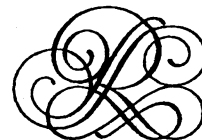


Rodgers
Instrument Corporation

602

Owner's Manual



RODGERS®
INSTRUMENT CORPORATION



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING:
TO REDUCE THE RISK OF
FIRE OR ELECTRIC
SHOCK, DO NOT EXPOSE
THIS APPLIANCE TO RAIN
OR MOISTURE.

PATENTS
G.B. 1312161
F.R.G. 22 02 658
CANADIAN 951550
(1974)

ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

**CAUTION: TO REDUCE THE RISK OF
ELECTRICAL SHOCK:**

DO NOT REMOVE COVER OR BACK.

NO USER-SERVICEABLE PARTS INSIDE.

**REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.**

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

NOTICE TO USERS

Information in this document is subject to change without notice. No part of this manual may be translated into any language, stored in a retrieval system, reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose without the express written permission of **Rodgers Instrument Corporation**.

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Richmond, B.C. V6V 2M4
(604) 270-6332

SAFETY INSTRUCTIONS

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using this instrument, always follow basic precautions, including the following:

1. Read all the instructions before using, adjusting or repairing this instrument.
2. To reduce the risk of injury, supervise children closely when they are around the instrument.
3. Use this instrument only in the manner recommended by Rodgers Instrument Corporation.
4. Do not use this instrument near water, for example, near a swimming pool or a damp/wet room.
5. Use of this instrument, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
6. Locate the instrument so its position does not interfere with its proper ventilation.
7. Locate the instrument away from heat sources such as radiators, heat registers or other products that radiate heat directly onto the instrument.
8. Protect the instrument from dust as much as possible.
9. Connect the instrument to a power source only of the type described in the operating instructions or as marked on the instrument. Do NOT attempt to defeat the grounding connection of the three-prong attachment plug. *This is a safety feature.* If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do NOT defeat the safety purpose of the plug.
10. Unplug the power cord of the instrument from the power source when left unattended for a long period of time.
11. Do not walk on or place objects on top of the power cord.
12. Do not pull the cord to unplug. Hold the plug when unplugging from the power source.
13. When setting up with other instruments or peripherals, follow the procedures in accordance with Rodgers' owner's manual.
14. Take care that objects do not fall or liquids spill into the instrument.
15. Service the instrument with qualified service personnel when:
 - a. The power cord or plug has been damaged.
 - b. Objects have fallen or liquid has spilled into the instrument.
 - c. The instrument has been exposed to rain or other weather damage.
 - d. The instrument does not appear to operate normally or exhibits a marked change in performance.
 - e. The instrument has been dropped or the enclosure has been damaged.
16. Do not attempt to service the instrument beyond that described in the owner's manual. Refer all other servicing to qualified technical service personnel.

WARNING: THIS INSTRUMENT MUST BE EARTH GROUNDED.
You must GROUND instruments equipped with a TYPE AC, 3 WIRE GROUND PLUG.

SAVE THESE INSTRUCTIONS

Radio and Television Interference

The Rodgers 602 uses and generates small amounts of radio-frequency (RF) energy. The instrument complies with the limits set for Class B digital devices. FCC Rules, Part 15, Subpart B define the limits for radio and television interference in a residential installation.

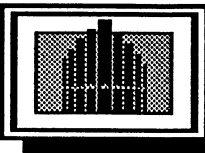
Follow the installation and the use instructions in the manual, or the instrument could potentially cause interference with some radio or television reception. In the unlikely event this occurs, we encourage the user to try the following corrective measures:

- ✓ Turn the instrument OFF to see if it is the actual source of the interference.
- ✓ Disconnect the peripheral devices and their input/output cables one at a time. If the interference stops, it is caused by the peripheral device or its I/O cable.
- ✓ Try coiling and uncoiling the instrument's power cord in different ways.
- ✓ Connect the instrument's power cord to a power outlet on a different circuit.
- ✓ Move the instrument further away from the radio or television receiver.
- ✓ Turn the radio or television receiver until the interference stops.
- ✓ Connect the radio or television receiver to a different power circuit.
- ✓ Reorient or move the receiver antenna further away from the instrument. Consider installing a rooftop antenna with coaxial cable lead-in between the antenna and receiver.
- ✓ Consult the nearest Rodgers dealer for more information if the above corrective measures don't remove the interference.

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OVERVIEW OF THE 602

Thank you for choosing the Rodgers 602. This instrument is a high quality classical organ in both sound and construction, designed to provide years of reliable service.

This instrument is a two-manual classical organ that incorporates an eclectic specification and authentic pipe organ sounds. The 602 has 29 speaking stops, dual expression, a two-channel (stereo) audio system with external speakers and many other features.

The console is constructed of the finest woods and veneers, suitable in the most elegant surroundings. It is unsurpassed in beauty and longevity.

The 602 utilizes lighted tilt tab stop controls. Traditional couplers are included, as well as an adjustable combination action (pistons) featuring Generals with two levels of memory.

This instrument is completely voiced and tuned for optimum tonal authenticity. A Rodgers factory-trained technician can provide additional voicing and finishing as required.

The 602 offers full MIDI (Musical Instrument Digital Interface) capability, allowing the organist to control other MIDI devices (keyboards, sequencers, rhythm units, sound modules, etc.). MIDI allows the performer full recording and playback capabilities using an external MIDI device.

Rodgers organs are built in Hillsboro, Oregon, USA. Through the most advanced technology available, the Rodgers Instrument Corporation, a member of the Roland Group, delivers proven reliability, design innovation and a tradition of musical excellence, marking our position as

The sound choice!

"Leadership through technology for the musician of today and tomorrow."





BRIEF TOUR

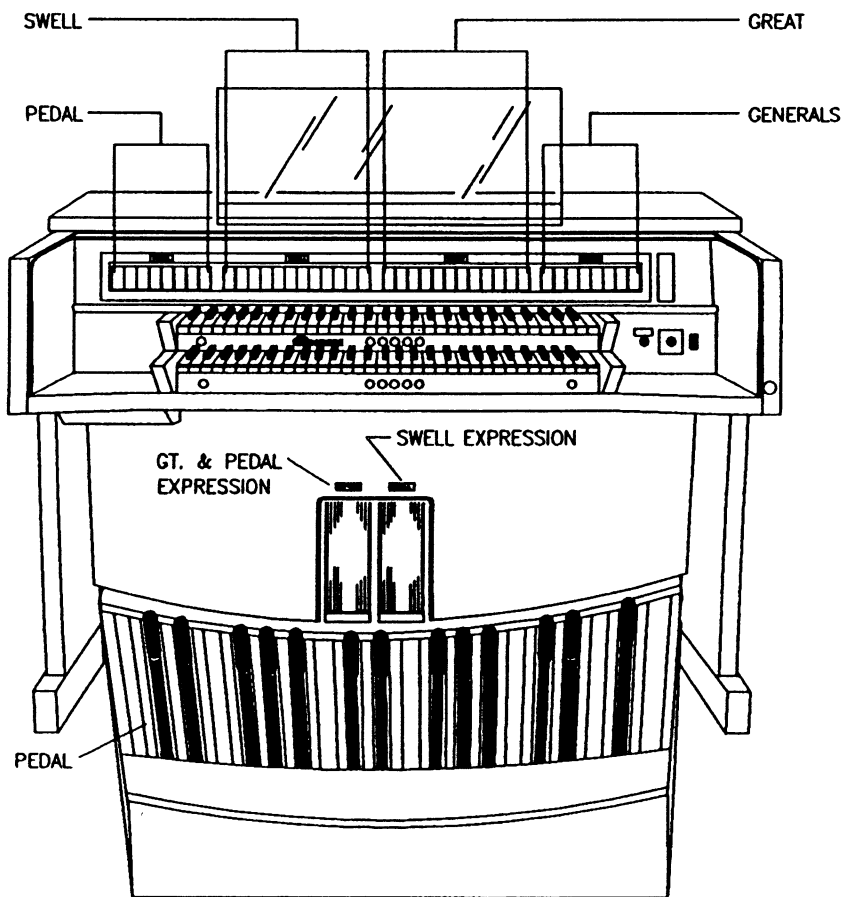
To get started, here is a brief tour of the basic operations of the Rodgers 602:

TURN ON/TURN OFF

To turn the organ on, press the power rocker switch at the top (I). In approximately 5 seconds, the SET and General Cancel pistons will light, indicating the power is on and the organ is ready to play. To turn the power off, press the power rocker switch at the bottom (O). The power to the organ is off.

DIVISIONS

The following groupings of stops (tilt tabs) affect the indicated manuals (keyboards) or pedalboard:



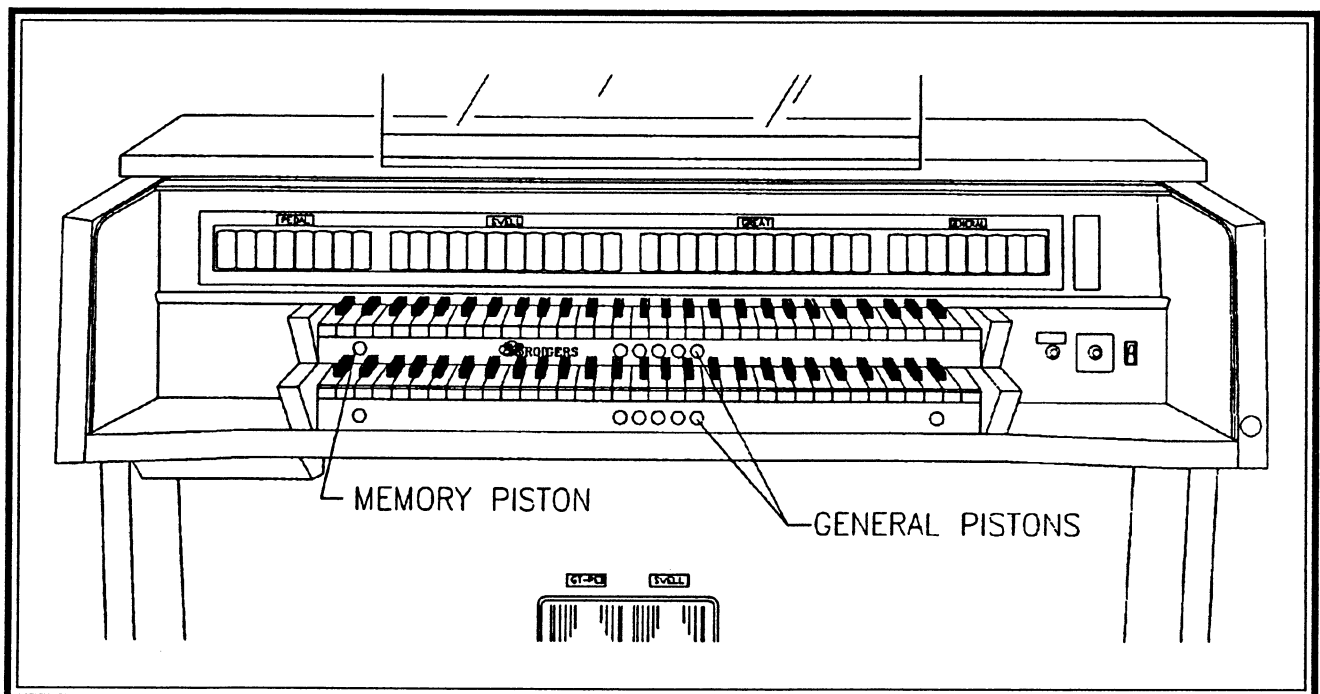
SELECTING OR RETIRING A STOP

Press the bottom of the desired tilt tab to turn it on. It will light, indicating it is on. Press the top of the tilt tab to turn off the stop. The light will go off, indicating the stop is off.

COMBINATION ACTION (Pistons)

The 602 features a combination action easily changed by the organist from the console. The organist can pre-select favorite registrations and make rapid changes in tone color using this advanced system. The pistons will light when pressed.

The 602 combination action includes 10 General pistons with two memory levels. A SET piston and a General Cancel piston are also included. General pistons affect all Divisions of the organ (Great, Swell and Pedal).



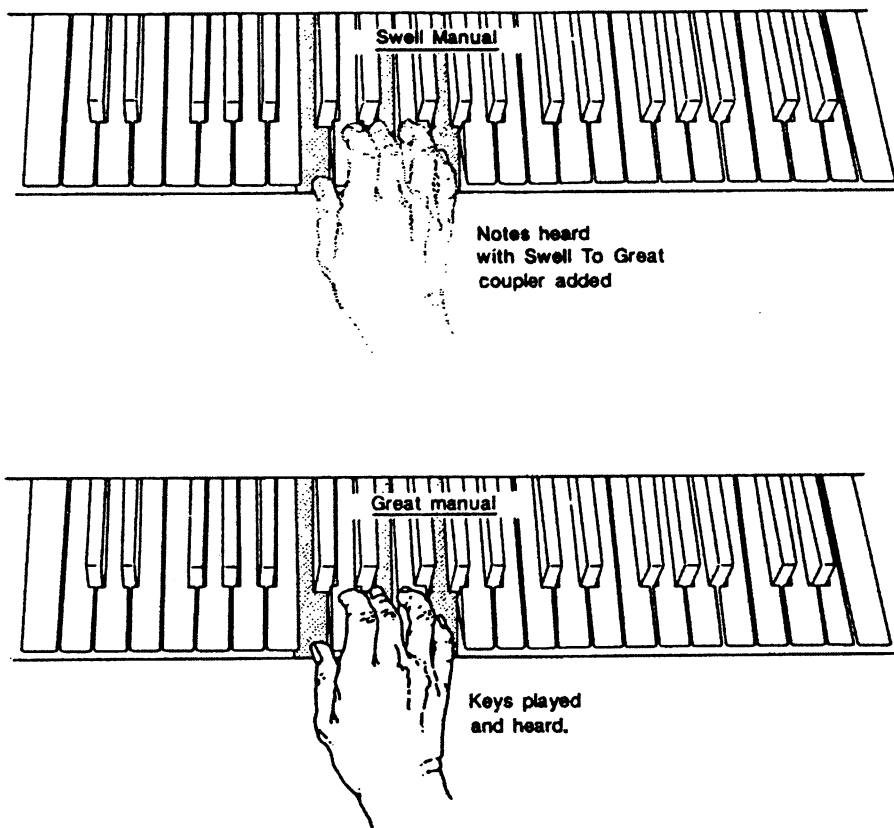
• HOW TO SET THE PISTONS:

1. Select the stops desired.
2. Press the SET piston and hold.
3. While holding the SET piston, press the desired piston, and then release both pistons simultaneously.

