 1800 Hz data, 2300 Hz handshake 2300 Hz kissoff checksum
9	Radionics	3x1, 40 pps, 1800 Hz data, 2300 Hz handshake 2300 Hz kissoff checksum
10	Surgard	DTMF 4x3 2300 Hz handshake 2300 Hz kissoff 2 rounds
11	Surgard	DTMF 4x3 2300 Hz handshake 2300 Hz kissoff checksum
12	Ademco Express	DTMF 4x2 1400/2300 Hz handshake 1400 Hz kissoff
13	Contact ID	DTMF 4x3,3,2,3 1400/2300 Hz handshake 1400 Hz kissoff

Table 15 - Entry/Exit Time (4,2)

Menu Ref.	Parameter	Range	Value	Remarks
4,2,0	Entry Time	0-99 seconds	30	This determines the time allowed to sign-in after the entry door is activated when the system is armed
4,2,1	Exit Time	0-99 seconds	30	This determines the time allowed to exit after Security Check determines that all protected zones are closed. Exit time is terminated by closing the entry door.
4,2,2	Entry Warning Time	0-99 seconds	15	This determines the duration of the local warning alarm after exit or entry time has expired, before a full intruder alarm is generated. If set to 0, a full intruder alarm is generated immediately, without any local warning alarm.
4,2,3	Night Exit Time	0-99 seconds	5	This determines the delay before the system arms to Night Mode. This delay is allowed for people to leave the protected Night Zones

Table 16 - Security Options (4,3)

Menu Ref.	Parameter	Range	Value	Remarks
4,3,1	Force Arm	On/Off	Yes	ON to allow Force Arming
4,3,3	Siren Reverse	On/Off	No	OFF to activate sounder by applying 12V. Yes to activate sounder by removing voltage (for self-actuating sirens)

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Table 17 - General (non-detector) Alarm Conditions

Triggering of zones or inputs activate Alarm Types according to the Zone Types. Alarm Types are also activated by other conditions not related to zones, for example, Low Battery, power failure . Each General Alarm in the table below is assigned to an Alarm Type, which determines the characteristics of the alarm. The setting is accessed using the Locations menu (Engineer menu 7,4,1). To disable the general alarm, set the alarm type to 0, for example, to disable the Phone Trouble alarm, set Location 7 to 0. The phone line cut is still detected but the alarm will not be reported, there will be no trouble siren, and the Home led will remain steady.

There is usually no need to change the default settings

General Alarm Condition	Location	Alarm Type	General Alarm Condition	Location	Alarm Type
Intruder	3	1	Siren Trouble	17	22
Zone Trouble	4	5	Not Used	18	0
Low Battery	5	7	HomeSafe Sign In	19	26
Power Failure	6	8	Dial Test	20	27
Line Cut	7	3	CMS Dial Test	21	18
Duress	8	2	Entry Alert	22	10
Arm Fail	9	4	Fire	23	12
Family Care	10	14	Panic	24	9
Disarm	11	17	Not Used	25	28
Arm	12	19	New Message	26	29
Tamper	13	11	Doorbell	27	25
Force Arm	14	23	RS485 Comms Fail	28	24
Entry Warning	15	21	Sign In Tamper	29	31
Alarm Abort	16	20			

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Table 18 - Alarm Types (Engineer Menu 2) - Dial Settings

No	Assigned To	Dial Out?	Dial Indexes								Dial Delay	CMS Report Code		CMS Restore Code		Class Code
			1	2	3	4	5	6	7	8		digit 1	digit 2	digit 1	digit 2	
		Yes/No									0 to 15				1-9	
		Press ...	1,1									1,2	1,3		1,4	
1	Intruder	Yes	1	1	1	1	1	1	1	1	No	3	0	3	0	1
2	Duress	Yes	1	1	1	1	1	1	1	1	No	2	1	15	15	1
3	Line Cut	No									No	15	15	15	15	3
4	Arm Fail	No	1	1	1	1	1	1	1	1	No	0	6	15	15	4
5	Zone Trouble	Yes	1	1	1	1	1	1	1	1	No	7	0	7	0	3
6	Zone Alert	Yes	1	1	1	1	1	1	1	1	No	3	2	15	15	1
7	Low Battery	Yes	1	1	1	1	1	1	1	1	No	0	2	0	2	3
8	Power Fail	No	1	1	1	1	1	1	1	1	No	0	1	0	1	3
9	Panic	Yes	1	1	1	1	1	1	1	1	No	2	0	15	15	1
10	Entry Alert	No	1	1	1	1	1	1	1	1	No	15	15	15	15	1
11	Tamper	Yes	1	1	1	1	1	1	1	1	No	3	7	3	7	1
12	Fire	Yes	1	1	1	1	1	1	1	1	No	1	0	15	15	1
13	Gas	Yes	1	1	1	1	1	1	1	1	No	5	1	15	15	1
14	Family Care	Yes	1	1	1	1	1	1	1	1	No	0	2	15	15	1
15	Perimeter	No	1	1	1	1	1	1	1	1	No	3	1	15	15	1
16	Bypass Zone	No	1	1	1	1	1	1	1	1	No	7	0	7	0	5
17	Disarm	No									No	0	1	15	15	4
18	CMS Test	Yes	1	1	1	1	1	1	1	1	No	0	1	15	15	6
19	Arm	No									No	0	1	15	15	4
20	Alarm Abort	No	1	1							No	0	6	15	15	4
21	Entry Warning	No									No	15	15	15	15	1
22	Siren Trouble	No	1	1	1	1	1	1	1	1	No	7	3	7	3	3
23	Force Arm	No										5	0	15	15	4
24	RS485 Comms	No	1	1	1						No	15	15	15	15	3
25	Doorbell	No									No	15	15	15	15	6
26	HomeSafe	No									No	15	15	15	15	4
27	Dial Test	Yes	1	1	1	1	1	1	1	1	No	0	1	15	15	6
28	Not Used	No									No	15	15	15	15	3
29	New Message	Yes									No	15	15	15	15	6
30	Engineer Dial	No									No	15	15	15	15	6
31	Signin Tamper	Yes	1	1							No	1	3	15	15	4

CMS Report codes are set to Contact ID as default

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Table 19 - Alarm Types (Engineer Menu 2) - Other Settings

