Gamewell WORLDWIDE

IDENTIFLEX 632

ANALOG / ADDRESSABLE

FIRE ALARM CONTROL PANEL

Installation & Operation Manual

The Gamewell Company
60 Pleasant St
Ashland MA 01721

P/N 71906
Release: 3 1/31/2001
Firmware Ver. 7

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PROPRIETARY MATERIAL

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GENERAL INFORMATION

The Gamewell Company thanks you for choosing the IDENTIFLEX 632 to serve your monitor and control signaling needs. As with all our products we have taken great care to insure that we have provided a quality Fire Alarm Control Panel. To receive maximum benefit and many years of reliable service we would like to make the following recommendations:

1. **Read this manual carefully** and in it's entirety before proceeding with the installation of the IF632 control panel.

2. **Never** make any connections **with the power connected.**

3. Gamewell spends many hours testing devices that are supplied by Gamewell to be used with it's control panels to verify compatibility. **To maximize system performance, and minimize risk of damage to the equipment, we suggest using all Gamewell Components.**

4. **There is no substitute for proper maintenance and testing** of this or any life safety product. Gamewell recommends testing and maintenance of your IDENTIFLEX 632 system in accordance with the guidelines set forth by the National Fire Protection Association, be done on a regular basis, as a minimum.

5. **This manual should be stored with the IDENTIFLEX 632** for future reference, and should not be removed, providing reference to the operation and programming of the installed IDENTIFLEX 632 System.

Thank you again for choosing Gamewell. If you have any comments regarding your IDENTIFLEX 632 Analog Addressable Control Panel, or other Gamewell products, please feel free to write us at:

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Section 1

IDENTIFLEX 632

System Description

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GENERAL

Identiflex 632 Fire Alarm Control Panel with firmware version r7 is an update of the prior versions of IF 632 FACP. The version r7 provides all of the features and performance of the previous IF 632 firmware as well as many new features and improved panel configuration data storage.

NEW FEATURES

SmartStart Password

With the exception of the automatic SmartStart which occurs when firmware chips are installed in an IF-600 panel, a level 4 password is required to initiate a SmartStart.

Releasing

Provides a multi-step releasing sequence with ANDed inputs, and programmable Pre-release, Abort and Dump.

Water Zone

Allows inputs to be designated as Water Flow with programmable delays, and selectable silencing.

Daylight Savings time

Allows automatic correction of the time for the entry and exit from daylight savings time.

Leap Year

Allows the automatic correction of the date for Leap Years. (Including the year 2000)

Positive Alarm Sequence

Allows Day/Night control of the use of PAS.

Verification Counter

Provides a tally of the number of times a Verification point activates without going into alarm, within the past 30 days. A programmable limit will place a point into trouble if the tally for that point exceeds the limit.

Alarm, Supervisory, Trouble Displays

Allows the selectable display of Alarms, Supervisories, or Troubles.

All Input Walk Test

Allows the placement of all inputs and outputs into walk test without individual programming.

Expanded RAN/SAN Supervision

Allows the supervision of up to 20 RAN/SANs connected to the panel.

Auto Silence Timeout

Allows the timeout for Auto Silence to be programmed.

Silence Inhibit

Allows the inhibit time for Signal Silence to be programmed.

Building Control Switch Supervision

Allows the switches on Building Control Displays to indicate Trouble if they are not in the Auto position.

Building Control Display Placement

Allows Building Control Displays to be located over an Analog card in the top two positions.

Walk Test Auto Terminate

Causes the automatic termination of walk test after 25 minutes without activity.

There are special functions which can be accomplished with the Gamewell Series 600 Fire Alarm Control Panel. One is Releasing, which allows control of dump or deluge forms of fire suppression.

RELEASING

The Gamewell Series 600 Fire Alarm Control Panel, with version r7 firmware, and Analog Addressable devices, can provide all of the required functions to control the releasing of bulk fire suppressant materials. The Series 600 FACP is currently listed for NFPA 13 Sprinkler, NFPA 11 Low Expansion Foam, NFPA 16 Water Foam, NFPA-17 Dry Chemical types of suppressant and NFPA 2001 Clean Agent suppressant. **NOTE When using the panel for releasing NFPA 2001 agents, a mechanical manual release must be provided in accordance with NFPA 2001**.

Operation

The releasing process is started by the activation of two ANDed initiating devices. When the first of the programmed pair activates it is displayed on the control panel of the FACP and the Signal Circuit output will provide an audible signal at the rate 60 bpm. When the second of the programmed pair activates, the Signal Circuit output changes to 120 bpm, and the Predischarge timer starts. The time period of this timer is programmable from 15 second to 60 seconds. At any time during this timer period, an Abort switch may be activated to manually intervene in the time cycle. There are five modes of Abort operation, which are selectable through programming.

1. **One Shot (Default)** — The Abort switch will pause the Predischarge counter as long as the switch is activated. Upon deactivation of the switch, the counter will resume from where it was paused. Only one activation of the Abort switch is recognized. Subsequent activations will have no effect on the Releasing cycle.

2. **Timer Expiry** — The Predischarge timer continues the count down while the Abort switch is activated, the Releasing process does not occur until the switch has been deactivated, AND the Predischarge counter has reached zero.

3. **Immediate** — The Releasing process commences immediately after the deactivation of the Abort switch, regardless of the Predischarge timer setting.

4. **10 Second Delay** — *NOTICE: This mode does not conform to UL requirements! It is included since it is allowed by some AHJs*.
   The Releasing process commences 10 to 18 seconds after the deactivation of the Abort switch, regardless of the Predischarge timer setting.

5. **Reset Timer** — *NOTICE: This mode does not conform to UL requirements! It is included since it is allowed by some AHJs*.
   The Predischarge counter is halted each time the Abort switch is activated, and reset back to the full programmed delay when the Abort switch is deactivated. This delay cycle can be initiated as many times as required.

Upon completion of the Predischarge counter cycle, or the programmed Abort operation, the FACP enters into the Releasing process. The Signal Circuit output will provide a steady signal, and the Discharge delay counter is started. This counter is programmable from 0 to 30 seconds. At the completion of the programmed delay, the Releasing solenoids are activated and fire suppressant discharge is performed. A manual **Dump** switch will immediately initiate the Discharge delay counter, after the deactivation of the Abort switch (if it is activated), regardless of the state of the Predischarge delay timer.

Programming

WARNING! In order to properly prepare the inputs and outputs required for Releasing, very specific programming steps must be performed. Failure to follow these steps could result in failure of the suppressant to be discharged, or there could be unplanned discharge of the suppressant.

The following describes the steps to be taken to program the IF 632 FACP for releasing. The detailed programming instructions can be found in Section 4 Programming.
In order to create a Releasing sub system, it is necessary to select and program Input devices, Control devices, and Output devices.

Input Devices

Select the first initiating device to activate Releasing, program it as an AND zone and Assign Input Group X
Select the 2nd initiating device to activate Releasing, program it as an AND zone and Assign Input Group X

Control Devices

Select the input device for the Abort switch, program it as an Abort zone and Assign Input Group X
Select the input device for the Dump switch, program it as a Dump zone and Assign Input Group X

Output Devices

Select the Signal Circuit (Conventional) to sound the audible alarm, program it's Alarm Level (ALR:2) to Releasing and it's Signal type (SIG:XXX) to Releasing. Program the Output Group to Y.
Select the Releasing Solenoid Module (RSM-95) to control the releasing solenoid, program it's Alarm Level (ALR:3) to Releasing. Program the Output Group to Y.

Tying it together

Program the Control By Event (CBE) table to have Input group X activate Output Group Y

IMPORTANT

Only the Analog Addressable Device RSM-95 with a SID module, installed in accordance with the Wiring Drawing A-W532-1 should be used to actuate the Releasing Solenoid. This device is Bypassed during a SmartStart to prevent accidental discharge , should inputs be activated during the generic configuration. After a SmartStart, the correct configuration should be uploaded to the FACP, the Releasing Solenoid disconnected from the RSM-95, and the Bypass removed from the RSM-95. After determining that the RSM-95 is not active, the solenoid should be reconnected.

SYSTEM OVERVIEW

IF 632 Control Panel

The Gamewell IDENTIFLEX 632 system (IF632), is an Analog/Addressable, microprocessor based, fire alarm control panel. It is designed to monitor and control up to 1008 analog addressable input/output points. It can also accommodate up to 56 input or output circuits. The IF632 system is designed to meet the requirements of medium sized applications. It provides the user with a full range of features including; self-configuring, self-monitoring, and self-testing. Some of the many other features the IF632 system offers include; User prompted operation, a 4 line by 40 character LCD display, programmable input/output circuit types, a 1000 event history log, Default Alarm Mode, Multiple levels of password protection, easy access wiring terminals, universal module mounting and many more. All of the IF632 system functions are fully field programmable from the front panel or may be configured via computer using its built in, Upload/Download feature.

Modular Construction

The design of the system utilizes a modular building block approach. The base system consists of the Common Control, the Main Power Supply and the system cabinet with two card bays and an Analog Addessable card installed. The second bay will accommodate another Analog Addessable card or any of the 2, 4 or 8 circuit modules available for the IF632 system. With the addition of an expander cabinet the system allows for up to 6 additional circuit modules with up to 48 individual circuits or Auxilliary Power Supplies. Through selection of individual F600 series I/O modules (i.e. initiating, indicating, control, etc) the user can customize the control panel for each specific application.

SmartStart™

The IF632 control panel utilizes a unique initialization programming process, SmartStart™. This initialization process stores the project specific system configuration in memory. Then a control-by-event table is automatically created that allows any system input to activate the system outputs. Upon completion of the initialization process the system is completely operable in a general alarm situation with the control-by-event data tables protected in non-volatile memory

SYSTEM MODULAR CONSTRUCTION

Common Control Section

The common control section consists of four modules; the operators display, the bus driver module, a relay expansion module, and the main CPU module. An optional RS-232 interface module is available for interface to the system CPU.

Operators Display Module

The operators display module is the main user interface to the IF632 system. It includes the interactive, 4 line by 40 character, alphanumeric display, the LED indicators and tactile switches. The operators display module provides the user with visual indications and guided prompts during all operating and programming functions. All alarms, faults, or supervisory actions, as well as system operating conditions (*Normal, Alarms, Faults)* are shown on the alphanumeric display. LEDs provide indication, and prompt the user response to the next sequential action. The "Power On" LED indicator is green, alarms or activated signal circuits and city tie are indicated by red LED's. Faults and user prompts are indicated by yellow LED's. There are four arrow keys for scrolling through events and selecting functions.

Bus Driver Module

The bus driver module (BDM) contains the circuitry that interfaces with the CPU and system modules. It is equipped with two Style Y or Z, limited energy signaling circuits (2 amps maximum each) and a city tie circuit. It has three power limited outputs for 24 Vdc auxiliary power, 12 Vdc, and resetable 24 Vdc smoke detector power. The BDM also monitors the status of the CPU for transfer to default alarm mode of operation.

Relay Expansion Module

The common relay module provides 4 form C (SPDT) common relay outputs. These relays transfer during *Common Alarm, Common Trouble,* and *Supervisory*. The common contact on each relay is fused with a 10 amp fuse. Each relay has a monitor terminal (positive feedback), for status indication of the controlled device. The common relay module mounts (via standoffs) to the right side of the bus driver module. A fourth relay is provided for optional applications.

CPU Module

The CPU module (or microprocessor module) contains the system operating firmware and non-volatile memory. A serial communications port is provided for connection to peripheral devices. All user programmed memory is backed up via its on board lithium battery.

SYSTEM I/O COMPONENTS

IF632 Analog Addressable Module

The IF632 analog addressable module, monitors and controls the Gamewell Series 95 analog addressable devices. The module can be configured with either one (AAM95-1), two (AAM95-2) or four (AAM95-4) analog circuits. Each circuit is capable of monitoring and controlling up to 126 analog addressable devices. The analog addressable module has its own microprocessor which provides communication between the connected field devices and the Common Control. Each analog/addressable circuit can be wired as a Style 4 (class B), or Style 6 (class A) analog/addressable circuit. These circuits are suitable for limited energy wiring. Up to two AAM95-4 modules may be installed in a IdentifFlex 632 system for a total of 1008 analog addressable points per system.

Series 95 Input/Output Devices

The IF632 system is designed to operate with Gamewell's Series 95 Analog Addressable detectors (photoelectric, ionization and heat) and interface devices.

Other input devices include the Point Identification Device (PID-95), the Manual Station (MS-95) and the Collective Zone Interface (CZI-95).

Analog Addressable output device include the Relay Control Element (RCE-95), the Signal Control Element (SCE-95), the Building Control Element (BCE-95) and the City Tie module (CTX-95).

NOTE: The following display modules may be located over any Analog Addressable Module, Aux. Power Supply, or empty module location.

Relay Control Display

The 600 series *Relay Control Display* Module (RCD) provides 8 individual displays with a Red (Active) and Yellow (Trouble) LED to indicate the status of user assigned RCE-95 modules. Each display also includes a tactile switch for programming.

Signal Control Display

The 600 series *Signal Control Display* Module (SCD) provides 8 individual displays with a Red (Active) and Yellow (Trouble) LED to indicate the status of user assigned SCE-95 modules. Each display also includes a tactile switch for programming.

Building Control Display

The 600 series *Building Control Display* Module (BCD) provides 8 individual displays with a Green (ON Relay Active) and a Red (Off Relay Active) LED to indicate the status of user assigned BCE-95 modules. Each display includes a tactile switch for programming and rotary On/Auto/Off switch for manual control of the BCE-95.

SYSTEM I/O COMPONENTS (CONTINUED)

Conventional Input Module

The 600 series *Conventional Input Modules* are available in either a 4 circuit module (CIM-4) or an 8 circuit module (CIM-8). These modules provide monitoring capabilities of conventional detectors and contact type devices. Zone programming enhances their capabilities by allowing a single module to be programmed with multiple zone types (automatic, supervisory, verified, etc...). Each zone can be wired and programmed to meet the performance requirements of Styles B or C (Class B) circuits, or an optional Style D Adapter module (CIM-SDA) may be added to meet the requirements of Style D or E (Class A) circuits.

CIM Display

The display module provides LED annunciation of *Alarm and Trouble* conditions. Each circuit has a tactile switch for programming and service functions. A location for a user defined custom label is provided on each circuit. LED annunciation is indicated by - red - Alarm (active) and - yellow - Trouble.

Universal Signal Module

The Flex 600 series U*niversal* S*ignal Modules* are a multi-function output module. These modules are available in either 4 circuit (USM-4) or 8 circuit (USM-8) increments. These circuits are designed to meet the requirements of NFPA 72, Style Y (Class B) notification appliance circuits. An optional Style Z adapter (USM-SZA) is available to meet the requirements of NFPA 72, Style Z (Class A) notification appliance circuits.

USM Display

The display module provides LED annunciation of *Alarm and Trouble* conditions. Each circuit has a tactile switch for programming and service functions. A location for a user defined custom label is provided on each circuit. LED annunciation is indicated by - red - Alarm (active) and - yellow - Trouble

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Relay Modules

The 600 series *relay modules* have been designed to supply 4 (RM-4) or 8 (RM-8) programmable Form C relays for control of auxiliary functions. A feedback point, for positive confirmation that the controlled function has occurred, has been supplied with each set of contacts. The relays are rated at 10 amps with a fused common to protect the controlled circuit.

Relay Display

The relay module display is provided with green (inactive) and red (active) LED's. Each relay circuit is provided with tactile switches for programming and service functions and a location for a user defined label.

SYSTEM I/O COMPONENTS (CONTINUED)

Building Control Module	The 600 series B*uilding Control Modules*, are designed to provide an On/Auto/Off control function to building systems. The building control module is available in 4 (BC-4) or 8 (BC-8) circuit increments. Each circuit consists of two relays that provide ON or OFF control when selected. Each relay is programmable for Form A or Form B contacts. The relay contacts are rated at 10 Amps and fused to protect the controlled circuits. Each circuit has a feedback point to provide positive confirmation that the controlled function has occurred.
BCM Display	The building control module display provides LED status and manual control of each circuit. Each display circuit comes with a tactile switch for programming and service functions, a three position On/Auto/Off switch for manual override and two LEDs for status indication. Green = ON relay active or Feedback point normal, red = OFF relay active or Feedback point active.

AM500 Module	The AM500 module allows the IF632 system to interface to Flex 500 devices. It has been designed with 8 Class B circuits that will monitor 50 devices each. An optional Class A module (AM500-SDA) is available. Up to two of these modules may be installed in an IF632 system for a total capacity of monitoring 800 of the Flex 500 devices.
AM500 Display	The display module provides LED annunciation of *Alarm and Trouble* conditions. It has one switch per circuit for programming and service functions and a location for a user defined custom label.

City Tie Module	The 600 series *City Tie Auxiliary* Module (CTX-4) provide 4 additional, limited energy, polarity reversal, city tie circuits. Each circuit is independently programmable for selective operation.
City Tie Module Displays	The city tie auxiliary module display provides LED annunciation indicated by - red - Alarm (active) and - yellow - Trouble. Each circuit has a tactile switch for programming and service functions. A location for a user defined custom label is provided on each circuit.

SYSTEM I/O COMPONENTS (CONTINUED)

Main Power Supply

The *Main Power Supply* (MPS-8) is an eight 8 amp DC power supply. A battery distribution block is provided to distribute battery power to Auxiliary Power Supplies. It can be configured to transfer the system to standby power when a "Brown Out" condition occurs. The main power supply mounts in the lower left hand corner of the cabinet, and cables to the bus driver module.

Lead Acid Battery Charger Module

The battery charger module is a plug-in type module that installs directly into the main power supply. This module will monitor and recharge lead acid batteries from 5 to 60 Amp hours in capacity.
NOTE*: *The Battery Charger is configured for 41 - 60 AH batteries at the factory. Remove R1 resistor for 21-40AH batteries. Remove R17 & R21 resistors for 5-20AH batteries.

Auxiliary Power Supply

The *Auxiliary Power Supply* (APS-8) provides eight (8) amps of unfiltered 24 VDC power. Two (2), four (4) amp circuits are available from its connectors for signaling power expansion. The auxiliary power supply has provisions for receiving a signal from the main supply to switch to battery standby due to brown out condition.

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Section 2

IDENTIFLEX 632

System Operation

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COMMON CONTROL DISPLAY - FUNCTIONAL DESCRIPTION

Operator Display Control

Acknowledge Switch

The Acknowledge switch (ACK), silences the internal buzzer of the panel. Any signal circuit or relay programmed to return to normal condition when the "ACK" switch is depressed, will return to normal. Should a second alarm activate the same points (signal circuit or relay programmed to restore on Acknowledge) which have been returned to normal will re-activate.

Δ WARNING !

Do NOT reset the system until the authority having jurisdiction has authorized reset.

Reset Switch

The Reset switch (RESET) removes power from the initiating devices for a period of four (4) seconds. Power is temporarily removed from the S+ S- terminals. Any devices latched into alarm should return to the normal condition, provided the cause of alarm has been eliminated. The signal circuits, city tie, alarm relay and/or supervisory relay will restore, and the panel will return to the normal quiescent condition.

Signal Silence

The Signal Silence switch (SIGNAL SILENCE) will silence (i.e. return to normal), any circuit or relay that is programmed to restore on signal silence. The signal silence switch is an alternating action switch. Pressing the signal silence switch will return the silenced circuits to an active state.

Drill	The Drill switch (DRILL) will activate all circuits that have been programmed to respond when the Drill switch is pressed. The Drill switch is alternate acting. Pressing the Drill switch again will deactivate the test.

Keypad Switches	These switches are used for test and programming functions.
City Tie	Used to test or program the city notification function, (see programming sections).
Signal Circuit 1 & 2	Used to test, program or bypass signal circuits 1 or 2 (see programming sections).
Arrow Keys	Use to scroll the alphanumeric display and assist the user during system programming.

Indicators

POWER ON Indication	The green "Power On" LED indicates AC line operation. If pulsing, this indicates a problem with the incoming AC line voltage.
ALARM	The "Alarm" LED (red) indicates a common fire alarm has been activated in the system.
PRE ALARM	The PreAlarm LED (red) indicates that the system is in a first stage alarm condition.
DRILL	The Drill LED (yellow) indicates the Drill feature has been activated.
ACKNOWLEDGE	The Acknowledge LED (yellow) will flash to indicate the next action is to press the "ACK" switch.
SUPERVISORY ALARM	The Supervisory LED (yellow) indicates a supervisory zone has activated (alarmed).
SIGNAL SILENCE	The Signal Silence LED (red) will flash to indicate that the signal silence switch is active.
CITY TIE	The City Tie LED's are red for active, yellow for trouble.
SIGNAL CIRCUIT 1	Signal Circuit 1 LED's are red for active, yellow for trouble.
SIGNAL CIRCUIT 2	Signal Circuit 2 LED's are red for active, yellow for trouble.
RESET	The Reset LED's (red) flash when the reset switch is available for use.
TROUBLE	The Trouble LED (yellow) indicates the system is not in the normal condition, a fault detected.

SYSTEM OPERATING CONDITIONS

Default Mode

When shipped from the factory, the Identiflex 632 system has been initialized to a minimal "default" configuration as part of our system testing procedures. It is important that the system be re-initialized utilizing the SmartStart™ feature upon installation, after all of the input and output devices have been connected. This will result in a customized default configuration.

WARNING NOTE

The IF632 System will not recognize or communicate with any of the connected devices until the SmartStart™ process has been exercised. The IF632 will not report an alarm until this process has been completed. Refer to the programming section of this manual for details about activating SmartStart™.

After the SmartStart™ routine has re-initialized the IF632, the system will be configured as follows:

1. All (input) initiating points are configured to be "Automatic" initiating points (standard smoke detector points). Point Identification Devices (PID's) shall be configured as manual stations if the priority interrupt is set.

2. The system defaults to Access Level #2.

3. Whenever any input point(s) goes into alarm:

   A. All output signaling circuits activate and produce a steady, 24VDC output.

   B. All output relays are activated.

   C. The city-tie and common alarm relays activated.

Normal Quiescent Condition (default)

When the system is in the normal quiescent condition, the green "Power On" LED is illuminated indicating the system is operating from normal AC line power. All input and output circuits are "normal" (no alarm or trouble conditions). All other LED's and alphanumeric display are extinguished. The system internal buzzer is silent. To view system status message, press "**Enter**". Refer to Figure O-1. All Series 600 Relay Modules and Building Control Modules programmed with feedback will have the associated LED illuminated indicating either an active or inactive relay position. All other indicators will be extinguished.

In the normal condition, the green "Power-On" LED will be 'ON' - steady. All other indicators will be extinguished.

NOTE: **The system is equipped with a built-in screen saver. When the system remains in the idle mode (i.e. normal quiescent condition) for over 15 seconds the screen will automatically go blank.**

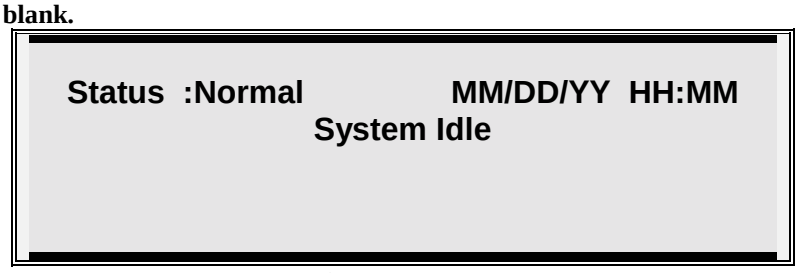


Figure O-1

Alarm Condition (default)

The IDENTIFLEX 632 will go into an ALARM state when any analog/addressable initiation device reports an alarm condition or when an initiation device activates on any conventional alarm circuit. The alphanumeric display will show the device or zone address. (see Figure O-2). By default the following actions will occur at the common control display. Refer to Table O-1, System Events Messages for complete listing of message displays.

1. The red "Alarm" LED will begin flashing. The flash rate is a continuously repeating sequence of 1/4 second 'On' followed by 1/4 second 'Off'. The internal system buzzer will sound. All auxiliary relay circuits will activate and illuminate the red *active* LED. All building control off relays will activate and illuminate the red "Off" LED. If feedback is connected for either the relay circuits or the building control the active LED to be lit during an *Alarm* state will be the reverse of the one that is lit during normal quiescent condition.

2. The alphanumeric display will show the location of the *Alarm* along with date and time, refer to Figure O-2. Alarm information is logged into the History Buffer to provide a time stamped record of the event's occurrence. In the event of multiple alarms, the alphanumeric display can be scrolled (using the up/down arrow keys) to show all activated initiating devices.

3. The red Alarm LED for "City Tie" will light steady to indicate that the city tie circuit has been activated.

4. Signaling Circuits indication will be as follows;

   The red alarm LED's for (Signal Circuit 1 and Signal Circuit 2 - as well as any additional signal circuits installed on the system) will light steady to indicate any signaling circuits that have been activated.

5. The Form C common alarm relay contacts will transfer.

   5.1 Building Control Relay Circuits (if utilized):

   A. If a building control circuit's feedback point is NOT connected, the circuit's red LED will be 'On' steady to indicate that the "OFF" relay has been energized.

   B. If a building control circuit's feedback point IS connected, the active LED used to indicate an Alarm condition will be reverse of the one that is used to indicate a normal quiescent condition.

   5.2 Relay Circuits:

   A. If a relay circuit's feedback point is NOT connected, the circuit's red LED will be 'On' steady for each active relay point to indicate that the relay has been energized.

   B. If the relay circuit's feedback point IS connected, the active LED used to indicate an Alarm condition will be reverse of the one that is used to indicate a normal quiescent condition.

   Note: The Relay or Building Control Module LED's will follow the state of their respective relays. To have their LED's follow the state of the monitor point the 3.9k EOL resistor must be in place.

6. The acknowledge switch red LED will begin to flash. This guided prompt feature notifies the user that the next expected action is to press the "ACK" switch - acknowledging the *Alarm Condition*. The panel will remain in an alarm condition until all initiating devices are cleared and reset. At that time the panel will return to normal quiescent condition. Should the city tie be programmed for local energy master box trip, the city tie will be in trouble and the box should be reset at this time.

- **NOTE**: **Table P4 - Word Dictionary defines the Word Types (1 - 5) used to describe the alarm location, device etc. See Table P4 found in Section 5 Programming for complete listing.**

Figure O-2

Display for Multiple Alarm(s)

- **NOTE**: **Multiple alarms are shown after the words ALARM Total "x"; with "x" representing the total amount of alarms. See Figure O-3.**

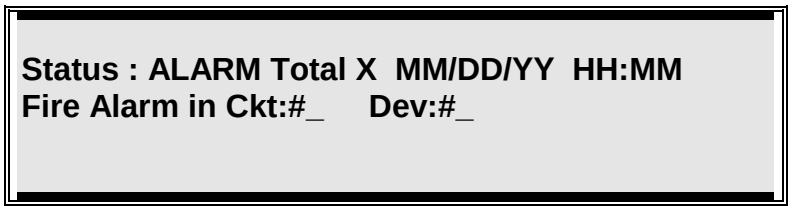


Figure O-3

OPERATING PROCEDURES

Acknowledging the Alarm Condition

When the user presses the "ACK" switch to acknowledge an alarm condition, the following actions will occur.

1. The control panel's internal audible buzzer will (always) silence.
2. The acknowledge key's activation is logged into the History Buffer to provide a time stamped record of the event's occurrence.
3. The Acknowledge red LED will extinguish.
4. Any outputs programmed to return to the normal condition upon pressing the "ACK" switch will return to normal at this time.
5. The red LED's for RESET and SIGNAL SILENCE switches will flash. This "guided prompt" feature notifies the user that the next expected action is to *Reset* the system or *Silence* the signals (if so programmed).

Signal Silence

In the Alarm condition, the red LED for SIGNAL SILENCE will begin to flash. This guided prompt feature notifies the user that it is possible, but not necessary, to press the SIGNAL SILENCE switch. In the *default mode*, all signal circuits will silence.

If the user presses the SIGNAL SILENCE switch, the following actions will occur:

1. The LED for the SIGNAL SILENCE switch will remain flashing.
2. All output signal circuits which have been programmed to silence when the SIGNAL SILENCE switch is activated (which is all output circuits in the "default" case) will silence and the red activated LED will extinguish.

Resound or Return of Signals

A. The signal silence switch is alternating action switch. If the user subsequently presses the SIGNAL SILENCE switch again, the signal circuits will activate.

B. All the output signal circuits which had deactivated will reactivate; returning to the *Alarm* condition. The red active LED's will light.

Reset

After the initiating device(s) have been restored to normal condition, the momentary *Reset* switch should be depressed. When the user presses the RESET switch the following actions will occur:

1. The LCD Display will announce the System Reset (Refer to Figure O-4).
2. If no further alarms exist in the system, all signal circuits will deactivate. The RESET key's activation is logged into the History Buffer to provide a time stamped record of the event's occurrence.