Note: Selecting M2 before steps 1-3 will activate a second memory, thereby doubling the number of combinations available.

COUPLERS

• Couplers enable stops of one Division to be played on another keyboard or pedalboard. The couplers on the 602 are GREAT TO PEDAL, SWELL TO PEDAL and SWELL TO GREAT.



TREMULANTS

Tremulants create changes in pitch (sharp and flat) or amplitude (volume). The use of tremulants adds warmth to solo or small ensemble combinations and is useful in gospel and romantic music. The 602 has a main TREMULANT that affects all manual voices. It also has a SWELL FLUTE TREMULANT FULL that affects all the flute voices on the Swell manual. This tremulant has a wider excursion (depth) and faster rate than the other tremulant. The tremulants are adjustable for both speed and depth. It is recommended these adjustments be made by A Factory-Trained Technician.

EXPRESSION PEDALS

The pedal on the right controls the overall volume of the Swell Division. The pedal on the left controls the overall volume of the Great and Pedal Divisions. These pedals are used to give variety of expression to the music played. Pressing the pedal forward increases the volume; drawing back decreases the volume.

When the **EXPRESSION PEDALS** are in use, the Expression indicators will light in green segments (from bottom to top) as the pedal is depressed and more volume is created. The Expression indicators are located to the right of the stop rail above the Swell manual, and are engraved **GT** and **SW**.

Note: The indicators will reflect the actual expression of volume, not necessarily the physical position of the Expression Pedal.

GREAT TO SWELL EXPRESSION COUPLER

The **GREAT TO SWELL EXPRESSION COUPLER** allows the Great and Swell Divisions to be expressed by using the Swell Expression Pedal.



THE BASS COUPLER

This feature's name is derived from the ancient term "Basso Continuo," meaning thoroughbass. When this tilt tab is pressed, it will light. Any stops or couplers on in the Pedal Division will sound from the lowest key being played on the Great manual. This provides a pedal bass without having to actually play the pedalboard with the feet.

In its normal setting, the Bass Coupler affects keys 1 through 24 of the Great manual, but its range is programmable.

• HOW TO SET THE RANGE OF THE BASS COUPLER:

1. Hold SET and press the BASS tilt tab, which will start flashing.
2. Release the SET piston and BASS tilt tab.
3. While the BASS tilt tab is flashing, press a key which corresponds to the highest note the range is to extend. Any note from key 1 to key 61 may be selected. Keys above 36 will play external MIDI devices but will not play the Pedal stops. After the selected key has been pressed, the BASS tilt tab will stop flashing.

Note: When a key is pressed to set the range, no sound will be heard even if stops are on, so no disturbance will be made if programming during a performance.



THE MELODY COUPLER

When the MELODY tilt tab is pressed, it will light. Any stop or coupler of the Swell Division will sound from the highest key being played on the Great manual. This allows a solo melody and an accompaniment to be played from the same manual.

In its normal setting, the Melody Coupler affects keys 25 through 61 on the Great manual, but its range is programmable.

• HOW TO SET THE RANGE OF THE MELODY COUPLER:

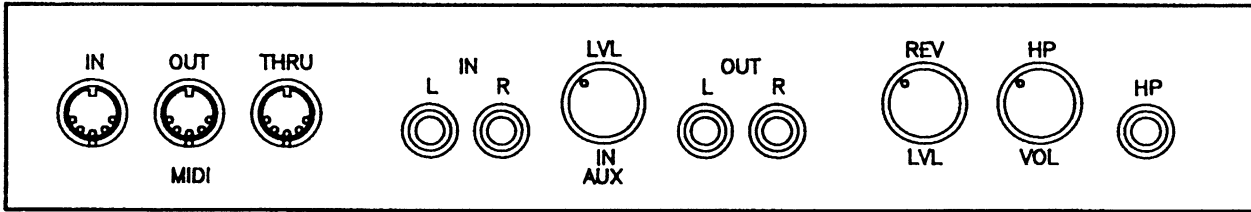
1. Hold SET and press the MELODY tilt tab, which starts flashing.
2. Release the SET piston and MELODY tilt tab.
3. While the MELODY tilt tab is flashing, press a key which corresponds to the lowest note the range is to extend. Any note from key 1 to key 61 may be selected. After the selected key has been pressed, the MELODY tilt tab will stop flashing.

Note: When a key is pressed to set the range, no sound will be heard even if stops are on, so no disturbance will be made if programming during a performance.



USER I/O PANEL

The Rodgers USER I/O PANEL allows the organist to conveniently make adjustments to the headphone volume level, reverb level, auxiliary audio input level and to make audio input and output and MIDI in/out and thru connections from the front of the organ. This panel is located under the keydesk on the left side. The following descriptions detail the controls and their functions:



MIDI IN/OUT/THRU

These are the jacks used to connect the Rodgers organ to an external sequencer, voice module, computer or other external MIDI device or instrument.

AUXILIARY INPUTS (Left and Right)

These are AUXILIARY AUDIO INPUTS allowing the organist to connect the audio outputs of a MIDI voice module, cassette player, compact disc player or other stereo audio device to the organ. This allows the sound of the audio device to be heard through the organ speakers.

AUXILIARY INPUT LEVEL

This control allows you to increase or decrease the volume level of the external audio device connected to the auxiliary audio inputs. This is factory set and rarely has to be changed, but is provided should the volume level of the external device need adjustment.

AUXILIARY OUTPUTS (Left and Right)

These AUXILIARY AUDIO OUTPUTS may be connected to the audio inputs of an external audio mixer, amplifier, cassette recorder, DAT recorder, VHS-HIFI VCR or other external audio or audio/video device of this type.

REVERB LEVEL

This control adjusts the amount of digital reverberation affecting the organ voices.

HEADPHONE VOLUME AND JACK

The volume level of the headphone set is adjusted by this control.

The 602 has a headphone jack. When a set of headphones is plugged into the jack, the speaker system shuts off, allowing the organist privacy when playing. It is recommended you use stereo headphones with an impedance of not less than 8 ohms (Ω).

SUSTAIN SWITCH

This switch is located on the far left side of the Great/Pedal expression pedal. This switch will sustain voices playing from the MIDI ON GREAT coupler. Press the switch to sustain, release to stop. Pressing this switch sends a MIDI Sustain Message on the MIDI ON GREAT coupler channel. If the MIDI ON GREAT coupler is on, then pressing the sustain switch will cause a MIDI Sustain Message to be sent out of the corresponding MIDI Channel.

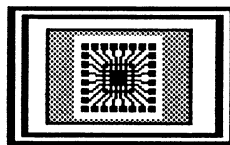
TUNING CONTROL

The 602 is equipped with a TUNING control. This allows the entire organ to be tuned easily and quickly to a piano or musical instrument not at standard concert pitch (A 440). If the TUNING control is pushed in, the organ will remain at standard concert pitch, and turning the control will have no effect. To alter the pitch, pull the TUNING control out until it clicks, then turn the control to set the pitch.