No	Assigned To	Resp	Alarm Desc	Strobe	Siren Type	Siren Delay	Allow Arm	Alarm State
		0-127	0-254	Yes/No	1-20	Yes/No	Yes/No	0-3
	Press ...	2	3	4	5	5	7	8
1	Intruder		101	Y	1	No	N.A.	3
2	Duress		103	N	0	No	N.A.	3
3	Line Cut		104	N	11	No	Yes	1
4	Arm Fail		8	Y	14	No	N.A.	3
5	Zone Trouble		105	N	7	No	Yes	1
6	Zone Alert		106	N	0	No	N.A.	2
7	Low Battery		108	N	7	No	No	1
8	Power Fail		109	N	7	No	Yes	1
9	Panic		107	Y	1	No	N.A.	3
10	Entry Alert		121	N	3	No	N.A.	2
11	Tamper		102	Y	1	No	N.A.	3
12	Fire		100	Y	2	No	N.A.	3
13	Gas		113	Y	13	No	N.A.	3
14	Family Care		110	Y	0	No	N.A.	0
15	Perimeter		111	N	0	No	N.A.	2
16	Bypass Zone		197	N	0	No	N.A.	0
17	Disarm		20	N	0	No	N.A.	0
18	CMS Test		238	N	0	No	N.A.	0
19	System Armed		191	N	0	No	N.A.	0
20	Alarm Abort		131	N	0	No	N.A.	0
21	Entry Warning		135	N	6	No	N.A.	2
22	Siren Trouble		229	N	11	No	Yes	1
23	Force Arm		242	N	0	No	N.A.	0
24	RS485 Comms		248	N	7	No	N.A.	1
25	Doorbell		213	N	10	No	N.A.	0
26	HomeSafe		119	N	0	No	N.A.	0
27	Dial Test		238	N	0	No	N.A.	0
28	Not Used							
29	New Message		74	N	0	No	N.A.	0
30	Engineer Dial		9	N	0	No	N.A.	0
31	Sign-in Tamper		127	N	0	No	N.A.	0

It is normally not necessary to change the Alarm Type default programming, except to turn the dialout on or off, and to program which of the Dial settings 1 to 8 to dial to. If Contact ID format is chosen for the Monitoring Station, then it is not necessary to reprogram the Report and Restore codes.

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Table 20 - Alarm Phrases (used in Engineer Menu 2,3)

Alarm Erased	131	Entry Alarm	135	Perimeter Alarm	111
Alarm Voice Message	173	Family Care Mode	19	Phone Trouble	104
Arm Failure	8	Family Care Alarm	110	Phone Call, Please hang up	230
Away Mode	3	Fire Alarm	100	Power Failure	109
Battery Warning	108	Force Arm	242	Restore	134
Bypass	197	Gas Alarm	113	Sign In Tamper	127
Bypass Off	212	Security off	20	Siren Trouble	229
Communications Failure	248	HomeSafe Sign In Report	119	System Armed	191
Day Mode	246	Intruder Alarm	101	Tamper Alarm	102
Dial Failure	112	Invalid - Call Engineer	201	Vacation Mode	75
Dial Test	238	Monitoring Station	142	Voice Phone	140
Door Bell	213	New Message	74	Warning Alarm	198
Duress Alarm	103	Night Mode	23	Wrong Code	27
Engineer Sign In Option	9	Pager	141	Zone Trouble	105
Entry Alert	121	Panic Alarm	107	Zone Alert	106

Any of the Alarm Phrases in the table above may be assigned to each Alarm Type. The Alarm Phrase is announced during dialout to a Voice phone, in the event log, and in the Alarm History. There is usually no need to change assignment of Alarm Phrases to Alarm Types unless you are customizing an Alarm.

Table 21 - Other Dialout Parameters

Other Parameters	Location	Value	Description
Dial Delay (Seconds)	161	30	Common Dial Delay for all alarms with Dial delay set
Maximum tries for dial-out	264	5	Redials to each number when not successful
Redial Time (seconds)	265	60	Time before redial to the same number
Delay after CMS kissoff in alarm	1,687	0	Delay before dialing other numbers after a CMS kissoff. Applies to alarm conditions only (from v4.35)

📞 NZ installations: To comply with Telepermit requirements, Maximum tries for dialout should be not more than 10, and Redial time should not be less than 30 seconds.

Program Worksheet (FS17)

Table 22 - Siren Types

Siren Type		Sound Type	Location	Duration					System use
				Secs	1st Location	Value	2nd Location	Value	
1	Intruder	0	444	300	446	Any	447	23	Y
2	Fire	1	448	600	450	Any	451	46	Y
3	Arming Tone	2	452	300	454	Any	455	23	Y
4	Away Arm Trouble	3	456	600	458	Any	459	46	Y
5	Away Armed	4	460	1	462	20	463	0	Y
6	Warning	5	464	120	466	96	467	9	Y
7	Short Trouble	3	468	10	470	200	471	0	Y
8	Alternate Siren	7	472	300	474	Any	475	23	
9	Test Siren	0	476	2	478	40	479	0	Y
10	Doorbell	6	480	1	482	20	483	0	Y
11	Trouble	3	484	32,768	486	Any	487	1,275	Y
12	Ring	10	488	255	490	Any	491	19	Y
13	Beep	11	492	300	494	Any	495	23	
14	Arm Fail	8	496	60	498	Any	499	4	Y
15	Chime	6	500	2	502	40	503	0	Y
16	Night Armed	4	504	1	506	20	507	0	Y
17	Alternate Chime	11	508	3	510	60	511	0	
18	Auto Arming	2	512	300	514	Any	515	23	Y
19	Auto Arm trouble	3	516	300	518	Any	519	23	Y
20	Not Assigned	0	520		522		523		

Sound Types are preprogrammed sound patterns which are used by Siren Types. The Sound Types table below describes the characteristics of each Sound Type. The column "System Use" shows which siren types are used by Alarm Types or by Comfort itself

Table 23 - Sound Type Definitions

Sound Type	Description
0	Wailing 500 Hz to 2 kHz
1	1 kHz for 1 sec, 2 kHz for 1 sec, repeat 2 times, then pause 1.5 seconds
2	Beep 50 ms every second
3	Beep 200 ms, off 200 ms
4	Beep 100 ms off 400 ms
5	1 kHz tone 0.5 secs, off 0.5 secs
6	1 kHz tone 2 secs, 800 Hz 2 seconds
7	1 kHz 1 sec, 2 kHz 2 secs
8	1 kHz 50 ms, Off 200 ms
9	600 Hz 1 second, 800 Hz 1 second
10	700 Hz 400 ms, Off 200 ms repeat then 1.5 seconds off
11	600 Hz 500 ms, off 500 ms

