036-23098-001-B-0312

COMMUNICATING CONTROL SYSTEM WIRING

COMM System Wiring Diagrams

This document provides specific details for making low voltage wiring connections of UPG Residential products. This includes diagrams for many specific air conditioning or heat pump outdoor applications with air handlers or gas furnaces. These diagrams use a specific UPG communicating thermostat for UPG residential products. Due to continuous product improvements, all specifications are subject to change without notice. For distribution use only - not to be used at point of retail sale. All rights reserved. For the most up-to-date technical information, please visit our website at www.york.com.

Table of Contents - COMM System Wiring Diagrams

Number	Indoor Unit	Outdoor Unit	Special Application Note
HP1	V/S Air Handler	Two Stage Heat Pump (Hot HP)	heat kit first stage=W1
HP2	V/S Air Handler	Two Stage Heat Pump (Hot HP)	heat kit first stage=W2
HP3	V/S Air Handler	Two Stage Heat Pump (Hot HP)	heat kit first stageW1+W2
HP21	V/S Air Handler	Two Stage Heat Pump (Hot HP)	
HP4	V/S Air Handler	Two Stage Heat Pump	heat kit first stage=W1
HP5	V/S Air Handler	Two Stage Heat Pump	heat kit first stage=W2
HP6	V/S Air Handler	Two Stage Heat Pump	heat kit first stage=W1+W2
HP22	V/S Air Handler	Two Stage Heat Pump	
HP7	V/S Air Handler	Single Stage Heat Pump (Hot HP)	heat kit first stage=W1
HP8	V/S Air Handler	Single Stage Heat Pump (Hot HP)	heat kit first stage=W2
HP9	V/S Air Handler	Single Stage Heat Pump (Hot HP)	heat kit first stage=W1+W2
HP23	V/S Air Handler	Single Stage Heat Pump (Hot HP)	
HP10	V/S Air Handler	Single Stage Heat Pump	heat kit first stage=W1
HP11	V/S Air Handler	Single Stage Heat Pump	heat kit first stage=W2
HP12	V/S Air Handler	Single Stage Heat Pump	heat kit first stage=W1+W2
HP24	V/S Air Handler	Single Stage Heat Pump	
HP25	V/S Air Handler (AHV)	Two Stage Heat Pump (Hot HP)	heat kit first stage=W1
HP26	V/S Air Handler (AHV)	Two Stage Heat Pump (Hot HP)	heat kit first stage=W2
HP27	V/S Air Handler (AHV)	Two Stage Heat Pump (Hot HP)	heat kit first stageW1+W2
HP37	V/S Air Handler (AHV)	Two Stage Heat Pump (Hot HP)	
HP28	V/S Air Handler (AHV)	Two Stage Heat Pump	heat kit first stage=W1
HP29	V/S Air Handler (AHV)	Two Stage Heat Pump	heat kit first stage=W2
HP30	V/S Air Handler (AHV)	Two Stage Heat Pump	heat kit first stage=W1+W2
HP38	V/S Air Handler (AHV)	Two Stage Heat Pump	
HP31	V/S Air Handler (AHV)	Single Stage Heat Pump (Hot HP)	heat kit first stage=W1
HP32	V/S Air Handler (AHV)	Single Stage Heat Pump (Hot HP)	heat kit first stage=W2
HP33	V/S Air Handler (AHV)	Single Stage Heat Pump (Hot HP)	heat kit first stage=W1+W2
HP39	V/S Air Handler (AHV)	Single Stage Heat Pump (Hot HP)	
HP34	V/S Air Handler (AHV)	Single Stage Heat Pump	heat kit first stage=W1
HP35	V/S Air Handler (AHV)	Single Stage Heat Pump	heat kit first stage=W2
HP36	V/S Air Handler (AHV)	Single Stage Heat Pump	heat kit first stage=W1+W2
HP40	V/S Air Handler (AHV)	Single Stage Heat Pump	
HP13	Modulating Furnace	Two Stage Heat Pump (Hot HP)	
HP14	Modulating Furnace	Two Stage Heat Pump (Hot HP)	with Bonnet Sensor
HP15	Modulating Furnace	Two Stage Heat Pump	
HP16	Modulating Furnace	Two Stage Heat Pump	with Bonnet Sensor
HP17	Modulating Furnace	Single Stage Heat Pump (Hot HP)	
HP18	Modulating Furnace	Single Stage Heat Pump (Hot HP)	with Bonnet Sensor
HP19	Modulating Furnace	Single Stage Heat Pump	
HP20	Modulating Furnace	Single Stage Heat Pump	with Bonnet Sensor
AC19	Modulating Furnace	No OD Unit Installed	
AC1	Modulating Furnace	Single Stage AC (Conventional Wiring)	
AC5	Modulating Furnace	Two Stage AC (Conventional Wiring)	
AC2	Modulating Furnace	Single Stage AC	
AC8	Modulating Furnace	Two Stage AC	
AC20	V/S Air Handler	No OD Unit Installed	heat kit first stage=W1
AC21	V/S Air Handler	No OD Unit Installed	heat kit first stage=W2
AC22	V/S Air Handler	No OD Unit Installed	heat kit first stage=W1+W2
AC23	V/S Air Handler	No OD Unit Installed	
AC32	V/S Air Handler (AHV)	No OD Unit Installed	heat kit first stage=W1
AC33	V/S Air Handler (AHV)	No OD Unit Installed	heat kit first stage=W2
AC34	V/S Air Handler (AHV)	No OD Unit Installed	heat kit first stage=W1+W2