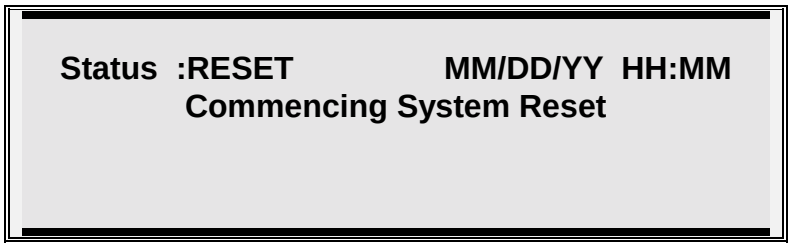


Figure O-4

Alarm Verification

Alarm verification is used to reduce the occurrence of nuisance alarm conditions (transient smoke etc.). Careful consideration should be taken before enabling the Alarm Verification feature on any device. Programming the Alarm Verification feature may delay the reporting of an actual emergency. Only those devices that are subject to conditions that require verification should be programmed with this feature.

Any two wire automatic detector reporting an alarm condition, programmed for verification will start the pre-set verification timer (see Programming section) and the event will be recorded in the verification history log. At the expiration of the Verification Timer (10 seconds), the device is automatically reset for a period of four seconds and the devices are allowed a stabilization period (30 seconds). After the device stabilization period a sixty second monitor cycle begins. If an alarm condition is detected during any portion of the verification sequence the system will activate all CBE functions and the alarm condition processed. If no other alarm conditions are reported during this period the system resumes normal operation.

Supervisory Alarm Condition

A supervisory alarm condition occurs when an analog/addressable device programmed as a supervisory device activates or when a supervisory device activates on any supervisory alarm circuit, the associated circuit supervisory red *alarm* LED illuminates. This indicates the circuit where the supervisory device is located. The common supervisory alarm LED (yellow) illuminates. The alphanumeric display indicates the point where the supervisory device is located and logs it into the History Buffer to provide a time stamped record of the event's occurrence. Refer to Figure O-5. The system common buzzer shall sound, and the Form C common supervisory alarm relay transfers. Any signal, or relay point programmed to the supervisory zone will activate.

When the momentary *Acknowledge* switch is pressed, the audible indicator will be silenced. If a subsequent supervisory alarm should occur in a different supervisory alarm zone, the alphanumeric display will annunciate the new point, and the system common signal will reactivate.

The acknowledged supervisory alarm(s) will remain until the device(s) have been restored to normal condition, and the momentary *Reset* switch has been depressed. If no further supervisory alarms exist in the system, the panel will return to normal quiescent condition. Otherwise, the panel will return to supervisory alarm condition.

Any unacknowledged supervisory alarms, that are cleared before the point was acknowledged, will not latch in and will not need to be reset. The information will still be placed into the history log. Refer to Appendix, System Event Messages, for a complete listing of message displays.

CAUTION

When programming a device as a supervisory alarm, change the device input group so that it will not sound an alarm for that signal circuit. Refer to section 5 Programming.

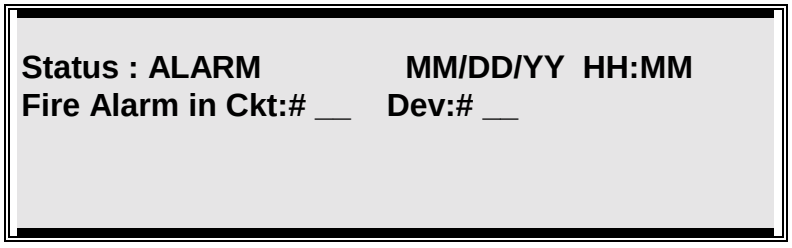


Figure O-5

Trouble Condition

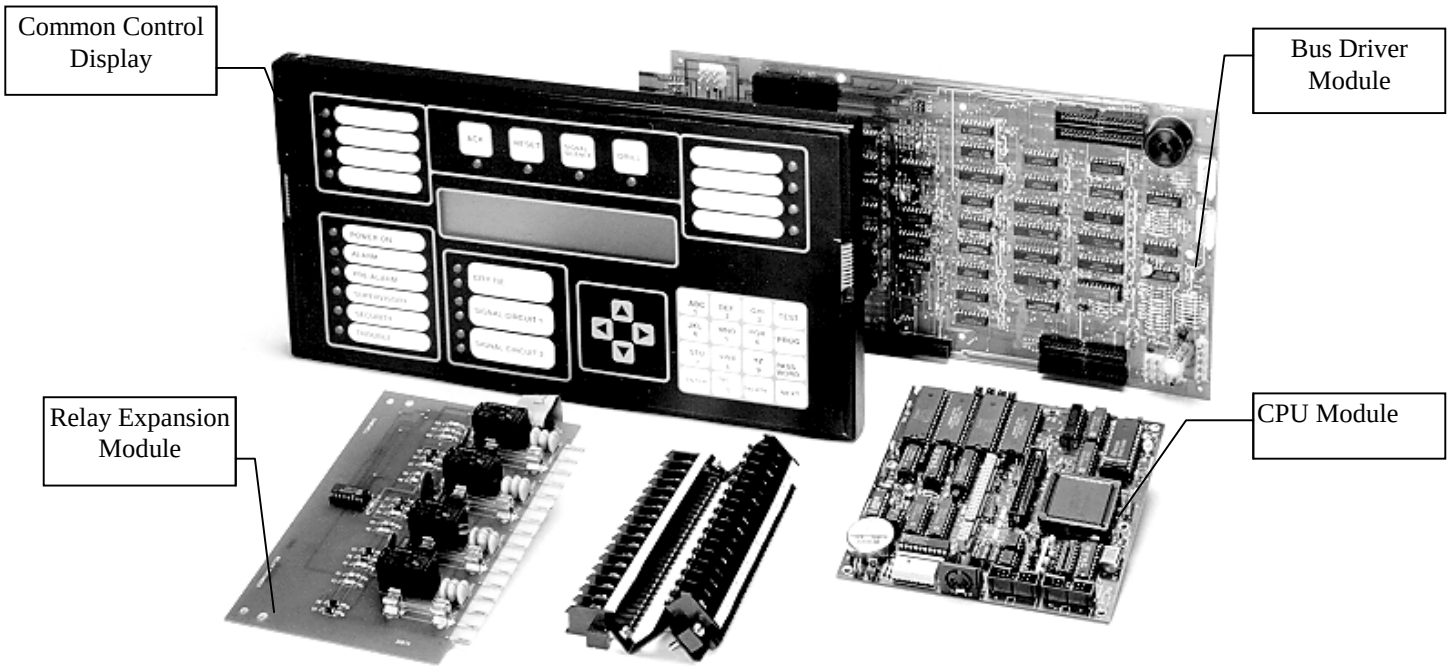
A trouble condition occurs when a fault or potential problem develops within the system, system components, or system wiring connections. When a fault is detected the system common fault LED will be illuminated on the common control display, and the system common audible will be sounded. The origin of the fault message will be shown on the LCD alphanumeric display and logged into the History Buffer to provide a time stamped record of the event's occurrence. See Figure O-6. When the *Acknowledge* button is depressed, the system trouble audible is silenced and the system trouble LED remains illuminated. Should another trouble occur the panel will return the trouble audible. Refer to the Appendix, System Event Messages, for a complete listing of message displays.

When all trouble conditions have been corrected the panel will extinguish the common *Trouble* LED, returning the system to the normal quiescent condition.

Status: FAULT MM/DD/YY HH:MM
Fault in Ckt:# __ Dev:# __

Description of Fault

Figure O-6



IdentiFlex 632 Common Control

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Section 3

IDENTIFLEX 632

Installation

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IdentiFlex 632 System Housing

The system is a modular compact stand-alone unit. The top area of the cabinet houses the IdentiFlex 632 common control section. This section includes the CPU module, Operators Display, the Bus Driver Module and the Relay Expander card. In the lower section of the cabinet, the Analog Addressable Interface Modules, and the power supply are mounted. A 5"H x 12"W x 5"D area is reserved for batteries. For complete system installation (including sub-assembly and control device circuit wiring) refer to Wiring, IF632 Analog Addressable System (B-W471). All field wiring must be in accordance with N.F.P.A. pamphlet #70 article #760.

Hardware Assembly

Systems are all factory assembled. The 600 series modules will be positioned within a cabinet (reading left to right, top to bottom) in the following order. Blank dress plates will be supplied for any unused module bays.

1. AAM (Analog Addressable Module)
2. CIM (Conventional Input Module - *Initiating Module*)
3. USM (Universal Signal Module - *Indicating Module*)
4. RM (Relay Module)
5. BC (Building Control Module)
6. CTX (City Tie Expander)
7. APS (Auxiliary Power Supply)

For complete system installation (including sub-assembly and control device circuit wiring) refer to Wiring, IF632 Analog Addressable System *(*D-WXXX*)*. All field wiring must be in accordance with N.F.P.A. pamphlet #70 article #760.

Wiring / Issue Date	Part No.	Module	Display
C-W847 - 3/29/94	30879	Bus Driver Module	
C-W862 - 11/28/94	30941	Analog Loop Module (AAM95-2)	30870-02
C-W862 - 11/28/94	30942	Analog Loop Expander Module	
C-W845 - 3/28/94	30868-01	Initiating Module 4 CCT (CIM-4)	30870-02
C-W845 - 3/28/94	30868	Initiating Module 8 CCT (CIM-8)	30870-02
C-W846 - 3/29/94	30878-01	Indicating Module 4 CCT (USM-4)	30870-02
C-W846 - 3/29/94	30878	Indicating Module 8 CCT (USM-8)	30870-02
C-W848 - 3/29/94	30873	Relay Module 4 Circuit (RM-4)	30870-03
C-W848 - 3/29/94	30874	Relay Expander Module (RM-4E)	
C-W849 - 7/7/94	30871	Building Control Module (BC-4)	30870-04
C-W849 - 7/7/94	30872	Building Control Expander (BC-4E)	
C-W845 - 3/28/94	30869	Class "A" Adapter (CIM-SDA)	
C-W846 - 3/29/94	30940	Class "A" Adapter (USM-SZA)	
C-W861 - 3/31/94	30875	City Tie Extender Module (CTX-4)	30870-02
C-W856 - 3/28/94	30889	Main Power Supply 8 Amp (MPS-8)	
C-W857 - 3/28/94	30890	Aux. Power Supply 8 Amps (APS632-8)	

Table 1, Installation Wiring Diagrams

Cabinet Dimensions

IF632 Cabinet	
Dimensions	30"H x 22"W x 5.5"D
Battery Storage	8"H x 14.2"W x 5.5"D
Weight	*approx. 65 lbs*

Table I-2, Cabinet Dimensions

Hardware Assembly Note

NOTE: **Upon receiving the control panel, remove all packaging materials. Inspect for any damage that may have occurred during shipment. Notify the manufacturer immediately if damage is detected.**

Control Panel Mounting

Complete the following instructions to mount the control panel. The main chassis must be removed from the cabinet to correctly secure the cabinet. The control panel is shipped utilizing a right hand hinge door. If the mounting location requires the cabinet door to open to the left, mount the cabinet accordingly. The main chassis is designed to accept either mounting. Refer to drawing B-W471, Wiring, IF632 Analog Addressable System.

---

1. Remove the six mounting screws securing the dead front panel.
2. Remove the two horizontal cross rails.
3. Remove five main chassis mounting hex nuts. Remove the main chassis.
4. Secure the cabinet to the mounting foundation. Connect all conduit and secure.
5. Ensure the cabinet is clean before re-mounting the main chassis. Clean as required.
6. Mount the main chassis to the cabinet studs and secure hex nuts.
7. Connect all field wiring. Referenced drawing B-W471, Wiring, IF632 Analog Addressable System as . (All field wiring must be in accordance with N.F.P.A. pamphlet #70 article #760.) Ensure the cabinet is clean.
8. Mount the cross rails and secure.
9. Position the operators display into alignment pins of cross rails.
10. Plug in the battery charger card.
11. Re-mount the dead front panel and secure.

Module Identification and Placement

Modular Functions

The IF632 system utilizes a unique addressing scheme that allows it to supervise card placement and monitor *card types.* This addressing scheme monitors specific pre-assigned module locations in the control panel as well as the expander cabinet. The card locations are pre-defined that can not be altered. See Figure I-1.
Card numbered 0 through 7 are reserved for the various common control module sections. These card location numbers are hardwired physical circuits. Card locations 8 - 39 are assigned to specific cards and displays installed in the cabinet bays.

Card Type Code

Each module returns a *card type* code when polled by the main CPU. Card type codes are fixed codes that are assigned to each module type. When a valid response is detected to any of the addresses polled, a data base for the device is created in memory. The specific card type codes which are read from these locations are defined in Table I-3 below.

Card Locations 0 through 7

Cards numbered 0 through 7 identify the location of card types that reference the common control section of the system. Specifically, the electronic module functions are identified. These card location numbers reference hardwired physical circuits.
Card identification numbered 0 through 3 reference designated hardwired circuits interconnecting to the common control display module. Card identification numbered 4 - 7 reference designated hardwired circuits on the bus driver module.

Cards # 8 - 39

Card numbered 8 through 39 are individual modules physically installed in cabinet bays In the IF632 only eight card and eight display locations are available. See Installation Section 3, Figures I-1 and I-2 for cabinet layout. Each module (i.e. I/O module or individual display) has programmable addressing jumpers (1, 2, 3 or 4) which are designated on each module as S1. The addressing jumpers must be set according to the physical placement in the cabinet bay locations. Set the module addressing jumper (1 - 4) in the proper location as shown in Figures I-1 and I-2.

Module Bus

The Module bus interconnects the left I/O modules and the right I/O modules with the bus driver module. The left I/O modules are linked (via ribbon cable) and interface with the bus driver module at J5 connector (labeled I/O Left). The right I/O modules are also interconnect (via ribbon cable) and interface with the bus driver module at J8 connector (labeled I/O Right). Each I/O module occupies one slot on the module bus.

The left I/O module displays are linked (via ribbon cable) and interface with the bus driver module at J6 connector (Display Left). The right I/O module displays are linked (via ribbon cable) and interface with the bus driver module at J7 connector (Display Right). The addressing jumper of each display must match the associated I/O module addressing jumper placement.

FLEX 632
Main Cabinet

Common Control Section Cards ID# 0 - 7							
DISPLAY BUS	Display Module (Left)	MODULE BUS	I/O Modules (Left)		I/O Modules (Right)	MODULE BUS	Display Module (Right)	DISPLAY BUS
	12 **Set addressing jumper to 1**		**8** **Set addressing jumper to 1**		**16** **Set addressing jumper to 1**		**20** **Set addressing jumper to 1**	

Figure I-1, Cabinet Module Locations IF632 main cabinet

FLEX 632
Expansion Cabinet
w/Bus Extender

DISPLAY BUS	Display Module (Left)	MODULE BUS	I/O Modules (Left)		I/O Modules (Right)	MODULE BUS	Display Module (Right)	DISPLAY BUS
	28 **Set addressing jumper to 1**		**24** **Set addressing jumper to 1**		**32** **Set addressing jumper to 1**		**36** **Set addressing jumper to 1**	
	29 **Set addressing jumper to 2**		**25** **Set addressing jumper to 2**		**33** **Set addressing jumper to 2**		**37** **Set addressing jumper to 2**	
	30 **Set addressing jumper to 3**		**26** **Set addressing jumper to 3**		**34** **Set addressing jumper to 3**		**38** **Set addressing jumper to 3**	

Figure I-2, Cabinet Module Locations IF632 expander cabinet

Card Location	Card Type ID (Hex)	Card description
00	0A	Front Display panel W/Alphanumeric
01	FF	*vacant*
02	FF	*vacant*
03	FF	*vacant*
04	01	CCM: 2 Signal Circuits, Class A
05	02	CCM: 4 Relay Circuits
06	05	CCM: City Tie, Buzzer etc
07	07	*not used*
	09	*Analog Addessable I/O card*
	F0	GW500 card with Class A adapter
	F1	GW500 without Class A adapter
	0A	Analog Control Panel - Tactile SW installed
	0B	Analog Control Panel - Tactile SW missing
	0E	Building Control I/O Card - 8 circuit
	0F	Building Control I/O Card - 4 circuit
	1F	Red/Yellow LEDs, no 3 pos sw, no tactile sw (Alarm Display)
	1E	Red/Yellow LEDs, no 3 pos sw, tactile sw installed (Alarm Display)
	1B	Red/Green LEDs, no 3 pos sw, no tactile sw (Control Display)
	1A	Red/Green LEDs, no 3 pos sw, tactile sw installed (Control Display)
	17	Combo Red/Green/Yellow LEDs no 3 pos sw, no tactile sw (Left Control Display)
	16	Combo Red/Green/Yellow LEDs no 3 pos sw, tactile sw installed (Left Control Display)
	13	Combo Red/Yellow LEDs, no 3 pos sw, no tactile sw (Right Control Display)
	12	Combo Red/Yellow LEDs, no 3 pos sw, tactile sw installed(Right Control Display)
	19	Red/Green LEDs, no 3 pos sw, no tactile sw (Fan Control)
	18	Red/Green LEDs, no 3 pos sw, tactile sw installed (Fan Control)
Zone Card	28	Eight Circuit Class A installation
(CIM)	29	Four Circuit Class A (Alternate)
	2A & 2B	Invalid
	2C	Four Circuit Class A, plus Four circuit Class B
	2D	Four Circuit Class A
	2E	8 Circuit Class B
	2F	Four Circuit Class B
Signal Card	38	Eight Circuit Class A installation
(USM)	39	Four Circuit Class A (Alternate)
	3A & 3B	Invalid
	3C	Four Circuit Class A, plus Four circuit Class B
	3D	Four Circuit Class A
	3E	8 Circuit Class B
	3F	Four Circuit Class B
Relay Card	5E	Eight circuit
	5F	Four Circuit
RCD	14	Relay Control Display
SCD	1C	Signal Control Display
BCD	10	Building Control Display

Table I-3 - Card Type ID Codes

Main Power Supply

The main power supply (p/n 30889) is a combination 8 amp system power supply and battery charger. It provides the system with five supplies (a 24Vdc regulated, 24Vdc unregulated, 12Vdc, 5Vdc and the battery charger). The standard battery charger is sized to maintain 5 to 60 AH batteries. The battery charger card has three resistors for programming various battery sizes. R21 & R17 should be removed when 5 - 20AH batteries are installed. R1 should be removed when 21 - 40AH batteries are installed. No resistors should be removed when 41 - 60AH batteries are used.

Installation Diagram

Refer to drawings C-W856 Main Power Supply B-W471 Wiring, Minimum System Flex 632 and B-W474 Wiring Basic Chassis for installation and cable connections. When applicable, refer to C-W857 Aux. Power Supply.

Specifications

Input Voltage	120 VAC 50/60 Hz 3 amps Max. (Optional 220V AC available)
Output Voltage	24 Volt DC regulated @ 4 Amps - system power, S+ S- and A+ A-**{**XE "\"Smart Start\""**}**
	24 Volt DC filtered @ 4 Amps - for signal circuit power
	5 Volt DC regulated - supply for logic circuits
	12 Volt DC regulated @ 2 Amps
Operating Temperature	0 to +49 degrees C
Humidity	85% non-condensing

Interconnects

24 VAC	(2) secondary transformer connection
C+, C-	Connection (Red, Black) to Filter Capacitor
BO (Brown-out Output)	Brown Out - connects to auxiliary power supply BI (Brown-out Input) terminal
B+, B-	(Red, Black) connections to Battery Distribution Block
J4 connector	J2 Analog
J3 connector	Interconnects to J16 on bus driver module
J2 connector	Interconnects to J12 on bus driver module (5V, 12V, and 24V supervision)

Auxiliary Power Supply

Auxiliary Power supply, APS632-8 (p/n 30890) is an 8 amp auxiliary supply, which mounts into one module expansion slot. It provides the system with 24 VDC auxiliary power, full wave rectified, and filtered. Two 4 amp outputs are provided for signaling or auxiliary power.

Note: *Terminals Black, Red are not power limited outputs.*

Interconnects

Card APS632-8	Designation	Description
OUTPUT		
J1 connector	RED	+24VDC auxiliary power (4 amps available for signal circuits)
J1 connector	BLK	-24VDC auxiliary power (4 amps available for signal circuits)
J1 connector	WHT	Monitor point for AC/Battery fault
J2 connector	RED	+24VDC auxiliary power (4 amps available for signal circuits)
J2 connector	BLK	-24VDC auxiliary power (4 amps available for signal circuits)
J2 connector	WHT	Monitor point for AC/Battery fault
POWER	B+	Battery +24V Input
	B-	Battery -24V Input
	BO	Connect to next aux. power supply terminal “BI”
	BI	From terminal "BO” of main power supply or previous aux. power supply
	24VAC	24VAC from transformer
	24VAC	24VAC from transformer

Common Control Specifications

The specifications listed identify the interfacing modules housed in the common control section; the common control display module, the bus driver module, a relay expander card, and the CPU module.

Common Control	
Input Power	24VDC
Quiescent Current	275 mA
Alarm Current	407 mA plus Signal Circuit power plus 2mA for master box or 22 mA for reverse polarity

	Terminal #	**Terminal Designation**	**Description**
Auxiliary Output	1	A+	21 VDC, 2 Amps regulated auxiliary power*
	2	A-	21 VDC Common*
Smoke Detector Power	3	S+	21 VDC @ 2 Amps, resetable regulated power * (4 second reset time)
	4	S-	21 VDC common *
Security Power	5	(+)12	12VDC, 2 Amps regulated power
	6	(-)12	common for +12VDC
City Tie	7	M1	Connections for master box or line reversal option.
	8	M2	Line Reversal - 24VDC @ 15mA nominal
Signal Circuit 1			Signal CCT#1, 24V@2A, Style Y or Z
	9	1L1R	Style Z (+) Return
	10	1L1	(+) Signal Power** (normal)
	11	1L2	(-) Signal Power** (normal)
	12	1L2R	Style Z (-) Return
Signal Circuit 2			Signal CCT#2, 24V@2A, Style Y or Z
	13	2L1R	Style Z (+) Return
	14	2L1	(+) Signal Power** (normal)
	15	2L2	(-) Signal Power** (normal)
	16	2L2R	Style Z (-) Return

* **NOTE 1:** ***Total load of regulated power including system power, A+ A- and S+S- must not exceed 4 amps.***
****NOTE 2:** ***Style Y signal circuit wiring requires 3.9K EOL resistor***.

Relay Expander Card

The relay expansion module provides four relay circuits with Form C (SPST) contacts. When connected to the bus driver module this module provides the *Common Alarm, Common Trouble,* and *Supervisory Alarm* relays. Each relay has a fused common rated at ten (10) amps and accepts positive feedback for status indication. Each relay on the bus driver module draws 22mA when activated. In normal operation only the *Trouble* relay is activated. The system initialization determines if the feedback loop is utilized. A feedback circuit must have less than 50 ohms in loop resistance. The function of relays (K1 - K4):

- Relay K1 Common Alarm
- Relay K2 Common Trouble (Relay is normally energized)
- Relay K3 Common Supervisory
- Relay K4 spare

Installation Diagram

Refer to (drawing # B-W471 for wiring the Relay Expander Card. No switch settings are required. Card location identification number is "5".

Cable Connection & Notes

J2 Connector	Interconnection (ribbon cable) to J17 connector on the bus driver module
F1 fuse	10 Amp overload protection K1 relay
F2 fuse	10 Amp overload protection K2 relay
F3 fuse	10 Amp overload protection K3 relay
F4 fuse	10 Amp overload protection K4 relay

Relay Expander Card

RELAY 1 COMMON ALARM	Terminal #	Designation	Description
	1	1 NO	Normally open Alarm contact
	2	1 NC	Normally closed Alarm contact
	3	1 C	Alarm relay common contact 10A @ 30 VDC or 220 VAC resistive, fused @ 10 amps.
	4	1 M	Alarm relay feedback point to monitor status of controlled device

RELAY 2 COMMON TROUBLE	Terminal #	Designation	* Relay is shown normally energized (normal condition)
	5	2 NC	Normally closed Trouble contact
	6	2 NO	Normally open Trouble contact
	7	2 C	Trouble relay common contact 10A @ 30 VDC or 220 VAC resistive, fused @ 10 amps.
	8	2 M	Trouble relay feedback point to monitor status of controlled device

RELAY 3 COMMON SUPERVISORY	Terminal #	Designation	Description
	9	3 NO	Normally open Supervisory contact
	10	3 NC	Normally closed Supervisory contact
	11	3 C	Supervisory relay common contact 10A @ 30 VDC or 220 VAC resistive, fused @ 10 amps.
	12	3 M	Supervisory relay feedback point to monitor status of controlled device

RELAY 4 SPARE	Terminal #	Designation	Description NOTE: When the City Tie is programmed in the Chicago mode the spare relay will transfer during City Tie circuit faults.
	13	4 NO	Normally open spare contact
	14	4 NC	Normally closed spare contact
	15	4 C	Spare relay common contact 10A @ 30 VDC or 220 VAC resistive, fused @ 10 amps.
	16	4 M	Spare relay feedback point to monitor status of controlled device

Bus Driver Module

The bus driver module contains the circuitry that interfaces with the CPU module and the system modules. The bus driver module is equipped with two Style Y or Z, limited energy signaling circuits and a city tie circuit.

The bus driver module provides the system with the following :

- Controls default alarm bus if the CPU fails
- Monitors system modules for placement
- Monitors system for ground faults
- Watchdog circuit
- Programmable Signal Circuits (1 & 2)
- Auxiliary Power Outputs (A+/A-, S+/S-, +/- 12VDC)

The internal circuitry draws about 18mA from the +24V power supply with both signal circuits terminated with a 3.9K ohm resistor (with no current draw on the city tie circuit). Each relay on the bus driver module draws 22mA when activated. In normal operation only the trouble relay is energized.

City Tie Programming

The bus driver module contains three jumpers for city tie programming (J1, J2, & J3) located in the center of the board. These three jumpers are used to select the reverse polarity or the master box option for the city tie connection.

City Tie Programming - Set jumpers as follows:	J1	J2	J3
Reverse Polarity	X		X
Master Box		X	

X = jumper installed

Installation Diagram

Refer to drawings D-W1146, Wiring Minimum System IF 632 and C-W847, Bus Driver Module.

Cable Connections

P1 Connector	Interconnect (ribbon cable) to IBX1 on the CPU module
J5 Connector	Interconnect (ribbon cable) to Left I/O modules
J6 Connector	Interconnect (ribbon cable) to Left Display modules
J7 Connector	Interconnect (ribbon cable) to Right Display modules
J8 Connector	Interconnect (ribbon cable) to Right I/O modules
J9 Connector	Interconnect (ribbon Cable) to Cabinet Expander
J11 Connector	Interconnect (ribbon cable) to P1 on the common control display
J12 Connector	Cable connector to J2 - Power Supply
J16 connector	Three conductor cable to J3 power supply
J17 Connector	Interconnect (ribbon cable) to J2 on the Relay Expander Card

Operators Display

The Operators Display (OD) is the main interface to system. The display provides the user with all necessary switches, keys and annunciation points to maintain and monitor the system. Alarm, supervisory and trouble conditions are indicated by dedicated LED's and the internal sounder. The system's operating status is shown on the alphanumeric display. LED annunciation is also provided for AC power, PreAlarm, (2) signal circuits, City Tie connection and Bypass. The alphanumeric keypad provides user access for programming and password entry.

The alphanumeric display contains a 4 x 40 character backlit display. To regulate the contrast of the alphanumeric LCD display, adjust the potentiometer R29 located (solder side of the display board - lower left hand corner) - see drawing D-W1146). The card location identification number is " 0 " (see above Table I-3).

Installation Diagram

Refer to (drawing # B-W471) Wiring, IF632 Analog Addressable System. The 34 pin ribbon cable (p/n 71158) interconnects the OD to the bus driver module (J11 connector).

CPU Module

The CPU module (or microprocessor module) contains the system operating firmware and non-volatile memory. It provides all the system memory and processing functions as well as providing the local/remote communications and supervision. System field programming, via a laptop PC link, is accomplished utilizing the P2 interface. The CPU module jumper settings are preset at the factory and do not require any field programming. Do not place any jumpers on the module.

Baud Rate Setting

The settings of DIP switch SW1, regulates the system's baud rate. The switch settings are preset at the factory; see SW1 default settings table.

The module contains a serial communications port for serial device interface (Isolated RS-232 Card). To install, the U18 IC must be removed from its socket and replaced with the interconnecting cable from the Isolated RS-232 Card.

Installation Diagram

Refer to B-W471, Wiring, IF632 Analog Addressable System. The CPU module jumper settings are preset at the factory and do not require any field programming. Do not place any jumpers on the module.

SW1 - Default Settings		
S1	Open	Do Not Change
S2	Open	Do Not Change
S3	Always Closed	Do Not Change
S4	Open	Do Not Change
S5	Open	Do Not Change
S6	Open	Do Not Change
S7, S8 Open	9600 Baud Rate	
S7, S8 Closed	4800 Baud Rate	
S7 Open, S8 Closed	2400 Baud Rate	
S7 Closed, S8 Open	1200 Baud Rate	

DIP Switch SW1 Table

The LED's on the CPU Module provide the following indications:

LED Indication		
	All four LED's "On"	Hardware Reset
	D1 "On" only	*not used*
	D2 "On" only	*not used*
	D3 "On" only	*not used*
	D4 "On" only	*not used*

Cable Connections:

IBX1 connector	Interconnection (ribbon cable) to P1 connection on the bus driver module
P2 connector	Interconnection (ribbon cable) for system field programming link, via laptop PC
P4 (pins 3 & 4)	System Hardware Reset (momentary short) jumper pins
U18 socket	Interface socket for the 16 pin ribbon cable provided for the Isolated RS232 Card
IBX0 connector	Interconnectio (ribbon cable) for SIM xxx Network card, when provided.