The Duration of each siren type is programmed in two consecutive locations in the above table. Refer to the table below for programming different durations

Program Worksheet (FS17)

Table 24 - Siren Duration

Duration (secs)	1st Location	2nd Location	Duration (secs)	1st Location	2nd Location
0.5	10	0	50	232	3
1	20	0	60	176	4
2	40	0	120	Any	9
4	80	0	180	Any	14
5	100	0	240	Any	18
10	200	0	300	Any	23
20	144	1	600	Any	46
30	88	2	1,200	Any	93
40	32	3	Indefinite	Any	255

Each Unit in the 2nd Location represents a duration of 12.8 seconds (or 256 x 50 ms). Each unit in the 1st Location represents a duration of 50 ms. For Siren durations longer than 60 seconds, the 1st Location value is insignificant and may be ignored.

Table 25 - Siren Types (Output Settings)

Siren Type	Location	Priority	Door	Keypad	Spare	Hi SPK	SIREN	Value
	Add Value	Add 128	Add 64	Add 32	Add 16	Add 8	Add 4	Total
1 Intruder	445			32		8	4	44
2 Fire	449	128		32		8	4	172
3 Arming Tone	453		64	32				96
4 Away Arm Trouble	457		64	32				96
5 Away Armed	461		64	32		8	4	108
6 Warning	465			32		8		40
7 Short Trouble	469			32				32
8 Alternate Siren	473			32		8	4	44
9 Test Siren	477			32		8	4	44
10 Doorbell	481		64	32				96
11 Trouble	485			32				32
12 Ring	489			32				32
13 Beep	493			32				32
14 Arm Fail	497			32		8	4	44
15 Chime	501			32				32
16 Night Armed	505			32				32
17 Alternate Chime	509			32				32
18 Auto Arming	513			32				32
19 Auto Arm trouble	517			32				32
20 Not Assigned	521							

Each Siren type may be programmed to be output to any combination of the Keypads, Door Station, Siren (12V). All Siren Types will be output on the Speaker, but the Speaker level is programmable at a High level (maximum) or Low level which is adjustable using the onboard VR1 trimmer. HI SPK setting sets the Speaker output. to High Level for Alarms.

Program Worksheet (FS17)

Table 26 - Control Menu (3,1)

Key	Description				Action	Action Words				Resp
					(0 to *)	Description	(0-255)	(0-255)	(0-255)	(0-127)
0	Word 1	Word 2	Word 3	Word 4	0					
	(0-255)	(0-255)	(0-255)	(0-255)	1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
	Location for Feedback Input				9					
	1819				*					
1	Word 1	Word 2	Word 3	Word 4	0					
	(0-255)	(0-255)	(0-255)	(0-255)	1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
	Location for Feedback Input				9					
	1820				*					
2	Word 1	Word 2	Word 3	Word 4	0					
	(0-255)	(0-255)	(0-255)	(0-255)	1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
	Location for Feedback Input				9					
	1821				*					
3	Word 1	Word 2	Word 3	Word 4	0					
	(0-255)	(0-255)	(0-255)	(0-255)	1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
	Location for Feedback Input				9					
	1822				*					

Program Worksheet (FS17)

Key	Description				Action (0 to *)	Action Words				Resp (0-127)	
						Description	(0-255)	(0-255)	(0-255)		
4	Word 1	Word 2	Word 3	Word 4	0						
	(0-255)	(0-255)	(0-255)	(0-255)	1						
					2						
					3						
					4						
					5						
					6						
					7						
					8						
	Location for Feedback Input				9						
	1823				*						
	5	Word 1	Word 2	Word 3	Word 4	0					
		(0-255)	(0-255)	(0-255)	(0-255)	1					
						2					
				3							
				4							
				5							
				6							
				7							
				8							
Location for Feedback Input				9							
1824				*							
6		Word 1	Word 2	Word 3	Word 4	0					
		(0-255)	(0-255)	(0-255)	(0-255)	1					
						2					
					3						
					4						
					5						
					6						
					7						
					8						
	Location for Feedback Input				9						
	1825				*						
	7	Word 1	Word 2	Word 3	Word 4	0					
		(0-255)	(0-255)	(0-255)	(0-255)	1					
						2					
				3							
				4							
				5							
				6							
				7							
				8							
Location for Feedback Input				9							
1826				*							

Program Worksheet (FS17)

Key	Description				Action	Action Words				Resp
					(0 to *)	Description	(0-255)	(0-255)	(0-255)	(0-127)
8	Word 1	Word 2	Word 3	Word 4	0					
	(0-255)	(0-255)	(0-255)	(0-255)	1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
	Location for Feedback Input				9					
	1827				*					
9	Word 1	Word 2	Word 3	Word 4	0					
	(0-255)	(0-255)	(0-255)	(0-255)	1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
	Location for Feedback Input				9					
	1828				*					
*	Word 1	Word 2	Word 3	Word 4	0					
	(0-255)	(0-255)	(0-255)	(0-255)	1					
					2					
					3					
					4					
					5					
					6					
					7					
					8					
	Location for Feedback Input				9					
	1830				*					

Program Worksheet (FS17)

Notes on Control Menu Programming

- 1 **If the Control Menu is not programmed, (or more precisely, Control Key 1 is not programmed), the User Menu will not announce "4 for Home Control"**
- 2 The Location for Feedback Input should have the input number which provides the status of the controlled appliance (On or Off). The input should be programmed as Zone Type 8 (Switch N/O) or Zone Type 24 (Switch N/C). If the Input specified in the feedback location is ON, the System takes the word for ON from Action Key 1. Otherwise, it takes the word for OFF from Action Key 0. The system can only report OFF and ON status.
- 3 **From 4.107, the Location for feedback allows output states, analog Inputs, and counter values to be announced on the Control Menu. To announce analog input values (0 to 255), put in the Input number + 64 in the Feedback Location. Note that only the inputs on the main and slave boards are analog inputs, not those on the LEMs. To announce outputs (on/off), put in the output number + 128 in the Feedback location. To announce the value in a counter, put in the Counter number + 192 in the Feedback Location**