TRANSPOSER CONTROL

Turning the TRANSPOSER control will raise or lower the pitch of the organ up to four semitones (half steps). Many singers need a key change to accommodate their voice range. The TRANSPOSER is especially useful for accompanying soloists, eliminating the need to mentally transpose music on a printed sheet into a more suitable key. The TRANSPOSER helps the organist





MIDI (Musical Instrument Digital Interface)

The Rodgers 602 features velocity-sensing keyboards and possesses some of the most advanced MIDI capabilities in the world. MIDI voices are activated via three MIDI coupler tilt tabs. The MIDI channels these coupler tilt tabs control are:

Great Channel	1*	MIDI ON GREAT
Swell Channel	2	MIDI ON SWELL
Pedal Channel	3	MIDI ON PEDAL

* May be changed to any of the sixteen MIDI channels.

To change this channel, see "Channel Reassignment."

SENDING A PROGRAM CHANGE

1. Hold SET and press the bottom of a MIDI coupler tilt tab. The tilt tab will flash, indicating the MIDI Set Mode is active. Release SET and the MIDI coupler.
2. Choose the desired Program Change (sound), and press the corresponding key (see the Program Change chart).

PROGRAM CHANGE CHART		
	KEY	PROGRAM CHANGE
GREAT	LOW C - HIGH C	1 - 61
SWELL	LOW C - HIGH C	62 - 122
PEDAL	LOW C - LOW F	123 - 128

If SET is held while pressing a key to send a Program Change, the Program Change will be sent, but the MIDI Set Mode will be "locked on." Once this happens, further Program Changes may be sent by holding SET and pressing a corresponding key. This allows the organist to try several sound selections until the appropriate one is found. The MIDI Set Mode will remain active until the flashing MIDI coupler or General Cancel is pressed.

Once a Program Change has been sent on a MIDI coupler, that same Program Change will be sent each time the tilt tab is activated. The Program Change will also be saved on any combination piston including that MIDI coupler.

VELOCITY INFORMATION

As a default, the Great and Swell MIDI channels send detected velocity messages. The harder a key is played, the louder the MIDI sound will be. The Pedal always sends a fixed velocity.

It is possible to have the Great or Swell MIDI coupler send a fixed velocity message. To change the Great or Swell MIDI coupler from detected velocity to fixed velocity:

1. Hold SET and press the MIDI coupler to be changed. The coupler will flash. Release SET and the MIDI coupler.
2. Press the sustain switch which is located at the left of the Great/Pedal Expression Pedal. The coupler will stop flashing.

To change the coupler back to detected velocity, repeat steps 1 and 2 under “Velocity Information.” The velocity status of the Great and Swell MIDI couplers will be stored in the combination action of the organ.

CHANNEL REASSIGNMENT

All MIDI couplers transmit on fixed channels except MIDI ON GREAT. To set the transmit channel for this coupler:

1. Hold SET and press the bottom of MIDI ON GT. It will flash. Release SET and MIDI ON GT.
2. Hold piston 1, and press any key on the Great manual between low C and tenor D# to signify the desired MIDI channel. Low C is Channel 1, low C# is Channel 2, etc. The MIDI ON GT coupler will stop flashing.

The new Great MIDI Channel assignment will be stored in the combination action of the organ.

OCTAVE TRANSPOSE

Normally, all MIDI couplers play at standard pitch (middle C = note 60). The Octave Transpose parameter may be reset to cause any MIDI coupler to play one octave above or below standard pitch.

1. Hold SET and press the bottom of the desired MIDI coupler. It will flash. Release SET and the MIDI coupler.
2. To transpose up one octave, turn the TRANSPOSER control to +1, +2, +3 or +4.
3. To transpose down one octave, turn the TRANSPOSER control to -1, -2, -3 or -4.
4. Exit this mode by pressing General Cancel.
5. Return the TRANSPOSER to the desired setting.

The Octave Transpose status of each MIDI coupler will be stored in the combination action of the organ.

To return a MIDI coupler to standard pitch repeat steps 1-5 and return the TRANSPOSER from +1 to 0 if returning from one octave sharp. Return the TRANSPOSER from -1 to 0 if returning from one octave flat.

ENABLING/DISABLING MIDI MASTER CHANNELS

The following MIDI channels are used to control the organ through MIDI:

Great Master Channel	12
Swell Master Channel	13
Pedal Master Channel	14

It is possible to stop the transmission or reception of MIDI information on these Master Channels.

To disable reception of information on a MIDI Master Channel:

1. Hold SET and press the bottom of the MIDI coupler corresponding to the channel to be disabled. It will flash. Release SET and the MIDI coupler.
2. While the coupler is flashing, press the top of the MIDI coupler (as if turning off). It will stop flashing.

To enable reception of information on a MIDI Master Channel:

1. Hold SET and press the bottom of the MIDI coupler corresponding to the channel to be enabled. It will flash. Release SET and the MIDI coupler.
2. While the coupler is flashing, press the bottom of the MIDI coupler (as if turning on). It will stop flashing.

When transmission on all MIDI Master Channels is inhibited, then no stop change (MIDI System Exclusive stop change) is transmitted.

To disable transmission of information on a MIDI Master Channel:

1. Hold SET and press the MIDI coupler corresponding to the MIDI Master Channel to disable. It will flash. Release the MIDI coupler.
2. While the coupler is flashing, hold SET and press the top of the MIDI coupler (as if turning off). It will stop flashing.

To enable transmission of information on a MIDI Master Channel:

1. Hold SET and press the bottom of the MIDI coupler corresponding to the MIDI Master Channel to enable. It will flash. Release the MIDI coupler.
2. While the coupler is flashing, hold SET and press the bottom of the MIDI coupler (as if turning on). It will stop flashing.

The send and receive status of all MIDI Master Channels will be saved in the combination action of the 602.

GS Format Sound Selection Instructions

The leading-edge MIDI capabilities of the 602 organ from Rodgers include a function known as **GS Format Sound Selection**. GS Format Sound Selection greatly increases the control that Rodgers owners have with MIDI.

To this point, MIDI has used 128 different **Program Change messages** to select sounds. Page 10 of this Owner's Manual contains instructions on using Program Change messages to select sounds in a separate MIDI sound module.

However, some sound modules have more than 128 sounds. The GS Format Sound Selection was developed to allow MIDI users access to more sounds. With the GS Format Sound Selection feature on your Rodgers organ, you have the ability to select 16,384 different sounds!

Rodgers is the first manufacturer in the organ market to introduce this powerful capability. By following these steps, you will be able to put this exciting feature to work.

How does GS Format Work?

In the past, MIDI has used 128 Program Change messages to select sounds. Each of these program changes is still used in the GS Format; however, 128 **Variation Select messages** are now used to select variations of each sound.

For instance, study the graph below:

<i>Variation 16</i>				Mandolin		
<i>Variation 8</i>		Detuned E. Piano 1	Church Bell	12 String Guitar	Orchestra	Brass 2
<i>Variation 0</i>	Piano 1	E. Piano 1	Tubular Bell	Steel Str. Guitar	Strings	Brass 1
<i>Program Changes</i>	1.....	5.....	15.....	26.....	49.....	62.....

Sending a Program Change message by itself will select a sound in the lowest variation of voices, shown above with no shading. This variation of voices is often called "Variation 0". For instance, sending Program Change #5 would select "E. Piano 1"; sending Program Change #26 would select "Steel Str. Guitar".