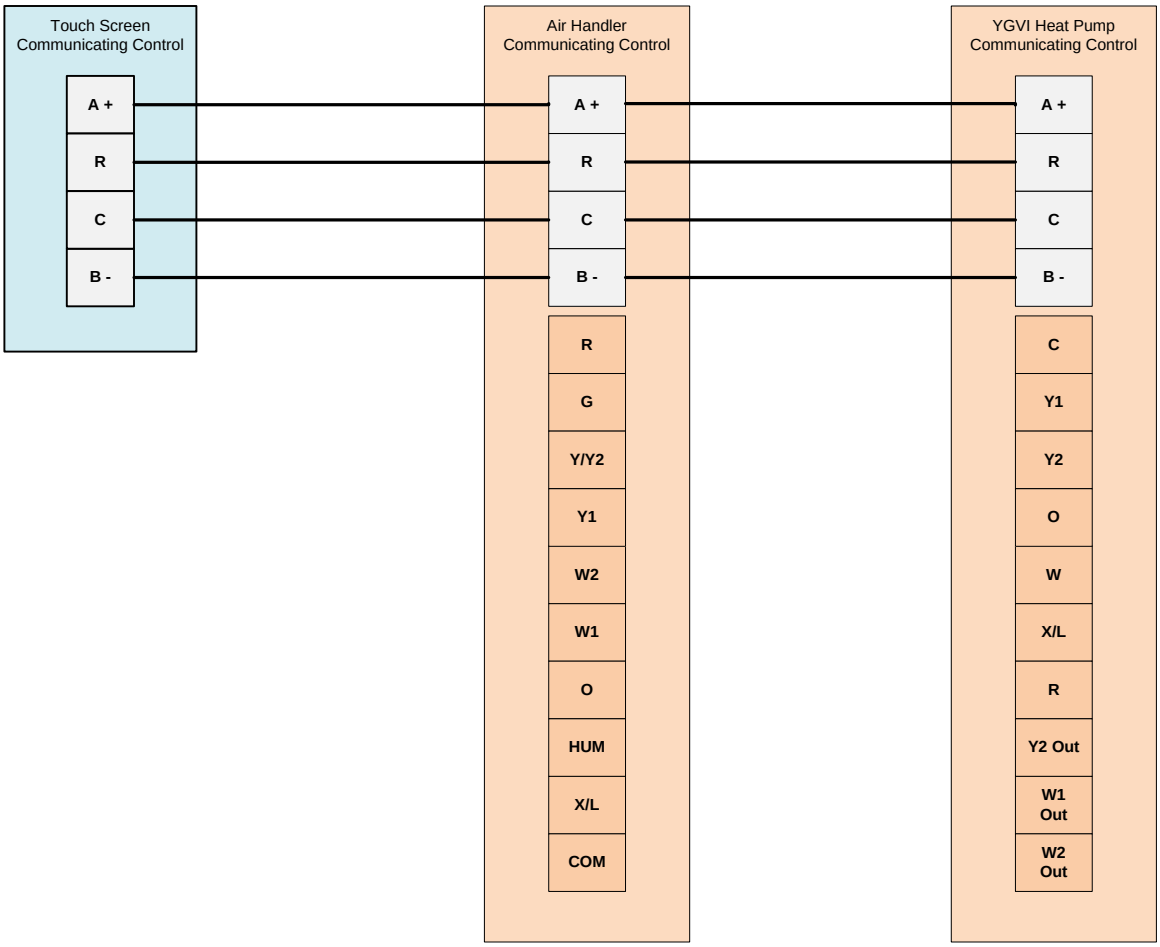
Number	Indoor Unit	Outdoor Unit	Special Application Note
AC35	V/S Air Handler (AHV)	No OD Unit Installed	
AC11	V/S Air Handler	Single Stage AC	heat kit first stage=W1
AC12	V/S Air Handler	Single Stage AC	heat kit first stage=W2
AC13	V/S Air Handler	Single Stage AC	heat kit first stage=W1+W2
AC17	V/S Air Handler	Single Stage AC	
AC14	V/S Air Handler	Two Stage AC	heat kit first stage=W1
AC15	V/S Air Handler	Two Stage AC	heat kit first stage=W2
AC16	V/S Air Handler	Two Stage AC	heat kit first stage=W1+W2
AC18	V/S Air Handler	Two Stage AC	
AC24	V/S Air Handler (AHV)	Single Stage AC	heat kit first stage=W1
AC25	V/S Air Handler (AHV)	Single Stage AC	heat kit first stage=W2
AC26	V/S Air Handler (AHV)	Single Stage AC	heat kit first stage=W1+W2
AC30	V/S Air Handler (AHV)	Single Stage AC	
AC27	V/S Air Handler (AHV)	Two Stage AC	heat kit first stage=W1
AC28	V/S Air Handler (AHV)	Two Stage AC	heat kit first stage=W2
AC29	V/S Air Handler (AHV)	Two Stage AC	heat kit first stage=W1+W2
AC31	V/S Air Handler (AHV)	Two Stage AC	
AUX39	ID Aux (AH with electric heat)	No OD Unit Installed	
AUX40	ID Aux (AH no heat)	No OD Unit Installed	
AUX1	ID Aux (AH with electric heat)	Two Stage AC (Conventional Wiring)	
AUX11	ID Aux (AH no heat)	Two Stage AC (Conventional Wiring)	
AUX12	ID Aux (AH with electric heat)	Single Stage AC (Conventional Wiring)	
AUX13	ID Aux (AH no heat)	Single Stage AC (Conventional Wiring)	
AUX2	ID Aux (AH with electric heat)	Two Stage AC	
AUX14	ID Aux (AH no heat)	Two Stage AC	
AUX15	ID Aux (AH with electric heat)	Single Stage AC	
AUX16	ID Aux (AH no heat)	Single Stage AC	
AUX17	ID Aux (AH with electric heat)	Two Stage Heat Pump (Hot HP)	
AUX18	ID Aux (AH no heat)	Two Stage Heat Pump (Hot HP)	
AUX19	ID Aux (AH with electric heat)	Two Stage Heat Pump	
AUX20	ID Aux (AH no heat)	Two Stage Heat Pump	
AUX21	ID Aux (AH with electric heat)	Single Stage Heat Pump (Hot HP)	
AUX22	ID Aux (AH no heat)	Single Stage Heat Pump (Hot HP)	
AUX23	ID Aux (AH with electric heat)	Single Stage Heat Pump	
AUX24	ID Aux (AH no heat)	Single Stage Heat Pump	
AUX35	ID Aux (AH with electric heat)	Demand Defrost Heat Pump	
AUX36	ID Aux (AH no heat)	Demand Defrost Heat Pump	
AUX41	ID Aux (Two Stage Furnace)	No OD Unit Installed	
AUX10	ID Aux (Two Stage Furnace)	Two Stage Heat Pump (Hot HP)	
AUX9	ID Aux (Two Stage Furnace)	Two Stage Heat Pump	
AUX8	ID Aux (Two Stage Furnace)	Single Stage Heat Pump (Hot HP)	
AUX7	ID Aux (Two Stage Furnace)	Single Stage Heat Pump	
AUX37	ID Aux (Two Stage Furnace)	Demand Defrost Heat Pump	
AUX25	ID Aux (Two Stage Furnace)	Single Stage AC (Conventional Wiring)	
AUX26	ID Aux (Two Stage Furnace)	Two Stage AC (Conventional Wiring)	
AUX5	ID Aux (Two Stage Furnace)	Single Stage AC	
AUX6	ID Aux (Two Stage Furnace)	Two Stage AC	
AUX42	ID Aux (Single Stage Furnace)	No OD Unit Installed	
AUX27	ID Aux (Single Stage Furnace)	Two Stage Heat Pump (Hot HP)	
AUX28	ID Aux (Single Stage Furnace)	Two Stage Heat Pump	
AUX29	ID Aux (Single Stage Furnace)	Single Stage Heat Pump (Hot HP)	
AUX30	ID Aux (Single Stage Furnace)	Single Stage Heat Pump	
AUX31	ID Aux (Single Stage Furnace)	Single Stage AC (Conventional Wiring)	
AUX32	ID Aux (Single Stage Furnace)	Two Stage AC (Conventional Wiring)	
AUX33	ID Aux (Single Stage Furnace)	Single Stage AC	
AUX34	ID Aux (Single Stage Furnace)	Two Stage AC	
AUX38	ID Aux (Single Stage Furnace)	Demand Defrost Heat Pump	