Table 27 - Holidays (3,2)

No	Holiday Name	Month (1-12)	Day (1-31)	No	Holiday Name	Month (1-12)	Day (1-31)
1				13			
2				14			
3				15			
4				16			
5				17			
6				18			
7				19			
8				20			
9				21			
10				22			
11				23			
12				24			

Program Worksheet (FS17)

Table 28 - Time Programs (3,3)

No	Description	Day of Week								Time		Resp
		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hol	Hour	Minute	
		1	2	3	4	5	6	7	8	0-23	0-59	0-127
		Press 3								Press 2		Press 4
1	Auto arm to Night										69	
2	Auto disarm from night										63	
3	Auto arm Night weekend										69	
4	Auto disarm weekend										63	
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

Holidays in Time Programs

If a Time Program is set for days of week say Monday to Friday but not for Holiday, and a particular day is a Holiday (as defined in the Holidays table), the Time Program will be active on that day. If it is required that the Time Program/ Reminder should **not** be active on a Holiday then in the Time Program Response, the actions code sequence 73,19 (Get Holiday), 13 (Exit if NZ) should be used to bypass the Response on holidays (V4.21 above)

Program Worksheet (FS17)

Table 29 - Vacation Programs (3,4)

No	Description	Start Time	Hours	ON Response	Off Response
		Hours 0-23	Duration 0-23	0-127	0-127
		Press 1	Press 2	Press 3	Press 4
1					
2					
3					
4					
5					
6					
7					
8					

Table 30 - Security Mode Responses (3,5)

Mode	Response (0-127)	Description	Mode	Response (0-127)	Description
0 - Off			2 - Night	31	
1 - Away	28	Strobe on 3 secs	3 - Day		

Table 31 - Other Responses Locations

Function	Location	Resp	Remarks
7 to Open Door Response (Door Station Menu)	52	0	The Door Station Menu will announce "7 to Open Door", and pressing 7 will activate this Response (hopefully, to open the door)
Startup Response	1683	0	Response activated at Startup (reset or Power on) (v4.77)
Phone Ring Response	1685	0	Response for Ring Detected (NOT USED for V4.124 above)
4 to Open Gate Response (Door Station Menu)	1686	0	The Door Station Menu will announce "4 to Open Gate", and pressing 4 will activate this Response (hopefully, to open the gate)
Doorbell Response	1691	0	Response activated when Door Station button is pressed
Hourly Response	1845	0	Response activated each hour (v4.107)
AC Restore Location	1847	0	Response activated when AC is restored after power failure (v4.88)
Phone Trouble Restore	1848	0	Response activated when Line cut is restored after "phone trouble" (v4.88)
Start Arming Response	1850	0	Response activated when the system is being armed (at the start) (v4.88)

Program Worksheet (FS17)

Program Worksheet (FS17)

Table 33 - Responses (3,6)

No	Description	Action Codes					
		1	2	3	4	5	6
1	Output 1 ON	128	1	1	255		
2	Output 1 OFF	128	1	0	255		
3	Output 2 ON	128	2	1	255		
4	Output 2 OFF	128	2	0	255		
5	Output 3 ON	128	3	1	255		
6	Output 3 OFF	128	3	0	255		
7	Output 4 ON	128	4	1	255		
8	Output 4 OFF	128	4	0	255		
9	Output 5 ON	128	5	1	255		
10	Output 5 OFF	128	5	0	255		
11	Output 6 ON	128	6	1	255		
12	Output 6 OFF	128	6	0	255		
13	Output 7 ON	128	7	1	255		
14	Output 7 OFF	128	7	0	255		
15	Output 8 ON	128	8	1	255		
16	Output 8 OFF	128	8	0	255		
17	IR 1 Output 1	129	1	1	255		
18	IR 2 Output 1	129	2	1	255		
19	IR 3 Output 2	129	3	2	255		
20	IR 4 Output 2	129	4	2	255		
21	IR 5 Output 3	129	5	3	255		
22	IR 6 Output 3	129	6	3	255		
23	IR 7 Output 4	129	7	4	255		
24	IR 8 Output 4	129	8	4	255		
25	Intruder/Panic Alarm /Tamper Response	73	25	16	74	65	193
26	(If Off/Night/Day, On 'A' Lights. Away/vacation, flash Lights	74	49	255			
27	IR 11 Output 6	129	11	6			
28	Away Mode Response (Strobe On 3 seconds)	74	118	255			
29							
30							
31	Disable Dialout in Night Mode	73	0	68	2	100	0
32		255					
33	X10 A1 ON (Downstairs)	195	65	1	5	255	
34	X10 A1 OFF	195	65	1	7	255	
35	X10 A2 ON	195	65	2	5	255	
36	X10 A2 OFF	195	65	2	7	255	
37	X10 A3 ON	195	65	3	5	255	

Program Worksheet (FS17)

No	Description	Action Codes					
		1	2	3	4	5	6
38	X10 A3 OFF	195	65	3	7	255	
39	X10 A4 ON	195	65	4	5	255	
40	X10 A4 OFF	195	65	4	7	255	
41	X10 B1 ON (Upstairs)	195	66	1	5	255	
42	X10 B1 OFF	195	66	1	7	255	
43	X10 B2 ON	195	66	2	5	255	
44	X10 B3 OFF	195	66	2	7	255	
45	X10 B3 ON	195	66	3	5	255	
46	X10 B3 OFF	195	66	3	7	255	
47	X10 L1 ON (outside Lights)	195	76	1	5	255	
48	X10 L1 OFF (outside lights)	195	76	1	7	255	
49	Flash X10 Lights housecodesA and B at 5 seconds intervals	74	96	74	122	194	7
50	X10 A9 OFF	0	5	51	255		
51	Flash X10 Housecodes A and B (from Response 49)	74	66	74	123	194	7
52	X10 A10 OFF	0	5	49	255		
53	Entry Delay in Day Mode	73	0	68	3	4	255
54	Entry Delay in Night Mode	73	0	68	2	4	255
55	Unbypass All Zones	10	255	255	3	4	255
56	Momentary switch Keyarm/Disarm to Night mode	73	0	16	73	9	69
57		2	72	2	193	72	0
58		255					
59	Announce Zone i	1					
60	Momentary switch Keyarm/Disarm to away mode	73	0	16	73	9	69
61		2	72	1	193	72	0
62		255					
63	Auto Disarm from Night Mode only and not in Alarm	73	0	68	2	73	9
64		69	3	71	0	255	
65	X10 All Units A Off	195	65	0	1	255	
66	X10 All Lights 'A' Off	195	65	0	13	255	
67	Doorphone, Chime	9	6	1	64	10	255
68	AUTO ARM Away	71	1	255			
69	AUTO ARM Night from Security Off only	73	0	13	71	2	255
70	Disarm	71	0				
71	KEY ARM Day from Security Off	73	0	13	72	03	255
72	KEY ARM Away from Security Off	73	0	13	72	01	255
73	KEY ARM Night from Security Off or Day Mode	73	0	13	72	2	
74		255					