ANALOG INTERFACE MODULE & SUB-ASSEMBLY SPECIFICATIONS

Analog Addressable Interface Module
AAM95-1ND
AAM95-2ND
AAM95-4ND

This module (one main board with an expander card) drives four circuits that can monitor and control up to 126 analog addressable devices (points) per line for a total of 504. The functions of this card are controlled by a micro controller and the software programming. The system uses a 16 point field wiring terminal strip. The main board with the micro controller and two channel driver circuits draws 35mA from the 24V supply not allowing for any draw by devices on the lines and with the class A relays de-energized. The expander card brings the current draw to 55mA. If either line on the main board or on the expander board opens, then the relays for both lines are activated, adding an additional 20mA draw from the 24V supply.

Installation Diagram

Refer to (drawing # B-W471) Wiring, IF632 Analog Addressable System for installation and cable connections. See the table below.

Circuit 1	Terminal #	Designation	Description
Lower	1	+24	+24 Vdc
Terminal	2	+24 R	+24 Vdc return
Block	3	L1	Common (-)
	4	L1R	Common (-) return
	5	L2	Data
	6	L2R	Data return
Circuit 2	**Terminal #**	**Designation**	**Description**
Lower	11	+24	+24 Vdc
Terminal	12	+24 R	+24 Vdc return
Block	13	L1	Common (-)
	14	L1R	Common (-) return
	15	L2	Data
	16	L2R	Data Return
Circuit 3	**Terminal #**	**Designation**	**Description**
Upper	1	+24	+24 Vdc
Terminal	2	+24 R	+24 Vdc return
Block	3	L1	Common (-)
(optional)	4	L1R	Common (-) return
	5	L2	Data
	6	L2R	Data return
Circuit 4	**Terminal #**	**Designation**	**Description**
Upper	11	+24	+24 Vdc
Terminal	12	+24 R	+24 Vdc return
Block	13	L1	Common (-)
(optional)	14	L1R	Common (-) return
	15	L2	Data
	16	L2R	Data return

NOTE: Terminals 7-10 on lower and upper blocks are not used.

Addressable Input Devices

Gamewell's IdentiFlex 600 series of Addressable Input Devices provide the interface between the IF600 Analog circuits and contact devices. The input devices available are Point Identification Device (PID-95), Manual Station (MS-95) and Collective Zone Interface (CZI-95).

PID-95

The PID-95 is intended to provide the interface between conventional devices and the analog circuit of the IF600. They provide a means of connecting and identifying monitor points without the use of conventional zone modules at the main control panel. The use of PID-95's can drastically reduce the field wiring required on many projects by reducing the number of wires required on the installation.

The PID-95 is designed to mount in standard electrical backboxes. When monitoring other contact devices the unit can be mounted in a standard double gang back box.

PID-95P is a PID-95 mounted on a 4 11/16 plastic plate where visual identification of the device's location is required.

MS-95

The MS-95 is an Addressable Manual Station with in and out leads. The MS-95 is designed to mount in standard electrical backboxes.

CZI-95

The CZI-95 is a Collective Zone Interface for the analog addressable circuit. It is designed to power up to 25 conventional smoke detectors. It accommodates both style B or D wiring. The CZI-95 mounts to any standard 4 11/16" backbox and is provided with screw terminals for wiring.

>>NOTE: Refer to the Installation Instructions supplied with the devices for detailed mounting and wiring instructions

Addressable Input Devices
Installation Notes:

Electrical Specifications	PID-95, PID-95P, MS-95	CZI-95
Input power:	21 VDC	21 VDC
Quiescent Current:	.0004 amperes	10 mA
Alarm Current:	.0014 amperes	100 mA
Operating temperature	0·C to +49·C	0 to 49°C
Relative Humidity	85%, non-condensing	85% non-condensing

SYSTEM I/O COMPONENTS (600 SERIES)

Conventional Input Module

The conventional input module (CIM) consists of up to 3 assemblies. The *I/O Circuit module*, the *Style D (Class A) adapter*, and the *Alarm Display*. To view a comprehensive listing of compatible devices with the IF650 control panel, refer to Figure I-2, Compatible Initiation Devices found at the end of this section. Also refer to Figure I-3, for a comprehensive listing of auxiliary devices.

Circuit Module

The circuit module provides four (CIM-4) or eight (CIM-8) conventional circuits. All circuits operate on the Style B (Class B) mode of operation. The *End of Line Resistor* (EOLR) required is 3.9k ohms with a maximum of 25 ohms line resistance. Programming jumper (S1) is provided on each board for setting the vertical position/address of the card (S1-1 through S1-4). The I/O circuit module uses the lower terminal block and connects via cables to the bus driver module. The conventional input module and its display require one bay of the IF650 system.

Style "D" Adapter

The style D adapter card (CIM-SDA) provides 4 or 8 Style D (Class A) circuits to the I/O circuit module. When the Style D adapter is used the EOLR's are not required. The style D adapter uses the upper terminal block, and is cabled to the I/O circuit module.

Display Module

The display module provides eight (8) red circuit alarm LED's, eight (8) yellow circuit trouble LED's. Eight (8) circuit tactile switches are provided for *programming*, *Bypass* and *WalkTest* functions. The display module connects (via the display bus) to the bus driver module. The physical location of the display is set by the addressing jumper S1. Ensure addressing jumper is set according to its physical location in the cabinet and matches associated I/O module address jumper setting. Refer to Figure I-1, Cabinet Module Locations.

Conventional Input Module Terminal Description

Bottom card (30868) CIM-8	Terminal #	Designation	Description
	1	1L1	Initiating CCT # 1 (-)
	2	1L2	Initiating CCT #1 (+)
	3	2L1	Initiating CCT # 2 (-)
	4	2L2	Initiating CCT #2 (+)
	5	3L1	Initiating CCT # 3 (-)
	6	3L2	Initiating CCT #3 (+)
	7	4L1	Initiating CCT # 4 (-)
	8	4L2	Initiating CCT #4 (+)
	9	5L1	Initiating CCT # 5 (-)
	10	5L2	Initiating CCT #5 (+)
	11	6L1	Initiating CCT # 6 (-)
	12	6L2	Initiating CCT #6 (+)
	13	7L1	Initiating CCT # 7 (-)
	14	7L2	Initiating CCT #7 (+)
	15	8L1	Initiating CCT # 8 (-)
	16	8L2	Initiating CCT #8 (+)

Class "A" Adapter -Conventional Input Module - Terminal Description

Top Card (30869) (CIM-SDA)	Terminal #	Designation	Description
	1	1L1	Initiating CCT #1 (-) Class "A" Return
	2	1L2	Initiating CCT #1 (+) Class "A" Return
	3	2L1	Initiating CCT #2 (-) Class "A" Return
	4	2L2	Initiating CCT #2 (+) Class "A" Return
	5	3L1	Initiating CCT #3 (-) Class "A" Return
	6	3L2	Initiating CCT #3 (+) Class "A" Return
	7	4L1	Initiating CCT #4 (-) Class "A" Return
	8	4L2	Initiating CCT #4 (+) Class "A" Return
	9	5L1	Initiating CCT #5 (-) Class "A" Return
	10	5L2	Initiating CCT #5 (+) Class "A" Return
	11	6L1	Initiating CCT #6 (-) Class "A" Return
	12	6L2	Initiating CCT #6 (+) Class "A" Return
	13	7L1	Initiating CCT #7 (-) Class "A" Return
	14	7L2	Initiating CCT #7 (+) Class "A" Return
	15	8L1	Initiating CCT #8 (-) Class "A" Return
	16	8L2	Initiating CCT #8 (+) Class "A" Return

Universal Signal Circuit Module	The indicating signal circuit modules (USM-4, USM-8) consists of up to three (3) assemblies. The *I/O Signal Module*, *Style "Z" Adapter*, and the *Alarm Display Card*. To view a comprehensive listing of compatible devices with the IF 632 control panel, refer to Figure I-4, Compatible Indicating Appliances found at the end of this section. Also reference to Figure I-5, Wiring Guidelines Signaling Circuit Wire SizesEach USM-4 requires an Auxilliary Power supply,APS632-8. Each. USM-8 requires 2 Auxilliary Power Supplies, APS632-8 These must be mounted in an expander cabinet.
Signal Circuit Module	The signal circuit module provides four (4) or eight (8), 2 amp DC, current limited analog signaling circuits. All circuits operate on the Style Y (Class B) mode of operation. The end of line resistor (EOLR) is 3.9K ohm. Programming jumper (S1) is provided on each board for setting the vertical position/address of the card (J1 through J4). The I/O signal module uses the lower terminal block and connects via cable to the bus driver module. Each universal signal module communicates via the Module bus and requires one bay position each. The SIGNAL I/O board has an option that allows programming of the signal circuits to be operable under Default Alarm Mode. A DIP switch (S2) is provided on the module to select which signaling circuits operate under default alarm mode. To set the circuits that are active, close their respective switch on S2. I.E.: Switch 1 for circuit 1, Switch 2 for circuit 2, through Switch 8 for circuit 8.
Style "Z" Adapter	The Style D adapter (USM-SZA) card provides four (4) or eight (8) Style Z (Class A) circuits to the I/O signal card. When the Style Z adapter is used the EOLR's are not required. The Style Z adapter uses the upper terminal block, and is cabled to the I/O signal module.
Display Module	The alarm display module provides eight (8) red zone alarmed LED's, eight (8) yellow zone trouble LED's. Eight (8) zone tactile switches are provided for *programming*, *Bypass* and *WalkTest* functions. Card slots are furnished for zone description, comments. The display module connects (via the display bus) to the bus driver module. The physical location of the display is set by the addressing jumper S1. Ensure addressing jumper is set according to its physical location in the cabinet and matches associated I/O module address jumper setting. Refer to Figure I-1, Cabinet Module Locations.

Universal Signal Circuit Module Terminal Description

Bottom card (30878) USM-8	Terminal #	Designation	Description
	1	1AL1	Indicating CCT #1 (+) output
	2	1AL2	Indicating CCT #1 (-) output
	3	2AL1	Indicating CCT #2 (+) output
	4	2AL2	Indicating CCT #2 (-) output
	5	3AL1	Indicating CCT #3 (+) output
	6	3AL2	Indicating CCT #3 (-) output
	7	4AL1	Indicating CCT #4 (+) output
	8	4AL2	Indicating CCT #4 (-) output
	9	5AL1	Indicating CCT #5 (+) output
	10	5AL2	Indicating CCT #5 (-) output
	11	6AL1	Indicating CCT #6 (+) output
	12	6AL2	Indicating CCT #6 (-) output
	13	7AL1	Indicating CCT #7 (+) output
	14	7AL2	Indicating CCT #7 (-) output
	15	8AL1	Indicating CCT #8 (+) output
	16	8AL2	Indicating CCT #8 (-) output

Class "A" Adapter - Universal Signal Module - Terminal Description

Top Card (30940) (USM-SZA)	Terminal #	Designation	Description
	1	1AL1	Indicating CCT #1 (+) output Class "A" return
	2	1AL2	Indicating CCT #1 (-) output Class "A" return
	3	2AL1	Indicating CCT #2 (+) output Class "A" return
	4	2AL2	Indicating CCT #2 (-) output Class "A" return
	5	3AL1	Indicating CCT #3 (+) output Class "A" return
	6	3AL2	Indicating CCT #3 (-) output Class "A" return
	7	4AL1	Indicating CCT #4 (+) output Class "A" return
	8	4AL2	Indicating CCT #4 (-) output Class "A" return
	9	5AL1	Indicating CCT #5 (+) output Class "A" return
	10	5AL2	Indicating CCT #5 (-) output Class "A" return
	11	6AL1	Indicating CCT #6 (+) output Class "A" return
	12	6AL2	Indicating CCT #6 (-) output Class "A" return
	13	7AL1	Indicating CCT #7 (+) output Class "A" return
	14	7AL2	Indicating CCT #7 (-) output Class "A" return
	15	8AL1	Indicating CCT #8 (+) output Class "A" return
	16	8AL2	Indicating CCT #8 (-) output Class "A" return

Relay Module

The relay modules (RM-4, RM-8) consists of three (3) assemblies. The *I/O Relay Module*, the *Relay Expander*, and the *Control Display*.

Relay Circuit Module

The relay module consists of four (4) form "C" 10 amp fused relay contacts. The module also provides four (4) feedback input points (switched negative) using 3.9K ohm resistors in parallel with an open feedback contact. If the feedback points are connected the LED's on the control display will follow the status of the feedback input point. A (-) connected directly to the feedback point will actuate the Red LED and a (-) through the 3.9k resistor will actuate the Green LED. Otherwise the LED's on the display will follow the status of the relay. Programming jumper (S1) is provided on each board for setting the vertical position/address of the card (S1-1 through S1-4). The relay module uses the lower terminal block and cables to the bus driver module. Each position on the Module bus can accommodate an expanded relay module.

Relay Expander Module

The relay expander provides the addition of four (4) supplementary form "C" 10 amp fused relay contacts. The module also provides four (4) feedback input points (switched negative) using 3.9K ohm resistors in parallel with an open feedback contact. If the feedback points are connected (when the system is initialized) the LED's on the control display will follow the status of the feedback input point. Otherwise the LED's on the display will follow the status of the relay. The relay expander module uses the upper terminal block and cables to the I/O relay module.

Relay Display Module

The control display module provides eight (8) red relay activated LED's, eight (8) green relay normal LED's. Eight (8) circuit tactile switches are provided for *programming* and *Bypass* functions. Card slots are furnished for relay descriptions and comments. The display module connects (via the display bus) to the bus driver module. The physical location of the display is set by the addressing jumper S1. Ensure addressing jumper is set according to its physical location in the cabinet and matches associated I/O module address jumper setting. Refer to Figure I-1, Cabinet Module Locations.

Relay Module

RM-4 (30873)	Terminal Number	Designator	Description
	1	1 NO	Form C normally open contact
	2	1 NC	Form C normally closed contact
	3	1 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A.
	4	1 M	CCT #1 Relay feedback point to monitor status of controlled device
	5	2 NO	Form C normally open contact
	6	2 NC	Form C normally closed contact
	7	2 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A.
	8	2 M	CCT #2 Relay feedback point to monitor status of controlled device
	9	3 NO	Form C normally open contact
	10	3 NC	Form C normally closed contact
	11	3 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A.
	12	3 M	CCT #3 Relay feedback point to monitor status of controlled device
	13	4 NO	Form C normally open contact
	14	4 NC	Form C normally closed contact
	15	4 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A.
	16	4 M	CCT #4 Relay feedback point to monitor status of controlled device

Relay Expansion Module

RM-4E (30874)	Terminal #	Designator	Description
	1	5 NO	Form C normally open contact
	2	5 NC	Form C normally closed contact
	3	5 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A
	4	5 M	CCT #5 Relay feedback point to monitor status of controlled device
	5	6 NO	Form C normally open contact
	6	6 NC	Form C normally closed contact
	7	6 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A.
	8	6 M	CCT #6 Relay feedback point to monitor status of controlled device
	9	7 NO	Form C normally open contact
	10	7 NC	Form C normally closed contact
	11	7 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A.
	12	7 M	CCT #7 Relay feedback point to monitor status of controlled device
	13	8 NO	Form C normally open contact
	14	8 NC	Form C normally closed contact
	15	8 C	Form C common contact 10A @ 30VDC or 220VAC resistive, fused @ 10A.
	16	8 M	CCT #8 Relay feedback point to monitor status of controlled device

Building Control Module

The building control module (BC) consists of three (3) assemblies. The *I/O Building Control Module*, the *Building Control Expander*, and the *Building Control Display/Switch Module.*

Building Control Circuit Module

The Building Control Module consists of eight (8) form A/B (jumper programmable) 10 amp relays set up in four (4) "ON" relays and four (4) "OFF" relays, with a 10 amp fused common. Each relay (ON and OFF) is programmable for N/O or N/C contacts by removing the A or B jumper. Remove the A jumper for N/C contacts or the B jumper for N/O contacts. The module also provides four (4) feedback input points (switched negative) using 3.9K ohm resistors in parallel with an open feedback contact. A (-) connected directly to the feedback point will actuate the Red LED and a (-) through the 3.9k resistor will actuate the Green LED. Should the feedback points be connected the LED's on the building control display will follow the status of the feedback input point. Otherwise the LED's on the display will follow the status of the active relay. Programming jumper (S1) is provided on each board for setting the vertical position/address of the card (S1-1 through S1-4). The building control module uses the lower terminal block and cables to the bus driver module. The building control module uses one slot in the Module bus.

Building Control Expander

The Building Control Expander module provides an additional eight (8) form A/B (jumper programmable) 10 amp relays set up in four (4) "ON" relays and four (4) "OFF" relays, with a 10 amp fused common. The module functions identically as the building control module - providing four (4) feedback input points (switched negative) using 3.9k ohm resistors in parallel with an open feedback contact. The expander module mounts to the building control module (via standoffs) and uses the upper terminal block and cables to the I/O building control module.

Building Control Display/Switch Module

The Control Display Module provides eight (8) red "OFF" relay activated LED's, eight (8) green "ON" relay activated LED's. Eight (8) three (3) position (AUTO,ON,OFF) rotary switches are provided for manual control of the I/O building control module and building control expander. Eight (8) circuit tactile switches are provided for *programming* and *Bypass* functions. Card slots are provided for building control description, comments. The building control display module mounts to the display door and is cabled to the bus driver module. The physical location of the display is set by the addressing jumper S1. Ensure addressing jumper is set according to its physical location in the cabinet and matches associated I/O module address jumper setting. Refer to Figure I-1, Cabinet Module Locations.

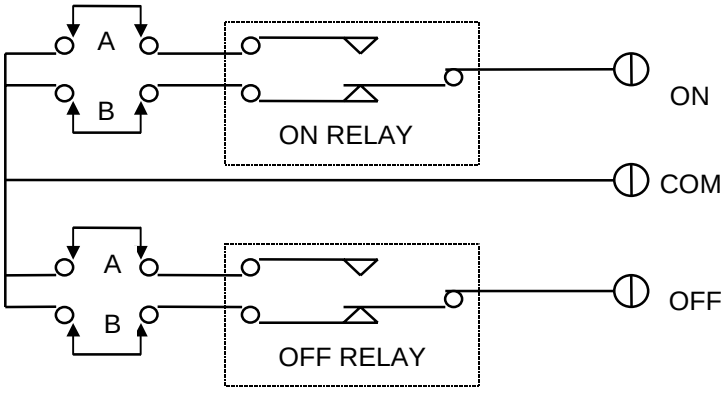

Figure 3.2 Typical building control circuit relay configuration

Building Control Module

BC-4 (30871)	Terminal #	Designation	Description
	1	1 OFF	CCT 1 relay N/O contact - remove the W2 B Jumper
	2	1 COM	Common for CCT1 relays (terminals 1 & 3)
	3	1 ON	CCT 1 relay N/C contact - remove the W3 A Jumper
	4	1 MON	Monitor point for CCT1 (requires 3.9K resistor to (-) when used)
	5	2 OFF	CCT 2 relay N/O contact - remove the W6 B Jumper
	6	2 COM	Common for CCT2 relays (terminals 5 & 7)
	7	2 ON	CCT 2 relay N/C contact - remove the W7 A Jumper
	8	2 MON	Monitor point for CCT2 (requires 3.9K resistor to (-) when used)
	9	3 OFF	CCT 3 relay N/O contact - remove the W10 B Jumper
	10	3 COM	Common for CCT 3 relays (terminals 9 & 11)
	11	3 ON	CCT 3 relay N/C contact - remove the W11 A Jumper
	12	3 MON	Monitor point for CCT 3 (requires 3.9K resistor to (-) when used)
	13	4 OFF	CCT 4 relay N/O contact - remove the W14 B Jumper
	14	4 COM	Common for CCT 4 relays (terminals 13 & 15)
	15	4 ON	CCT 4 relay N/C contact - remove the W15 A Jumper
	16	4 MON	Monitor point for CCT 4 (use 3.9K to (-) when reqd.)

BC-4E (30872)	Terminal #	Designation	Description
	1	5 OFF	CCT 5 relay N/O contact - remove the W2 B Jumper
	2	5 COM	Common for CCT 5 relays (terminals 1 & 3)
	3	5 ON	CCT 5 relay N/C contact - remove the W3 A Jumper
	4	5 MON	Monitor point for CCT 5 (requires 3.9K resistor to (-) when used)
	5	6 OFF	CCT 6 relay N/O contact - remove the W6 B Jumper
	6	6 COM	Common for CCT6 relays (terminals 5 & 7)
	7	6 ON	CCT 6 relay N/C contact - remove the W7 A Jumper
	8	6 MON	Monitor point for CCT6 (requires 3.9K resistor to (-) when used)
	9	7 OFF	CCT 7 relay N/O contact - remove the W10 B Jumper
	10	7 COM	Common for CCT 7 relays (terminals 9 & 11)
	11	7 ON	CCT 7 relay N/C contact - remove the W11 A Jumper
	12	7 MON	Monitor point for CCT 7 (requires 3.9K resistor to (-) when used)
	13	8 OFF	CCT 8 relay N/O contact - remove the W14 B Jumper
	14	8 COM	Common for CCT 8 relays (terminals 13 & 15)
	15	8 ON	CCT 8 relay N/C contact - remove the W15 A Jumper
	16	8 MON	Monitor point for CCT 8 (use 3.9K to (-) when reqd.)

City Tie Extender Module

The city tie extender module (CTX) consists of two (2) assemblies. These include the *I/O City Tie Extender Module* and *Alarm Display Module*.

City Tie Extender Circuit Module

The I/O city tie extender module provides for four (4) additional reverse polarity city tie circuits. These circuits can be programmed for multiple buildings being controlled by one panel, multiple entrances, or different types of alarms including supervisory or building notification. Each circuit transmits trouble for the zones associated to its circuit. Programming jumper (S1) is provided on each board for setting the vertical position/address of the card (S1-1 through S1-4). The city tie extender module uses the lower terminal block and cables to the bus driver module. This module uses one slot in the Module bus.

Display Module

The display module provides eight (8) red circuit alarm LED's, eight (8) yellow circuit trouble LED's. Eight (8) circuit tactile switches are provided for *programming* and *Bypass* functions. A card slot is furnished for circuit description and comments. The display module mounts to the display door and is cabled to the bus driver module. The physical location of the display is set by the addressing jumper S1. Ensure addressing jumper is set according to its physical location in the cabinet and matches associated I/O module address jumper setting. Refer to Figure I-1, Cabinet Module Locations.

City Tie Expander Module

4 Circuits (30875) CTX-4	Terminal #	Designation	Description
	1	1M1	Circuit 1 (+) line connection
	2	1M2	Circuit 1 (-) line connection
	3	2M1	Circuit 2 (+) line connection
	4	2M2	Circuit 2 (-) line connection
	5	3M1	Circuit 3 (+) line connection
	6	3M2	Circuit 3 (-) line connection
	7	4M1	Circuit 4 (+) line connection
	8	4M2	Circuit 4 (-) line connection
	9	5M1	not used
	10	5M2	not used
	11	6M1	not used
	12	6M2	not used
	13	7M1	not used
	14	7M2	not used
	15	8M1	not used
	16	8M2	not used

FLEX 600 COMPATIBLE INDICATING APPLIANCES			
PART NUMBER	**MODEL NUMBER**	**DESCRIPTION**	**CURRENT**
70874	MB-G6-24-R	MOTORBELL 6"	.030
70875	MB-G10-24-R	MOTORBELL 10"	.030
71557	RSP-2430-VFR	30 Cd Strobe Adapter Red	.124
71631	SRP-2475-VFR	75 Cd Strobe Adapter Red, Sync.	.215
71558	RSP-2475-VFR	75 Cd Strobe Adapter Red	.200
71561	SRP-24110-HFR	110 Cd Strobe Adapter Red	.250
71586	CSX10-24-DC-R	10” SS Exp indoor Red..	.500
71587	CSXG10-24DC-R	10” SS Exp outdoor Red..	.500
71581	CH-BF1-R	Chime SS/Vib Red	.020
71585	CH-CF1-W	Chime SS/Vib ceiling white	.020
68460-01	CH-DF1-R	Chime Vibrating	.020
71583	CH-CF1-LS-24-VFR	Chime SS/Vib Red	.100
71300	CH-DF1-LS-24-VFR	Chime SS/Vib Red	.100
71301	CH-DF1-LSM-24-VFR	Chime SS/Vib Red	.135
71584	CH-CF1-MS-24-CFW	Chime SS/Vib White	.155
71302	CH-DF1-MS-24-VFR	Chime SS/Vib Red	.155
71582	CH-CF1-IS-24-CFW	Chime SS/Vib White	.245
71303	CH-DF1-IS-24-VFR	Chime SS/Vib Red	.245
71548	SM-12/24-R	Single Circuit Sync Module	.025
71549	DSM-12/24-R	Dual or Class A Sync Module	.038
70871	MIZ-24-R	Mini Horn Red	.017
70873	MIZ-24-W	Mini Horn White	.017
71287	MIZ-24-LS-VFR	Mini Horn/Strobe 15 Cd	.092
71288	MIZ-24-LSM-VFR	Mini Horn/Strobe 15/75 Cd	.127
71289	MIZ-24-MS-VFR	Mini Horn/Strobe 30 Cd	.147
71290	MIZ-24-IS-VFR	Mini Horn/Strobe 75 Cd	.237
71138	MT-12/24-R	Multi-tone Horn Red	See DS851
71573	AMT-12/24-R	Multi-tone Horn Red 3 Input	See DS851
71614	MT4-12/24-R	Multi-tone Horn Red Surface	See DS851
71292	MT-24-LS-VFR	Multi-tone Horn/Strobe Red 15 Cd	See DS851
71574	AMT-24-LS-VFR	Multi-tone Horn/Strobe Red 15 Cd 3 input	See DS851
71295	MT-24-IS-VFR	Multi-tone Horn/Strobe Red 75 Cd	See DS851
71575	AMT-24-IS-VFR	Multi-tone Horn/Strobe Red 75 Cd 3 input	See DS851
71293	MT-24-LSM-VFR	Multi-tone Horn/Strobe Red 15/75 Cd	See DS851
71576	AMT-24-LSM-VFR	Multi-tone Horn/Strobe Red 15/75 Cd 3 input	See DS851

FLEX 600 COMPATIBLE INDICATING APPLIANCES (Cont.)			
PART NUMBER	**MODEL NUMBER**	**DESCRIPTION**	**CURRENT**
71294	MT-24-MS-VFR	Multi-tone Horn/Strobe Red 30 Cd	See DS851
71140	MT-24-WM-VFR	Multi-tone Horn/Strobe Red 110 Cd	See DS851
71426	MT-24-SL-VFR	Multi-tone Horn/Strobe Red 15 Cd Sync	See DS851
71427	MT-24-SLM-VFR	Multi-tone Horn/Strobe Red 15/75 Cd Sync	See DS851
71550	RS-2415-VFR	Strobe 15 Cd	.074
71553	RS-241575-VFR	Strobe 15/75 Cd	.100
71552	SRP-2415-VFR	Strobe 15 Cd Plate mount Sync	.096
71551	SR-2415-VFR	Strobe 15 Cd Sync	.096
71569	RSP-241575-VFR	Strobe 15/75 Cd Plate Mount	.100
71554	SRP-241575-VFR	Strobe 15/75 Cd Plate Mount Sync	.138
71555	SR-241575-VFR	Strobe 15/75 Cd Sync	.138
71557	RSP-2430-VFR	Strobe 30 Cd Plate mount	.124
71556	RS-2430-VFR	Strobe 30 Cd	.124
71558	RSP-2475-VFR	Strobe 75 Cd Plate mount	.200
71559	RS-2475-VFR	Strobe 75 Cd	.200
71616	SR-2475-VFR	Strobe 75 Cd Sync	.200
71560	RS-24110-HFR	Strobe 110 Cd	.200
71561	SRP-24110-HFR	Strobe 110 Cd Plate mount Sync	.200
71562	SR-24110-HFR	Strobe 110 Cd Sync	.200
71543	AS-2415-VFR	Horn/Strobe 15 Cd	.093
71544	AS-241575-VFR	Horn/Strobe 15/75 Cd	.121
71545	AS-2430-VFR	Horn/Strobe 30 Cd	.126
71546	AS-2475-VFR	Horn/Strobe 75 Cd	.239
71547	AS-24110-HFR	Horn/Strobe 110 Cd	.269

Table I-2

WIRING GUIDELINES SIGNALING CIRCUIT WIRE SIZES 24 VOLT DC PARALLEL					
WIRE RESISTANCE		PAIR IN DISTANCE TO LAST DEVICE (MAXIMUM LINE LOSS 10%)			
AWG	OHM/1000	0.5amp	1.0amp	1.5amp	2.0amp
18	6.5	400'	200'	130'	100'
16	4.1	620'	300'	210'	160'
14	2.6	1000'	500'	330'	250'
12	1.6	1600'	800'	520'	400'
10	1.0	2500'	1250'	840'	620'

CIRCUIT CHARACTERISTICS			
CIRCUIT	EOL	LINE RESISTANCE	CABLE TYPE
PID-95 (Analog)	3.9 K ohm 1/2 watt	25 ohm	st lay - 18 Ga.
SIGNAL	3.9 K ohm 1/2 watt	4.8 ohm @0.5a	st lay - 14 Ga.
		1.2 ohm @2.0a	st lay - 12 Ga.
ANALOG LINE	Not Required	25 ohm	Twisted Pair - 16 Ga.