Notes:

a. Some diagram numbers may not be used (e.g. for obsolete controls or reserved for future use).

b: "Hot HP" refers to the HP controls which allow higher discharge air temperatures than standard HP's.

HP 1	V/S Air Handler – Two Stage Heat Pump (Hot HP)



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

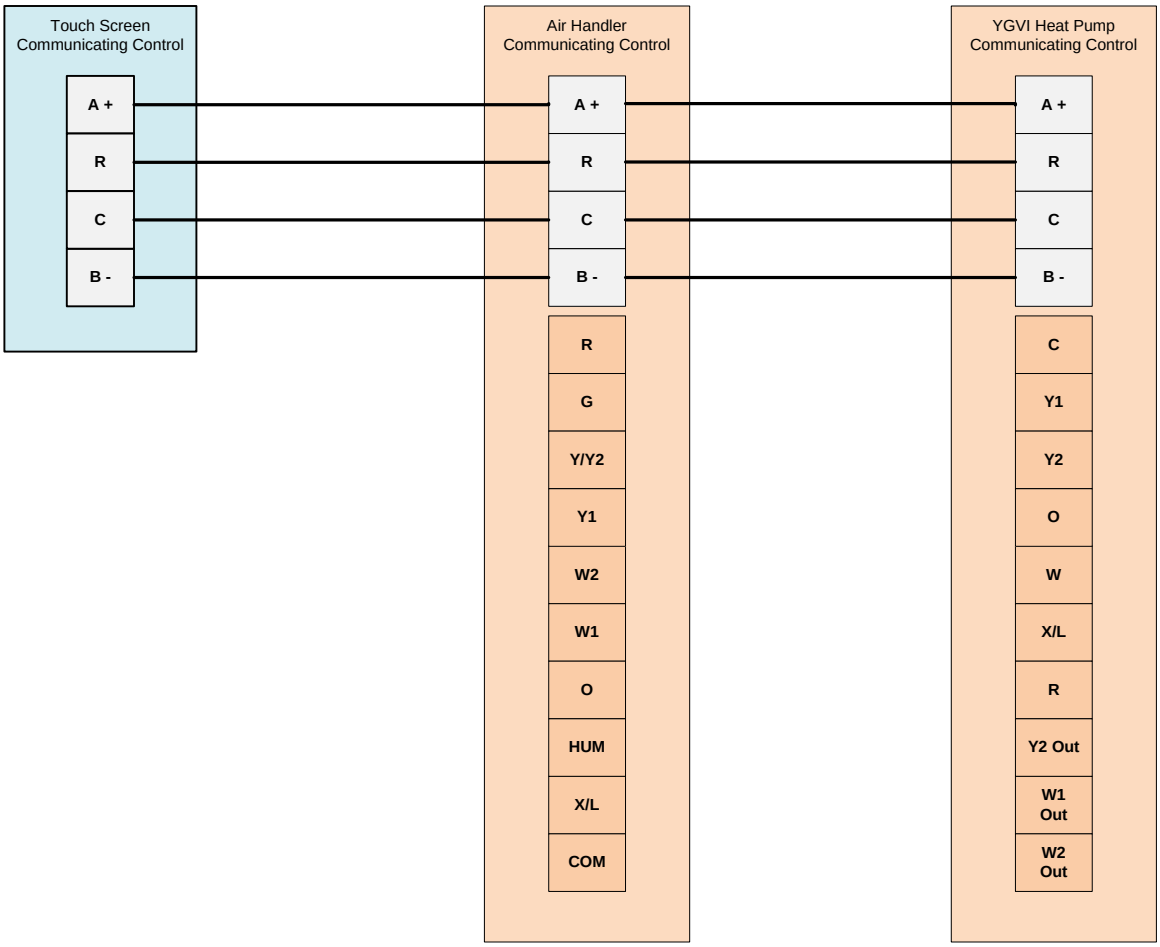
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 2 V/S Air Handler – Two Stage Heat Pump (Hot HP)