Program Worksheet (FS17)

No	Description	Action Codes					
		1	2	3	4	5	6
75	Chime Siren (Conditional) Operates if Flag16=0	132	16	2	13	64	15
76		255					
77	Security Off Response (stop Timer 7 Lights flash)	85	7	255			
78	All Outs, X10 Off	8	195	65	0	1	
79	Pulse Output 1 1 second	130	20	1	255		
80	Pulse Output 2 1 second	130	20	2	255		
81	Pulse Output 3 1 second	130	20	3	255		
82	Pulse Output 4 1 second	130	20	4	255		
83	Pulse Output 5 1 second	130	20	5	255		
84	Pulse Output 6 1 second	130	20	6	255		
85	Cancel Entry Delay in Night Mode (entry door)	73	0	68	2	5	255
86	Vibration Analyser Apply with Zone Types 6,7,16,19,25 3 counts in 30 seconds triggers alarm Uses Counter 7 and Timer 8	86	8	16	194	8	0
87		30	0	131	7	1	192
88		83	7	70	3	85	8
89		193	21	255			
90	Daylight Savings Time Used in Time Program 16 every Sunday at 2.00 am. +1 hour last Sunday March - 1 hr last Sunday October	73	4	69	25	193	73
91		5	68	3	98	1	193
92		68	10	98	2	255	
93	Intelligent Set (use in Zone Response for detector) If Landing detector triggered, arm to Night not Away	73	10	12	72	0	72
94		2	255				
95	Doorbell Recording M'box1 after 30s , use in Alarm Type 25	135	01	30	255		
96	X10 All Lights Housecode 'A' ON (Downstairs Lights)	195	65	0	3	255	
97	Flag 16 ON - Chimes, announce OFF	132	16	1	255		
98	Flag 16 OFF - Chimes, announce ON	132	16	0	255		
99	All Outputs Off	8	255				
100	Arm Security System Menu	91	1	255			
101	Bypass Menu	99	32	91	8	255	
102	Home Control Menu	99	64	91	4	255	
103	Test Menu	99	32	91	7	255	
104	Record Memo Menu	91	27	255			
105	Event Log	99	32	91	6	255	
106	Change Phone Menu	99	128	91	11	255	
107	Change Code Menu	91	24	255			
108	Change Date and Time	99	128	91	10	255	
109	Answering Machine Menu	99	128	91	09	255	
110	Enable Engineer Code, activate Alarm 30	92	1	88	30	255	
111	User Codes Menu	99	128	91	36	255	
112	Zone Monitor Keypad 1	94	1	255			

Program Worksheet (FS17)

No	Description	Action Codes					
		1	2	3	4	5	6
113	Zone Monitor Keypad 2	94	2	255			
114	Assign Phone to Mailbox	91	28	255			
115	Change Time Program	99	128	91	17	255	
116	Reminder 8 on keypad 1	133	8	1	255		
117	Strobe Off	66	0	255			
118	Strobe on 3 secs (TMR 8), then Resp 117 (Strobe off)	66	1	194	8	0	3
119		117	255				
120	Baby Monitor Keypad 2	93	2	91	25	255	
121	Intercom request	22	255				
122	S12V Off, Start Timer	90	0	194	8	0	3
123		124	255				
124	S12V On	90	1	255			
125	CMS Dial-Test	80	18	255			
126	External Lights ON for 5 Minutes, X-10 L1 Lux Dependent on Zone 13 (N.O when light)	79	13	12	74	47	194
127		1	1	44	48	255	

Table 34 - Other Location Changes (7,4,1)

Not all settings are changed using the Engineer Menu. Those which cannot be changed in the menus can be changed using Locations (Engineer Menu 7,4,1). Enter the Location followed by #. The Location and current value at the location are announced, then "Enter new number and # key". when the number is entered and #, the new number is announced. Remember that Engineer Code access must be enabled by Program Menu 3,4,1. When some of the Locations are changed, it is necessary to press RESET or do a software reset in Engineer Menu 7,4,2). These Locations are indicated by the RESET column in the table below.

Loc.	Parameter	Range	Value	Units	Reset ¹
112	2 Way Audio Parameters (DO NOT CHANGE THESE DEFAULT PARAMETERS. These values are listed for reference for troubleshooting of two way audio problems)		255		Y
113			7		Y
114			170		Y
115			10		Y
116			128		Y
117			62		Y
118			25		Y
119			1		Y
44	Alarm Abort Time	0 - 255	90	seconds	N
	If an alarm condition is disarmed with the Alarm Abort Time, an Abort Alarm (Misoperation) is activated, which can be used to signal to the Central Station indicating a false alarm This is applicable to the UK				
45	Armed/Alarm Output	1 - 16	0	Output	N
	Enter the output number to indicate Armed (Steady) or Alarm/Alert (Flash). An LED can be connected to the output with a suitable series resistor (1k to 2.2k) to provide a visual indicator. This is the same indication as the Red led on the main board				
46	Off / Trouble Output	1 - 16	0	Output	N

Program Worksheet (FS17)