Table I-3

Analog Circuit Wiring Requirements and Limitations

1. Cable length per circuit - 4,000 feet maximum including all "T-tap" runs. “T-Tap” wiring is not allowed on signal circuits.
2. Use twisted cable wherever possible, even when in conduit.
3. Twisted cable required on all open wiring runs involving 1,000 Ft. or more.
4. Avoid running circuits parallel with power wiring for any distance.
5. Avoid running circuits parallel with cables having high switching rates.
6. Avoid running circuits parallel with fluorescent fixtures.
7. Avoid running analog circuits parallel with signal circuit wiring.
8. Shield signal circuit wiring , even if in conduit, if run together with analog circuits.
9. Maximum conductor resistance for circuits is 25 ohms.

Table I-4

FLEX 632 CONTROL PANEL
COMPATIBLE DEVICES FOR ANALOG ADDRESSABLE CIRCUITS

PART# / IDENTIFIER	DESCRIPTION	COMPATABLE BASES / MOUNTING	QTY/CCT MAX
XP95-P	Photo-Electric Analog Smoke Sensor	XP95-B4, XP95-B6, XP95-B6LOW, XP95-B6R4, XP95-B6SNDR	126
XP95-I	Ionization Analog Smoke Sensor	XP95-B4, XP95-B6, XP95-B6LOW, XP95-B6R4, XP95-B6SNDR	126
XP95-T	Thermal Analog Sensor	XP95-B4, XP95-B6, XP95-B6LOW, XP95-B6R4, XP95-B6SNDR	126
XP95-PD	Photo-Electric Duct Analog Smoke Sensor	Provided	126
XP95-ID	Ionization Duct Analog Smoke Sensor	Provided	126
XP95-LI	Line Isolator Module for Analog Circuit	Provided	
MS-95	Analog Addressable Manual Pull Station	Single Gang 28762 Backbox (optional)	126
CZI-95	Collective Zone Interface	4 11/16” Backbox	40
PID-95	Point Identification Device	None Required	126
PID-95P	Point Identification Device (Plate Mounted)	4 11/16” Backbox	126
ESC-95	Signal Control Element	4 11/16” Backbox	126
RCE-95	Relay Control Element	4 11/16” Backbox	126
RSM-95	Solenoid Control Element	4 11/16” Backbox	126
BCE-95	Building Control Element	4 11/16” Backbox	126

>>NOTE: Refer to the Installation Instructions supplied with the devices for detailed mounting and wiring instructions

FLEX 632 CONTROL PANEL
COMPATIBLE INITIATION DEVICES FOR CONVENTIONAL ZONES
(Identifier 600-1A, 600-1B)

PART#/IDENTIFIER	DEVICE	DESCRIPTION	DETECTOR Compatibility ID	QTY/CCT MAX
30780-01/30780-01	Z77B	STANDARD BASE	F7, D9, R7 / (F7, D9, R7)	25
30780-02/30780-02	Z77D	STANDARD BASE W/ REMOTE	F7, D9, R7 / (F7, D9, R7)	25
30780-03/30780-03	Z77R	STANDARD BASE W/ REMOTE & RELAY	F7, D9, R7 / (F7, D9, R7)	25
30780-04/30780-04	Z77F	STANDARD BASE W/FLASH STANDBY, REMOTE	F7, D9, R7 / (F7, D9, R7)	25
30780-05/30780-05	Z77FR	STANDARD BASE W/FLASH STANDBY, REMOTE & RELAY	F7, D9, R7 / (F7, D9, R7)	25
70891 / (HB-4)	STANDARD BASE (SMOKE)		70884,70885 70886/(HD-3)	25
70892 /(HB-13)	STANDARD BASE W/RELAY (SMOKE)		70884,70885 70886/(HD-3)	25
70893	STANDARD BASE (HEAT DETECTOR)		70887,70888, 70889,70890	MAX AL. CURRENT 100 MA
70894 /(HB-18)	STANDARD BASE W/LATCHING LED (HEAT DETECTOR)		70887,70888, 70889,70890	MAX AL. CURRENT 100 MA
69121/69124	LINEAR BEAM SMOKE DETECTOR			1 SET
71034/55000-250	IONIZATION DETECTOR			25
71033/55000-350	PHOTOELECTRIC DETECTOR			25
71035/55000-153	HEAT DETECTOR			25
71036/45681-200	BASE FOR 71033, 71034, 71035 DETECTORS			
71086/45681-220	BASE FOR 71033, 71034, 71035 DETECTORS			

Table I-5

FLEX 632 CONTROL PANEL COMPATIBLE INITIATING DEVICES FOR 'AND' (COUNTING) ZONES		
71034 / 55000-250	IONIZATION DETECTOR	25
71033 / 55000-350	PHOTOELECTRIC DETECTOR	25
71035 / 55000-153	HEAT DETECTOR	25
71036 / 45681-200	BASE FOR 71033, 71034, 71035 DETECTORS	
71086 / 45681-220	BASE FOR 71033, 71034, 71035 DETECTORS	

Table I-6

FLEX 600 CONTROL PANEL COMPATIBLE AUXILIARY DEVICES	
PART NUMBER	DESCRIPTION
30954	4 WIRE IONIZATION DUCT DETECTOR, APOLLO
30955	4 WIRE, PHOTOELECTRIC DUCT DETECTOR< APOLLO
30069	END OF LINE SUPERVISORY RELAY
30844	4 WIRE, DUCT SMOKE DETECTOR
30845	4 WIRE, DUCT SMOKE DETECTOR

Table I-7

Initial System Startup

CAUTION !

Connect primary power to the system before connecting battery/standby power source.

1. Activate main power. The "Power ON" message (Figure I-1) is displayed.

Figure I-1

2. Wait the required 15 seconds. [Power ON] LED is flashing. Commencing System Reset screen is displayed (see Figure I-2).

Figure I-2

3. After the initial system startup is completed, the display will show the current date (month/day/year) and time (military), see Figure I-3.

Figure I-3

NOTE: The system is equipped with a built-in screen saver. When the system remains in an idle mode (i.e. normal quiescent condition) for over 15 seconds the screen will automatically go blank.

NOTE: To regulate the contrast of the alphanumeric LCD display, adjust the potentiometer R29 located (solder side of the display board - lower left hand corner) - see drawing B-W471).

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Section 4

IDENTIFLEX 632

System Test Mode

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Overview

Walk Test, Bypass mode, Detector/Device Test, and information displays can be selected at any time from the Password Protected - Access Level 3. Function Programming Menu by pressing one of the **FN** keys on the left or right arrow keys, and selecting the desired test as indicated on the LCD screen.

1. Make sure that a level 3 pass word has been entered
2. From the Operational Mode press the key marked '**FN**'.

```
Function Programming
1=Walk Test 2=Bypass 3=Input Test
4=Output Test 5=Display 0=exit
```

Walk Test

Walk Test is an automatic test used to test devices in the system both silently and audibly. Testing the system in the Walk Test mode enables one person to test the system without the aid of another to confirm activation and reset the panel. Activation (i.e. detected ALARM or TROUBLE signal) in the initiating device will cause the panel to log the event and activate all associated indicating circuits if programmed. The device is reset after four (4) seconds. Activation of a Fault (Trouble) follows the same routine. For ALARM testing all associated signal circuits will sound twice. For TROUBLE testing, all associated signal circuits will sound once.

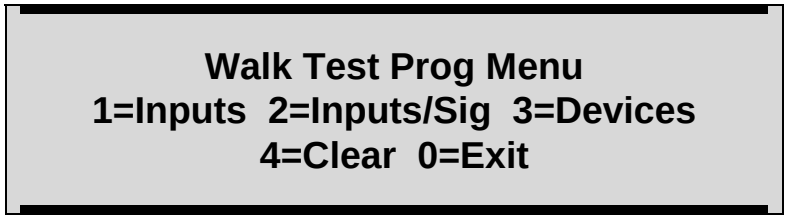
>>**NOTE: All devices selected for Walk Test become disabled and will not ALARM. Devices not selected for Walk Test will report an ALARM condition. After 30 minutes of inactivity the system will time out of Walk Test.**

1. From Function Programming Display, press the "**1**" key followed by the "**Enter**" key
2. 2. The **Walk Test** LED will begin flashing at 60 PPM. Figure T4 is now displayed.

```
Function Programming
1=Walk Test 2=Bypass 3=Input Test
4=Output Test 5=Display 0=exit
>1
Walk Test Menu
1=Display  2=Program
3=Exit
```

Figure T4

3. Select "Display" [1] to display the circuits (input and output) that are currently in the Walk Test mode. Select "Prog" [2] to select circuits for Walk Test mode.



1=Inputs	Places all inputs in Walk Test
2=Inputs/Sig	Places all Inputs and Signal Circuits in Walk Test
3=Devices	Allows individual selection of Inputs and Signal circuits to placed in Walk Test through the following procedures..

Figure T5 is now displayed. Use the up/down arrow keys to select the circuit of the devices to be tested.

>>**NOTE: Use the right arrow key to move the cursor under the device address.**

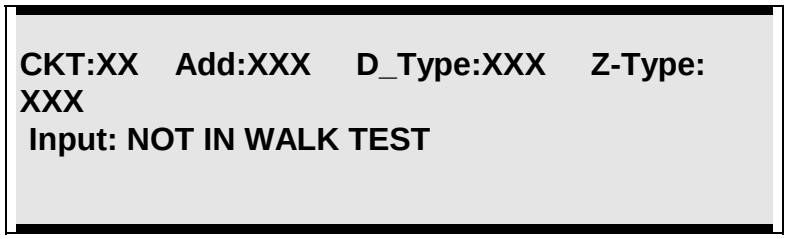


Figure T5

4. Use the up/down arrow keys to select the device address. When the device address is selected, the device type, zone type and zone status will be displayed automatically.
5. Use the left/right arrow keys to move to the Walk Test status field.
6. Use the up/down arrow keys to select "NOT in Walk Test" or "In Walk Test" option.
7. Repeat steps 3 through 6 for each device to be tested.
8. When all desired devices have been selected - Press "**Enter**".
9. The system will now prompt you for a signal circuit to select for Walk Test annunciation.

>>**NOTE: The system will display addressable relay modules that are not available for walk test mode.**

Figure T5B

9A. Signal circuits are numbered by their physical location in the system. Use the up/down arrows to select circuits sequentially or enter the circuit number with the alphanumeric keypad and press enter.

>>**NOTE: Signal Circuits 1 and 2 located on the Operators Display are Numbers 129 and 130, respectively.**

10. The display will show the status of the signal circuit in respect to Walk Test. Use the up/down arrow keys to toggle the signal circuit into and out of the Walk Test mode. When you have made your selection press the "**Enter"** key to begin Walk Test.

11. The system will now enter the Walk Test Mode. The Acknowledge and Trouble LED's will flash and the buzzer will sound. The system will remain in Trouble until all Walk Test devices are cleared from the system.

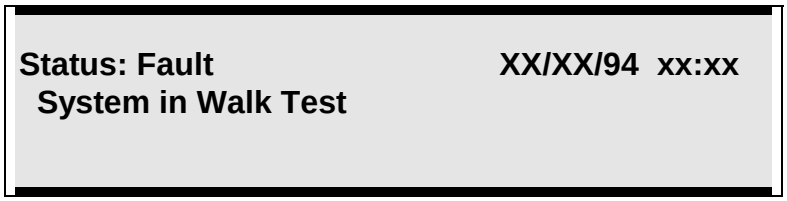


Figure T6

Δ WARNING !

If the system is in Walk Test mode ,and a device not in the test mode is activated, the system will go into alarm and all output circuits will be activated.

12. To clear Walk Test operation select 4=Clear from the Walk Test Prog Menu to clear all devices, individual devices may be cleared in the same manner as described in steps 1-10 above. Each device must be set to "NOT IN WALK TEST".

13. If all devices have been cleared from Walk Test the system will return to the Idle Mode.

ByPass Mode

The ByPass function is used to remove an addressable device or signal circuit from service. Bypassing a device will disable the control panel response from the device selected or prevent activation of the device or signal circuit.

1. From the Function Programming menu, press the "2" followed by the "Enter" key.
2. Figure T7 is now displayed. The ByPass LED will flash at 60 PPM.

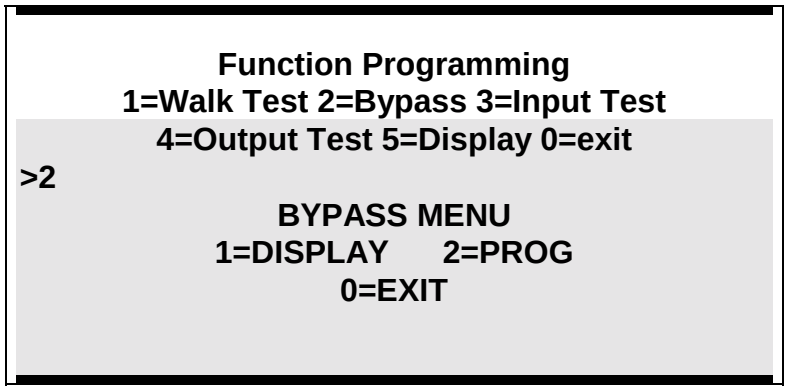


Figure T7

Δ WARNING !

Devices will not report an alarm or trouble condition. A Fire Watch or other reliable means should be employed to monitor the unprotected area.

3. Select "Display" [**1**] to display the circuits (input and output) that are currently in the Bypass mode.
4. Select "Prog" [**2**] to select circuits for bypass. Figure T8 is now displayed.

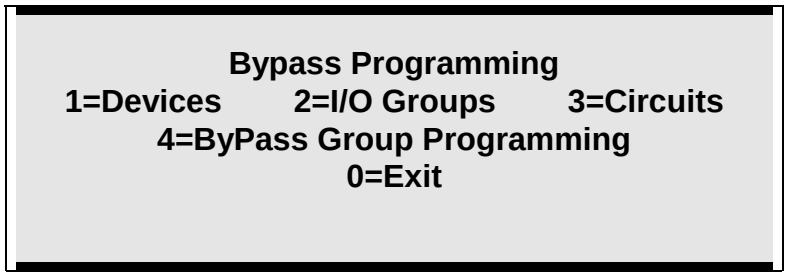


Figure T8

5. Select [**1**] to program circuits. Figure T8A is now displayed

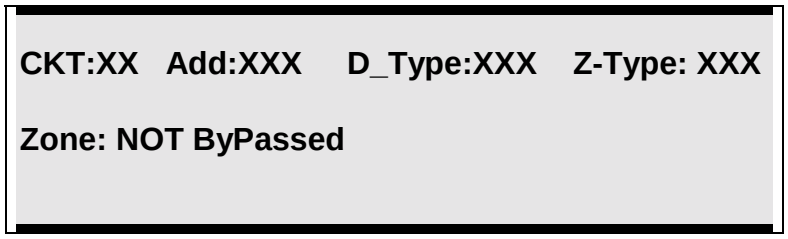


Figure T8A

6. Use the up/down arrow keys to select the circuit of the devices to be bypassed.

>>NOTE: Use the right arrow key to place the cursor under the device address.

7. Use the up/down arrow keys to select the device address. When the device address is selected, the device type, zone type and zone status will be displayed automatically.
8. Use the left/right arrow keys to move to the Bypass status field.
9. Use the up/down arrow keys to select "NOT ByPassed" or "ByPassed" option.
10. Repeat steps 3 through 6 for each device to be Bypassed.
11. When all desired input devices have been selected - press "**Enter**".
12. Repeat steps 3-8 to bypass outputs.
13. Press the Enter key. Then exit the test menu by depressing 0, then Enter.

***In the same manner as above, Select I/O Groups [2] and/or Circuits [3] for ByPass*.**

14. The system will now flash the Acknowledge and Trouble LED's and the sounder will activate. Once the system has been acknowledged the Trouble LED will remain flashing until all bypassed devices are cleared. The display will indicate that a part of the system has been disabled. Figure T10 is now displayed.

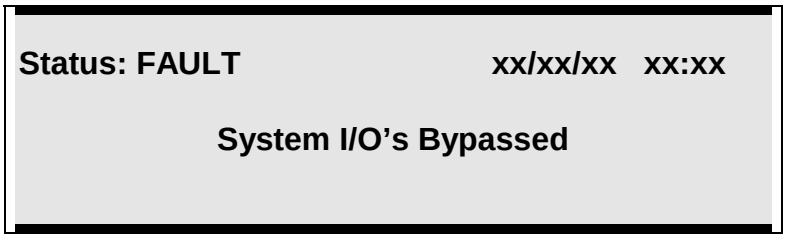


Figure T10

15. To reactivate Bypassed devices repeat steps 1-11 toggling each device to the "NOT-BYPASSED" selection.

ByPass Group Programming

1. Select [4] from the ByPass Menu. Figure T11 is now displayed

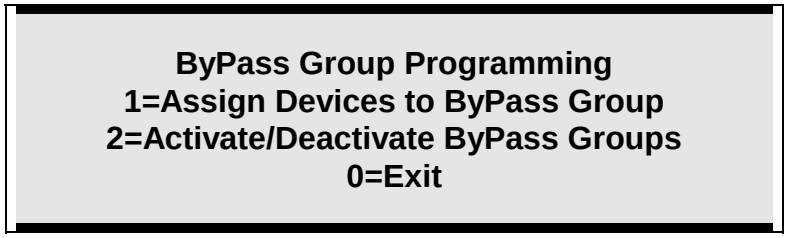


Figure T11

2. Select [**1**] from the menu to assign Devices to ByPass groups, then select either [**1**} for Inputs, or [**2**] for Outputs
3. Select the desired Circuit and Device by using the arrow keys. With the left/right arrow keys select **B_Grp:**. Using the up/down arrow keys select the desired ByPass Group number, or enter the number and press the ENTER key.
4. Repeat this process until all of the desired Devices are assigned to ByPass Groups.

5. Press the Enter key to exit the menu to active or deactivate ByPass Groups, press[**2**] at the ByPass Group Programming menu

7. Enter the number of the desired ByPass group and press the Enter key
8. The selected ByPass group number will be displayed with a message that the Group is either ByPassed or NOT ByPassed.
9. Pressing any key will toggle the state of the group. When the desired condition is shown, press the Enter key to go to the next group selection.
10. Pressing the Enter key at the Group number selection screen without entering a group number will exit the ByPass Group Activate/Deactivate programming operation.

Input Test

The Input test function allows the user to individually test the functionality of each device, operation and response.

Device LED will illuminate if selected for Input Test. The LED will turn off when the device is deselected.

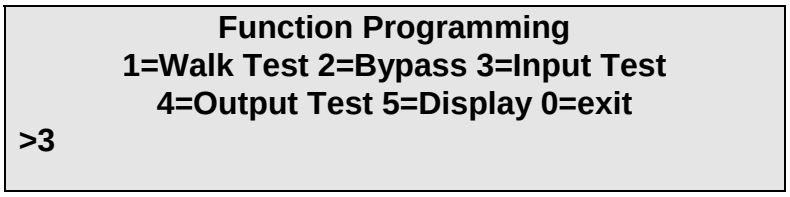


Figure T2

1. Press "**3**" and then "**Enter**"
2. Figure T3 is now displayed.

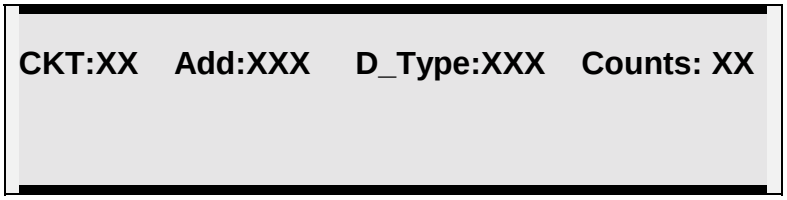


Figure T3

CCT	Circuit of selected device (1-4)
Add:	Address of the selected device
D_Type	Device type (*see table P3 in programming section)*
Counts	Real time analog value

3. Use the up/down arrow keys to scroll through the connected devices. When the device address is selected, the device type and real time analog value will be displayed automatically.
4. Determine the functionality and operating response of the Detector using the following table.
5. To exit the Detector Test Mode press the Enter key at any time.

T-1 DEVICE TEST TABLE
Input Device

Display Panel	Description	Trouble / No Feedback	Background	Dirty	Pre-Alarm on 1st	Alarm / Shorted/ Active
Ion	Ionization Detector	0 - 9	10 - 40	41 - 44	Background + 26	Background + 36
Opt.	Photo Detector (non-comp.)	0 - 9	20 - 30	41 - 44	25 + (sensitivity * 6) + 8	25 + (sensitivity * 6) + 18
Opt.	Photo Detector (Compensated)	0 - 9	10 - 40	41 - 44	Background + (sensitivity * 6) + 8	Background + (sensitivity * 6) + 18
Heat	Thermal Detector	0 - 7	10 - Fixed Value	*NA*	*NA*	Above Fixed Value
CZI or CZII	CZI-95	0 - 16	17 - 54	*NA*	*NA*	55 - 122 2nd Alarm above 122
PID or MAN	PID - 95 or MS - 95	0 - 9	10 - 54	*N/A*	*N/A*	55 - 127
REL	RCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127
RSM	RSM-95	0 – 14	15 – 45	*NA*	*NA*	46 - 127
SCE or Snd.	SCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127

Output Test

The Output test function allows the user to individually test the functionality of each device, operation and response.

Device LED will illuminate if selected for Output Test. The LED will turn off when the device is deselected.

Function Programming
1=Walk Test 2=Bypass 3=Input Test
4=Output Test 5=Display 0=exit
>4

This displays in the same fashion as the Input Test

CKT:XX Add:XXX D_Type:XXX Counts: XX
Flags:xXX Bits:xXX

Display

The Display Function allows the Operator to view or download the system configuration, dictionaries, operating information, and current detector values.

```
Function Programming
1=Walk Test 2=Bypass 3=Input Test
4=Output Test 5=Display 0=exit
>5
Display
1=Config 2=Dict. 3=Events
4=Misc. 5=Detectors 0=Exit
```

```
Display
1=Config 2=Dict. 3=Events
4=Misc 5=Detectors 0=exit
>1
```

Config.

The Configuration Menu allows selection of either viewing or downloading the system configuration.

```
Configuration Menu
1=Display 2=Download 3=Exit
```

Dict. The Dictionary Menu allows selection of either viewing or downloading the system dictionaries.

```
Display
1=Config 2=Dict. 3=Events
4=Misc 5=Detectors 0=Exit
>2
```

```
Display Dictionary Menu
1=Display 2=Download 3=Exit
```

```
Display
1=Config 2=Dict. 3=Events
4=Misc 5=Detectors 0=Exit
>3
```

Events The Events Menu allows viewing of the system events log

```
Use up/down keys to scroll
Press Enter key to Exit
```

```
Display
1=Config 2=Dict. 3=Events
4=Misc 5=Detectors 0=exit
>4
```

Misc. The Misc. function allows the viewing of critical information about the operation of the panel..

```
Display Menu (Misc.)
1=Pass 2=Codes 3=Tally
4=Ver 5=Ram 0=exit
>1
```

Pass

The Passwords Menu Is not available in this mode. It requires a Level 4 password to activate.

```
This Function Is Only Accessible
At Security Level 4
```

```
Display Menu (Misc.)
1=Pass 2=Codes 3=Tally
4=Ver 5=Ram 0=exit
>2
```

Codes

The Codes Menu allows viewing of the programmed Codes

```
Use up/down keys to scroll
Press Enter key to Exit
```

Tally

The Menu Menu allows selection of either viewing or downloading the 30 day accumulated tally of Verification events that did not result in a general alarm.

```
Tally Menu
1=Display 2=Download 3=Exit
```

```
Display Menu (Misc.)
1=Pass 2=Codes 3=Tally
4=Ver 5=Ram 0=exit
>4
```

Ver

The Version Display shows the system type and the panel software version and update date and time.

```
600 System Ver. 7.00
Last Updated On:
Oct. 14 1999 At 09:55:11
Press Any Key To Continue
```

```
Display Menu (Misc.)
1=Pass 2=Codes 3=Tally
4=Ver 5=Ram 0=exit
>5
```

Mem The Mem Display shows the available Random Access Memeory.

```
Unallocated Bytes of Ram: 206123
Press Any Key To Continue
```

```
Display
1=Config 2=Dict. 3=Events
4=Misc 5=Detectors 0=exit
>4
```

Detectors The Display Detectors menu allows the downloading of the smoke and heat detector sensitivity values.

```
List Detector Sensitivity
1= Download 0=Exit
```

Section 5

IDENTIFLEX 632

Programming

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PROGRAMMING OVERVIEW

1 Circuit programming
- 1 Inputs
- 2 Outputs
- 3 Init

2 Control by Event

3 Function programming
- 1 Walk test
  - 1 Display
  - 2 Program
    - I Inputs
    - 2 Inputs/Sig
    - 3 Devices
    - 4 Clear
- 2 Bypass
  - 1 Display
  - 2 Program
    - 1 Device
    - 2 I/0 Groups
    - 3 Circuits
    - 4 Bypass groups
      - 1Assign devices to grp
      - 2 Act/Deact Groups
- 3 Test input devices
- 4 Test output devices
- 5 Display
  - 1 Configuration
    - 1 Display
    - 2 Download
  - 2 Dictionary
    - 1 Display
    - 2 Download
  - 3 Events
    - 1 Display
    - 2 Download
  - 4 Misc.
    - 1 Display pass codes
    - 2 Display codes
    - 3 Tally
    - 4 Display software version
    - 5 Display available RAM
  - 5 Detectors
    - 1 Download

4 System

- 1 Display
  - 1 Configuration
    - 1 Display
    - 2 Download
  - 2 Dictionary
    - 1 Display
    - 2 Download
  - 3 Events
  - 4 Misc.
    - 1 Display pass codes
    - 2 Display codes
    - 3 Tally
    - 4 Display software version
    - 5 Display available RAM
  - 5 Detectors
    - 1 Download
- 2 Change
  - 1 Menu 1
    - 1 Pass Codes
    - 2 Initiating codes
    - 3 Time/date
    - 4 Access level
    - 5 Baud rate
  - 2 Menu 2
    - 1 City
      - Select MB,LR,Chicago,Dialer
    - 2 Ann. Supervision
    - 3 I/O troubles
    - 4 BC Key
    - 5 Day Enable
    - 6 Day/night – manual/auto
  - 3 Menu 3
    - 1 Abort type
    - 2 Alarm Prefix
    - 3 Config file name
    - 4 Tally verification
    - 5 Silence inhibit
    - 6 Auto silence
  - 4 Menu 4
    - 1 Cfg {Not available from Front Panel}
    - 2 Waterflow delay
    - 3 Release timing
    - 4 Dump timing
    - 5 Dictionary
      - 1 Edit
      - 2 Upload
    - 6 Cards
      - 1 Add
      - 2 Delete

3 Test

1 Inputs
2 Outputs
3 Card I.D
4 Ground fault
5 Lamp test
6 Analog test

INTRODUCTION

"SmartStart"™

The SmartStart automated programming process feature is available in the Gamewell's IF 600 control panels. This initialization process uniquely configures the system parameters in memory. The system automatically ties its inputs to its outputs through the creation of the Control-By-Event tables.
During power-up and after a hardware reset, the controller decides if the system has previously had a configuration in memory. If the system does not have a configuration data base, the system polls all of the modules for type codes, status and placement, then builds a hardware configuration data base. It then polls all 126 device addresses on each circuit of the Analog Interface card. When a valid response is detected to any of the addresses polled, a data base for the device is created in memory. This data base for the device consists of information specific to the device such as its circuit, its address, its device type etc. The complete data base for the addressable devices is divided into circuit tables that store the information for all of the 126 possible devices on each circuit. The circuit table is then further divided into an input table and an output table. Input tables consist of all initiating devices (detectors, pull stations, etc.) while the output table consists of all the actuating devices (relays and signal circuits, etc.). At the completion of the SmartStart cycle the system is configured as a general alarm system. All initiating devices are assigned to automatic zones. Any initiating device(s) reporting an alarm condition will activate all signal circuits steady and relays active.

Polling

During system operation the controller sequentially polls all initiating devices that are listed in the input tables. All analog circuits are polled independently and asynchronously.

General Overview

The additional system programming is completed through tactile keypad switches mounted on the front Operators Display (OD). Main level display screens are menu driven and users are prompted to enter sequential keystrokes. Additional programming can also be accomplished through a P. C. connected to the serial port.