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

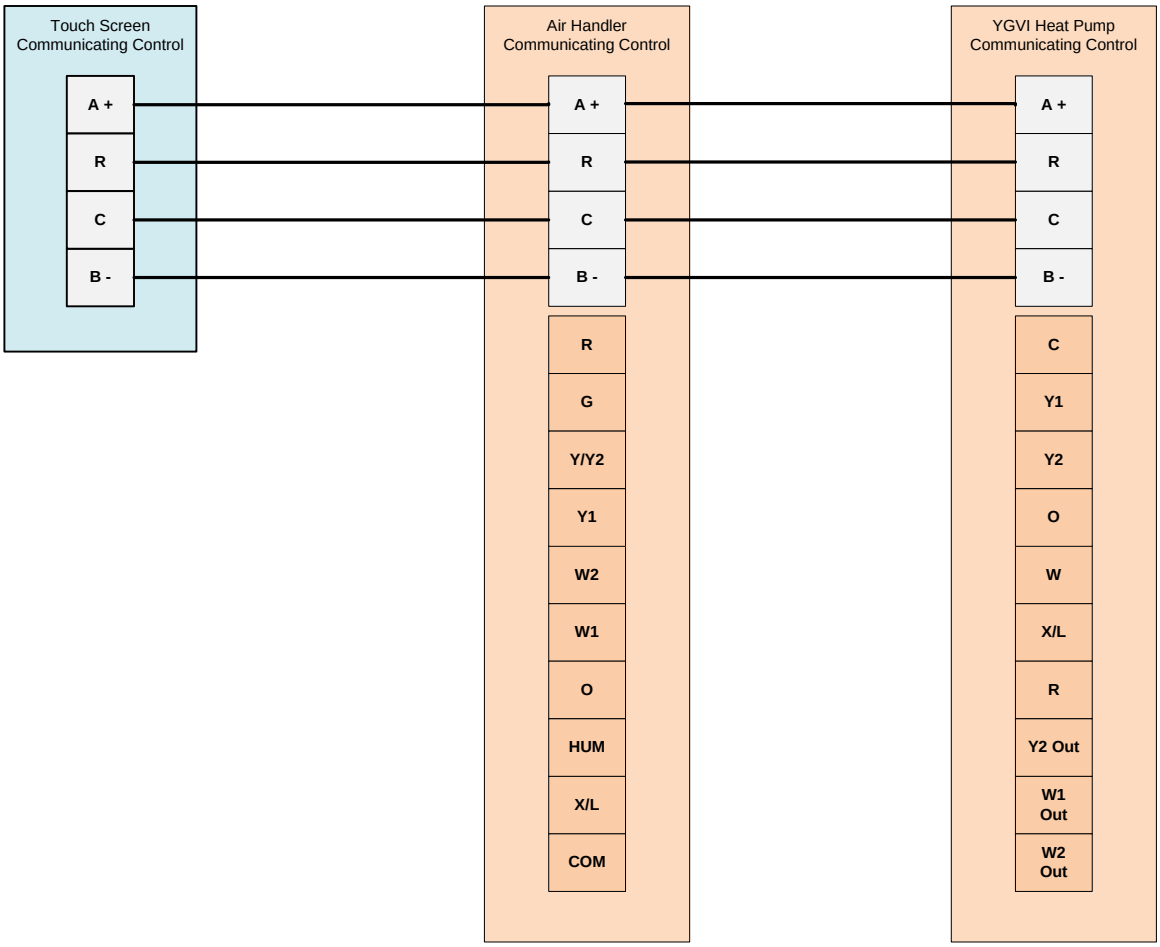
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 3	V/S Air Handler – Two Stage Heat Pump (Hot HP)



Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

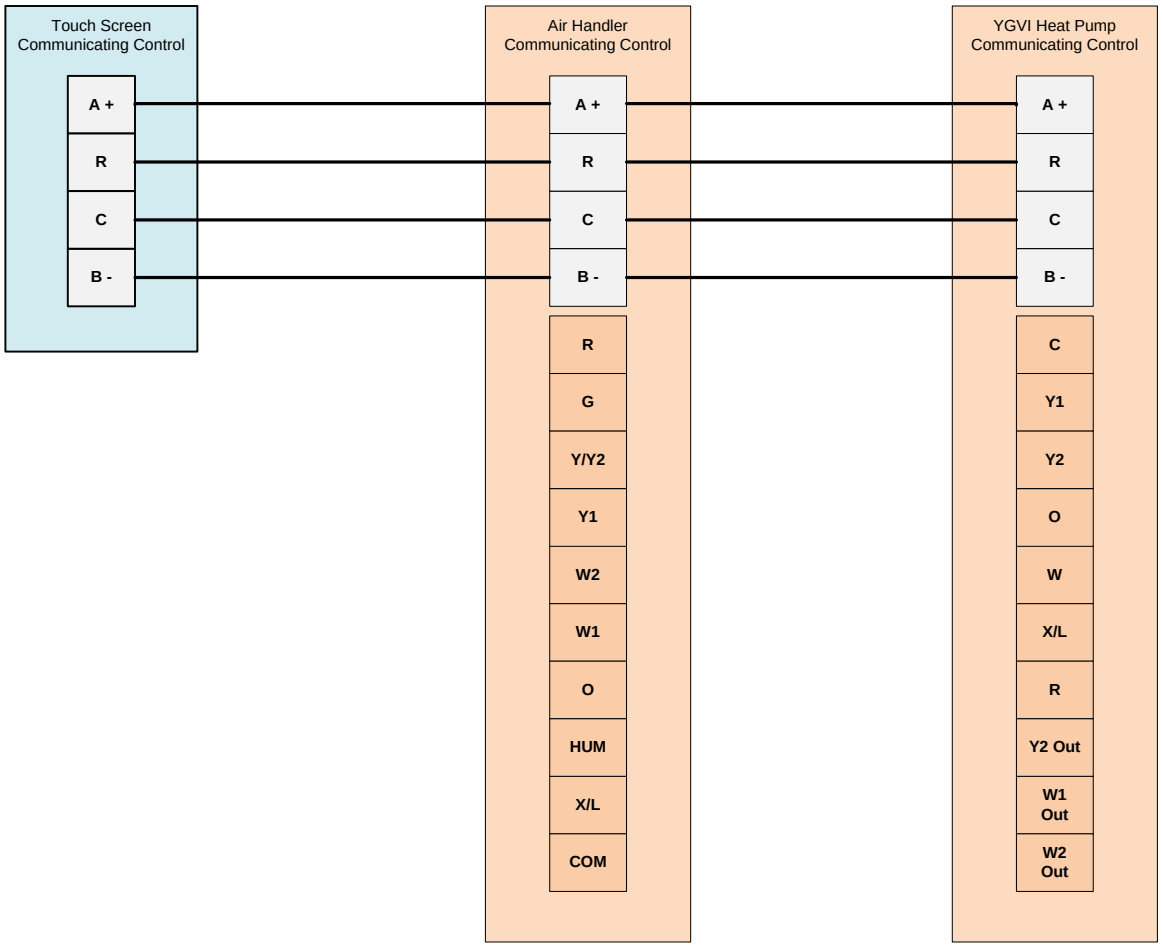
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