Loc.	Parameter	Range	Value	Units	Reset ¹
	Enter the output number to indicate Off (Steady) or Trouble (flash). An LED can be connected to the output with a suitable series resistor (1k to 2.2k) to provide a visual indicator. This is the same indication as the green led on the main board				
47	Incoming Call Release Time	0 - 255	45	Seconds	N
	This is the time in seconds for the telephone exchange to release the line during a call after the local phone is put on hook. If no dial tone is detected when Comfort is trying to call during an alarm, it will first try a hook flash to get dial tone (if 3rd party call facility is available). If no dial tone is obtained, it will go on hook for the time programmed in this location before trying to dial again. During this time, Comfort will not answer any incoming call. This protects against burglars who try to prevent a dialout by making a call and not hanging up. This is only effective if Wait for Dial Tone setting is enabled in Location 39				
48	Pager Upper Frequency	0-255	64	counts	N
49	Pager Lower Frequency	0-255	55	counts	N
	Applicable for dialing to automatic Pager systems (i.e. not answered by human operators). Comfort sends information to the pager when a series of beeping tones is detected. The upper and lower frequency counts determine the limits of the pager beep frequency. If the pager beep tone frequency falls within the limits defined by the pager upper and lower frequency locations, the pager data will be sent. The value in the location is calculated by the formula (Pager frequency)/33.33. e.g if the pager frequency is 2000 Hz, then the required count is 60. Setting pager upper frequency location as 70 and Pager lower frequency location as 50 will provide the necessary tolerance for detection. For paging system that have automatic voice answering but do not provide a distinctive beep which is not in the same frequency range as the answering voice, but allows the pager sequence to be sent while the voice is talking, program the pager frequency to detect voice. Use Lower Frequency = 17, Upper Frequency = 70. This range will not be triggered by busy or ringback tones.				
51	Siren Delay	0 - 255	3	Minutes	N
	This is the common delay in minutes for all alarms which have the Siren Delay setting enabled (Engineer Menu 2,5,1).. If the telephone line is cut during the Siren Delay, the siren is turned on immediately.				
52	Open Door Response for Door Station Menu 7	0 - 127	0		N
	If a Response number is programmed in this location, the Door Station Menu will announce "7 to Open Door", and pressing 7 will activate this Response (hopefully, to open the door or gate)				
54	Keypad Voice Level	0 - 12	6	-	N
	Volume of Keypad Voice Menu. This is a software setting which can control the Keypad voice volume in addition to the Volume control knob on the Keypad				
80	DTMF Tone Level	0-12	8	-	Y
	For DTMF dialing. This parameter has been set according to the required value to operate with the telephone exchanges in your country. This setting has been tested by the telecommunications authorities. Do Not Change.				
90	Phone Voice Level	0-12	6	-	Y
	Voice menu volume on telephone				
102	DTMF Twist Level	-	80	-	Y
	For DTMF dialing. This parameter has been set according to the required value to operate with the telephone exchanges in your country. This setting has been tested by the telecommunications authorities. Do Not Change.				
161	Dial Delay	0 - 255	30	Seconds	N
	This is the dial delay in seconds which applies if the Dial Delay Setting for the Alarm Type is enabled (Engineer menu 2,1,2). When the Alarm Type is activated, the system will commence dialing only when the Dial delay time expires				
165	Arm Abort Time	0 - 255	5	Minutes	N
	This is the time in Minutes after starting of an Arm operation to abort arming if not all protected doors and windows are not closed. During this time, the names of the zones are announced. When the time expires, there will be an ARM Fail Alarm, but the premises is not armed. The user must disarm and arm again				

Program Worksheet (FS17)

Loc.	Parameter	Range	Value	Units	Reset ¹
260	Pager Start Key	0-9, *=11, # =12	11	-	N
261	Pager Separator Key		12	-	N
262	Pager 1st End Key		11	-	N
263	Pager 2nd End Key		11	-	N
	These are numeric pager setup parameters. The pager Start key is the number which starts the pager sequence. The Pager separator is the number which appears as a separator, i.e. '.' or space on the pager display. The Pager 1st End key is the number which terminates the pager data sequence. For some paging systems, 2 End keys are needed. If so, enter the second number in the Pager 2nd End Key Location.. The pager data sent is in the sequence (Pager Start Key),XXXX-YY-ZZ, (pager 1st end key) (pager 2nd end key if any).				
264	Maximum tries for dial-out	1 - 255	5	-	N
	This number in this location determines how many times the system will attempt to dial to this number, in case of a dial failure caused by busy, no answer, no sign in (for Voice phone), No acknowledgment (in case of Alarm Message Dialout, No pager beep acknowledgment for pager.				
265	Redial Time	1 - 255	60	Seconds	N
	This location is the time between redials in seconds to the same number				
720	Battery Test Interval	0 - 255	24	Hours	N
	This is the time in hours between Battery Tests Battery Test (User Menu 3,4,11 or Eng Menu 8,1) initiates an immediate Battery Test. For UL 985 (Fire) applications, program 4 or less into this location. During a battery test, the AC is turned off, leaving the system to be powered by the standby battery. The Duration of each battery test is in Location 721. Enter 0 in this Location to disable Battery Test				
721	Battery Test Duration	1 - 255	2	Minutes	N
	This is the duration of each battery test in minutes. During a battery test, the AC is turned off, leaving the system to be powered by the standby battery. The Interval between each battery test is programmed in Location 720. To turn of the automatic battery Test, use Engineer 8,1,0 or User 3,4,1,0.				
1672	UCM Communications	0,1	1	-	Y
	Set this location to 1 if one UCM is connected. The location can be left at 1 even if the UCM is not connected. A UCM is needed for the CSXpress software to upload and download to Comfort.				
1673	No of Slaves (Set to 0)	0			
1674	No of Door Stations	0-1	0		Y
	This location gives the number of Door Stations which are connected (0 to 2). The id for each Door Station must be set correctly.				
1675	No of Keypads	0-4	1		Y
	This Location gives the number of Keypads which are connected (0 to 8). The ds for each Keypad must be set correctly				
1683	Startup Response. See Other Response Locations, Table 31				
1684	Line Cut Detection Time (v4.66)	0-255	60	seconds	N
	Time (secs) required to detect a Line cut				
1685	Phone Ring Response. (NOT USED for V4.124 and above)				
1686	Open door Response for Door Station Menu 4. See Other Response Locations, Table 31				
1687	Delay after CMS kissoff in Alarm (V4.35)	0 to 255	0	seconds	N
1689	"OFF" Word Number	0 to 255	229		N
	Word number for "OFF" announced by Action 1 in Zone OFF Response				

Program Worksheet (FS17)