As you can see, some sounds have variations (located in the squares above Variation 0). By combining a Variation Select message (actually called a "Controller 0" message) with a Program Change message, the sounds in the variations above Variation 0 can be selected. For example, sending Variation Select #8 and Program Change #5 would select "Detuned E. Piano 1"; sending Variation Select #16 and Program Change #26 would select "Mandolin".

To send a Variation Select and Program Change message from a MIDI coupler:

1. Hold SET.
2. Press and hold selected MIDI coupler (coupler will flash as it is held).
3. Release SET and press key which corresponds to the variation desired:

Low C (Great)	Variation 0
Low C# (Great)	Variation 1
Low D (Great)	Variation 2
etc.	
Low C (Swell)	Variation 61
Low C# (Swell)	Variation 62
etc.	
Low C (Pedal)	Variation 122
Low C# (Pedal)	Variation 123
etc.	
Low F (Pedal)	Variation 127

4. After Variation is selected, release MIDI coupler (it will continue to flash).
5. Press key which corresponds to the Program Change desired:

Low C (Great)	Program Change 1
Low C# (Great)	Program Change 2
Low D (Great)	Program Change 3
etc.	
Low C (Swell)	Program Change 62
Low C# (Swell)	Program Change 63
etc.	
Low C (Pedal)	Program Change 123
Low C# (Pedal)	Program Change 124
etc.	
Low F (Pedal)	Program Change 128

If no Variation Select message is specified, Variation 0 will be used.

Pressing General Cancel at any time will exit the procedure.

RECEIVING PROGRAM CHANGES AND GS VARIATION SELECT CHANGES FROM A PR-300

When in a MIDI set Mode, if a Program Change or a Variation Select on the MIDI Channel for the flashing coupler is received, it will be saved and retransmitted each time the coupler is turned on.

SAVING A COMBINATION MEMORY

The contents of any combination memory may be saved into a MIDI sequencer and later reloaded into the organ. To save a memory:

1. The Master Clock on the sequencer must be ON.
2. Select the memory to be saved.
3. Hold SET. Start the sequencer and wait for it to begin recording.
4. Release SET to begin the transmission of memory information. Each piston will light as it is saved to the sequencer.
5. Stop the sequencer after all pistons have been saved.

To restore a memory from the sequencer:

1. Select the memory to be loaded into the 602.
2. Hold SET and start the sequencer playback. Each piston will light as it receives memory information.
3. Release SET after the final memory has been received.

RECEIVING A PROGRAM CHANGE

Registrations may be selected on the organ by sending a Program Change from another MIDI device. The following is a list of Program Changes the 602 will respond to on Channel 12:

<u>PROGRAM CHANGE</u>	<u>WILL SELECT</u>
1	piston 1
2	piston 2
3	piston 3
4	piston 4
5	piston 5
6	piston 6
7	piston 7
8	piston 8
9	piston 9
10	piston 10
20	General Cancel
31	memory 1
32	memory 2

LOCAL ON/OFF

The 602 is equipped with a LOCAL ON/LOCAL OFF control. When the organ is set to LOCAL ON, it operates normally.

When the organ is set to LOCAL OFF, none of the organ stops sound when keys or pedals are pressed. MIDI information is, however, generated on activated MIDI Master Channels and MIDI coupler channels. In addition, movement of the Expression Pedal generates MIDI volume information on activated MIDI Master Channels and MIDI Coupler Channels but does not affect the organ stop volume. An application for this is when sequencing, the volume of the organ may be sequenced one way, and the volume of the MIDI voices another way.

MIDI information received on the MIDI Master Channels will still control the 602 when the organ is set to LOCAL OFF.

To set the organ to LOCAL OFF:

1. Hold SET, and press any MIDI coupler. It will flash.
2. Hold SET, and press and release General Cancel. The General Cancel light will go off, signifying LOCAL OFF is activated.

To set the organ to LOCAL ON:

1. Hold SET, and press any MIDI coupler. It will flash.
2. Hold SET, and press and release General Cancel. The General Cancel light will go on, signifying LOCAL ON is activated.

The Local On/Off status can be saved in the combination action of the organ.

RETURNING TO DEFAULT SETTINGS

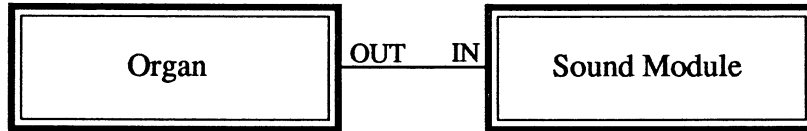
To return to the default settings for Send Channel, Detected/Fixed Velocity, Octave Transpose, MIDI Master Send Channel, Primary Receive Channel and Local On/Off:

1. Hold SET and press General Cancel (0). The SET light will go off and the MIDI parameters will be set to factory default.
2. Continue to hold SET and General Cancel for about 5 seconds until the SET light comes back on. The General and Divisional pistons for the selected memory will be restored to factory default. Repeat this procedure for each memory bank you wish to restore.
3. Continue to hold SET and General Cancel for about 5 seconds more until memory 1 piston lights. The Melody and Bass couplers will be restored to their factory default settings.

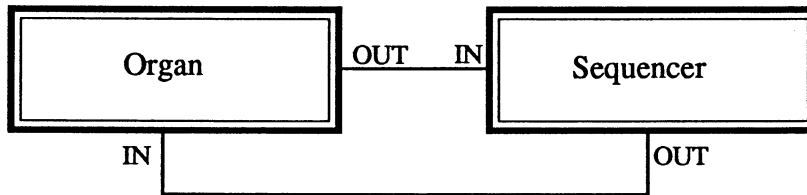
In addition, an All Notes Off message is generated to clear any problems with other MIDI equipment, so this can be used as a "Panic Button" should any other MIDI devices get confused. If the SET and General Cancel buttons are held in until the SET button lights again, then the combination action for the current memory level will be reloaded with factory defaults selections.

COMMON MIDI CONNECTIONS

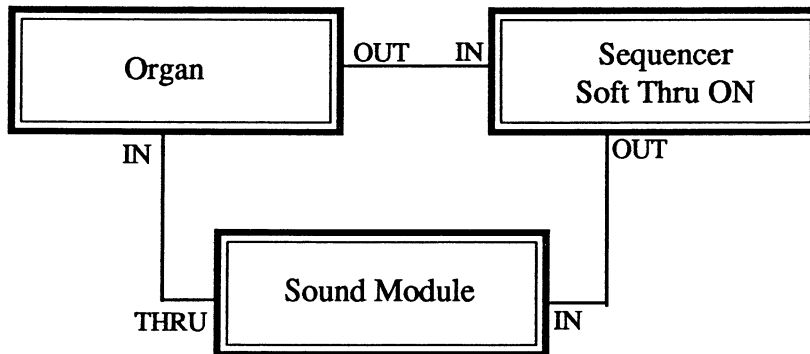
Organ with Sound Module

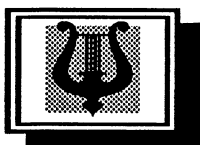


Organ with Sequencer



Organ with Sound Module and Sequencer





602 SPECIFICATIONS

GREAT ORGAN

Principal 8'
Rohrflöte 8'
Flauto Dolce 8'
Flute Celeste 8'
Octave 4'
Spitzflöte 4'
Super Octave 2'
Quintflöte 1½'
Mixture IV
Cromorne 8'
Chimes
Swell to Great