Programming Prompts

Δ WARNING !

During all levels of programming, the system will be in an off-line status and no alarms will be processed. The protected premises should be monitored by a fire watch or other reliable measure(s).

>>NOTE: Before proceeding, notify all personnel, monitoring companies and municipalities that the system will be temporarily "out of service".

Programming Prompts (continued)

Throughout the programming sequence, the user is prompted to enter data selections at the location of the flashing cursor. To select sub- menu options, use the following prompts:

To Select a Field Option	Use Right and Left arrow keys to horizontally scroll and select option field.
To Select Field Variable Types	Use up and down arrows keys to vertically scroll variable types.
Keypad prompts	Keypad prompts (e.g. [Password], [Drill], [1] [2] etc.) will be enclosed with brackets.
Display Messages	All formats for display messages will be enclosed in quotation marks.
"**Enter**" key	To complete the choice of an option, press the "**Enter**" key. This standard format of the word "**Enter**" is used throughout the programming section.

SYSTEM STARTUP

This section is subdivided into two sections, Initial System Startup and System Restart / Re-Configuration. Instructions for a newly installed system, or a system in which the firmware has been changed, are detailed in the Initial System Startup section. Instructions for a "hardware reset" are detailed in the System Restart / Re-Configuration section.

CAUTION !

Connect primary power to the system before connecting battery/standby power source.

>>**NOTE: It is assumed all system installation wiring procedures detailed in this manual have been completed in accordance with local, state and federal codes.**

Initial System Startup

1. Activate main power. The "Power ON" message (Figure 2) is displayed. Power will now be applied to all modules and devices.

Figure 2

2. If this is an initial power up, or if the processor firmware has been changed, the panel will proceed into the SmartStart, without the need for a password. Wait the required 15 seconds. [Power ON] LED is flashing. Commencing System Reset screen is displayed (see Figure 2A).

Figure 2A

3. To modify the program, proceed to **Password Entry - Access Levels** section.

SYSTEM RESTART / RE-CONFIGURATION - SMARTSTART

Δ WARNING !

All programming data will be lost when the system is re-configured. The system will initialize the SmartStart™ feature and will configure a new data base.

Hardware Reset

1. Complete a hardware reset by shorting the jumper pins on P4, located on the CPU card. Figure 2 screen will be displayed. (Power On/System Reset)
2. While the Power On LED is still flashing, press the [**ACK**] switch. Figure 3 will be displayed.

Password Entry Screen

Enter Password:
Security Level: *X* User ID: *XXX*

Figure 3

3. Enter a Level 4 password. If an invalid password is entered, or no password is entered, the system will go into normal reset and skip the SmartStart.
4. If the password is accepted Figure 3A will be displayed. If no action is taken the system will continue its reset process.

To Initialize System to Default settings
Press Enter Key Now
All Programmed Data will be lost !!!!

Figure 3A

Δ WARNING !

Pressing "Enter" - all programmed data will be lost. Pressing any other key will Bypassed the re-configuration sequence.

5. Press "**Enter**" to begin SmartStart processing. Figure 3A is displayed. "Time remaining *N* sec" is a countdown from 15 seconds.

Status : Normal 00/00/94 00:00
Begin System I/O Assignments.
Please Wait .... 15 sec Power Up Delay !
Time remaining *N* sec

Figure 3B

Hardware Reset (continued)

5. After a 15 second delay, the system commences a hardware restart. Modules and devices are being read and will scroll up on the display, Figure 3C. Next the System RESET screen is shown, Figure 2A. Then the "System Idle" screen is displayed, Figure 4.

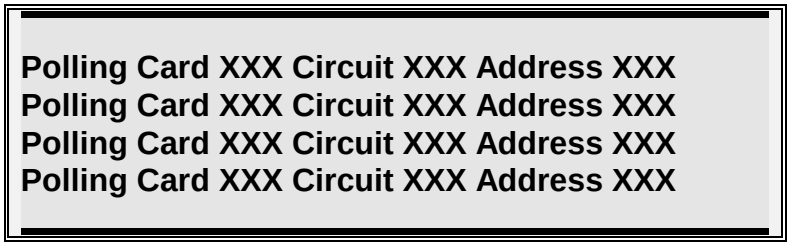


Figure 3B

>>**NOTE: Upon completion of the SmartStart process, all connected addresses will be contained in system memory and all inputs will be tied to all outputs. Any input in Alarm will activate the system outputs.**

System Idle Display

After the initial system startup or system re-configuration is completed, the display will show the current date (month/day/year) and time (military), see Figure 4.

>>**NOTE: The system is equipped with a built-in screen saver. When the system remains in a idle mode (i.e. normal quiescent condition) for over 15 seconds the screen will automatically go blank.**

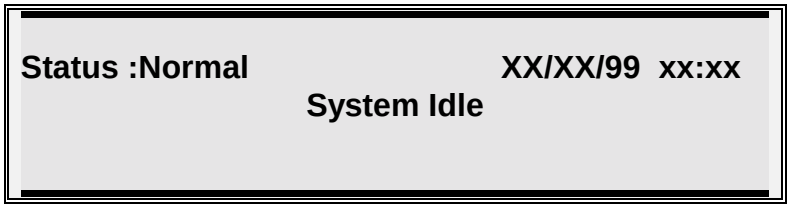


Figure 4

PASSWORD ENTRY - ACCESS LEVELS

Four levels of password protection have been incorporated in the IF 632 system firmware. These passwords allow access to various functions of the system. Each of the four levels default to certain functions of the system and can be re-assigned to other functions via programming. Up to ten passwords may be assigned to these access levels. As well, an area to assign a user ID to each password has also been provided for quick reference. Each user ID may contain up to 10 characters. Each of these password ID's may be assigned up to a ten character string.

>>**NOTE: System configuration (i.e. SmartStart™) defaults to level 2 password access. When the password access level is changed, the system defaults to that level even when the system loses power. The system will not default to a Level 4 .**

The four access level default settings are:

Access level 1 = Ack.
Access level 2 = Ack., Sig. Sil., Reset, Drill
Access level 3 = Ack., Sig. Sil., Reset, Drill, Det. test, Walk Test, Bypass
Access level 4 = Programming, SmartStart

Default passwords for the access levels are:

Password 1111 = Access level 1
Password 2222 = Access level 2
Password 3333 = Access level 3
Password 4444 = Access level 4

Δ WARNING !

>>**When the system is in access level 4, programming, the system will not recognize an alarm or trouble condition. The premises should be protected by a fire watch or other reliable measure(s) whenever the system is being programmed.**

Password Entry

1. Press "Password" keypad switch. Figure 5 is now displayed.

Figure 5

2. To change access levels, enter the appropriate password on the keypad.
3. To enter the programming mode after a system configuration, enter the password access LEVEL 4.

>>**NOTE: System will exit the Programming mode and commence a Reset after 5 minutes of inactivity.**

PROGRAMMING MODE

Main Display

The main programming display shows the user an overview of the programming modes. The user is allowed to select from four categories. (Figure 6)

```
Programming Mode
1=Ckt. Prog. 2=CBE
3=Function 4=System 0=Exit
>
```

Figure 6

1= Ckt Prog	Circuit Programming
2 = CBE	Control-By-Event
3= Function	System Test/Bypass
4 = System	System Wide Programming
0= Exit	Exit

PROGRAMMING MODES
TABLE P1

Circuit Programming

Select "Ckt Prog" from the main "Programming Mode" menu to modify input/output device characteristics (e.g. zone type, group assignment, signal code and device specification text). (Figure 7)

```
Circuit Programming
1=Inputs 2=Outputs 3=Init. 0= Exit
```

Figure 7

"Inputs" Circuit Selection

1. From the Circuit Programming menu, Press [**1**] on keypad.
2. Press "**Enter**".

>>**NOTE: The cursor will be flashing under the circuit number. If the device type is an ion detector Figure 8 will be displayed.**

```
Ckt:XX Add:XXX D_Type: Ion Z_Type: XXXX
I_GRP:XXX
```

Figure 8

>>**NOTE: The display starts with Circuit 1 and begins with the highest address in circuit.**

Field Descriptions

“Ckt”: xx"	Indicates the circuit (analog line or conventional) address that has been selected.
"Add: xxx"	Shows the address of the analog device to be modified (1 - 126).
"D_Type:xxx"	Shows the type of device (from type code of addressed device). If the device type is a photo detector, Figure 8A will be displayed. For a complete list of Device Types refer to Table P3.
“Comp:x”	A photo detector can be selected for operation with background compensation (Yes) or without background compensation (no). Default is Yes.
“Sens:x”	The sensitivity range of a photo detector can be adjusted (compensated) to the environment. The device sensitivity range; 3 is the least sensitive and 0 is the most sensitive. The default is ‘2’.
“R/R:x” “FTemp:x”	If the device is a heat detector, Figure 8B will be displayed. If the device is a heat detector, the temperature can be defined in Celsius or Fahrenheit.
"Z_Type: xxx"	Shows the type of zone that has been selected for the device. Zone types are defined in Zone Type Table P2.
"I_GRP: x"	Indicates the selected initiating group of the device. Each input device can only be assigned to one group. One initiating group can contain many input devices (logically arranged). The user can utilize up to 256 initiating groups.
"W1:xxx "	Indicates the five (5) separate word dictionaries (W1 - W5) stored and words contained in each dictionary (0 - 127 coded words for Dict. 1 - 4, and 0 - 1024 for Dict. 5). This field is not displayed until selected. Refer to Table P4.

>>**NOTE: The user can scroll through field variables using up/down arrow keys or enter the address number directly via the key pad.**

Device Selection

4. Use the left/right arrow keys to move the cursor flashing under the device address "Add:xxx", enter the address number or use the up/down arrow keys to select the address of the device to be modified then press enter.

Photo Device Sensitivity Selection

Δ WARNING !

>>**Changing the sensitivity of a Smoke Detector may delay alarm reporting. No device should be changed without the approval of the authority having jurisdiction. All settings should be in compliance with all NFPA codes, UL listings, or other local codes.**

4.1 To modify the device sensitivity, use the left/right arrow keys to scroll to "sense:". Use the up arrow key to adjust sensitivity.

>>**NOTE: The sensitivity scale allows the user to select a range of settings which are numeric values (0 through 3). The number 0 is the most sensitive device setting and the number 3 is the least sensitive device setting. Refer to Figure 8A.**

```
Ckt:XX  Add:XXX  D_Type:Opt    Z_Type: XXX
I_Grp:XXX        Sens: X         Comp: X
```

Figure 8A

4.2 To change an optical detector to a compensated/uncompensated device use the left/right arrow keys to scroll to "comp:". Use the up/down keys to select "Y" or "N" (Yes/No).

Heat Device Operating Selection

4.3 To select a heat detector operating characteristic or use the left/right arrow keys to scroll to "R/R". Use the up arrow key to select "Y" (Yes) rate of rise function. When rate of rise is selected the device will alarm when it detects a 15° increase in temperature within one minute. Select "N" (No) for fixed temperature device. "F Temp" refers to the device's fixed high temperature setting. To change the temperature setting use the up/down arrow keys. The default is 55C/131F. Rate of Rise default is 'yes'.

```
CCT:XX   Add:XXX   D_Type: Heat  Z_Type: XXX
I_GRP:XXX  Temp:xxC/xxF   RofR: X
```

Figure 8B

Zone Type Selection

5. Use the right arrow key to move to "Z_Type:". Use the up/down arrow keys to select zone type. Only zone types that apply to device types will be displayed. Refer to Table P2 for a complete list of all zone types.

Initiating Group Selection

6. Use the right arrow key to move to "I_Grp". Enter the initiating group number or use the up/down arrow keys to select initiating group type (see Field Description).

User Text Selection

7. Use the right/left arrow keys to move to select *text word dictionaries* "W1" through "W5:" field (not shown until selected).

8. Use the up/down arrow keys or enter the three digit word number to select text entries from *text word dictionaries* "W1" through "W5:". The ## represents the text entry number in dictionary *D.* See Figure 10.

>>**NOTE: The "W*D*" field is not displayed until the cursor is placed in its field. When the dictionary 1 through 5 is selected "W*D*" will be shown on the lower right hand corner of the display. See Figure 10.**

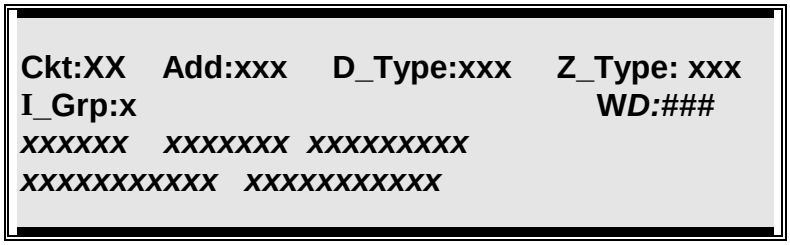


Figure 10

9. When the desired coded word is displayed, use the left/right arrow keys to select the next field.

>>**NOTE: It is not necessary to press "Enter" when the Up/Down arrow keys are used to change the parameter of a field. The field contents are automatically updated for the device as shown on the display (Except I_Grp).**

10. When all input devices have been programmed, press "**Enter**" to exit the input circuit programming mode.

ZONE TYPE TABLE - P2

Display Panel	Name	Description
Ver	Verification	Automatically verifies the device). (Default program, after a 45 sec. Min., 60 sec. Max Reset/Stabilization delay, monitors the device for 60 seconds to verify an alarm condition.
Auto	Automatic	Places the panel into General Alarm
Gener	Generic	All the device control functions are active without placing the system in a general alarm condition at the panel.
And	And Initiating Zone	Two stage automatic detection.
Ack	Acknowledgment	Remote location acknowledgment
Drill	Drill	Remote drill system condition.
SigSil	Signal Silence	Remote location Signal Silence
Reset	Reset	Remote reset of the panel - resets system.
Abort	Abort	Delays or stops discharge cycle
Dump	Dump	Initiates discharge manually
Super	Supervisory	Sprinkler Supervisory signal input
Water	Water flow	Water flow, non silenceable
Watr	Water flow delayed	Water flow, delayed, non silenceable
Watrs	Water flow delayed	Water flow, delayed, silenceable

DEVICE TYPE TABLE - P3

Display Panel	Description
Ion.	Ionization Sensor
Opt .	Photo-Electric Sensor
Heat	Thermal Sensor
Mon.	Point Identification Device (contact monitor)
Man.	Manual Station (or PID with priority interrupt set)
CZI	Collective Zone Interface
CZII	Collective Zone Interface (with priority interrupt set)

TEXT DICTIONARY TABLE - P4

W1	W2	W3	W4	W5
Fire Alarm	Smoke Detector	1st.	Floor Room Number	1
Alarm	Heat Detector	2nd.	Floor Corridor	2
Gas	Duct Detector	3rd.	Floor Elevator Lobby	3
Sprinkler	Water flow	4th.	Floor	4
Trouble	Tamper switch	5th.	AHU	5
Acknowledge	Manual Station	6th.	Floor-Closet	6
Reset	Pull Station	7th.	Level	7
Mechanical	Beam Detector	8th.	Floor-Service Elevator Lobby	8
Electrical	Fire Station	9th.	Sub-level	9
Boiler	Ionization Smoke Detector	10th.	Basement Level	10
Utility	Photo Smoke Detector	11th.	Sub-basement Level	11
Extinguishing	Tunnel Heat Detector	12th.	Basement	12
Fire	PIV switch	13th.	Parking Level	13
	Pressure switch	14th.	Garage Level	14
	Fire Pump	15th.	Wing	15
	Generator	16th.	Floor Wing	16
		17th.	Atrium	17
		18th.	Mezzanine	18
		19th.	Ballroom	19
		20th.	Kitchen	20

Output Circuit Programming

Select "Outputs" from the Circuit Programming menu to modify Indicating and Output signal characteristics (e.g. zone type, group assignment signal codes, restore options and Drill mode).

Signal Circuit 1 and Circuit 2

Select Outputs from the circuit programming menu to modify the signal circuits characteristics (e.g. drill, group assignments, signal type, etc).

1. From the Circuit Programming menu, Press [**2**] on keypad, see Figure 7.
2. Press "**Enter**".
3. When a signal circuit is selected for programming from the operators display, Figure 11. The red LED of the selected circuit will illuminate.

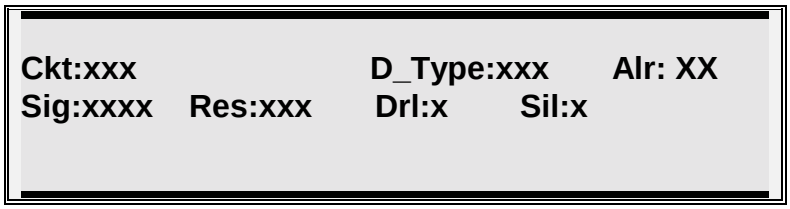
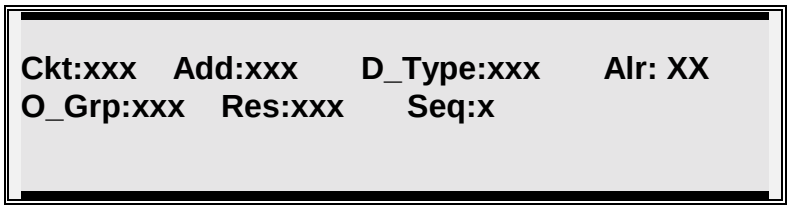


Figure 11

3.2 When an analog addressable line is selected for programming from the operators display, Figure 11B. The yellow LED of the selected circuit will illuminate



>>**NOTE: If an output device is not present on the selected analog addressable line, the result is no action.**

Field Descriptions for Signal Circuits and Analog Addressable

"Ckt:xxx" Indicates the signal circuits memory address

"Add:xxx Address of analog relay module

"D_Type:Sig" Shows the type of output circuit

"ALR:x" Indicates to what alarm level the circuit will be activated in the event that "and" zones are programmed.

>>NOTE: The use of Cross and Counting Zones must comply with the applicable requirements of NFPA 72, 3-8.2.5:

Systems that require the operation of two automatic detection devices to initialize the alarm response shall be permitted, provided:

(a) They are not prohibited by the authority having jurisdiction.

(b) There are at least two automatic detection devices in each protected space.

(c) Automatic detection device area spacing is no more than one-half that determined by the application of NFPA 72 Chapter 5.

"Sig:xxx" Indicates the type of signaling to be output by the circuit (i.e. steady, marchtime, etc). Refer to ***Output Signal Circuit Type*** for a complete description .

"Res:xxx" Indicates when the signal circuit has been programmed to return to normal. **Refer to *Signal Circuit Restore*** for a complete list of options.

"DRL:x" Indicates if a signal circuit will activate when the drill switch is depressed.

"Sil:x" Auto Silence – Programmable, 2 – 15 min..

"O_Grp:xxx" Identifies the output group.

"Seq:" Sequentially Restores.

>>**NOTE: If an analog addressable line (or single device) is not programmed when selected, the result is no action.**

4. Program the signal circuit by using the left/right arrow keys to move between fields and the up/down keys to assign the desired characteristics.

5. To exit output circuit programming press the "**Enter**" key.

Signal Circuit Types

Output Signal Circuit Type

A. STEADY DC

Steady DC type signal circuit is the System Default. When Activated, any signal circuits programmed for Steady DC will provide a 24VDC uninterrupted output.

B. MARCHTIME 60

Marchtime 60 circuits, when activated, will provide a 24 VDC output on the selected circuits at a 60 pulses per minute rate with a duration of 50% on and 50% off cycle.

C. MARCHTIME 120

Marchtime 120 circuits, when activated, will provide a 24 VDC output on the selected circuits at a 120 pulses per minute rate with a duration of 50% on and 50% off cycle.

D. TEMPORAL

Temporal signaling circuits, when activated, will provide a 24 VDC output in the pattern of a Morse Code "U". This pattern is active for .25 seconds, off for .25 seconds, active for .25 seconds, off for .25 seconds, active for .25 seconds, off for .75 seconds. The pattern repeats until the circuit is returned to Idle.

E. CALIFORNIA UNIFORM FIRE CODE

California Uniform Fire Code Signal circuits, when activated, will provide a 24 VDC output in Marchtime 120 format for 10 seconds on and 5 seconds off. The pattern repeats until the circuit is returned to Idle.

F. CODED

Zone coded signaling circuits when activated will produce a 24VDC pulsed numeric code to be transmitted up to 6 times or as programmed. A separate code is usually transmitted for each input zone.

G RELEASING

Releasing coded signaling circuits will sound at 60 bpm during one alarm, 120 bpm during pre-release, and steady during discharge and the discharge delay if programmed.

Signal Circuit Restore

A. Restore On - ACKNOWLEDGE *For use with supplementary signaling and functions*

Any active output point programmed to restore on ACKNOWLEDGE will return to Idle whenever the Acknowledge switch is pressed. All output points that were returned to Idle will reactivate upon a subsequent alarm which is programmed to activate those output points.

B Restore On - SIGNAL SILENCE (** System Default **) *All required Fire Alarm outputs in which silence is intended to occur, shall be programmed under this switch or function.*

Any active output point programmed to restore on Signal Silence will be silenced by the activation of the Signal Silence Switch and will return to Idle. The Signal Silence Switch operates as an alternate acting switch. All outputs that were returned to idle will reactivate upon a subsequent alarm or by depressing the Signal Silence Switch again. Both Signal Circuits and Relay Outputs can be programmed to restore on Signal Silence. . All output points that were returned to Idle will reactivate upon a subsequent alarm.

C. Restore On - RESET

Serves as System Back up. Any active output point not restored by any other means will restore on RESET. Any active output programmed to restore on RESET will not restore on any other action.

>>**NOTE: There are a few restrictions to be aware of regarding output signal circuits:**

1. The two signal circuits on the Bus Driver Module (BDM) can be used for steady or pulsing DC (marchtime, temporal, etc.) and programmed separately.

Alarm Levels Available

There are four levels of alarm that can be assigned to each type of output circuit, PreAlarm, 1st Alarm, 2nd Alarm or Releasing. These levels designate at which level of alarm an output circuit will activate. Output circuits assigned to 1st alarm level (system default) will activate when a first alarm is detected on its assigned input circuit(s), provided the input circuit is assigned to activate that output circuit in the CBE table. Circuits designated as PreAlarm will activate when a prealarm level is detected on an input circuit. Circuits requiring activation on 2nd alarm (AND zones) can be assigned to alarm level 2. An AND zone assigned to activate both 1st and 2nd alarm level output circuits will activate only those outputs assigned to level 1 during a first alarm condition. When a second alarm is detected both first and second alarm outputs will activate. A shorting device will activate both first and second alarm outputs (CZI).Discharge devices are assigned to Level three, and will activate after the 2nd alarm plus the releasing and dump timing, if not aborted.

Special Signal Circuit Functions

A. SIGNAL SILENCE INHIBIT

Silence Inhibit will prevent the operation of the Signal Silence function for a programmable period ranging from 30 seconds to 5 minutes from the time the first point goes into alarm. If the panel is programmed for Silence Inhibit any activation of the Signal Silence Switch will be ignored, allowing the output signal circuits to be active, until the programmed delay has elapsed.

B. AUTO SILENCE - Automatic Signal Cutoff

If an output signaling circuit is programmed for Auto Silence it will automatically silence the signal circuits, after the programmed delay, from the time the first point goes into alarm. If subsequent to its silencing, a new alarm occurs, the output signaling circuit will resound and the auto silence time-out feature will reset its timer to silence its associated outputs after the programmed delay.

C. Drillable

Any signal circuit programmed as drillable will activate when the drill feature is activated.

Restoring Outputs

A. Restore On - ACKNOWLEDGE *For use with supplementary signaling and functions*

Any active output point programmed to restore on ACKNOWLEDGE will return to Idle whenever the Acknowledge switch is Depressed. . All output points that were returned to Idle will reactivate upon a subsequent alarm.

B. Restore On - RESET

Serves as System Back up. Any active output point not restored by any other means will restore on RESET. Any active output programmed to restore on RESET will not restore on any other action.

C. SEQUENTIAL RESTORE - Upon System Reset

The sequential restore only applies to relay outputs. Any active RCE-95 programmed for Sequential Restore will only restore on Reset, not on Acknowledge. Selected relays will return to Idle 4 seconds apart, starting with the highest address and ending at the lowest address set. The restore sequence is determined by the actual address of the RCE and is not programmable.

Initializing an analog Circuit

Initializes an individual circuit. Allows the user to add new devices (detectors) or remove devices in the specific circuit selected. All other circuit information previously entered (utilized in Control By Event data base programming) is protected and cannot be altered or damaged.

1. From the circuit programming display menu, select the [3] numeric key.

2. Press "**Enter**"..

3. Select the circuit to initialize (1-4). SmartStart™ feature configures new data base making any changes that have been detected. See Figure 12D.

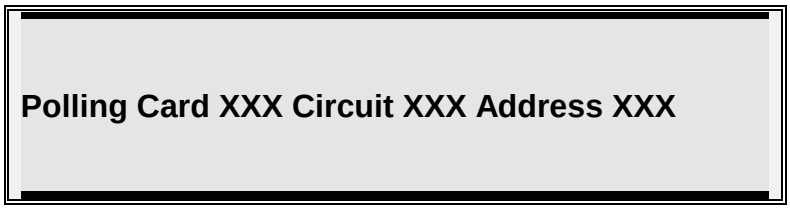


Figure 12D

CONTROL BY EVENT

Control-by-Event programming allows the user to create a matrix whereby selected groups of input devices are logically connected to selected groups of output devices or circuits. The SmartStart feature automatically assigns all input devices to select all output devices or circuits.

In the device specific screens, input or output group numbers (1 - 256) can be assigned to each device. Multiple devices can be assigned to a single group but each device can only be assigned to one group.

In the output programming menu for each device or circuit there is a field (Alr) for assigning the Alarm level it will activate. The four levels of alarm, 0= pre-alarm, 1=1st alarm, 2=2nd alarm and 3=Rleasing. These levels combined with the CBE table determine when the circuit or device will activate.

CBE Programming

Control-by-Event "CBE" programming is dedicated to system wide ALARM functions. Select "CBE" (#2) from the main "Programming Mode" menu to change or assign input group assignment with the associated output group.

To select "logical" Group Inputs

1. Select "CBE" (**2**) from the main "Programming Mode" menu.

2. Press "**Enter**".

Figure 13

3. Using numeric keys, enter the corresponding input group number. The group number will be displayed in the location as shown in Figure 14.

Figure 14

4. Enter all desired input group numbers. The assigned input group number is displayed in top left of screen. As the next input group number is entered, group numbers are sequentially arranged (ascending order). Enter up to 256 group input numbers.

>>**NOTE: To cancel an individual input group, enter that group number and press "Enter". The group number is <u>not</u> shown and is then canceled.**

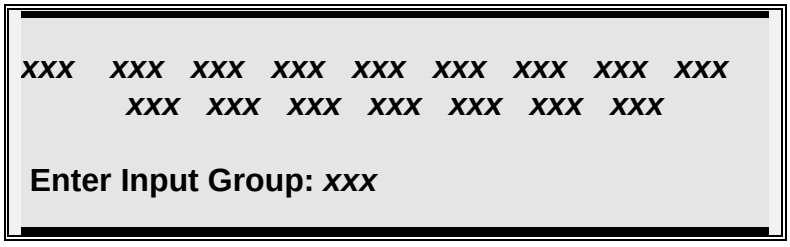


Figure 14A

To assign a "logical" Output Group

5. Press "**Enter**". Figure 15 is now displayed.

Figure 15

6. Using numeric keys, enter the desired output group number or press the signal circuit switch. The assigned output group number now is displayed in top left as shown in Figure 15A.

Figure 15A

7. Enter all desired output group numbers. The assigned output group number is displayed in the top left of the screen. As the next output group number is entered, group numbers are sequentially arranged (ascending order). Enter up to 256 group output numbers, see Figure 15B.

>>**NOTE: To cancel an individual output group, enter that group number and press "Enter". The group number is <u>not</u> shown and is then canceled.**

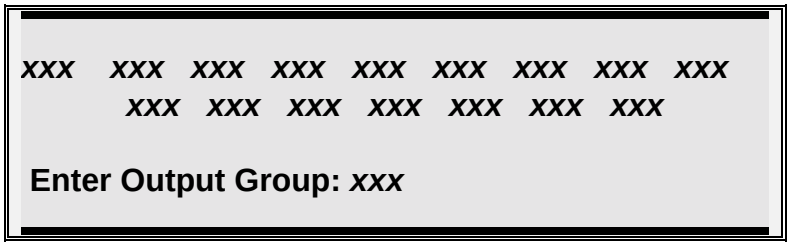


Figure 15B

8. Repeat sequential steps (3 through 7) for each associated input/output group to be modified in the selected circuit.

FUNCTION PROGRAMMING

See System Test Mode

SYSTEM PROGRAMMING

Programming

System programming menus may be accessed if the proper programming password is entered at the "ENTER PASSWORD:" prompt.

Programming may also be performed from a laptop computer connected to the RS-232 port on the CPU of the control panel. Refer to the end of this section for instructions.