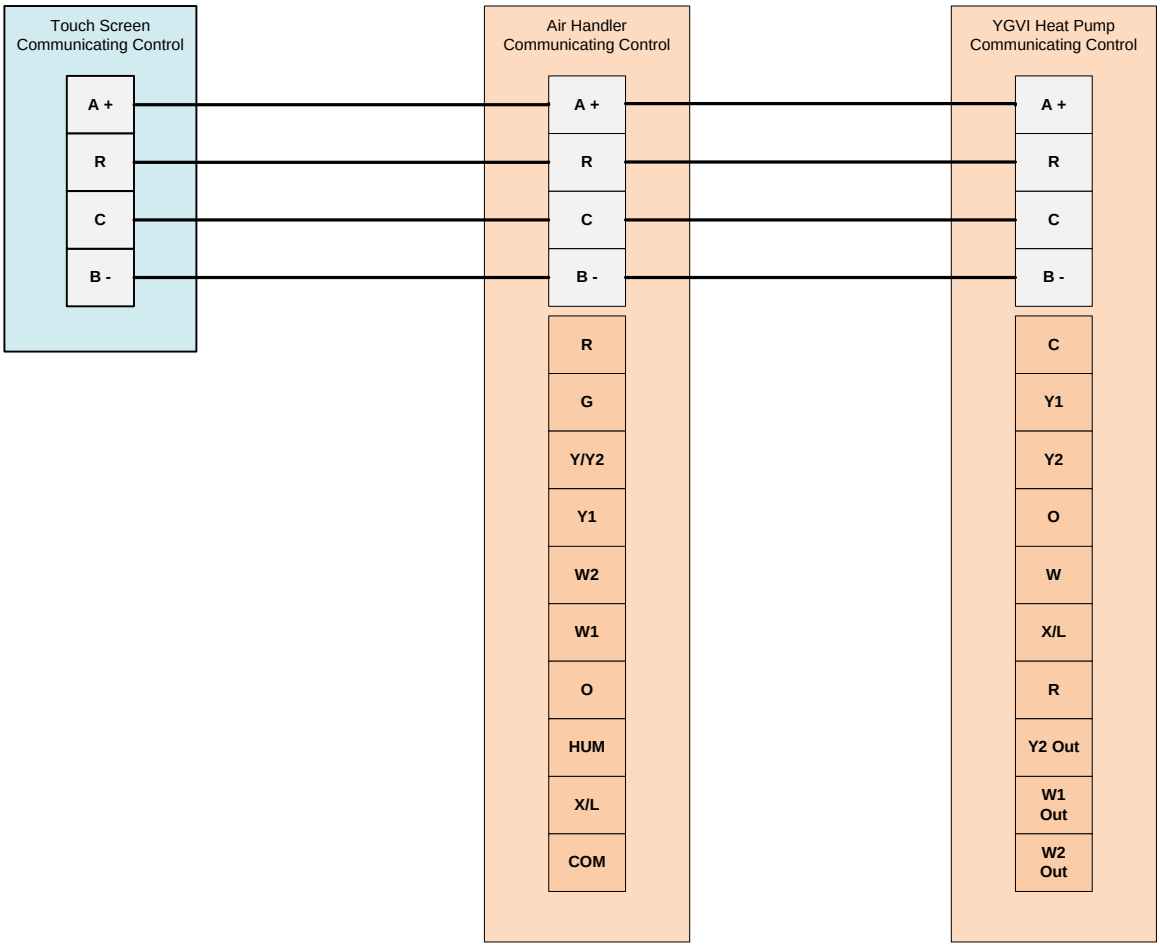
HP 21	V/S Air Handler – Two Stage Heat Pump (Hot HP)



Hum Stat Jumper must be set to YES
Heat-No Heat Jumper must be set to NO HEAT
Mode Jumper must be set to HP
Same as HP1 but with no electric heat.

Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to OFF

HP 4 V/S Air Handler – Two Stage Heat Pump



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

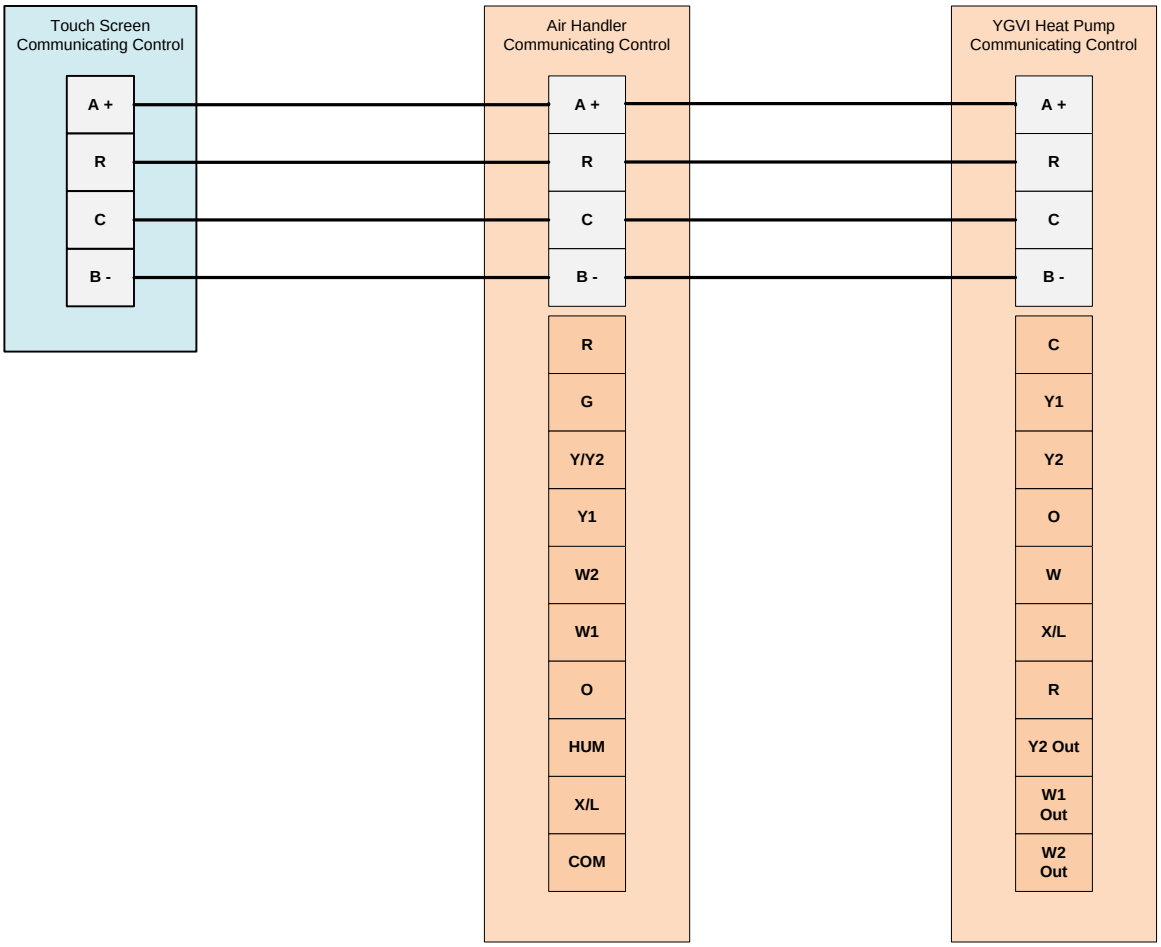
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 5 V/S Air Handler – Two Stage Heat Pump