Loc.	Parameter	Range	Value	Units	Reset ¹
1690	Zone Auto-shunt count	0 to 255	255	counts	N
	This is the number of successive activations of any zone in alarm state which will automatically shunt or disable the zone from causing any further alarms. The count is reset by arming, disarming, and activation of any other zone. If this feature is not required, set the Location to 0 or 255				
1691	Doorbell Response. See Other Response Locations, Table 31 Doorbell Response				
1692	Away Arming Method (See Table 3)				
1693	Dialout in Progress	1-16	0	Output	N
	Enter the output for indication that a dialout is in progress. An LED can be connected to the output with a suitable series resistor (1k to 2.2k) to provide a visual indicator.				
1695	Line Cut Output	1 - 16	0	Output	N
	Enter the output for indication that the telephone line has been cut or is faulty. An LED can be connected to the output with a suitable series resistor (1k to 2.2k) to provide a visual indicator.				
1698	Voice Menu Speed	0-6,250-255	0	-	Y
	The Voice menu speed can be changed to suit the customer. The normal speed is 0. Numbers 250 to 255 give faster speeds with the lower numbers being faster (250 is fastest). Numbers 1 to 6 give slower speeds with 6 being slowest. The pitch of the voice is not altered by this command. Reset is needed.				
1723	Phone Recording Level (v4.120)	0 (min) - 3	3	-	N
	The Recording level for messages using the incoming telephone line. This does not affect the keypad handfree recording level				
1724	Voice/Door Station talk level (v4.120)	0 (min) - 3	2	-	N
	The volume level for telephone to keypad/door station speaker during Voice Station or Door Station Mode				
1845	Hourly Response (v4.108). See Other Response Locations, Table 31				
1846	Time Adjust (seconds) Location (V4.88)	0 to 59	0	Seconds	N
	The time in seconds is added to or subtracted from the current time at 3:00 AM each day to correct for inaccuracy in the clock. Positive values are 1 to 29, negative values are 30 to 59. A value of 59 is equivalent to -1 second, and 30 is equivalent to -30 seconds.				
1847	AC Restore Response Location. See Other Response Locations, Table 31				
1848	Phone Trouble Restore Response Location (v4.88). See Other Response Locations, Table 31				
1849	Time given to press * after phone offhook for local phone access to Menu (v4.88)	0 to 255	6	Seconds	N
	The value in this location is the delay (secs) after local phone offhook for the * key to access Comfort				
1850	Start of Arming Response Location (v4.88). See Other Response Locations, Table 31				
The RESET column indicates if it is necessary to reset the system after changing the value at this location. System Reset can be done by pressing the Reset switch on the board or remotely in the Engineer Menu (7, 4, 2)					

Program Worksheet (FS17)

Table 35 - Location 39 and 40 Flag Settings

Location 39 and 40 contain certain **flags** which determine some behavior of Comfort. Add up all the value in the ADD VALUE column for the flags to be enabled, and enter the sum in Location 39 or 40. RESET the system by the Reset button or Eng Menu 7,4,2 for the settings to take effect. Some of these flags are accessible in Engineer Menu, in which case the menu reference is given in the last column. When changing flags which are not in Engineer Menu, you must take into account the values of all the flags in the Location

Flag Setting Location 39	Location	Add Value	Value	Engineer Menu
Connected as PABX extension	39	2		7,2 (Table 1)
Force Arm Option enable		4	4	4,3,1 (Table 16)
Local Phone voltage from RGR02 (4.107)		8	8	On for Australia only
Hear Announcements on Phone		16	16	V4.155
Incoming Call Screening on Keypad		32	32	User 2,6,6
Pulse Dialing		64		7,1 (Table 1)
Wait for Dial Tone before dialing		128	128	Not Available
Total			188	

Flag Settings Location 40	Location	Add Value	Value	Engineer Menu
Siren Reverse (Self-actuated siren)	40	1		4,3,3 (Table 16)
Ignore Line Cut		2		
RGR02 Ringer		4		1 if RGR02 ringer
Seize Phone Line for all dialout (4.101)		8		
Disable Voice on Door Station		16	16	
LEM 16 input 0 output		32		0 if SEP installed
Repeat Alarm Zone announce on keypad		64	64	
Ext Answering machine bypass (v4.132)		128		
Total			80	

Wait for Dial Tone is the only flag which needs to be changed using Location 39. When enabled, Comfort will wait for a dial tone before dialing. If a dial tone is not detected, Comfort tries a Hook Flash to try to get dial tone (this works if 3rd party or Conference call) is available on the telephone line. If there is still no dial tone, it will wait for the Incoming Call Release time in Location 47 (See Table 34) before trying again. During this time, if an alarm is on, it does not answer any calls.

Local Phone voltage for RGR02 is used for Australian systems only. Set this OFF.

Set Ignore Line Cut ON when it is not possible to connect the incoming telephone line to Comfort TEL IN and the house phones to TEL OUT. With this setting, house phones can be connected in parallel to TEL IN. The system will ignore Line Cut and will not report Phone Trouble. If there is a line cut, the house phones cannot be used to access the system. There is a loss of security, as the system will not be able to dial out if any house phone is offhook. **This is not to be used for UL installations or for a monitored system. It is only for Home Automation installations where security is not a concern.**

Seize Phone Line for all Dialouts: this causes the house phones to be cut off for all Comfort dialouts, including non-alarm situations like reporting system armed, disarmed, Dial Test and new messages. If this flag is not set, the house phones are cut off only for alarm dialouts. Set the flag if the number of phones in the premises causes Dial test to be unsuccessful, and removing the phones from the TEL OUT connector allows the Dial test to complete.

Disable Voice on Door Station prevents the announcement of zones and "Away Mode" during away arming. If the flag is ON, the Door Station is only used for 2 way conversation. There will be no zone and armed announcements in Night or Day Mode irrespective of the flag.

Program Worksheet (FS17)

LEM 16 input 0 output: This flag tells Comfort that a 16 zone (no outputs) Local Expansion Module (LEM) is installed. This means that the system capacity is 24 zones and 8 outputs. If a 8 zone 8 output LEM or no LEM is installed, this flag should be Off.

Repeat Alarm Zone on Keypad setting will keep announcing an activated zone until system is disarmed or another zone is activated.

RGR02 setting set to 1 if RGR02 ringer is used in the system instead of RGR01

External Answering Machine Bypass> This flag allows external answering machines and fax machines to be bypassed. First, call to the telephone number to which the system is connected and let it ring exactly once. Hang up and call again within 5 to 20 seconds. The system will answer immediately on detecting the first ring.