>>**NOTE: Before proceeding, notify all personnel, monitoring companies and municipalities the system will be temporarily "out of service". During all levels of programming, the system will be in an off-line status.**

System Menu

The "System Menu" menu is displayed when selected from the programming mode menu.

System Menu
1=Display 2=Change 3=Test
0=Exit

Display Menu

Selecting the "Display" option from the "System Menu" which allows the user to display or download various system parameters. There are four options that may be selected from this menu (see Figure 5-2) and four options that may be selected from the "MISC." menu selection. (Figure 5-3).

Display Menu
1=Config 2=Dict 3=Events
4=Misc 5=Detectors 0=Exit

Config Menu

The Configuration Menu allows the user to select either displaying the system module configuration or downloading the entire system configuration.

Configuration Menu
1=Display 2=Download 0=Exit

Display Config

The system module configuration is displayed when option 1 is selected from the Configuration Menu. This display shows the modules that are present in each card location, their associated card type, code and a description of the card. The modules displayed are retrieved from the system configuration memory and are not a real time scan of the actual cards present (refer to the system test menu for a real time display).

```
                    Configuration Menu
                1=Display 2=Download 0=Exit
>1
Card:0, ID:0C is CCM0: A/N Panel
Card:1, ID:FF is Vacant
Card:2, ID:FF is Vacant
Card:3, ID:FF is Vacant
Card:4, ID:01 is CCM4: 2 Sig Ckt, Class A
Card:5, ID:02 is CCM5: 4 Rel Ckt
Card:6, ID:05 is CCM6: Misc. Ckts.
Card:7, ID:FF is Vacant
Card:8, ID:FF is Vacant
Card:9, ID:FF is Vacant
Card:10, ID:FF is Vacant
Card:11, ID:FF is Vacant
Card:12, ID:FF is Vacant
Card:13, ID:FF is Vacant
Card:14, ID:FF is Vacant
Card:15, ID:FF is Vacant
Card:16, ID:FF is Vacant
Card:17, ID:09 is Analog Addressable Module
Press AnyKey To Continue
```

System Configuration

Select this field to view the system modular placement (hardware configuration, card identification number and I/O card type assignment).

Modular Placement

Card numbered 0 through 7 are reserved for the various common control module sections. These card location numbers are hardwired physical circuits.

Card ID # Each type of card is assigned a unique 8 bit code that the card transmits to the CPU when it is polled. In operation each card is periodically polled and returns its type code. The CPU detects if the card is functioning correctly, for a card type at that location. Refer to Table L4, Card ID Type.

Card Location	Card No.	Card ID Type Code (hex value)	Card Description
Display Module	Card# 0	0C	Alphanumeric (LCD) display card
Bus Driver Module	Card# 4	01	Signal Circuits
Bus Driver Module	Card# 5	02	Relays
Bus Driver Module	Card# 6	05	Variety of features (city tie supervision, ground fault, default power supply supervision, +24 V, +12V, +5V supervision, V-battery to power supply, unregulated raw supply, system on AC/Battery, Charging Monitor, battery monitor, aux 1 & 2).
Analog Addressable Module	Card# 17	09	XP95 analog addressable interface (1, 2 or 4 circuits)

Table L4, Typical Card ID Type

System Configuration

1. Select [1], the "Config" field.
2. Select “Display” [1], Press "**Enter**". (*Figure L-3 is an example of data shown*).
3. The alphanumeric screen will scroll and the user can view desired circuit.
4. Select “Download” [2] to download system configuration to a laptop computer. Refer to IF 600 computer/laptop programming manual.

Card 00, ID# 0C is: A/N Panel
Card 04, ID# 01 is: CCM: 2 Sig Ckt, Class A
Card 05, ID# 02 is: CCM: 4 Rel Ckt
Card 06, ID# 05 is: CCM: City Tie, Buzzer etc.
Card 07, ID# 07 is: Unused
Card 17, ID# 09 is: Analog Addessable Interface

Figure L-3

4. Press "**Enter**" key for previous menu. Figure L-2, is shown.

Download Config

Selecting Download from the Display Configuration Menu will prompt the system to transmit the complete system configuration file to the RS-232 port. When this is selected the system prompts the user to perform several steps. These steps are the actions required to receive an ASCII file when using PROCOMM communications software. When using alternate software packages follow the procedure required for that software to receive an ASCII file. The next CR the system receives will start the transmission of the file.

Configuration Menu
1=Display 2=Download 0=Exit

>2
Ready to Download Configuration File.

To Download:
1. Press PgDn
2. Choose 7 (ASCII)
3. Enter Filename

>>**NOTE: For Procomm only, the ASCII transfer setup must have the following parameters. Use the following table)**

ASCII Upload			**To Down Load**	
1) Echo locally	No		1) Press PgUp	
2) Expand blank lines	No		2) Choose 7	(ASCII)
3) Pace Character	0		3) Enter (filename)	
4) Character Pacing	15			
5) Line pacing `	10		CR translation	none
6) CR translation	none		LF translation	none
7) LF translation	strip			

Display Dict. Menu

This display option allows the user to view the contents of word dictionaries 1 - 5. Dictionaries 1 - 4 may contain up to 128 entries and dictionary 5 may contain up to 1024 entries. By selecting this option the contents of all 5 user dictionaries are output to the laptop/computer screen.

```
Display Dictionary Menu
1=Display 2=Download 0=Exit
```

Display Dict.

The following is the format in which the dictionary will be displayed.

```
Start of Dictionary #1

End of Dictionary #1
Start of Dictionary #2

End of Dictionary #2
Start of Dictionary #3

End of Dictionary #3
Start of Dictionary #4

End of Dictionary #4
Start of Dictionary #5

End of Dictionary #5

Press Enter Key to Continue.
```

Download Dict.

Selecting Download from the Display Dictionary Menu will prompt the system to transmit the complete set of 5 dictionaries to the RS-232 port. When this is selected, the system prompts the user to perform several steps. These steps are the actions required to receive an ASCII file when using PROCOMM communications software. When using alternate software packages follow the procedure required for that software to receive an ASCII file. The next CR the system receives will start the transmission of the file.

```
Display Dictionary Menu
1=Display 2=Download 0=Exit
>2
Ready to Download Dictionary File.

        To Download:
        1. Press PgDn
        2. Choose 7 (ASCII)
        3. Enter Filename
```

Display Events

The display events selection will prompt the CPU to output it's complete history log to the RS-232 port. The history log will contain all information regarding the system status changes for the previous 1000 events or since the last time the system SmartStart™ feature was invoked.

```
                    Display Menu
              1=Config 2=Dict 3=Events
              4=Misc 5=Detectors 0=Exit
>3
**** Start of Event Buffer ****
Status:NORMAL          03/27/95 15:08

Press Enter Key To Continue
```

Display, Misc.

When 4 (Misc) is selected from the Display menu, a sub-menu of selections is displayed.

```
                    Display Menu
              1=Config 2=Dict 3=Event
              4=Misc5=Detectors 0=Exit
>4
                  Display Menu (Misc.)
              1=Pass 2=Codes 3=Tally
              4=Ver  5=Ram 0=Exit
```

Display Pass

Displaying the passwords allows the user to view the 10 passwords that are assigned to the system. Each password has a user ID and a security or access level assigned to it. This screen also shows the security levels that are assigned to each of the function keys. The following display are the default settings for the IF 600 system.

```
                    Display Menu
              1=Config 2=Dict 3=Event
              4=Misc5=Detectors 0=Exit
>4
                  Display Menu (Misc.)
              1=Pass 2=Codes 3=Tally
              4=Ver 5=Ram 0=Exit
>1
1. Pass:1111 User ID:USER1 Sec:1
2. Pass:2222 User ID:USER2 Sec:2
3. Pass:3333 User ID:USER3 Sec:3
4. Pass:4444 User ID:USER4 Sec:4
5. Pass:5555 User ID:USER5 Sec:1
6. Pass:6666 User ID:USER6 Sec:1
7. Pass:7777 User ID:USER7 Sec:1
8. Pass:8888 User ID:USER8 Sec:1
9. Pass:7111 User ID:USER1 Sec:1
10. Pass:7222 User ID:USER2 Sec:1

Ack:01 Rst:02 Sig:02 Drl:03
Fun:03
     Press Any Key To Continue
```

Display Codes

Displaying the codes will allow the user to view the codes that are assigned to each of the 256 input groups. This is followed by information on the timing of the codes, number of rounds transmitted and whether the system reverts to March Time coding or silences after the coding is completed. The default setting for each code is 1,2,3,4,5,6.

```
                    Display Menu (Misc.)
                  1=Pass 2=Codes 3=Tally
                  4=Ver 5=Ram 0=Exit
>2
1=123456 2=123456 3=123456 4=123456
5=123456 6=123456 7=123456 8=123456
9=123456 10=123456 11=123456 12=123456
13=123456 14=123456 15=123456 16=123456
17=123456 18=123456 19=123456 20=123456
21=123456 22=123456 23=123456 24=123456
25=123456 26=123456 27=123456 28=123456
29=123456 30=123456 31=123456 32=123456
33=123456 34=123456 35=123456 36=123456
37=123456 38=123456 39=123456 40=123456
41=123456 42=123456 43=123456 44=123456
45=123456 46=123456 47=123456 48=123456
49=123456 50=123456 51=123456 52=123456
53=123456 54=123456 55=123456 56=123456
57=123456 58=123456 59=123456 60=123456
61=123456 62=123456 63=123456 64=123456
65=123456 66=123456 67=123456 68=123456
69=123456 70=123456 71=123456 72=123456
73=123456 74=123456 75=123456 76=123456
77=123456 78=123456 79=123456 80=123456
81=123456 82=123456 83=123456 84=123456
85=123456 86=123456 87=123456 88=123456
89=123456 90=123456 91=123456 92=123456
93=123456 94=123456 95=123456 96=123456
97=123456 98=123456 99=123456 100=123456
101=123456 102=123456 103=123456 104=123456
105=123456 106=123456 107=123456 108=123456
109=123456 110=123456 111=123456 112=123456
113=123456 114=123456 115=123456 116=123456
117=123456 118=123456 119=123456 120=123456
121=123456 122=123456 123=123456 124=123456
125=123456 126=123456 127=123456 128=123456

Pls:1.0Sec Cyl:04 Sig:OFF
Press Any Key To Continue
```

Tally

This displays the number of times that a detector which is selected for Verification, has activated without confimation within the last 30 days.

```
                    Display Menu (Misc.)
                  1=Pass 2=Codes 3=Tally
                   4=Ver 5=Ram 0=Exit
>3
Press any Key To Continue
```

Display Ver.

The version of firmware installed in the main CPU will be displayed when 3 (Ver) is selected from the Display Menu (Misc.).

```
                    Display Menu (Misc.)
                  1=Pass 2=Codes 3=Tally
                   4=Ver 5=Ram 0=Exit
>4
  600 System, Version 7.00
Last Updated on Oct 10, 1999 at 15:43:58

Press any Key To Continue
```

Display RAM

Displaying the RAM allows the user to view the available system Random Access Memory. This feature is helpful to Tech. Support for problem solving..

```
                    Display Menu (Misc.)
                  1=Pass 2=Codes 3=Tally
                   4=Ver 5=Ram 0=Exit
>5

Unallocated bytes of ram: XXXXXX

Press any Key to continue
```

Display Detectors

The Detector Display Menu allows the average counts of the input devices to be down loaded.

```
                      Display Menu
                  1=Config 2=Dict 3=Events
                  4=Misc 5=Detectors 0=Exit
>5

1=Down Load  0=Exit
```

Change Menu The system change menu allows the user to change various system parameters.

Change Menu 1

```
                    Change Menu
            1=Menu 1 2=Menu 2 3=Menu 3
                4=Menu 4 0=Exit
>
```

```
                    Change Menu
            1=Menu 1 2=Menu 2 3=Menu 3
                4=Menu 4 0=Exit
>1
                  Change Menu 1
            1=Pass 2=Code 3=Date 4=Seq
                5=Baud 0=Exit
```

Change Pass

The Change Password menu is used to change the password, user name and/or the access level associated with the passwords. When this is selected from Change Menu 1, the previously programmed password information is displayed, followed by a prompt requesting the password number to be changed. When the password number is entered the "Enter Password" prompt is displayed. Enter the new password (Four Digits) or press enter to leave the existing password. This is followed with the User ID prompt. The User ID may contain up to 8 ASCII characters. After defining the user, the access level or security level (Sec:) assigned to that password is defined.

NOTE: Before changing the password # 4 (programming password) make sure that you have added a new Security Level 4 password to access the programming area.

```
                    Change Menu
            1=Menu 1 2=Menu 2 3=Menu 3
                4=Menu 4 0=Exit
>1
                  Change Menu 1
          1=Pass 2=Code 3=Date 4=Seq
              5=Baud 0=Exit
>1
1. Pass:1111 User ID:USER1 Sec:1
2. Pass:2222 User ID:USER2 Sec:2
3. Pass:3333 User ID:USER3 Sec:3
4. Pass:4444 User ID:USER4 Sec:4
5. Pass:5555 User ID:USER5 Sec:1
6. Pass:6666 User ID:USER6 Sec:1
7. Pass:7777 User ID:USER7 Sec:1
8. Pass:8888 User ID:USER8 Sec:1
9. Pass:7111 User ID:USER1 Sec:1
10. Pass:7222 User ID:USER2 Sec:1
Enter Password # To Change:1
Enter Password:1234
Enter User ID: John Doe
Enter Security level:1
1. Pass:1234 User ID:John Doe Sec:1
2. Pass:2222 User ID:USER2 Sec:2
3. Pass:3333 User ID:USER3 Sec:3
4. Pass:4444 User ID:USER4 Sec:4
5. Pass:5555 User ID:USER5 Sec:1
6. Pass:6666 User ID:USER6 Sec:1
7. Pass:7777 User ID:USER7 Sec:1
8. Pass:8888 User ID:USER8 Sec:1
9. Pass:7111 User ID:USER1 Sec:1
10. Pass:7222 User ID:USER2 Sec:1
Enter Password # To Change:
```

Change Code

The codes in the IF 600 systems are assigned to the input groups. When a device within that group alarms, that code would be sounded on the signal circuits that have been programmed as coded circuits. Each input group may be assigned an individual code that contains up to 6 digits. The digits are defined in hexadecimal and range from 0-9 and A-F. When selected each digits (1-6) of the code is entered individually.

After the code has been entered a sub-menu appears. This menu allows you to change the Timing, the number of Cycles and the output of the signal circuits after the code is complete, silence or March Time signal.

Change Menu 1
1=Pass 2=Code 3=Date 4=Seq
5=Baud 0=Exit

>2
Enter Input Ckt/Group Number:1
Current Code For Ckt/Group1=123456
Enter Digit 01:656565Re-enter Input :6
Enter Digit 02:5
Enter Digit 03:4
Enter Digit 04:3
Enter Digit 05:2
Enter Digit 06:1
New Code For Ckt/Group1=654321
Enter Input Ckt/Group Number:

Change Coded Signal's Parameters
1=Timing 2=Cycles 3=Signal
0=Exit

>1

Change Coded Signal's Timing
1=0.5 2=1.0 3=1.5 4=2.0
0=Exit

>2
Enter # of Cycles (1-8):

>3

Choose Signal
1=OFF 2=March Time
0=Exit

Change Date

To change the date and/or time in the IF 600 system, the Change Date Menu must be selected. This menu prompts the user with the information the system requires to enter a new time and date.

```
                    Change Menu 1
                1=Pass 2=Code 3=Date 4=Seq
                    5=Baud 0=Exit
>3
                    Date Menu
                1=Date 2=Time 3=Savings
>1
THR Date 09/30/99  Time 09:52:41
Enter Month:  :09
Enter Date:   :30
Enter Year:   :99
Enter Day: 1=SUN 2=MON 3=TUE 4=WED
           5=THR 6=FRI 7=SAT 0=EXIT   5
>Enter
                    Date Menu
                1=Date 2=Time 3=Savings
>2
Current Date/Time
THR Date 09/30/99  Time 09:54:21
Enter Hour   :10
Enter Minutes: 43
          New Date/Time
    Date 09/30/99  Time 10:43:00
    Press Enter Key To Continue
>Enter
                    Date Menu
                1=Date 2=Time 3=Savings
>3
Daylight Savings Time DISABLED
Enable Daylight Savings Time
1=Yes 2=No Enter=Exit
>Enter
```

Change Seq

The Change Sequence option allows the user to redefine the access levels associated with each of the sequence keys. Each of these keys is assigned an access level by default. The Acknowledge key is assigned to level 1 access. The Reset, Signal Silence and Drill keys are assigned to level 2. Also, the Function and Day keys are assigned to level 3.
Any of these keys may be reassigned by selecting this option, pressing the key to be reassigned and entering the access level desired. These keys may also be assigned to level 4 access (programming level). By assigning a key to level 4 access, that keys operation is inhibited.

```
                Change Menu 1
          1=Pass 2=Code 3=Date 4=Seq
              5=Baud 0=Exit
>4

     Change Sequence's Security
      Press A Sequence's Key
      Press Enter Key To Exit

  Acknowledge, Current:01 Enter New:01
```

Change Baud

The Change Baud selection will cause the system to output a printer test pattern to the RS-232 port. This continuous output allows the user to select the baud rate of the connected device without having to cause system abnormalities.

```
                Change Menu 1
          1=Pass 2=Code 3=Date 4=Seq
        5=Baud 6=Net Baud 7=Net Type 0=Exit
>5
Ready To Read Dip Switch and Set
Serial Port 1's Baud Rate.
Press Enter Key To Proceed...

0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdef
ghijklmnopqrstuvwxyz{|}~!"#$%&'()*+,./0123456789:;<=>?@ABCDEFGH
IJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~!"#$%
&'()*+,./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^
_`abcdefghijklmnopqrstuvwxyz{|}~!"#$%&'()*+,./0123456789:;<=>?@AB
CDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|
}~!"#$%&'()*+,./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUV
WXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~!"#$%&'()*+,./0123456789:;
<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqr
stuvwxyz{|}~!"#$%&'()*+,./0123456789:;<=>?@ABCDEFGHIJKLMNOP
QRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ{|}~
```

Baud Rate Switch Settings

The baud rate is changed by setting DIP switch SW1 on the CPU module to the desired speed (see below table). Select this option to read new setting.

SW1 - Settings		

S1	Open	Do Not Change
S2	Open	Do Not Change
S3	Always Closed	Do Not Change
S4	Open	Do Not Change
S5	Open	Do Not Change
S6	Open	Do Not Change
Note:	P2 baud rate of is selected via S7 and S8. **Auto Detect Baud rate is utilized for peripheral devices.**	
S7, S8 Open	*9600 Baud Rate*	
S7 Closed, S8 Open	*4800 Baud Rate*	
S7 Open, S8 Closed	*2400 Baud Rate*	
S7, S8 Closed	*1200 Baud Rate*	

Change Menu 2

```
                Change Menu
        1=Menu 1 2=Menu 2 3=Menu 3
              4=Menu 4 0=Exit
>2
              Change Menu 2
        1=City 2=Ann 3=Trbl 4=BCKey
      5=Day Enable 6=Day/Night 0=Exit
```

Change City

The City Tie Circuit is designed to operate in four modes of operation; Line Reversal, Master Box, Dialer, and Chicago mode. In the Line Reversal and Dailer modes all alarms and troubles are transmitted over the city tie circuit. In the Chicago mode the City Tie transmits all troubles and alarms with the exception of City Tie troubles. If the City Tie circuit detects a trouble condition the Spare relay will transfer for use with a local indicator which indicates that troubles and alarms can't be transmitted. In the Dailer mode AC loss troubles are delayed for 6 hours to prevent unnecessary telephone messages.

```
                Change Menu
        1=Menu 1 2=Menu 2 3=Menu 3
              4=Menu 4 0=Exit
>2
              Change Menu 2
        1=City 2=Ann 3=Trbl 4=BCKey
      5=Day Enable 6=Day/Night 0=Exit
>1
   City Tie Is In XXXXXXX Mode
       Press Enter Key To Exit
    Press Any Other Key To Select New Mode
```

Change Ann

The Change Ann option allows the user to enable and disable the supervision of the supervised devices connected to the RS-232 port.

```
              Change Menu 2
        1=City 2=Ann 3=Trbl 4=BCKey
      5=Day Enable 6=Day/Night 0=Exit
>2
      Press Enter Key To Exit
    Press Any Other Key To Toggle
   Remote Annunciator is Detached
   Remote Annunciator is Attached
```

Change Trbl

The Change Trouble option should be in the "Troubles are Annunciated" Mode. This feature is used in Special Applications where a backup system is required. Special modules and wiring are required to utilize this option. Please consult your factory representative for applications requiring redundant system operation.

```
                    Change Menu 2
              1=City 2=Ann 3=Trbl 4=BCKey
            5=Day Enable 6=Day/Night 0=Exit
>3
      Press Enter Key To Exit
   Press Any Other Key To Toggle
  I/O Troubles Are Annunciated
  I/O Troubles Are Not Annunciated
```

Change Bldg. Control Switch Supervision

The change BC Key option allows the selection of supervision of the Building Control 3 position switches. When enabled, any BC switch that is off of the Auto (middle) position will show as a trouble.

```
                    Change Menu 2
              1=City 2=Ann 3=Trbl 4=BCKey
            5=Day Enable 6=Day/Night 0=Exit
>4
BC Keys Are Not Supervised
Press Enter Key To Exit
Press Any Other Key To Toggle
```

Change Day Enable

The Change Day Enable option allows the selection of Positive Alarm Sequence. When enabled the Day key on the front panel is active and can select the mode of operation.

```
                    Change Menu 2
              1=City 2=Ann 3=Trbl 4=BCKey
            5=Day Enable 6=Day/Night 0=Exit
>5
Day Night Keys Are Not Enabled
Press Enter Key To Exit
Press Any Other Key To Toggle
```

Change Day Night Mode

The Change Day Night option allows the selection of manual or automatic termination of Positive Alarm Sequence.

```
                    Change Menu 2
              1=City 2=Ann 3=Trbl 4=BCKey
              5=Day Enable 6=Day/Night 0=Exit
>6
System In Manual Day Mode
Press Enter Key To Exit
Press Any Other Key To Toggle
>1
System Is In Auto Day Mode
>Enter
Day Mode Exit Time Is Currently : 17:00
Do You Want To Modify (Y/N)
>Y
Enter Time To Exit Day Mode:
Enter Hour: 18
Enter Minutes: 30
>Enter
Day Mode Exit Time Is Currently : 18:30
```

Change Menu 3

```
                    Change Menu
              1=Menu 1 2=Menu 2 3=Menu 3
                   4=Menu 4 0=Exit
>3
                    Change Menu 3
              1=Abort 2=Prefix 3=Config 4=Tally
                   5=Sil Inh 6=AutoSil 0=Exit
```

Change Abort Type

The Change Abort Type option allows the selection of different mode of Abort operation in a discharge application.

```
                    Change Menu 3
              1=Abort 2=Prefix 3=Config 4=Tally
                   5=Sil Inh 6=AutoSil 0=Exit
>1
Abort Type Set To One Shot
Press Enter Key To Exit
Press Any Other Key To Changee
(Other Choices)
        Timer Expirey
        Immediate
        10 Sec Delay
        Reset Timer
```

Change Prefix

This option allows the user to change the Prefix for alarm events that occur. The default setting is FIRE Alarm. If the panel were monitoring Gas detectors, for example. The Prefix could be changed to GAS and therefore display GAS Alarm during alarm conditions.

```
Change Menu 3
1=Abort 2=Prefix 3=Config 4=Tally
5=Sil Inh 6=AutoSil 0=Exit
>2
Current Alarm Prefix is: Fire
Enter New Alarm Prefix: XXXX

Do you want to clear prefix Y/N? N

Alarm Prefix is set to! Fire
Press any key to continue
```

Change Configuration Name

The Change Config. name option allows a textual designation of the configuration file for archive identification..

```
Change Menu 3
1=Abort 2=Prefix 3=Config 4=Tally
5=Sil Inh 6=AutoSil 0=Exit
>3
Current Config String Is:
SmartStart Config
Enter New Config String:
New Name
>Enter
Do You Want To Clear String (Y/N)
>N
```

Change Tally Count

The Change Tally Count option allows the selection of the number of times a Verification detector can activate without a full alarm, in a 30 day period. If the number is exceeded the detector is put into “Verification Trouble” status..

```
Change Menu 3
1=Abort 2=Prefix 3=Config 4=Tally
5=Sil Inh 6=AutoSil 0=Exit
>4
Verification Count Is Set To: 2
Enter Verification Count (2-15)
```

Change Silence Inhibit Delay

The Change Sil Inh option allows the selection of the time period in which Silence is inhibited after an alarm signal.

```
Change Menu 3
1=Abort 2=Prefix 3=Config 4=Tally
5=Sil Inh 6=AutoSil 0=Exit
>5
Sil Inh Delay Is Set To: 0 Min
Enter New Signal Sil Delay (0-10)
Delay=Entry (0-10) X 30 sec
```

Change Auto Silence Delay

The Change Auto Sil Delay option allows the selection of the time period after an alarm which Silence automatically actuated.

```
Change Menu 3
1=Abort 2=Prefix 3=Config 4=Tally
5=Sil Inh 6=AutoSil 0=Exit
>6
Auto Sil Delay Is Set To: 10 Min
Enter New Signal Sil Delay (0-26)
Delay=2 min + Entry (0-26) X 30 sec
```

Change Menu 4

```
Change Menu
1=Menu 1 2=Menu 2 3=Menu 3
4=Menu 4 0=Exit
>4
Change Menu 4
1=Cfg 2=Water 3=Relse 4=Dump
5=Dict 6=Card 0=Exit
```

Change Config

Changing the system configuration requires a previously downloaded system configuration file. This option is only available when programming through a P. C. attached to the serial port, or from the Master in a network.

WARNING: It is necessary to perform a Smart Start on the panel before uploading a new configuration. Failure to do so will result in unpredictable operation of the panel

```
Change Menu 4
1=Cfg 2=Water 3=Relse 4=Dump
5=Dict 6=Card 0=Exit
>1
[If network, upload will start at this point]
Ready to Upload Configuration File.

    To Upload:
    1. Press PgUp
    2. Choose 7 (ASCII)
    3. Enter Filename
```

Change Water Flow Delay

The Change Water option allows the selection of the delay time before a Water flow alarm is activated..

```
Change Menu 4
1=Cfg 2=Water 3=Relse 4=Dump
5=Dict 6=Card 0=Exit
>2
Waterflow Zone Delay Is Set To: 30 sec
Enter Waterflow Delay (5-90 sec):
```

Change Releasing Delay

The Change Relse option allows the selection of the time delay from the ANDed releasing alarms to the Discharge command..

```
Change Menu 4
1=Cfg 2=Water 3=Relse 4=Dump
5=Dict 6=Card 0=Exit
>3
Releasing Delay Is Set To: 30 sec
Enter Releasing Delay (15-60 sec):
```

Change Discharge Delay

The Change Dump option allows the selection of the time delay from the Discharge command to the actual Discharge..

```
Change Menu 4
1=Cfg 2=Water 3=Relse 4=Dump
5=Dict 6=Card 0=Exit
>4
Discharge Delay Is Set To: 0 sec
Enter Discharge Delay (0-30 sec):
```

Change Dictionary

Changing the dictionary entries can be achieved by two means, changing the words or uploading an entirely new dictionary. The upload function should only be accomplished throug a P. C. connected through the serial port, or from the Master in a network.

```
Change Menu 4
1=Cfg 2=Water 3=Relse 4=Dump
5=Dict 6=Card 0=Exit
>5
Change Dictionary Menu
1=Words 2=Upload 0=Exit
```

Change Dict.Words

To change the Dictionary words, select 1 from the Change Dictionary Menu. The system will prompt you with the dictionary and word number to be changed. The existing word is then displayed. To change the word, type the desired text or press enter to leave the existing text and return to the word number prompt.

```
Change Dictionary Menu
1=Words 2=Upload 0=Exit
>1
Enter Dictionary #:1
Enter Word #:1
      Overwrite Current Word:
           Fire Alarm
Enter New Word:
Enter Word #:22
  Word Doesn't Exist, Append New Word
Enter New Word:
Enter Word #:
```

To select word options from the control panel:

Prompt	Description
<a1> =	first lower case letter of a word or key
<a2> =	second lower case letter of a word or key
<a3> =	third lower case letter of a word or key
<a#> =	etc. (sequential order)
<A1> =	First Upper Case letter of a word or key
<A2> =	Second Upper Case letter of a word or key
<A#>	etc. (sequential order)

1. Press the Letters/ Numbers key on the Keypad until the proper selection is displayed. The display indicates the selection by the following means.
2. When selecting the first letter on a key, <a1> should be displayed in the upper right hand corner of the display. To select the second letter on a key, press the Letters/ Numbers key until <a2> is displayed. <a3> should be displayed if the third letter is desired and <#> should be displayed if the number associated with that key is desired.
3. The case of the letters may be changed by pressing the Upper Case key. The case is indicated by the case setting of the <A> within the brackets shown on the display.
4. When the desired number or letter field is displayed press the key associated with it then go on to the next letter, number or punctuation mark.
5. When the text entry is complete press the "**Enter**" key and go on to the next text entry to change.
6. To exit the programming area, and save the changes made, press the "**Enter**" key a second time..