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

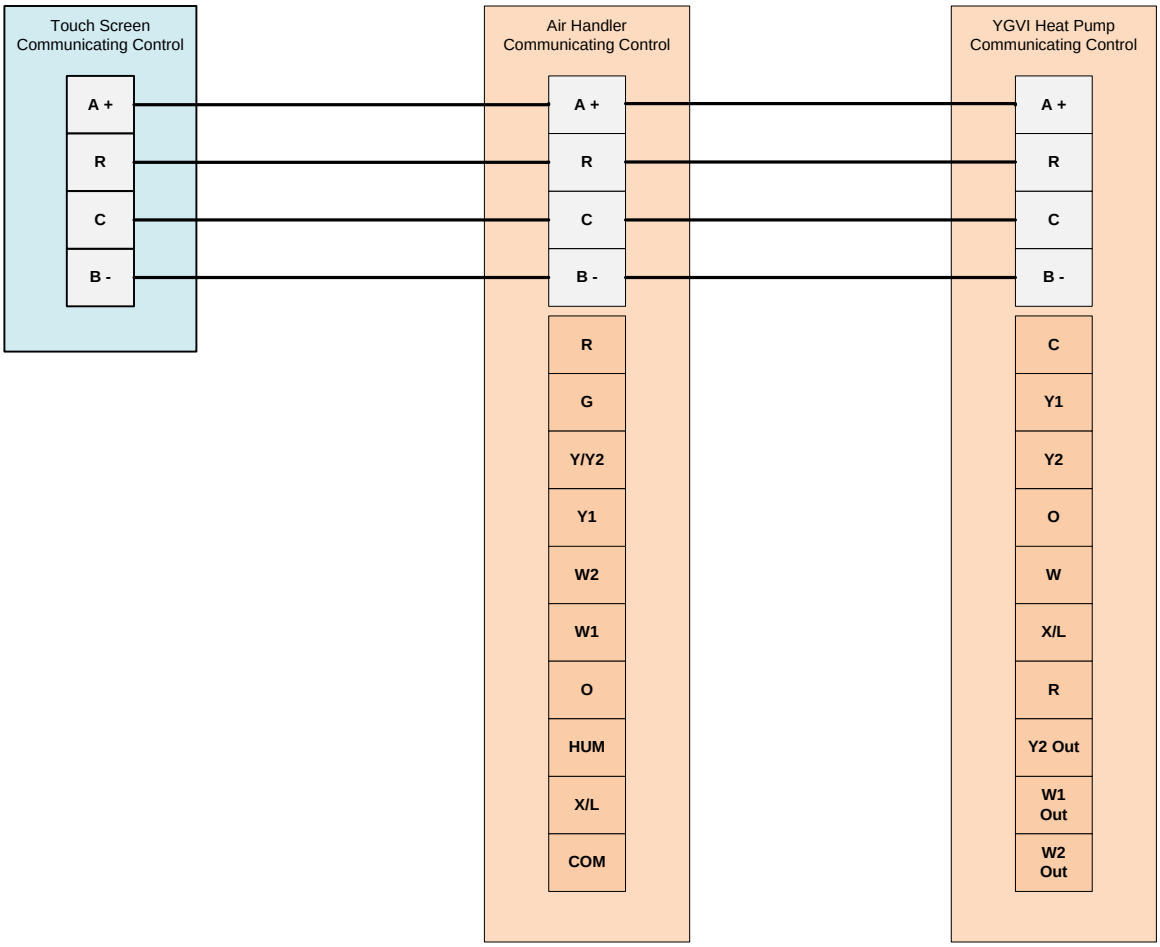
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 6 V/S Air Handler – Two Stage Heat Pump



Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

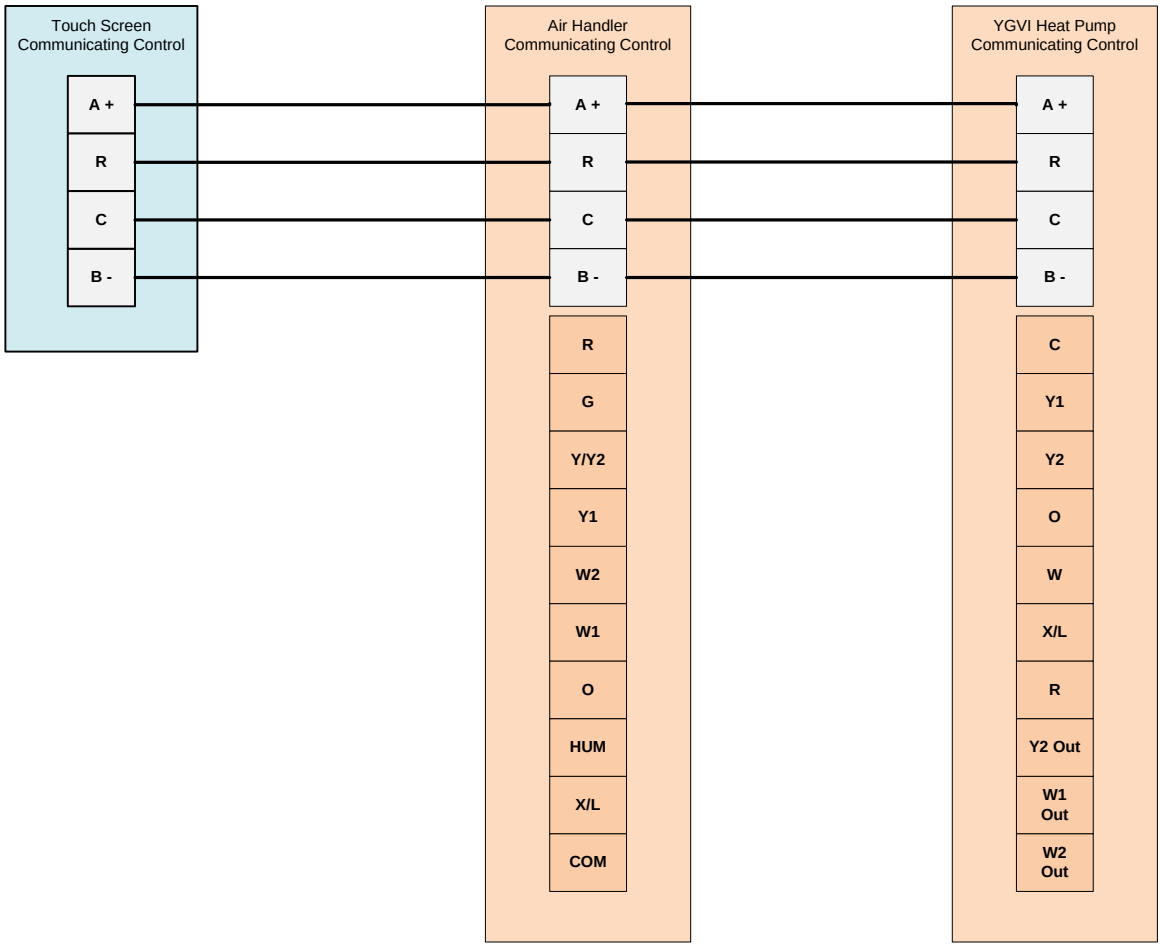
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