Table 36 - Reserved

Table 37A - User Timers

Timer	In Responses	Comments	Timer	In Responses	Comments
1			5		
2			6	195	Doorbell Macro
3			7	49,51	Flashing Lights in alarm
4			8	86, 118	Vibration Analyser, Strobe flash

Table 37B - Counters

CTR	In Responses	Comments	CTR	In Responses	Comments
0			4		
1			5		
2			6		
3			7	86	Vibration Analyser

Table 37C - User Flags

FLAG	In Responses	Comments	FLAG	In Responses	Comments
1			9		
2			10		
3			11		
4			12		
5			13		
6			14		
7			15		
8			16	59,75,97	Control Chimes, announce

Program Worksheet (FS17)

Table 38 - User Authorization Settings

User	Location	Local Disarm	Local Arm	Remote Disarm	Remote Arm	Alarm Disarm	Security Menu	Home Control	Program	Value
		Add 1	Add 2	Add 4	Add 8	Add 16	Add 32	Add 64	Add 128	
1	1785	1	2	4	8	16	32	64	128	255
2	1786	1	2	4	8	16	32	64	0	127
3	1787	1	2	4	8	16	32	64	0	127
4	1788	1	2	4	8	16	32	64	0	127
5	1789	1	2	4	8	16	32	64	0	127
6	1790	1	2	4	8	16	32	64	0	127
7	1791	1	2	4	8	16	32	64	0	127
8	1792	1	2	4	8	16	32	64	0	127
9	1793	1	2	4	8	16	32	64	0	127
10	1794	1	2	4	8	16	32	64	0	127
11	1795	1	2	4	8	16	32	64	0	127
12	1796	1	2	4	8	16	32	64	0	127
13	1797	1	2	4	8	16	32	64	0	127
14	1798	1	2	4	8	16	32	64	0	127
15	1799	1	2	4	8	16	32	64	0	127
16	1800	1	2	4	8	16	32	64	0	127

Table 39 - Keypad Control Station Menu (Engineer Menu 4,4)

Key	Response		Code Required?			Function
	Location	Response	Yes/No?	Location	Add	
0	Use Eng Menu 4,4 (Control Station)	110	No			Engineer Sign In Enable, do Alarm 30
1		101	Yes			Bypass Zone Menu
2		102	No			Home Control menu
3		103	No			Test Menu
4		104	No			Record Memo Menu
5		105	No			Event Log
6		106	Yes			Change Phones Menu
7		107	Yes			Change Sign in Code
8		121	No		1	Intercom
9		115	Yes		2	Time Program Menu
*		109	Yes		8	Answering Machine menu
F	1811	0	Yes	1818	4	
#	1813	111	Yes		16	User Codes
Away	1814	72	No		32	Arm to Away Mode
Night	1815	73	No		64	Arm to Night Mode
Day	1816	71	No		128	Arm to Day Mode

Function Keys 0 to 9 and * can be programmed using Engineer menu 4.4. Function Keys Away, Night, Day, #, F functions must be programmed using Locations (Engineer menu 7,4,1). To program F, #, and one touch keys for CODE required. Add the values in the ADD column if a code is required, including those for the 8,9,* keys for Location 1818

Program Worksheet (FS17)

Table 40 - Word List (E9)

Word	No	Word	No	Word	No	Word	No	Word	No
(SILENCE)	0	Door	178	Key	205	Party	41	Vacation	251
Action	156	Down	15	Kitchen	32	Path	238	Vibration	59
Airconditioner	1	Downstairs	16	Lamp	81	Perimeter	239	Video	60
Alarm	157	Drapes	17	Landing	67	Phone	240	Voice	254
Alert	158	Drive	18	Last	206	Play	78	Volume	61
All	85	Duress	179	Left	75	Pool	42	Warm	62
And	160	End	180	Level	8	Porch	43	Wash	77
Answering	161	Enter	181	Light	34	Power	210	Water	63
Area	80	Entertainment	72	Lights	33	Radio	66	Welcome	252
Arm	162	Entry	182	Living	35	Rain	44	Window	64
Armed	163	Erase	183	Lobby	94	Record	159	Zero	128
At	164	Event	184	Location	209	Reset	202	Zone	173
Attic	82	Exit	185	Lounge	69	Response	208	1st	86
Away	165	Failure	186	Low	36	Right	76	2rd	87
Awning	89	Family	187	Lower	95	Roof	45	3rd	88
Back	2	Fan	65	Machine	207	Room	46	1	129
Balcony	3	Fence	20	Maids	74	Safe	228	2	130
Basement	4	Fire	188	Main	211	Security	242	3	131
Bath	47	First	189	Master	37	Select	243	4	132
Battery	166	Flood	21	Menu	212	Sensor	25	5	133
Beam	5	Floor	90	Message	214	Settings	245	6	134
Bedroom	6	For	190	Messages	213	Shunt	71	7	135
Bell	193	Force	191	Minutes	215	Side	48	8	136
Breakglass	7	Front	22	Mode	216	Siren	246	9	137
Bright	84	Full	192	Monitoring	217	Sleep	49	10	138
Bypass	203	Games	91	Month	218	Smoke	50	11	139
Call	167	Garage	23	Movement	219	Speaker	247	12	140
Camera	9	Garden	24	Music	38	Sprinkler	51	13	141
Change	168	Gas	244	Name	220	Staircase	96	14	142
Check	169	Gate	241	New	221	Start	253	15	143
Children's	79	Greeting	194	Next	222	Station	225	16	144
Close	70	Ground	92	Night	223	Store	52	17	145
Code	170	Guest	93	No	224	Strobe	248	18	146
Control	172	Hall	27	Number	227	Study	53	19	147
Cool	10	Hangup	195	Numbers	226	Switch	68	20	148
Corridor	11	Hear	196	Off	229	System	249	30	149
Curtain	12	Heat	28	Office	39	Tamper	250	40	150
Date	174	Heater	29	On	230	Temperature	54	50	151
Day	175	Help	198	Open	231	Test	233	60	152
Delay	197	Hi-fi	30	Options	232	Toilet	73	70	153
Delete	176	High	31	Output	234	Trouble	171	80	154
Detector	13	Holiday	199	Outside	40	TV	55	90	155
Dial	177	Home	200	PABX	235	Up	56	<terminator>	255
Dim	83	Hours	201	Pager	236	Upstairs	57		
Dining	14	Intruder	204	Panic	237	Utility	58		