>>**NOTE: When changes are made to any dictionaries they are appended to the existing dictionary. Therefore the entire number of added text may change when you exit the programming area. For example, if dictionary 2 has twelve entries and you add an entry as number 15, when enter the word the dictionary is appended and your new entry becomes number 13.**

Upload Dictionary

Uploading is accessed by selecting 2 from the Change Dictionary Menu. In order to upload a new dictionary, a file containing the new dictionary entries must be created using an ASCII text editor. The SAN-RAN disk (P/N 30972) contains the AHED text editor that may be used to create the dictionary file. The dictionary file is comprised of a simple format that has very few restrictions (See Dictionary File Format).

Change Dictionary Menu
1=Words 2=Upload 0=Exit
>2
Ready to Receive Dictionary File.
[If network, upload will start at this point]
To Upload:
1. Press PgUp
2. Choose 7 (ASCII)
3. Enter Filename

Dictionary File

The dictionary file format consists of the five dictionaries, each separated by two fore slashes (//) as delimiters. The first line of the dictionary file would contain two fore slashes indicating that it is the beginning of the file and the next line received will be word #0 of dictionary #1. This line should be left blank since each device defaults to word #0 of each dictionary. The following lines would contain the desired text entries, in numerical order, for dictionary #1. When all of the entries for dictionary #1 have been entered two fore slashes should be inserted on the next line to signify the end of dictionary #1 and the start of dictionary #2. Again the next line, word #0 dictionary #2, should be left blank for default purposes. This format is followed throughout the five dictionaries. The end of dictionary five is also signified by two fore slashes.

Some important points to keep in mind when writing the file are as follows. Dictionary #1 through dictionary #4 may contain up to 128 entries (0-127). Dictionary #5 may contain up to 1024 entries (0-1023). If all of the entries in any one dictionary are not used, the file does not need to contain blank lines before terminating the dictionary with two fore slashes. Each dictionary entry may contain up to 40 characters. However, entries from dictionaries #1 and #2 are displayed on the third line of the alphanumeric display, and, entries from dictionaries #3, #4, and #5 are displayed on the fourth line of the alphanumeric display. The total characters of dictionary entries used in conjunction with each other should not exceed 40 characters.

The file below illustrates a simple dictionary file.

```
//

Fire Alarm
Supervisory Alarm
//

Smoke Detector
Heat Detector
//

First Floor
Second  Floor
Third Floor
//

Stairwell
Computer Room
Mechanical Room
//

Room 111
Room 112
Below Raised Floor
//
```

>> **NOTE: For Procomm only, the ASCII transfer setup must have the following parameters. Use the following table):**

ASCII Upload			**To Down Load**	
1) Echo locally	No		1) Press PgUp	
2) Expand blank lines	Yes		2) Choose 7	(ASCII)
3) Pace Character	0		3) Enter "Dict" (filename)	
4) Character Pacing	15			
5) Line pacing `	10		CR translation	none
6) CR translation	none		LF translation	none
7) LF translation	strip			

Change Card

The IF 600 system allow components to be added or deleted without disturbing the programming (Control By Event, etc.) of other system components. When the Change Card menu is selected, an Add or Delete option is then prompted. Select the desired option and enter the card number to be changed. (See system configuration in the installation section of this manual for card location information)

NOTE: When changing card types in a location, the existing card should be deleted before the new card is added. This will ensure that the control by event table is up to date.

```
                    Change Menu 4
            1=Cfg 2=Water 3=Relse 4=Dump
                5=Dict 6=Card 0=Exit
>6
                    Change Card Menu
                1=Add 2=Delete 0=Exit
>1
        Enter Card # To Add:
    Delete Existing Card First !
    Press Enter Key To Continue

          Change Card Menu
       1=Add 2=Delete 0=Exit
>2
      Enter Card # To Delete: 1
      Card Deleted From System
    Press Enter Key To Continue

          Change Card Menu
       1=Add 2=Delete 0=Exit

Enter Card # To Add: 1
        Card Added To System
    Press Enter Key To Continue
```

Test Menu

The test menu is a useful tool when testing and troubleshooting the IF 600 systems. The various options allow the testing of input and output devices, circuits, ground fault monitoring and system communications.

```
Test Menu
1=Input 2=Output 3=ID 4=Gnd
5=Lamp 6=Analog 0=Exit
```

Test Input

The Input Test allows the user to test input circuit cards and monitor for circuit noise. This selection requires the input of the card location number (see installation section for card location numbers) to be tested. The card is continuously scanned and a “real time” value in hexadecimal format (base 16) is returned for each of the 8 circuits (0-7) for that card location.

EXAMPLE: The normal value for a CIM card to return would be approximately 0E hex. If the circuit is open, the value would drop to 00 hex. If a short circuit occurs the value returned would increase up to FF hex.

```
Test Menu
1=Input 2=Output 3=ID 4=Gnd
5=Lamp 6=Analog 0=Exit

>1

        Input Card Test
      Enter Input Card #:11
     Press Enter Key To Exit
0=0E 1=0E 2=0E 3=0E 4=0E 5=0E 6=0E 7=0E
0=0F 1=0E 2=0E 3=0E 4=0F 5=0F 6=0E 7=0F
```

Test Output

The Output Test is used to test the interaction between an input circuit and an output circuit. When selected, the user is prompted to enter the output card location number to be tested. Then the input card location that is to be used to control the output card is entered. When the input circuit is activated, the corresponding output card circuit will activate.

EXAMPLE1: If card location 12 (CIM display) is selected as the output card location and card location 12 is selected as the input card location, when a switch on card 12 is pressed the corresponding LED will light.

EXAMPLE2: If output card location 17 (USM-8) is selected and input card 21 (USM-8 display) is selected, the corresponding signal circuit will activate when the display switch is pressed.

NOTE : When card 0 (main display) is selected on the 632 systems, no input card option is displayed. Pressing the front panel switches will toggle the LED's and display the switch number pressed.

```
                    Test Menu
          1=Input 2=Output 3=ID 4=Gnd
          5=Lamp 6=Analog 0=Exit
>2
        Output Card Test
Enter Output Card #:0
Enter Input (Keys) Card #:0
      Press Enter Key To Exit
```

Test ID

Selecting the Test ID option will continuously display the "real time" card readings from the system card locations. The card locations (0-39) should always equal the card type installed in that location.

```
                    Test Menu
          1=Input 2=Output 3=ID 4=Gnd
          5=Lamp 6=Analog 0=Exit
>3
00=0C 01=FF 02=FF 03=FF 04=01 05=02
06=05 07=FF 08=FF 09=FF 10=FF 11=FF
12=FF 13=FF 14=FF 15=FF 16=FF 17=09
18=FF 19=FF 20=FF 21=FF 22=FF 23=FF
24=FF 25=FF 26=FF 27=FF 28=FF 29=FF
30=FF 31=FF 32=FF 33=FF 34=FF 35=FF
36=FF 37=FF 38=FF 39=FF

00=0C 01=FF 02=FF 03=FF 04=01 05=02
06=05 07=FF 08=FF 09=FF 10=FF 11=FF
12=FF 13=FF 14=FF 15=FF 16=FF 17=09
18=FF 19=FF 20=FF 21=FF 22=FF 23=FF
24=FF 25=FF 26=FF 27=FF 28=FF 29=FF
30=FF 31=FF 32=FF 33=FF 34=FF 35=FF
36=FF 37=FF 38=FF 39=FF
```

Test Gnd

The Gnd (Ground) test utilizes a unique method of ground detection. A measurement is taken from the +5 supply to earth ground and a value is displayed. Then a measurement from system common is taken and its value is displayed. The differential value between these two measurements must be greater than 142 but less than 255 for a reading of "Good".

NOTE: The values displayed are derived from an A/D conversion and not displayed in actual voltages.

```
                    Test Menu
          1=Input 2=Output 3=ID 4=Gnd
          5=Lamp 6=Analog 0=Exit
>4
        Ground Fault Test
     Press Enter Key To Exit
       142 < Diff < 255
    5V=216, Gnd=1, Diff=215 : Good
```

Test Lamps

The Lamp test feature will illuminate all of the system LEDs when selected. It will light one panel at a time while alternating the internal sounder with each panel lit.

```
                    Test Menu
          1=Input 2=Output 3=ID 4=Gnd
          5=Lamp 6=Analog ork 0=Exit
>5
Press enter to continue
```

Test Analog

The analog test is designed to allow the user to control and obtain "real time" information about individual analog addressable devices. When analog is selected from the Test Menu ,the system prompts the user to enter the channel of the card and device address. The "Data to Send" (0-7) prompt is expecting an entry from 0-7. This entry controls the analog device mode of operation. There are 3 bits of information that control the state of each analog device (see table below). The accumulated total of these bits for the desired state is the number that should be entered at the "Data to Send" prompt. When this information is entered, the system displays the "real time "information including CCT#, Address #, Device type and Counts for the device selected.

```
                    Test Menu
          1=Input 2=Output 3=ID 4=Gnd
          5=Lamp 6=Analog 0=Exit
>6
Enter Card # 17
Enter Channel to Poll (1-4):
Enter Address to Poll (0-127):
Enter Data to Send (0-7):

Ch:01  Add:26   D_Type:Mon.   Counts:17
Flags:x08   Bits:x08
```

	BIT1	BIT 2	BIT 4
XP-95P	Local LED	Test Mode	Remote LED
XP-95I	Local LED	Test Mode	Remote LED
XP-95T	Local LED	Test Mode	Remote LED
MS-95	Local LED	N/A	N/A
PID-95	Local LED	N/A	N/A
CZI-95	Local LED	Class "A" Relay	Zone Power Off
RCE-95	Local LED	N/A	Relay
SCE-95	Local LED	N/A	Signal Power

Figure 1: Output Control Bits

Display Panel	Description	Trouble / No Feedback	Background	Dirty	Pre-Alarm on 1st	Alarm / Shorted
Ion	Ionization Detector	0 - 9	10 - 40	41 - 44	Background + 26	Background + 36
Opt.	Photo Detector (non-comp.)	0 - 9	10 - 40	41 - 44	25 + (sensitivity * 6) + 8	25 + (sensitivity * 6) + 18
Opt.	Photo Detector (Compensated)	0 - 9	10 - 40	41 - 44	Background + (sensitivity * 6) + 8	Background + (sensitivity * 6) + 18
Heat	Thermal Detector	0 - 7	10 - Fixed Value	*NA*	*NA*	Above Fixed Value
CZI or CZII	CZI-95	0 - 16	17 - 54	*NA*	*NA*	55 - 122 2nd Alarm above 122
PID or MAN	PID - 95 or MS - 95	0 - 9	10 - 54	*N/A*	*N/A*	55 - 127
REL	RCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127
RSM	RSM-95	0 – 14	15 – 45	*NA*	*NA*	46 - 127
SCE or Snd.	SCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127

Figure 2: Device Count Threshold

COMPUTER/LAPTOP PROGRAMMING OVERVIEW

Overview of Computer Programming

This section describes the system communications via a computer. System monitoring, general control functions and system programming can be achieved from a computer terminal. All figures shown are displayed on the computer screen.

Interconnect

The 14 pin ribbon cable P/N 71332, is used to connect the computer to the CPU Module port P2. Use cable P/N 70703 to connect to the isolateded RS-232 port of the Bus module. Refer to (drawing # D-W1142).

Communication Protocol

The system communicates with a computer at baud rates of 1200,2400,4800 and 9600 BPS (see baud rate settings in CPU installation section). The standard protocol is Xon/Xoff, No Parity, 8 Data Bits and 1 Stop Bit.

Û **NOTE: Most standard communication packages for computers will allow you to set the proper protocol for the communications port of your computer.**

PROCOMM SOFTWARE

Configuration

When using PROCOMM to communicate with your IF 600 system the following configuration should be used. Several areas of the Procomm setup menu and the line settings menu must be accessed to configure the protocol required.

Line Settings

The Line Settings option can be selected by pressing the ALT and P keys simultaneously. From this menu select the option that your RS-232 port is set for (e.g., 2400,N,8,1 would be selected if your port speed is set to 2400 baud). The protocol is Baud Rate (port speed setting), No Parity (N), 8 Data bits (8) and 1 Stop Bit (1).

Setup Menu

The Procomm SETUP MENU is accessed by pressing the ALT and S keys simultaneously. The following screen should appear:

```
1) MODEM SETUP
2) TERMINAL SETUP
3) KERMIT SETUP
4) GENERAL SETUP
5) HOST MODE SETUP
6) ASCII TRANSFER SETUP
S) SAVE TO DISK
```

Terminal Setup

Select option 2 from the Procomm SETUP MENU to display the TERMINAL SETUP menu. The following options should be displayed. To change the settings, select the desired number and use the up/down arrows to scroll through the selections. Press ESC to return to the SETUP MENU.

```
1) Terminal emulation... VT-100          10) Break Length (ms) .... 350

2) Duplex ............. Full            11) Inquiry (CTRL-E) ..... OFF

3) Flow control........ XON/XOFF

4) CR translation (in).. CR

5) CR translation (out). CR

6) BS translation ...... NON-DEST

7) BS key definition.... BS

8) Line wrap ........... ON

9) Scroll .............. ON
```

General Setup

From the Procomm SETUP MENU select option 4 to display the GENERAL SETUP menu. The following settings should be displayed.

```
1)  Editor name ..........                12) Xlat pause character . ~
2)  Default d/l path .....                13) Xlat CR character .... !
                                          14) Xlat CTRL character .. ^
3)  Default log file ..... PROCOMM.LOG    15) Xlat ESC character ... |
4)  Screen dump file ..... PROCOMM.IMG
                                          16) Aborted downloads .... KEEP
5)  Screen write method .. DIRECT
6)  Translate table ...... OFF            17) Transmit pacing (ms) . 25

7)  Sound effects ........ ON
8)  Alarm sound .......... ON
9)  Alarm time (secs)..... 5
10) Exploding windows .... YES

11) XMODEM mode .......... NORMAL
```

NOTE: The Editor Name should be set to reflect the name of the text editor you are using. The Default D/L Path option should be set to the directory where you want to keep your downloaded Configuration and Dictionary files. With no directory specified downloaded files will be saved in the current directory.

ASCII Transfer

From the ASCII TRANSFER SETUP menu select option 6 to display the ASCII TRANSFER SETUP menu. The following settings should be displayed.

```
        ASCII UPLOAD

1) Echo locally ......... NO
2) Expand Blank Lines ... NO

3) Pace character ....... 0    (ASCII)
4) Character pacing ..... 15   (1/1000 sec)
5) Line pacing .......... 10   ( 1/10 sec)

6) CR translation ....... NONE
7) LF translation ....... STRIP

        ASCII DOWNLOAD

8) CR translation ....... NONE
9) LF translation ....... NONE
```

SYSTEM MONITORING & CONTROL

Status Monitoring

The computer can be used to monitor the status of the system. All status changes are transmitted from the P1 port of the CPU, or the isolated ascii connectoin on bus card or Iso-232 card. The data transmitted can provide detailed information on alarm, trouble and system status changes. It can also aid in troubleshooting by providing detailed information of system faults.

Access Levels

System access levels may be entered via the computer. By transmitting a carriage return (**Enter**) to the system you will be prompted with " ENTER PASSWORD" . By entering the proper password you may set the system to it's various access levels.

Control Strings

Certain control strings may be transmitted to the system that provide remote control of the system from the computer. If the proper access level is enabled (see access levels) the system can be acknowledged, the signals can be silenced or the system can be reset from the computer. The following control strings provide these functions:

RESET = ^[Ox – F4
ACKNOWLEDGE = ^[OP – F1
SIGNAL SILENCE = ^[Or – F2

Most software communication packages will allow the function keys to be configured for transmission of these control strings.

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Section 5A

IDENTIFLEX 632

Appendix

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SYSTEM EVENT MESSAGES

	Event	Displayed Message	Description
1.	Status	skip I/O assignments	
2.	Status	start of I/O assignment	
3.	Trouble	out of memory during I/O assignments	
4.	Status	reset system	
5.	Trouble	card deleted	
6.	Trouble	card inserted	
7.	Trouble	out of memory assigning zone outputs	
8.	Status	I/O being bypassed	
9.	Status	bypassed I/O being restored	
10.	Status	zone being Trouble tested	
11.	Status	zone being Alarm tested	
12.	Alarm	zone in verification sequence	
13.	Alarm	Reserved for Future Use	
14.	Alarm	Fire zone in alarm sequence	
15.	Alarm	Supervisory zone in Alarm sequence	
16.	Alarm	Reserved for Future Use	
17.	Status	System Acknowledge	
18.	Trouble	I/O device not detected on card	
19.	Status	Signals activated	
20.	Status	Signals de-activated	
21.	Trouble	Unknown card ID detected	
22.	Trouble	Error bad configuration	
23.	Trouble	AD converter malfunction	

24.	Trouble	Bad card 6 supervisory voltages	
25.	Trouble	Good card 6 supervisory voltages	
26.	Status	Outputs automatically silenced	
27.	Trouble	+5 volts on card off limits	
28.	Trouble	+24 volts on CCT 0, 1, off limits	
29.	Trouble	+24 volts on CCT 2, 3, off limits	
30.	Trouble	+24 volts on CCT 4, 5, off limits	
31.	Trouble	+24 volts on CCT 6, 7, off limits	
32.	Trouble	+5 volts on card OK	
33.	Trouble	+24 volts on card 0, 1, OK	
34.	Trouble	+24 volts on card 2, 3, OK	
35.	Trouble	+24 volts on card 4, 5, OK	
36.	Trouble	+24 volts on card 6, 7, OK	
37.	Trouble	analog card crashed event	
38.	Trouble	programming mode	
39.	Trouble	key stuck	
40.	Trouble	zone in trouble sequence (input)	
41.	Trouble	zone in trouble sequence (output)	
42.	Trouble	duplicate analog detector (input)	
43.	Trouble	duplicate analog detector (output)	
44.	Trouble	missing analog detector (input)	
45.	Trouble	missing analog detector (output)	
46.	Trouble	dirty analog detector	
47.	Status	system idle	
48.	Trouble	analog channel in Class B operation	

49.	Trouble	LCD malfunction	
50.	Status	system in Walk Test	
51.	Status	system out of Walk Test	

F-600 CONFIGURATION FILE DATA STRUCTURE

Version R:7 and above

Sample Configuration File

```
R:7 C: Smart Start Config.
P:Fire
A:1T:0 N:Node Name
I:256 O:256 S:0
B:0 L:20 A:0 S:0 P:1 C:3 M:0 I:16
A:0 R:1 S:1 D:2 B:2 W:2 F:2 C:0 T:2 Y:2
A:0 B:0 E:0 D:0 H:17 M:0 V:2 W:30 R:30 P:30
C:0 I:10
C:1 I:255
C:2 I:255
C:3 I:255
C:4 I:1
N:0 D:0 G:128 A:1 E:2 Q:0 S:1 R:1 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
N:1 D:0 G:129 A:1 E:2 Q:0 S:1 R:1 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
C:5 I:2
N:0 D:0 G:131 A:1 E:0 Q:0 S:0 R:1 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
N:1 D:0 G:132 A:1 E:0 Q:0 S:0 R:1 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
N:2 D:0 G:133 A:1 E:0 Q:0 S:0 R:1 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
N:3 D:0 G:134 A:1 E:0 Q:0 S:0 R:1 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
C:6 I:5
N:1 D:0 G:130 A:1 E:0 Q:0 S:1 R:1 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
C:7 I:7
C:8 I:255
C:9 I:255
C:10 I:255
C:11 I:255
C:12 I:255
C:13 I:255
C:14 I:255
C:15 I:255
C:16 I:255
C:17 I:9
I:0
N:7 D:2 G:24 A:0 S:7 C:1 Z:15 B:0 1:0 2:0 3:0 4:0 5:0 Y:0
O:0
N:122 D:8 G:24 A:1 E:0 Q:0 S:0 R:0 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
I:1
N:4 D:3 G:25 A:25 S:0 C:1 Z:15 B:0 1:0 2:0 3:0 4:0 5:0 Y:0
N:11 D:2 G:25 A:0 S:7 C:1 Z:15 B:0 1:0 2:0 3:0 4:0 5:0 Y:0
N:12 D:2 G:25 A:0 S:7 C:1 Z:15 B:0 1:0 2:0 3:0 4:0 5:0 Y:0
N:13 D:2 G:25 A:0 S:7 C:1 Z:15 B:0 1:0 2:0 3:0 4:0 5:0 Y:0
N:14 D:2 G:25 A:0 S:7 C:1 Z:15 B:0 1:0 2:0 3:0 4:0 5:0 Y:0
O:1
N:8 D:8 G:25 A:1 E:0 Q:0 S:0 R:0 L:0 B:0 1:0 2:0 3:0 4:0 5:0 P:0 I:0 Y:0
I:2
O:2
I:3
O:3
C:18 1:255
C:19 1:255
C:20 1:255
```

//

Fire Alarm
Alarm
Gas
Sprinkler
Trouble
Acknowledge
Reset
Mechanical
Electrical
Boiler
Utility
Extinguishing
Fire
//

Smoke Detector
Heat Detector
Duct Detector
Waterflow
Tamper Switch
Manual Station
Pull Station
Beam Detector
Fire Station
Ionization Smoke Detector
Photo Smoke Detector
Tunnel Heat Detector
PIV Switch
Pressure Switch
Fire Pump
Generator
//

1st.
2nd.
3rd.
4th.
5th.
6th.
7th.
8th.
9th.
10th.
11th.
12th.
13th.
14th.
1 5th.
16th.
17th.
18th.
19th.
20th.

//

Floor Room Number
Floor Corridor
Floor Elevator Lobby
Floor
AHU
Floor-Closet
Level
Floor-Service Elevator Lobby
Sub-level
Basement Level
Sub-basement Level
Basement
Parking Level
Garage Level
Wing
Floor Wing
Atrium
Mezzanine
Ballroom
Kitchen
//

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
//

```
S:01:1 2:1 3:1 4:1 U:USER1
S:11:2 2:2 3:2 4:2 U:USER2
S:21:3 2:3 3:3 4:3 U:USER3
S:31:4 2:4 3:4 4:4 U:USER4
S:01:5 2:5 3:5 4:5 U:USER5
S:01:6 2:6 3:6 4:6 U:USER6
S:01:7 2:7 3:7 4:7 U:USER7
S:01:8 2:3 3:8 4:8 U:USER8
S:01:7 2:1 3:1 4:1 U:USER1
S:01:7 2:2 3:2 4:2 U:USER2
```

```
N:0
I:240000000030000000000000000000000000000000000000000000000000000000000000
I:250000000000000000000000000000000000070000000000000000000000000000000000
I:126000000030000000000000000000000000070000000000000000000000000000000000
C:24 1:2 2:2 3:2 4:2 5:2 6:2
C:25 1:1 2:1 3:1 4:1 5:1 6:1
T:24 1:1 2:1 3:1 4:4 5:0
T:25 1:2 2:0 3:2 4:3 5:0
O:7 1:2 2:1 3:4 4:0 5:0
B:1 1:0 2:0 3:1 4:4 5:0
000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000
```

—-End 0f file----

Configuration Data Descriptions

File Variable

R:7 C:Smart Start Config

R: Revision number of configuration file
C: User configuration name or description (“Smart Start Config” is default) 20 char. Max.

System Variables

P:xxxxxx
P = Alarm prefix - up to 6 characters (“Fire” is default)

A:1 T:0 N:
A = Node number (network firmware Only)
T = Node type (network firmware Only)
0 = Individual type network (default @ SmartStart)
1 = Monolith type network (Not currently available)

N = Node name - up to 20 characters (network firmware Only)

I:256 O:256
I:Total number of input groups
O:Total number of output groups

S:0
S: System type
0=F 650
1=F 630
2=F 632
3=F 610
4=not used

B:00 L:18 A:0 S:0 P:1 C:3 M:0 I:16

B: Total number of bypassed inputs & outputs in system
L: Address of last valid card in system
A: Remote Annunciator exists (1) or not (0)
S: Silence Inhibit delay (0=0 see, 1=30sec, 2=1 min. 3=1min 30 see, 4=2min, 5=2min-30sec, 6=3 min. 7=3min-30sec, 8=4min, 9=4min-30sec, 10=5min)
P: Coded Signal pulse period (0= 5sec, 1=1sec, 2=1.5sec, 3=2sec)
C: Number of Coded Signal Cycles (0=1, 1=2, 2=3, 3=4, 4=5, 5=6, 6=7,7=8)
M: Signal type after coded signals have been completed (0=Silence, 1 =March Time)
I: Auto Silence time (0=2min, 1=2min 30sec, 2=3min, up to 26=15min {default = 10min}.

A:0 R:1 D:2 S:1 B:2 W:2 F:2 C:0 T:2 Y:2

A: Acknowledge Security level
R: Reset Security level
S: Signal Silence Security level
D: Drill Security level
B: Bypass Security level
W: Walk Test Security level
F: Function Key Security Level (F610/F632/F650 systems only)
C: City Connection type (0=Line Reversal, 1=Local Energy Master Box 2=Chicago 3=Dialer)
T: Detector Test Security level (F610/F632/F650 systems only)
Y: Day/Night Security level

A:0 B:0 E:0 D:0 H:17 M:0 V:2 W:30 R:30 P:30

A = Abort key types
0 = *One Shot*. Abort stops timer while held, release after time out. Switch can be activated only once (default)
1 = *Time Expirey*. Abort prevents release while held, release after timer expires and Abort switch released. Multiple actuations allowed
2 = *Immediate*. Abort disables programmed timer, release immediately after switch deactivation
3 = *10 Sec Delay*. Abort disables programmed timer, release 10 to 18 sec after switch deactivation
4 = *Reset Timer*. (Not UL) Abort resets programmed timer while held, release when timer expires. Multiple actuations allowed

B = BC key Supervision control
0=BC keys are not supervised (default)
1=BC keys are supervised

E = Day/Night key enable control
0=Day/Night key not enabled (default @ SmartStart)
1=Day/Night key enabled

D = Day/Night operation control
0=Day/Night operation is Manual (default @ SmartStart)
1=Day/Night operation is Automatic

H = Day mode exit time hour
Valid entries 0-23 (17 default @ SmartStart)

M = Day mode exit time minutes
Valid entries 0-59 (0 default @ SmartStart)

V=Verification tally notification limit. Number of counts per last 30 days.
Valid enties 2-15 (2 default @ SmartStart)

W=Waterflow delay time seconds
Valid entries 5-90 (30 default @ SmartStart)

R=Releasing delay in seconds
Valid entries 15-60 (30 default @ SmartStart)

P=Discharge delay in seconds
Valid entries 0-30 (30 default @ SmartStart)

C:0 I:10

C:Card address, 0 through 39
I:Card ID

Input Card IDs
47=Class B Zone, 4 Circuits
46=Class B Zone, 8 Circuits
45=Ciass A Zone, 4 Circuits
40=Class A Zone, 8 Circuits

output Card IDs
1=CCP4: Signal Circuits, 2 Class A
2=CCP5: Relays, 4 Circuits
3=CCP5: No Relays installed
4=City Tie module
5=CCP6: OUT:City Tie 2 bits, Buzzer, Gnd. Fault,lN: Pwr. super.
14=Building Control, 8 Circuits
15=Building Control, 4 Circuits
48=Class A Signal, 8 Circuits
53=Class A Signal, 4 Circuits
54=Class B Signal, 8 Circuits
55=Class B Signal, 4 Circuits
94=8 Circuits Relays
95=4 Circuits Relays

Display Card IDs
10=CCP0 (F630tF650):A/N display card
11 =CCP0 (F630/F650): A/N with no keys
12=CCP0 (F610) A/N Display card with switches
16=BCD (F632)
18=CCP1 (F620):LED and 8 Tactile Switches
20=RCD (F632)
22=CCP0 (F620):LED and 8 Tactile Switches
24=Red, Green LED, 3 Position Rotary Switches and 8 tactile Switches
26=Red, Green LED and 8 Tactile Switches
28=SCD (F632)
30=Red, Yellow LED and 8 Tactile Switches

Addressable Interface Card IDs
9=Analog Addressable Interface
240=F500 Interface Class A
241=F500 Interface Class B

if I=9 {Analog Addessable interface) then:

I:0

I: lnput devices on channel number
0=1st, 1=2nd, 2=3rd, 3=4th channel

O:0

O: Output devices on channel number
0=1 st, 1 =2nd, 2=3rd, 3=4th channel

if 1=240 or 241 (Flex500 interface) then:

I:0

I: lnput devices on channel number
0=1st, 1=2nd, 2=3rd, 3=4th, 4=5th, 5=6th, 6=7th, 7=8th channel

O:0

O: 0utput devices on channel number
0=1st, 1=2nd, 2=3rd, 3=4th, 4=5th, 5=6th, 6=7th, 7=8th channel