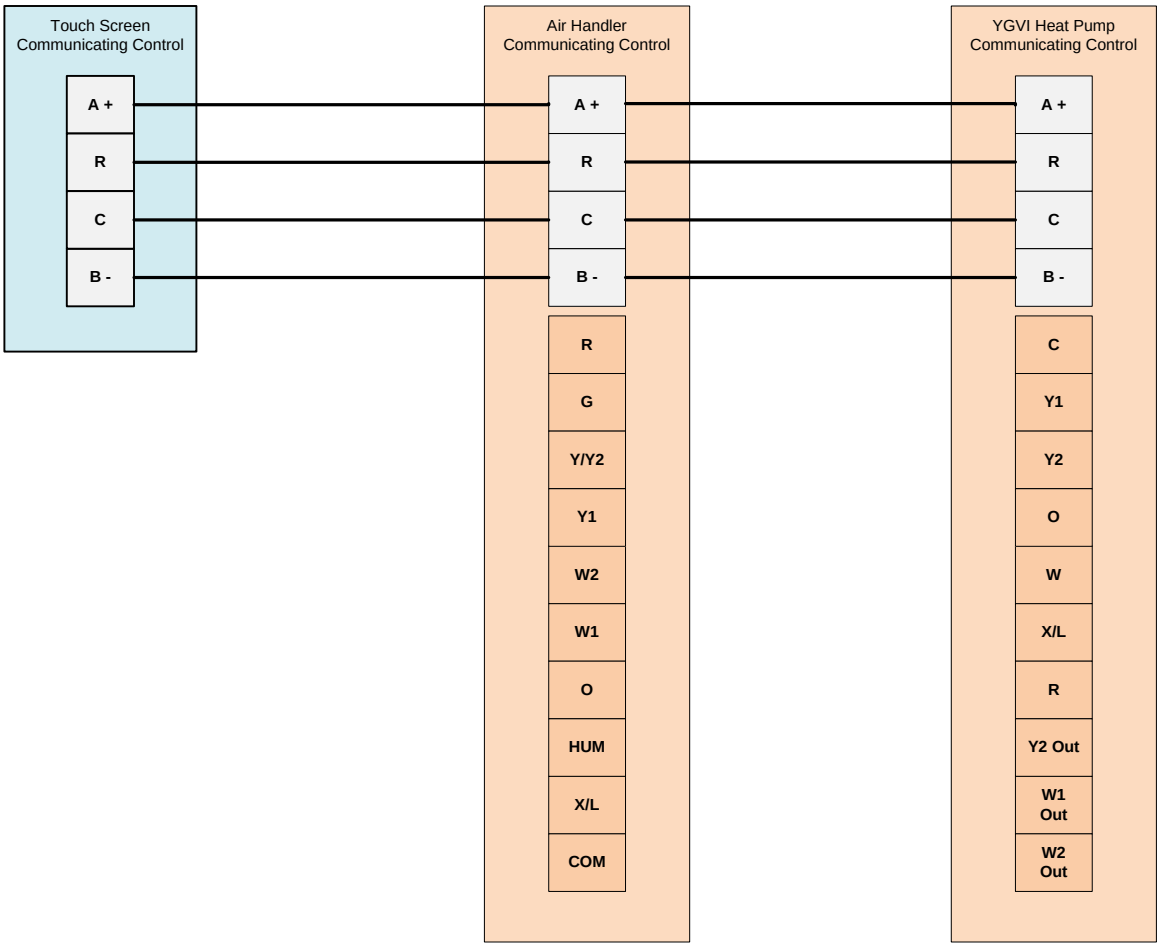
HP 22	V/S Air Handler – Two Stage Heat Pump



Hum Stat Jumper must be set to YES
Heat-No Heat Jumper must be set to NO HEAT
Mode Jumper must be set to HP
Same as HP4 but with no electric heat.

Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to OFF

HP 7	V/S Air Handler – Single Stage Heat Pump (Hot HP)