SWELL ORGAN

Bourdon 8'
Viola 8'
Viola Celeste 8'
Prestant 4'
Koppelflöte 4'
Nazard 2⅔'
Blockflöte 2'
Tierce 1⅓'
Plein Jeu IV
Contre Basson 16'
Trompette 8'
Hautbois 8'

PEDAL ORGAN

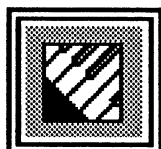
Principal 16'
Subbass 16'
Octave 8'
Gedackt 8'
Choral Bass 4'
Fagott 16'
Great to Pedal
Swell to Pedal

GENERAL

Tremulant
Swell Flute Tremulant Full
Great to Swell Expression
Bass Coupler
Melody Coupler
MIDI on Pedal
MIDI on Swell
MIDI on Great

CONSOLE FEATURES

Velocity-Sensitive Keyboards
Transposer Control
Tuning Control
Headphone Jack and Headphone Volume
External Audio Jacks (L/R IN and OUT)
Great/Pedal Expression Pedal with Indicator
Swell Expression Pedal with Indicator
10 General Pistons
Two Memory Levels
Set
General Cancel
Digital Reverb with Level Control
MIDI In
MIDI Out
MIDI Thru
Lighted Music Rack
Pedalboard Light
Hidden Cable Routing
Locking Rolltop



SUGGESTED REGISTRATIONS

The following pages of registrations are guidelines for selecting appropriate stops to match broad suggestions given in most printed organ literature. There will be variances of registration, depending upon the music, acoustics of the room, and the spirit of the performance.

GREAT ORGAN

Given Suggestions

FLUTE

SOFT FLUTE

FOUNDATIONS *p*

FOUNDATIONS *mf*

FOUNDATIONS *f*

FOUNDATIONS *ff*

FULL GREAT

Appropriate Registrations

Rohrflöte 8'

Flute Celeste 8'

Rohrflöte 8'
Flauto Dolce 8'
Spitzflöte 4'

Principal 8'
Spitzflöte 4'

Principal 8'
Rohrflöte 8'
Octave 4'
Spitzflöte 4'

Principal 8'
Rohrflöte 8'
Octave 4'
Spitzflöte 4'
Super Octave 2'
Mixture IV

Principal 8'
Rohrflöte 8'
Octave 4'
Spitzflöte 4'
Super Octave 2'
Quintflöte 1½'
Mixture IV
Cromorne 8'

SWELL ORGAN

Given Suggestions

STOPPED FLUTE

STRINGS

STRING ENSEMBLE

SOLO REED I *mf*

SOLO REED II *mf*

SOLO REED *f*

CORNET

FOUNDATIONS *mf*

FOUNDATIONS *f*

FOUNDATIONS *ff*

Appropriate Registrations

Bourdon 8'

Viola 8'
Viola Celeste 8'

Bourdon 8'
Viola 8'
Viola Celeste 8'
Koppelflöte 4'
Tremulant

Hautbois 8'

Contre Basson 16' (play 8va)

Trompette 8'

Bourdon 8'
Koppelflöte 4'
Nazard 2 $\frac{2}{3}$ '
Tierce 1 $\frac{3}{5}$ '

Bourdon 8'
Viola 8'
Koppelflöte 4'

Bourdon 8'
Viola 8'
Prestant 4'
Koppelflöte 4'
Blockflöte 2'

Bourdon 8'
Viola 8'
Prestant 4'
Koppelflöte 4'
Blockflöte 2'
Plein Jeu IV

FULL SWELL

Bourdon 8'
Viola 8'
Prestant 4'
Blockflöte 2'
Plein Jeu IV
Contre Basson 16'
Trompette 8'

PEDAL ORGAN

Given Suggestions

Appropriate Registrations

SOFT BASS

Subbass 16'

FLUTES

Subbass 16'
Gedackt 8'

FOUNDATIONS *mf*

Principal 16'
Gedackt 8'

FOUNDATIONS *f*

Subbass 16'
Octave 8'
Gedackt 8'
Choral Bass 4'

FOUNDATIONS *ff*

Principal 16'
Subbass 16'
Octave 8'
Gedackt 8'
Choral Bass 4'

FULL PEDAL

Principal 16'
Subbass 16'
Octave 8'
Gedackt 8'
Choral Bass 4'
Fagott 16'

ENSEMBLE COMBINATIONS

SOFT PRAYER HYMN

Great: Flute Celeste 8'
Tremulant (optional)

Swell: Viola 8'
Viola Celeste 8'

Pedal: Subbass 16'

Couplers: Swell to Pedal
Swell to Great

STRING CHORUS

Great: Principal 8'
Flute Celeste 8'
Tremulant (optional)

Swell: Viola 8'
Viola Celeste 8'
Koppelflöte 4'

Pedal: Subbass 16'

Couplers: Swell to Pedal
Swell to Great

FULL STRING CHORUS

Great: Rohrflöte 8'
Flute Celeste 8'
Spitzflöte 4'
Tremulant (optional)

Swell: Bourdon 8'
Viola 8'
Viola Celeste 8'
Prestant 4'
Koppelflöte 4'
Tremulant

Pedal: Subbass 16'

Couplers: Swell to Pedal
Swell to Great

SOFT FOUNDATIONS

Great: Rohrflöte 8'
Swell: Bourdon 8'
Viola 8'
Pedal: Subbass 16'
Couplers: Swell to Pedal
Swell to Great

FOUNDATIONS 8' *mf*

Great: Principal 8'
Spitzflöte 4'
Swell: Bourdon 8'
Viola 8'
Koppelflöte 4'
Pedal: Subbass 16'
Couplers: Swell to Pedal
Swell to Great

FOUNDATIONS 8' and 4'

Great: Principal 8'
Octave 4'
Spitzflöte 4'
Swell: Bourdon 8'
Viola 8'
Prestant 4'
Koppelflöte 4'
Pedal: Subbass 16'
Gedackt 8'
Couplers: Swell to Pedal
Swell to Great

FOUNDATIONS 8' *mf*

Great: Principal 8'
Spitzflöte 4'

Swell: Bourdon 8'
Koppelflöte 4'

Pedal: Subbass 16'

Couplers: Swell to Pedal
Swell to Great

FOUNDATIONS 8' and 4'

Great: Principal 8'
Octave 4'
Spitzflöte 4'

Swell: Bourdon 8'
Prestant 4'
Koppelflöte 4'

Pedal: Subbass 16'
Gedackt 8'

Couplers: Swell to Pedal
Swell to Great

FOUNDATIONS 8', 4' and 2'

Great: Principal 8'
Rohrflöte 8'
Octave 4'
Spitzflöte 4'
Super Octave 2'

Swell: Bourdon 8'
Viola 8'
Prestant 4'
Koppelflöte 4'
Blockflöte 2'

Pedal: Subbass 16'
Octave 8'
Gedackt 8'

Couplers: Swell to Pedal
Swell to Great

FOUNDATIONS and
MIXTURES

Great: Principal 8'
Rohrflöte 8'
Octave 4'
Spitzflöte 4'
Super Octave 2'
Mixture IV