Miscellaneous Card IDs

7=CCP7: Card 7, Vacant
255=Empty card slot

Input Device Variables

N:115 D:11 G:26 A:26 S:0 C:1 Z:15 B:0 1:0 2:0 3:0 4:0 5:00 Y:0

N: Device address/number

D: Device type (F610/F632/F650 only)
0=Conventional Circuit
2=GW-Switch Monitor (PID-95)
3=Analog Addessable-lonization 1
5=Analog Addessable-optical 1
6=Analog Addessable-Thermal 1
7=GW-MCP or Pull Box or PID
10=GW-CZI detector without interrupt
11 =Analog Addessable-lonization 2
13=Analog Addessable-optical 2
14=Analog Addessable-Thermal 2
15=GW-CZI detector with interrupt
16=F500 Input Device
17=F500 Output Device
18=F500 Manual Device

G: lnput group number (F610/F632/F650 only)

A: Detector average (F610/F632/F650 Analog Addessable Detectors only)
if D=6,14 ie Thermal detector then A=average temp
if D=3,5,11,13 ie Photo,lon then A=average count

S: Detector variables (F610/F632/F650 Analog Addessable detectors only)
if D=6, 14 ie Thermal detector then S=alarm temp in °C ((S X 2) -10%)+32 = Alarm Temp in °F)
if D=3,5,11,13 ie Photo,lon then S=sensitivity (0= High , 3 = Low Sensitivity)

C: lnput device variable
if D=0 ie conventional zone
C=0 no end of line resistor
C=1 end of line resistor exists
if D=6, 14 ie Thermal detector then if
C=1 Rate of Rise ON
C=0 Rate of Rise OFF
If D=3, 5, 11, 13 ie Photo lon then if
C=1 Auto compensation is ON
C=0 Auto compensation is OFF

Z:Zone type
Supervisory zone
0=Supervisory zone
1 =Generic zone

Security zones
2=Passive Entry/Exit Security zone
3-Active Entry/Exit Security zone
4=Normal Security zone
5=Active Security zone

Switch zones
6=Activate/Deactivate Security zone
7=Acknowledge zone
8=Drill zone
9=Reset zone
10=Signal Silence zone
11=Abort zone
12=Dump zone

Fire zones.
13=Verification zone
14=Do not use
15=Automatic zone
16=Style zone
17=And zone
20=Water zone
21=Watr zone
23=Watrs zone

B:Device bypass state
0=Not bypassed
1 =Bypassed

1: Dictionary 1 word (0-126)
2: Dictionary 2 word (0-126)
3: Dictionary 3 word (0-126)
4: Dictionary 4 word (0-126)
5: Dictionary 5 word (0-1023)

Y: Bypass Group Assignment

Output Device Variables

N:115 D:11 G:26 A:2 S:0 R:1 L:1 B:0 1:0 2:0 3:0 4:0 5:00 P:0 I:0 Y:0

N: Device address/number
D: Device type (F610/F632/F650 only)
0=Conventional Circuit
1=GW-Signal Sounder Audio (SCE-95)
4=GW—City Tie (CTX-95)
8=GW-Relay SPDT (RCE-95)
9=GW-Signal (SCE-95)
12=GW-Building Control (BCE-95)
17=F500 output Device
G: Output group number (F610/F632/F650 only)
A: Alarm activation level (0-3)
E: Restoration type
0=Reset restore
1=Acknowledge restore
2=Signal Silence restore
Q: Variable for conventional Relay or BC circuit else 0
If I=14,15,94,95 ie card is conventional Relay or BC type then
0=lnstantaneous reset
1 =Sequentially reset

S: Output Variable (default=0)

If D=4 (CTX-95)

0=Normal
1= Common Alarm
2=Supervisory
3=System Trouble

if I=1,48,53,54,55 ie card is a conventional signal type then

1=Steady ON signal
2=60 pulses/min, .50 sec ON/OFF
3=120 pulses/min' .25 sec ON/OFF
4=Temporal signal
5=California signal
6=Coded signals
7=Releasing

R: Variable for Signal, BC conventional circuit else 0

if I=1.48.53.54.55 ie card is Signal type then

0=Signal ckt is not programmed for drill
1=Signal ckt is programmed for drill

if 1=14. 15 ie card is Relav or BC type then

0=OFF relay is programmed for open in auto mode
1=OFF relay is programmed for closure in auto mode

L: Variable for Signal, BC conventional circuit else 0

if 1=1.48 53.54.55 ie card is Signal type then

0=Signal ckt is not programmed for auto signal silence
1=Signal ckt is programmed for auto signal silence

If 1=14. 15 ie card is Relay or BC type then

0=ON relay is programmed for open in auto mode
1 =ONrelay is programmed for closure in auto mode

B: Bypass state

0=Device/ckt is not bypassed
1=Device/ckt is bypassed

1: Dictionary 1 word (0-126)
2: Dictionary 2 word (0-126)
3: Dictionary 3 word (0-126)
4: Dictionary 4 word (0-126)
5: Dictionary 5 word (0-1023)
P: Display Card number (12 - 15, 20 - 23, 28 - 31, 36 - 39) of associated BCE/BCD, RCE/RCD or SCE/SCD combinations.
I: Display Card switch and/or led position(0-7) of associated BCE/BCD, RCE/RCD or SCE/SCD combinations.
Y: Bypass Group Assignment

This table consists of up to 256 lines that represent each of the possible Input Groups. Each set of two characters in the line represents a Hexadecimal number. When these numbers are converted to Binary and configured in rows from LSB to MSB each row represents an output group from 1 to 256. In network systems, there will be separate CBE tables for each node in the network that will oprate ouput groups on this panel.

N:xxx

N:xxx A three digit number (0-250 leading 0s may be omited) identifying the node whos input groups will activate outputs on this panel. A zero (0) indicates this panel, other numbers indicate panel Node numbers of other panels connected to the network which are programmed to activate outputs on this panel. Multiple CBE tables will exist only in network systems.

I:xxx

I:xxx A three digit number (0-255 leading 0s may be omited) identifying the Input group number associated with the following Output group line

Dictionaries

The start and end of each of the 5 word libraries are delimited by two fore slash characters. Word dictionaries 1-4 may have up to 126 entries and dictionary 5 may have up to 1023 entries. Entry 0 in each dictionary should be left blank for default purposes.

```
//
Word dictionary 1, Entry 0
Word dictionary 1, Entry 1
          |
Word dictionary 1, Entry 126(maximum)
//
Word dictionary 2, Entry 0
Word dictionary 2, Entry 1
          |
Word dictionary 2, Entry 126(maximum)
//
Word dictionary 3, Entry 0
Word dictionary 3, Entry 1
          |
Word dictionary 3, Entry 126(maximum)
//
Word dictionary 4, Entry 0
Word dictionary 4, Entry 1
          |
Word dictionary 4, Entry 126(maximum)
//
Word dictionary 5, Entry 0
Word dictionary 5, Entry 1
          |
Word dictionary 5, Entry 1023(maximum)
//
```

Passwords

S:0 1:X 2:X 3:X 4:X U:YYYYYYYY

Total 10 lines

S: 0 is the password security level (0-3)
X is a digit (1-9) of the associated password
Y is a character of the associated user's name (up to 10 characters)

Codes

Up to 256 lines that define the output coding

C:xxx 1:x 2:x 3:x 4:x 5:x 6:x

C:xxx A three digit number (0-255 leading 0s may be omited)identifying the Input Group associated with the designated coding

#:x =Represents a position(#) and a number (x) for the of the coded signal.

Input, output. & Bypass Group Descriptions

Up to 768 lines consisting of up to 256 lines each for Input groups, or output groups, and Bypass groups.

T:xxx 1:X 2:X 3:X 4:X 5:X
O:xxx 1:X 2:X 3:X 4:X 5:X
B:xxx 1:X 2:X 3:X 4:X 5:X

T:xxx A three digit number (0-255 leading 0s may be omited) identifying the Input Group associated with the designated description.

O:xxx A three digit number (0-255 leading 0s may be omited) identifying the Input Group associated with the designated description.

B:xxx A three digit number (0-255 leading 0s may be omited)identifying the Input Group associated with the designated coding

#:X =Represents a word selection X in dictionary #

Bypass Active Indicators

The next four lines are Bypass active indicators for Bypass Groups. The format of these lines is the same as the CBE table.

Drawings/ Misc. Reference:

Micro Processor Module	B-W447
Conventional Zone Module (CIM)	C-W845
Indicating Module (USM)	C-W846
Bus Driver Module	C-W847
Relay Module (RM)	C-W848
Building Control Module (BC)	C-W849
Main Power Supply (MPS-8)	C-W856
Aux Power Supply (APS-8)	C-W857
City Tie Expander (CTX-4)	C-W861
Analog Loop Module (AAM-95)	C-W862
Addressable Loop Module (AM500)	C-W879
Basic Chassis IF632	B-W474
Minimum System IF632	B-W471
Wiring, Solenoid Interface Device used for Releasing Service	A-W532-1

Analog Addressable Compatibility Chart

Manufacturer	Model Number	ID Number	Description	Max Quantity per Circuit
Gamewell	MS-95	---	Manual Pull Station	126[1]
Gamewell	PID-95	---	Contact Monitor	126[1]
Gamewell	PID-95P	---	Contact Monitor on 4 11/16 Cover	126[1]
Gamewell	CZI-95	---	Conventional Zone Interface	40[1]
Analog Addessable	XP95-P	55000-650	Analog Photoelectric Sensor	126[1]
Analog Addessable	XP95-I	55000-550	Analog Ion Sensor	126[1]
Analog Addessable	XP95-T	55000-450	Analog Heat Sensor	126[1]

[1] The maximum number of devices that can be connected to one circuit is 126. Different Analog Addressable modules may be intermixed to achieve the maximum device limit.

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{PRIVATE }{PRIVATE }IDENTIFLEX 632 BATTERY CALCULATION

MODULE		QTY	NORMAL CURRENT	ALARM CURRENT	NORMAL{PRIVATE } TOTAL[1]	ALARM TOTAL[2]
	BDM	1	.205	.337 + signal circuit power + .002 for master box and .022 for reverse polarity		
	CPU	1	.070	.070		
	S+S-	n.a.				
	A+A-	n.a.				
	12VDC	n.a.				
CIM-4			.050	.050 per active ckt		
CIM-8			.090	.050 per active ckt		
CIM-4 W/CIM-SDA			.050	.050 per active ckt .022 per active class a relay		
CIM-8 W/CIM-SDA			.050	.050 per active ckt .022 per active class a relay		
USM-4			.018	.020 PER CKT + signal load		
USM-8			.018	.020 PER CKT + signal load		
USM-4 W/USM-SZA			.018	.020 PER CKT + signal load .022 per active class a relay		
USM-4 W/USM-SZA			.018	.020 PER CKT + signal load .022 per active class a relay		
CTX			.020 +.005 per active ckt	.020 +max .046 per active circuit		
RM-4			.010 +.003 for each inactive feedback point and .006 for each active	Normal +.022 per active circuit		
RM-8			.010 +.003 for each inactive feedback point and .006 for each active	Normal +.022 per active circuit		
BC-4			.010 +.003 for each inactive feedback point and .006 for each active	Normal +.022 per active circuit		
BC-8			.010 +.003 for each inactive feedback point and .006 for each active	Normal +.022 per active circuit		
AM-500			.070	.070		
AM-500 SZA			.050	.050		
				SUB-TOTAL NORMAL CURRENT Carry over to Page 2 ☛		
					SUB- TOTAL ALARM CURRENT Carry over to Page 2 ☛	

[1]NORMAL TOTAL is figured by multiplying the number of modules times the current values for that module

[2]ALARM TOTAL is figured by multiplying the number of modules/active points times the current values for that module

{PRIVATE }IDENTIFLEX 632 BATTERY CALCULATION CHART

MODULE	QTY	NORMAL CURRENT	ALARM CURRENT	NORMAL TOTAL[3]	ALARM TOTAL[4]
			SUB-TOTAL NORMAL CURRENT Carried over from Page 1 ☛		
				SUB- TOTAL ALARM CURRENT Carried over from Page 1 ☛	
AAM95-2		.035	.035		
AAM95-4		.055	.055		
CABINET EXPANDER		.001	.001		
PID95		.0005	.0014 per active device		
RCE-95		.0005	.0015 per active device		
BCE-95		.0008	.0018 per active device		
SCE-95		.0011	.0015 per active device, + notification device current		
CZI-95		.0047 + detector load (.001 max)	.080 max per ckt. .102 per active class A ckt.		
CTX-95		.0025	.022 per active device		
RSM-95		.001	.0015 per active device, + solinoid current		
XP95-i		.000280	.00228 per active device		
XP95-P		.000340	.00434 per active device		
XP95-T		.000250	.00225 per active device		
			SUB-TOTAL NORMAL CURRENT Page 2 ☛		
				SUB- TOTAL ALARM CURRENT Page 2 ☛	
ALARM PERCENT CALCULATION 10 = 10% 100 = 100% ☛			TOTAL NORMAL CURRENT Page 1 + Page 2 ☛		
	X			TOTAL ALARM CURRENT Page 1 + Page 2 ☛	
HOURS OF STANDBY		TIMES TOTAL NORMAL CURRENT	EQUALS NORMAL A.H.	NORMAL A.H.	
				PLUS ALARM A.H.	
				= TOTAL X 1.25	
				Total AH Batt REQUIRED[5]	
	X				
MINUTES OF ALARM[6]		TIMES TOTAL ALARM CURRENT	EQUALS ALARM A.H.		

[3]NORMAL TOTAL is figured by multiplying the number of modules times the current values for that module

[4]ALARM TOTAL is figured by multiplying the number of modules/active points times the current values for that module

[5]Maximum of 50 AH Permitted

[6]Minutes of alarm is figured by dividing the minutes required by 60. 5 minutes divided by 60 equals .083 minutes

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MANUAL ADDENDUM

Firmware Version 7.1

Supplement to the Installation and Operation Manuals
For
IF-610 (p/n 71810 issue 3 or higher),
IF-632 (p/n 71906 Release: 2 or higher),
IDENTIFLEX 600 Stand Alone Panel firmware version r7 manual supplement (p/n 71956 issue 1 or higher) for IF 630/650/650E.

The Gamewell Company
60 Pleasant Street
Ashland, MA 01721

Part No. 72118
Issue A
9/27/2001

PROPRIETARY MATERIAL

GENERAL INFORMATION

Gamewell. thanks you for choosing the IF 600 to serve your monitor and control signaling needs. As with all our products we have taken great care to insure that we have provided a quality Fire Alarm Control Panel. To receive maximum benefit and many years of reliable service we would like to make the following recommendations:

1. **Read this manual carefully** and in it's entirety before proceeding with the of the programming of the IF 600 control panel. The contents of this manual adds features and functions to the contents of your Identiflex 600 manual.

2. Gamewell spends many hours testing devices that are supplied by Gamewell. to be used with it's control panels to verify compatibility. **To maximize system performance, and minimize risk of damage to the equipment, we recommend using all Gamewell components.**

3. **There is no substitute for proper maintenance and testing** of this or any life safety product. Gamewell recommends testing and maintenance of your IF 600 system in accordance with the guidelines set forth by the National Fire Protection Association, be done on a regular basis, as a minimum.

4. **This addendum and the IF 600 manual should be stored with the IF 600 panel** for future reference to the operation and programming of the installed IF 600 System, and should not be removed.

Thank you again for choosing Gamewell. If you have any comments regarding your IF 600 Analog Addressable Control Panel, or other Gamewell products, please feel free to contact us at:

Gamewell
60 Pleasant St.
Ashland, MA 01721

Phone: (508) 231-1400
Fax: (508) 231-0900

E-Mail: gamewellco@aol.com
Web Site: http://www.gamewell.com

GENERAL

This addendum contains the information required to utilize new features and functions incorporated into Version 7.1 of the IF 600 operating firmware. When using these features, follow the instructions contained in this addendum.

All of the features and functions described in the manual that accompanied the system are unchanged and perform as described in the original manual(s).

NEW FEATURES

XP95-M Analog Addressable Multisensor Detector.

The Multisensor Detector includes both Photoelectric and Thermal sensing elements integrated into a single head. The obscurity information from the Photoelectric sensor is combined with the rate of rise information from the Thermal sensor, by a custom microprocessor, into the data count that is sent to the FACP for processing. The microprocessor also performs drift compensation for the photoelectric sensor as contaminants build up within the detection chamber. When the compensation reaches it's set limits, the microprocessor signals the FACP of the need to clean the detector. The microprocessor also monitors all of the internal functions of the detector and, if any problem arises, signals the FACP of a trouble.

Installation

The XP95-M installs in the standard Series 95 bases in the same manner as all of the other Series 95 Detectors.

Programming

The XP95-M has a nominal, fixed, sensitivity of 2.4%/ft., and compensation is accomplished within the detector itself. When programming inputs, any device detected or programmed as an XP95-M will have the word "**Multi**" in the *D_TYPE* location, and will not have the *SENS* or *COMP* selections available.

All other programming of the input is the same as other detectors.

Multisensor Detector (Cont.)

DEVICE TEST TABLE
Input Device

Display Panel	Description	Trouble / No Feedback	Background	Dirty	Pre-Alarm on 1st	Alarm / Shorted/ Active
Ion	Ionization Detector	0 - 9	10 - 40	41 - 44	Background + 26	Background + 36
Opt.	Photo Detector (non-comp.)	0 - 9	20 - 30	41 - 44	25 + (sensitivity x 6) + 8	25 + (sensitivity x 6) + 18
Opt.	Photo Detector (Compensated)	0 - 9	10 - 40	41 - 44	Background + (sensitivity x 6) + 8	Background + (sensitivity x 6) + 18
Heat	Thermal Detector	0 - 7	10 - Fixed Value (ºC)	*NA*	*NA*	Above Fixed Value
Multi	Multisensor Detector	0 - 9	18 - 32	33 - 44	45 - 54	55 - 127
CZI or CZII	CZI-95	0 - 16	17 - 54	*NA*	*NA*	55 - 122 2nd Alarm above 122
PID or MAN	PID - 95 or MS - 95	0 - 9	10 - 54	*N/A*	*N/A*	55 - 127
REL	RCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127
RSM	RSM-95	0 – 14	15 – 45	*NA*	*NA*	46 - 127
SCE or Snd.	SCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127

DEVICE TYPE TABLE - P3

Display Panel	Description
Ion.	Ionization Sensor
Opt .	Photo-Electric Sensor
Heat	Thermal Sensor
Multi	Multi sensor, combined Photo and Thermal sensing
Mon.	Point Identification Device (contact monitor)
Man.	Manual Station (or PID with priority interrupt set)
CZI	Collective Zone Interface
CZII	Collective Zone Interface (with priority interrupt set)

Programmable Sounder Bases

As in previous versions of the IF 600 firmware, when Analog addressable Sounder Bases (XP-95 B6SNDR) are used with analog addressable detectors, their default mode of operation is to follow the attached detector. If the detector goes into alarm, the sounder in it's base activates. When the detector is reset, the sounder silences.

The Ver. 7.1 firmware allows the sounders in the sounder bases to be programmed through the panel's CBE table, making them appear as normal output devices.

A typical application could be in hotels or dormitories, where the activation of a detector in any one of a group of rooms could sound an audible alarm in the entire group without the need for separate notification appliances.

Programming:

1. In the "Programming/Circuits/Inputs" menu; Select zone type **AutSB** (Automatic Detector with Sounder base) or zone type **AutSBS** (Automatic Detector with Sounder base, Silenceable) The **AutSBS** type can be silenced with the system's SIGNAL SILENCE commands.

2. Assign an input group number to the device with the sounder base.

3. The assigned input group number also functions as the output group number for the sounder in the detector base. Assign appropriate input group numbers to the system input devices and program the CBE tables to provide the desired operation.

4. The sounder in the base of any detector programmed for zone type **AutSB** or **AutSBS** will also sound when output group #254 is activated. This "all call" output group facilitates programming of applications that require all sounders to operate at one time.

Note:

While this feature was incorporated to allow independent control of the sounders in sounder bases, The same programming will provide control of the relays in relay bases, or the LEDs in standard bases.

Programmable Sounder Bases (Cont.)

ZONE TYPE TABLE - P2

Display Panel	Name	Description
Ver	Verification	Automatically verifies the device). (Default program, after a 45 sec. Min., 60 sec. Max Reset/Stabilization delay, monitors the device for 60 seconds to verify an alarm condition.
Auto	Automatic	Places the panel into General Alarm
AutSB	Automatic detector with Sounder Base	Places the panel into General Alarm. The Sounder in the base has the same group number as the detector, and is a CBE programmable output. Activating output group 254 will activate all Sounder Bases in the system.
AutSBS	Automatic detector with Sounder Base, Silenceable	Same as AutSB, plus the Sounder in the base can be silenced by SIGNAL SILENCE commands.
Gener	Generic	All the device control functions are active without placing the system in a general alarm condition at the panel.
And	And Initiating Zone	Two stage automatic detection.
Ack	Acknowledgment	Remote location acknowledgment
Drill	Drill	Remote drill system condition.
SigSil	Signal Silence	Remote location Signal Silence
Reset	Reset	Remote reset of the panel - resets system.
Abort	Abort	Delays or stops discharge cycle
Dump	Dump	Initiates discharge manually
Super	Supervisory	Sprinkler Supervisory signal input
Water	Water flow	Water flow, non silenceable
Watr	Water flow delayed	Water flow, delayed, non silenceable
Watrs	Water flow delayed	Water flow, delayed, silenceable

Multi protocol UDACT support

Panel firmware version 7.1 supports the UDACT 600/610 multi protocol UDACT.

For installation, programming and operation, refer to the manual which accompanies the UDACT 600/610.

MANUAL ADDENDUM

Firmware Version 7.1

Supplement to the Installation and Operation Manuals
For
IF-610 (p/n 71810 issue 3 or higher),
IF-632 (p/n 71906 Release: 2 or higher),
IDENTIFLEX 600 Stand Alone Panel firmware version r7 manual supplement (p/n 71956 issue 1 or higher) for IF 630/650/650E.

The Gamewell Company
60 Pleasant Street
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Part No. 72118
Issue A
9/27/2001

PROPRIETARY MATERIAL

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Thank you again for choosing Gamewell. If you have any comments regarding your IF 600 Analog Addressable Control Panel, or other Gamewell products, please feel free to contact us at:

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GENERAL

This addendum contains the information required to utilize new features and functions incorporated into Version 7.1 of the IF 600 operating firmware. When using these features, follow the instructions contained in this addendum.

All of the features and functions described in the manual that accompanied the system are unchanged and perform as described in the original manual(s).

NEW FEATURES

XP95-M Analog Addressable Multisensor Detector.

The Multisensor Detector includes both Photoelectric and Thermal sensing elements integrated into a single head. The obscurity information from the Photoelectric sensor is combined with the rate of rise information from the Thermal sensor, by a custom microprocessor, into the data count that is sent to the FACP for processing. The microprocessor also performs drift compensation for the photoelectric sensor as contaminants build up within the detection chamber. When the compensation reaches it's set limits, the microprocessor signals the FACP of the need to clean the detector. The microprocessor also monitors all of the internal functions of the detector and, if any problem arises, signals the FACP of a trouble.

Installation

The XP95-M installs in the standard Series 95 bases in the same manner as all of the other Series 95 Detectors.

Programming

The XP95-M has a nominal, fixed, sensitivity of 2.4%/ft., and compensation is accomplished within the detector itself. When programming inputs, any device detected or programmed as an XP95-M will have the word "**Multi**" in the *D_TYPE* location, and will not have the *SENS* or *COMP* selections available.

All other programming of the input is the same as other detectors.

Multisensor Detector (Cont.)

DEVICE TEST TABLE
Input Device

Display Panel	Description	Trouble / No Feedback	Background	Dirty	Pre-Alarm on 1st	Alarm / Shorted/ Active
Ion	Ionization Detector	0 - 9	10 - 40	41 - 44	Background + 26	Background + 36
Opt.	Photo Detector (non-comp.)	0 - 9	20 - 30	41 - 44	25 + (sensitivity x 6) + 8	25 + (sensitivity x 6) + 18
Opt.	Photo Detector (Compensated)	0 - 9	10 - 40	41 - 44	Background + (sensitivity x 6) + 8	Background + (sensitivity x 6) + 18
Heat	Thermal Detector	0 - 7	10 - Fixed Value (ºC)	*NA*	*NA*	Above Fixed Value
Multi	Multisensor Detector	0 - 9	18 - 32	33 - 44	45 - 54	55 - 127
CZI or CZII	CZI-95	0 - 16	17 - 54	*NA*	*NA*	55 - 122 2nd Alarm above 122
PID or MAN	PID - 95 or MS - 95	0 - 9	10 - 54	*N/A*	*N/A*	55 - 127
REL	RCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127
RSM	RSM-95	0 – 14	15 – 45	*NA*	*NA*	46 - 127
SCE or Snd.	SCE - 95	0 - 14	15 - 45	*NA*	*NA*	46 - 127

DEVICE TYPE TABLE - P3

Display Panel	Description
Ion.	Ionization Sensor
Opt .	Photo-Electric Sensor
Heat	Thermal Sensor
Multi	Multi sensor, combined Photo and Thermal sensing
Mon.	Point Identification Device (contact monitor)
Man.	Manual Station (or PID with priority interrupt set)
CZI	Collective Zone Interface
CZII	Collective Zone Interface (with priority interrupt set)

Programmable Sounder Bases

As in previous versions of the IF 600 firmware, when Analog addressable Sounder Bases (XP-95 B6SNDR) are used with analog addressable detectors, their default mode of operation is to follow the attached detector. If the detector goes into alarm, the sounder in it's base activates. When the detector is reset, the sounder silences.

The Ver. 7.1 firmware allows the sounders in the sounder bases to be programmed through the panel's CBE table, making them appear as normal output devices.

A typical application could be in hotels or dormitories, where the activation of a detector in any one of a group of rooms could sound an audible alarm in the entire group without the need for separate notification appliances.

Programming:

1. In the "Programming/Circuits/Inputs" menu; Select zone type **AutSB** (Automatic Detector with Sounder base) or zone type **AutSBS** (Automatic Detector with Sounder base, Silenceable) The **AutSBS** type can be silenced with the system's SIGNAL SILENCE commands.

2. Assign an input group number to the device with the sounder base.

3. The assigned input group number also functions as the output group number for the sounder in the detector base. Assign appropriate input group numbers to the system input devices and program the CBE tables to provide the desired operation.

4. The sounder in the base of any detector programmed for zone type **AutSB** or **AutSBS** will also sound when output group #254 is activated. This "all call" output group facilitates programming of applications that require all sounders to operate at one time.

Note:

While this feature was incorporated to allow independent control of the sounders in sounder bases, The same programming will provide control of the relays in relay bases, or the LEDs in standard bases.

Programmable Sounder Bases (Cont.)

ZONE TYPE TABLE - P2

Display Panel	Name	Description
Ver	Verification	Automatically verifies the device). (Default program, after a 45 sec. Min., 60 sec. Max Reset/Stabilization delay, monitors the device for 60 seconds to verify an alarm condition.
Auto	Automatic	Places the panel into General Alarm
AutSB	Automatic detector with Sounder Base	Places the panel into General Alarm. The Sounder in the base has the same group number as the detector, and is a CBE programmable output. Activating output group 254 will activate all Sounder Bases in the system.
AutSBS	Automatic detector with Sounder Base, Silenceable	Same as AutSB, plus the Sounder in the base can be silenced by SIGNAL SILENCE commands.
Gener	Generic	All the device control functions are active without placing the system in a general alarm condition at the panel.
And	And Initiating Zone	Two stage automatic detection.
Ack	Acknowledgment	Remote location acknowledgment
Drill	Drill	Remote drill system condition.
SigSil	Signal Silence	Remote location Signal Silence
Reset	Reset	Remote reset of the panel - resets system.
Abort	Abort	Delays or stops discharge cycle
Dump	Dump	Initiates discharge manually
Super	Supervisory	Sprinkler Supervisory signal input
Water	Water flow	Water flow, non silenceable
Watr	Water flow delayed	Water flow, delayed, non silenceable
Watrs	Water flow delayed	Water flow, delayed, silenceable

Multi protocol UDACT support

Panel firmware version 7.1 supports the UDACT 600/610 multi protocol UDACT.

For installation, programming and operation, refer to the manual which accompanies the UDACT 600/610.

XP95-M Analog Addressable Multisensor Detector

Supplement to the Installation and Operation Manuals

For

The IF-610 (p/n 71810 issue 3 or higher), IF-632 (p/n 71906 Release: 2 or higher), and the IDENTIFLEX 600 Stand Alone Panel firmware version r7 manual supplement (p/n 71956 issue 1 or higher).

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Installation

The XP95-M installs in the standard Series 95 bases in the same manner as all of the other Series 95 Detectors.

Programming

The XP95-M has a nominal, fixed, sensitivity of 2.4%/ft., and compensation is accomplished within the detector itself. When programming inputs, any device detected or programmed as an XP95-M will have the word "**Multi**" in the *D_TYPE* location, and will not have the *SENS* or *COMP* selections available.

All other programming of the input is the same as other detectors.

Battery Calculations and Device Test

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Input Device

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XP95-M Multisensor Operating Specifications

Supply voltage	14 – 28 VDC
Idle current	.00050 A
Alarm current	.00385 A
Operating temperature	-20ºC to +60ºC
Humidity	0 to 95% w/o condensation