Swell: Bourdon 8'
Viola 8'
Prestant 4'
Koppelflöte 4'
Blockflöte 2'
Plein Jeu IV

Pedal: Principal 16'
Subbass 16'
Octave 8'
Gedackt 8'
Choral Bass 4'

Couplers: Swell to Pedal
Swell to Great

FOUNDATIONS,
MIXTURES and REEDS

Great:	Principal 8' Rohrflöte 8' Octave 4' Spitzflöte 4' Super Octave 2' Mixture IV
Swell:	Bourdon 8' Viola 8' Prestant 4' Koppelflöte 4' Blockflöte 2' Plein Jeu IV Contre Basson 16' Trompette 8' Hautbois 8'
Pedal:	Principal 16' Subbass 16' Octave 8' Gedackt 8' Choral Bass 4' Fagott 16'
Couplers:	Swell to Pedal Swell to Great

FOUNDATIONS, MIXTURES
AND REEDS

Great:	Principal 8' Rohrflöte 8' Octave 4' Spitzflöte 4' Super Octave 2' Mixture IV
Swell:	Bourdon 8' Prestant 4' Koppelflöte 4' Blockflöte 2' Plein Jeu IV Contre Basson 16' Trompette 8'
Pedal:	Principal 16' Subbass 16' Octave 8' Gedackt 8' Choral Bass 4' Fagott 16'
Couplers:	Swell to Pedal Swell to Great

ENGLISH CATHEDRAL

Great: Principal 8'
Rohrflöte 8'
Spitzflöte 4'

Swell: Bourdon 8'
Viola 8'
Prestant 4'
Koppelflöte 4'
Blockflöte 2'
Contre Basson 16'
Hautbois 8'

Pedal: Principal 16'
Subbass 16'

Couplers: Swell to Pedal
Swell to Great

CLASSIC CHORUS

Great: Principal 8'
Octave 4'
Super Octave 2'
Mixture IV

Swell: Bourdon 8'
Prestant 4'
Blockflöte 2'

Pedal: Subbass 16'
Octave 8'
Choral Bass 4'

Couplers: Great to Pedal

BAROQUE TRIO

Great: Rohrflöte 8'
Spitzflöte 4'
Quintflöte 1½'

Swell: Bourdon 8'
Blockflöte 2'

Pedal: Subbass 16'
Gedackt 8'

CORNET

Great: Rohrflöte 8'
Swell: Bourdon 8'
Koppelflöte 4'
Nazard 2 $\frac{2}{3}$ '
Tierce 1 $\frac{3}{5}$ '
Pedal: Subbass 16'
Couplers: Great to Pedal

FIVE SOLO VOICES
(GREAT)

- (1) Rohrflöte 8'
- (2) Spitzflöte 4'
- (3) Rohrflöte 8'
Spitzflöte 4'
- (4) Cromorne 8'
- (5) Cromorne 8'
Spitzflöte 4'

FIVE SOLO VOICES
(SWELL)

- (1) Hautbois 8'
- (2) Contre Basson 16'
- (3) Trompette 8'
- (4) Bourdon 8'
Nazard 2 $\frac{2}{3}$ '
- (5) Bourdon 8'
Koppelflöte 4'
Nazard 2 $\frac{2}{3}$ '
Blockflöte 2'
Tierce 1 $\frac{3}{5}$ '
Tremulant

**FOUR ACCOMPANIMENT
VOICES (GREAT)**

- (1) Flauto Dolce 8'
- (2) Flute Celeste 8'
- (3) Rohrflöte 8'
- (4) Rohrflöte 8'
Spitzflöte 4'

**FIVE ACCOMPANIMENT
VOICES (SWELL)**

- (1) Viola 8'
Viola Celeste 8'
- (2) Bourdon 8'
- (3) Bourdon 8'
Koppelflöte 4'
- (4) Viola 8'
Bourdon 8'
- (5) Viola 8'
Prestant 4'

**TWO ACCOMPANIMENT
VOICES (PEDAL)**

- (1) Subbass 16'
- (2) Subbass 16'
Gedackt 8'

TRUMPET TUNE

- Great:** Principal 8'
Rohrflöte 8'
Spitzflöte 4'
- Swell:** Trompette 8'
Hautbois 8'
- Pedal:** Subbass 16'
- Couplers:** Great to Pedal
Melody (optional)

**FIVE ACCOMPANIMENT
VOICES (SWELL)**

- (1) Viola 8'
Viola Celeste 8'
- (2) Bourdon 8'
- (3) Bourdon 8'
Koppelflöte 4'
- (4) Viola 8'
Bourdon 8'
- (5) Viola 8'
Prestant 4'

**FOUR ACCOMPANIMENT
VOICES (PEDAL)**

- (1) Subbass 16'
- (2) Subbass 16'
Gedackt 8'
- (3) Principal 16'
Subbass 16'
Gedackt 8'
- (4) Principal 16'
Subbass 16'
Gedackt 8'

CARE AND MAINTENANCE

As with any fine musical instrument, reasonable care is necessary to protect your investment. Normally no difficulties should be experienced, as only the finest component parts are used by Rodgers. If your instrument should require service, your Rodgers Service Representative is fully equipped and qualified to handle any service problems which may arise.

Your new Rodgers organ is not only a fine musical instrument, but also a fine piece of custom-made furniture, finished to hold its attractiveness through generations of use. Following are a few tips on caring for your Rodgers organ.

• CONSOLE AND PEDALBOARD

A frequent dusting with a soft, clean cloth is usually all that is required. A fine quality furniture oil will enhance the beauty of the wood. Always wipe the surfaces with the grain, using straight, even strokes.

Since extreme cold, heat or exposure to sunlight may injure the finish of any fine piece of furniture, neither the console nor finished speaker cabinets should be placed over a heat register or near an open window.

• KEYBOARDS AND TILT TABS

Keyboards and tilt tabs should be cleaned with a soft cloth slightly dampened with water and a mild soap. Avoid dripping water between the keys. DO NOT USE SOLVENTS (alcohol, gasoline, carbon tetrachloride, etc.).



Rodgers 602 Organ MIDI Features

The following is a general outline of MIDI features available in the Rodgers 602:

GREAT

Great Master Channel output = 12 or off
Great Master Channel input = 12 or off
MIDI on Great Channel = 1-16 (default is 1) or off
MIDI on Great Channel output octave transpose -1, 0, +1

Receive Program Change on Great Master Channel:

1-10 = General pistons 1-10
20 = General Cancel
31 = memory 1
32 = memory 2

Send Program Change on MIDI on Great Channel.
Send GS Variation Select on MIDI on Great Channel.

Great MIDI note on/off sends keyboard velocity or fixed velocity.

Great Expression Shoe sends MIDI volume message on Master Channel and MIDI on Great Channel. MIDI volume message on Great Master Channel input controls great expression.

SWELL

Swell Master Channel output = 13 or off
Swell Master Channel input = 13 or off
MIDI on Swell Channel output = 2 or off
MIDI on Swell Channel output octave transpose -1, 0, +1

Send Program Change on MIDI on Swell Channel.
Send GS Variation Select on MIDI on Swell Channel.

Swell MIDI note on/off sends keyboard velocity or fixed velocity.

Swell Expression Shoe sends MIDI volume message on Master Channel and MIDI on Swell Channel. MIDI volume message on Swell Master Channel input controls great expression.

PEDAL

Pedal Master Channel output = 14 or off
Pedal Master Channel input = 14 or off
MIDI on Pedal Channel output = 3 or off
MIDI on Pedal output octave transpose -1, 0, +1

Send Program Change on MIDI on Pedal Channel.
Send GS Variation Select on MIDI on Pedal Channel.

Pedal Note on/off sends fixed velocity.

Great Expression Shoe send MIDI volume message on MIDI on Pedal Channel.

GENERAL

Local Control on/off (all manuals).

Save combination action memory to MIDI (in MIDI System Exclusive packets).
Restore combination action memory from MIDI (from MIDI System Exclusive packets).
Organ Stop information in MIDI System Exclusive packet.

System Exclusive Device ID is selectable 0, 16-31.

Send MIDI Active Sensing.
On loss of MIDI Active Sense signal, all active MIDI notes are turned off.

Rodgers Instrument Corporation is an active registered member of the MIDI Manufacturers Association.

MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel	Default: Changed:	1-3, 12-14 *1 1-16	12-14 *1	12=Great 13=Swell 14=Pedal MIDI on GT only
Mode	Default: Messages: Altered:	Mode 3 X *****	Mode 3 X *****	
Note Number	True Voice	22-112	22-112	
Velocity	Note On: Note Off:	O O	X X	
After Touch	Keys: Ch's:	X X	X X	
Pitch Bender		X	X	
Control Change	7 64	O O	O X	Channel 12: Great Expression Channel 13: Swell Expression Channel 14: Pedal Expression MIDI on GT Channel
Program Change	True #	1-128 *****	1-10, 20, 31, 32, *****	
System Exclusive		O *2	O *2	
System Common	:Song Pos :Song Sel :Tune	X X X	X X X	
System Real Time	:Clock :Commands	X X	X 0 *3	
Aux Messages	:Local ON/OFF :All Notes Off :Active Sense :Reset	X O (123) O X	X O (123) O X	
<p>Notes: *1 Able to choose between O and X. *2 SysEx used for stop changes, combination memory dumps. *3 Received Start sends current stop and expression status. Received Stop restores expression to shoe positions. Received Continue sets expression to values at last Stop.</p>				

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

O : Yes
X : No

Rodgers Instrument Corporation MIDI System Exclusive Code

Rodgers organs use a subset of the Roland standard MIDI System Exclusive format. All Rodgers SysEx packets use the Roland "Data Set" command, listed under "One Way Transfer Procedure" in the Roland System Exclusive format specification. The first five bytes of this type of packet are as follows:

<u>Byte</u>	<u>Function</u>
F0H	Begin System Exclusive
41H	Roland/Rodgers SysEx ID
10H	Device ID*
30H	Model ID (30 = organ)
12H	Data Set Command

*Note: This byte is usually 10H; however, the organ receives 00H - 0FH and can be set to transmit Device ID 00H or transmit and receive any Device ID between 10H and 1FH. See the last page of these notes for more information.

This header is then followed by the message body. The message body contains a *subcommand byte*, an optional *offset byte* and a variable number of *data bytes* followed by a *checksum byte* and a MIDI *End Exclusive byte* (F7). The checksum byte value is such that if all bytes beginning with the subcommand byte and ending with the checksum byte are added, the lower 7 bits of the result will be all zeroes.

The following messages are used by Rodgers as of the introduction of model 602:

1. Stop Change

This message is transmitted each time one or more stops, couplers, or auxiliary controls changes state. The state of each control is represented as a bit in one of the message data bytes. The assignment of controls to specific bits is standardized for all Rodgers organs by use of the master code assignment list included herein. Activated controls ("on") are represented by ones in the bit map. This message is transmitted on the Sequencer and Pipe ports only on organs which have a separate MIDI Instrument port. It can, however, be received on the Instrument port as well.

Subcommand byte: 01H

Offset byte: 00H - 22H This byte indicates the offset of the first data byte from the beginning of the bit map. Normally, this will be zero, and the entire map (35 bytes) will be transmitted. It is possible, though, to send only part of the map beginning with the byte indicated by this value.

Data bytes: dd, dd, ... The data bytes represent the new state of the bit map beginning at the offset specified above. Any number of data bytes up to the full length of the bit map may be sent, although the entire map is usually transmitted. Refer to the included chart for stop map assignments.

2. Memory Dump

This message is transmitted when the organist sends (“dumps”) a combination memory to a sequencer. The body of the message contains a portion of the data from a combination memory; several such messages are usually necessary to transmit the complete contents of a memory.

Subcommand byte: 03H

Offset byte: mm This byte contains the zero-indexed number of the combination memory being dumped.

Data bytes: dd, dd, ... The data for the memory is converted from one byte with 8 significant bits to two bytes with 4 significant bits each. The high order bits are contained in the low order nibble of the first byte. The low order bits are contained in the low order nibble of the second byte. The contents of the piston data structure is proprietary and not disclosed.

Table 1. Stop SysEx Code Assignments

<u>BYTE</u>	<u>BIT</u>	<u>STOP NAME</u>
		(GREAT)
0	3	8' Principal
1	0	8' Rohrflöte
1	2	8' Flauto Dolce
1	3	8' Flute Celeste
1	5	4' Octave
1	6	4' Spitzflöte
2	1	2' Super Octave
2	3	1½' Quintflöte
2	6	IV Mixture
3	4	8' Cromorne
4	1	Chimes
		(SWELL)
8	0	8' Viola
8	1	8' Viola Celeste
8	4	8' Bourdon
9	3	4' Prestant
9	4	4' Koppelflöte
9	5	2½' Nazard
10	0	2' Blockflöte
10	4	IV Plein Jeu
10	6	16' Contre Basson
11	1	8' Trompette
11	2	8' Hautbois
7	5	16' Bourdon

(PEDAL)		
21	3	16' Principal
21	4	16' Subbass
22	2	8' Octave
22	4	8' Gedackt
22	6	4' Choral Bass
24	2	16' Fagott

(COUPLERS AND OTHER CONTROLS)

25	3	Great to Pedal
25	5	Swell to Pedal
26	6	Swell to Great
31	3	Swell Flute Tremulant Full
4	4	Great Tremulant
11	6	Swell Tremulant

Changing SysEx Device ID Transmission

At power-up, the 602 transmits a 10H SysEx Device ID. To change the Device ID which is transmitted in stop messages, use the following procedure:

1. Hold SET and press MIDI on Great (MIDI on Great will flash).
2. Hold piston #5 and press a key on the Great manual which corresponds to the Device ID desired:

Low "C"	10H
Low "C#"	11H
Low "D"	12H
Low "D#"	13H
Low "E"	14H
Low "F"	15H
Low "F#"	16H
Low "G"	17H
Low "G#"	18H
Low "A"	19H
Low "A#"	1AH
Low "B"	1BH
Tenor "C"	1CH
Tenor "C#" 1DH	
Tenor "D"	1EH
Tenor "D#" 1FH	

or

any other key	00H
---------------	-----

The transmit SysEx Device ID will remain changed until the organ is turned off. The 602 will always respond to Device ID's 00H - 0FH plus the Device ID specified above.