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

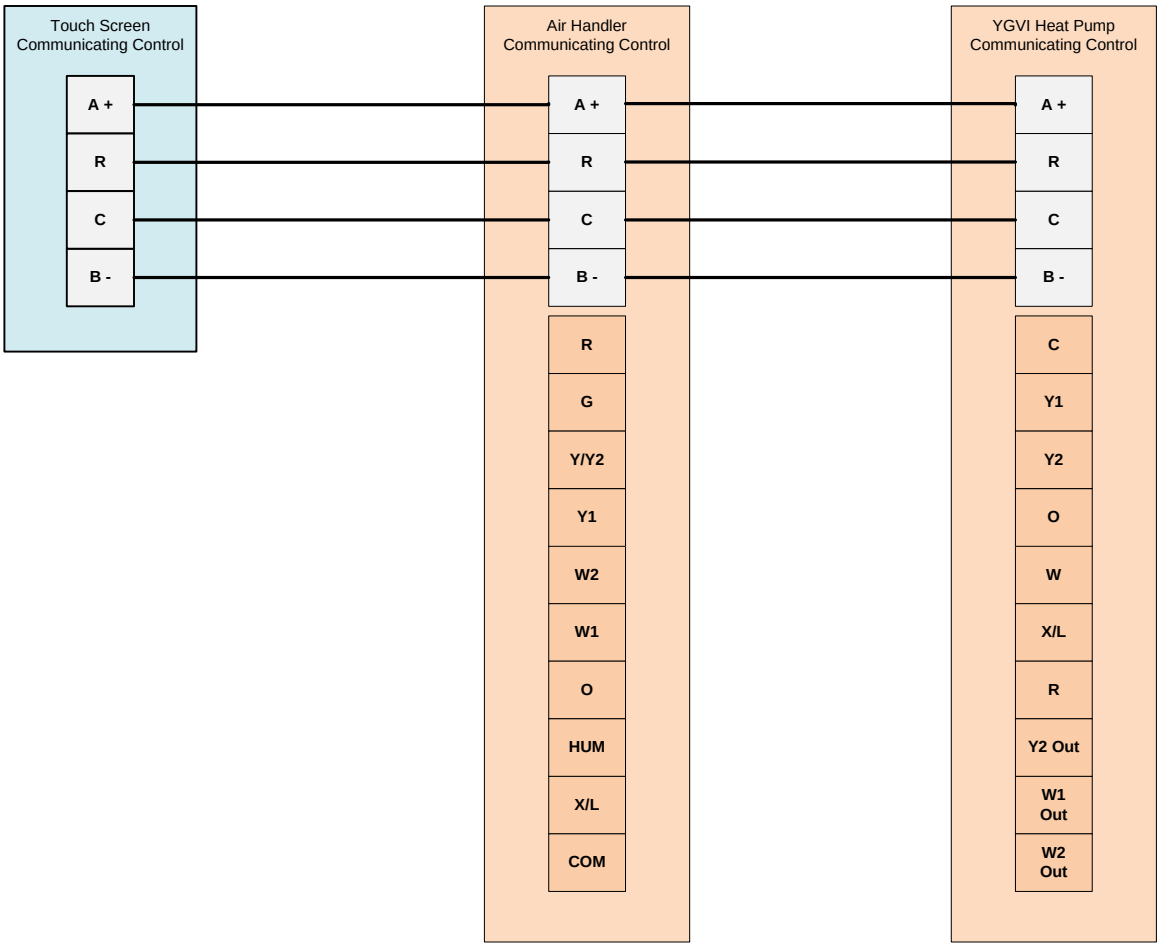
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 8 V/S Air Handler – Single Stage Heat Pump (Hot HP)



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

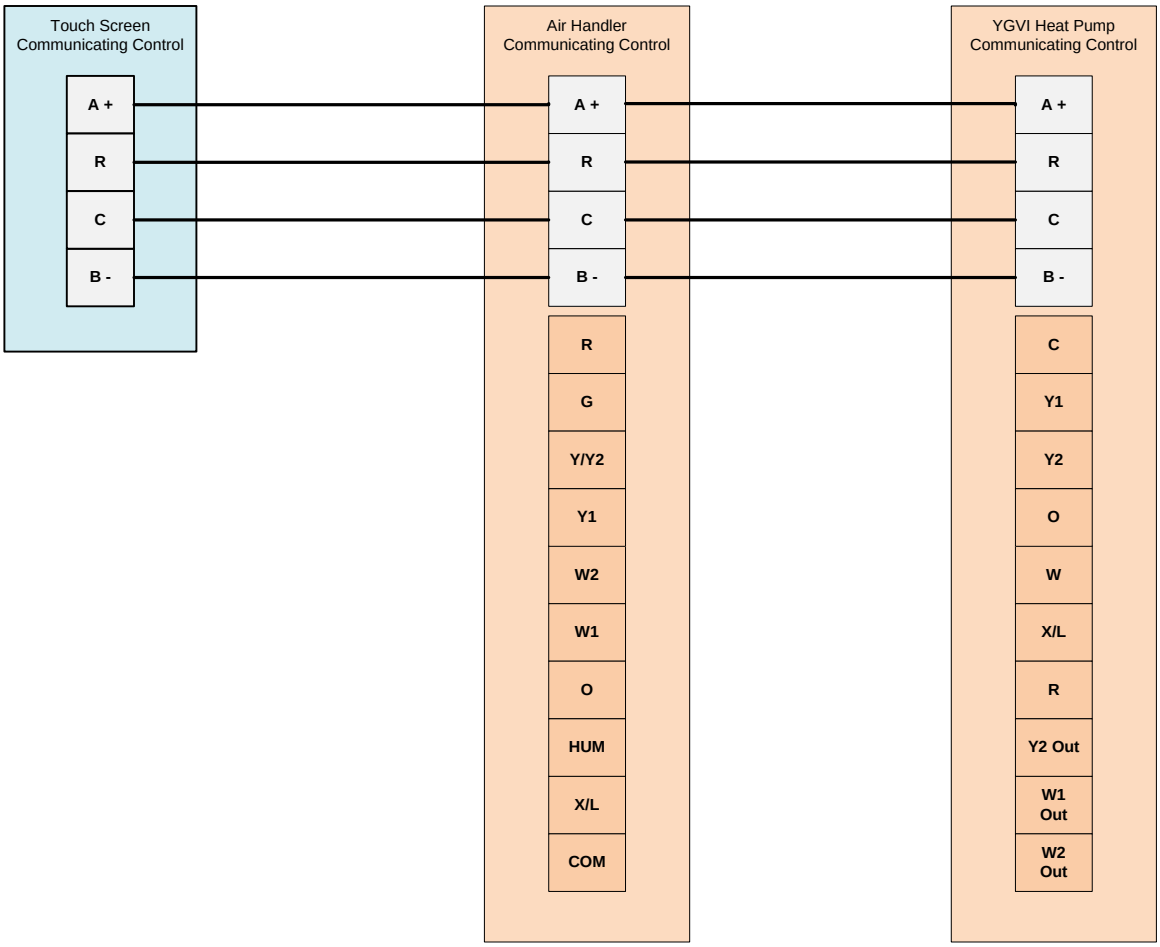
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 9	V/S Air Handler – Single Stage Heat Pump (Hot HP)



Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

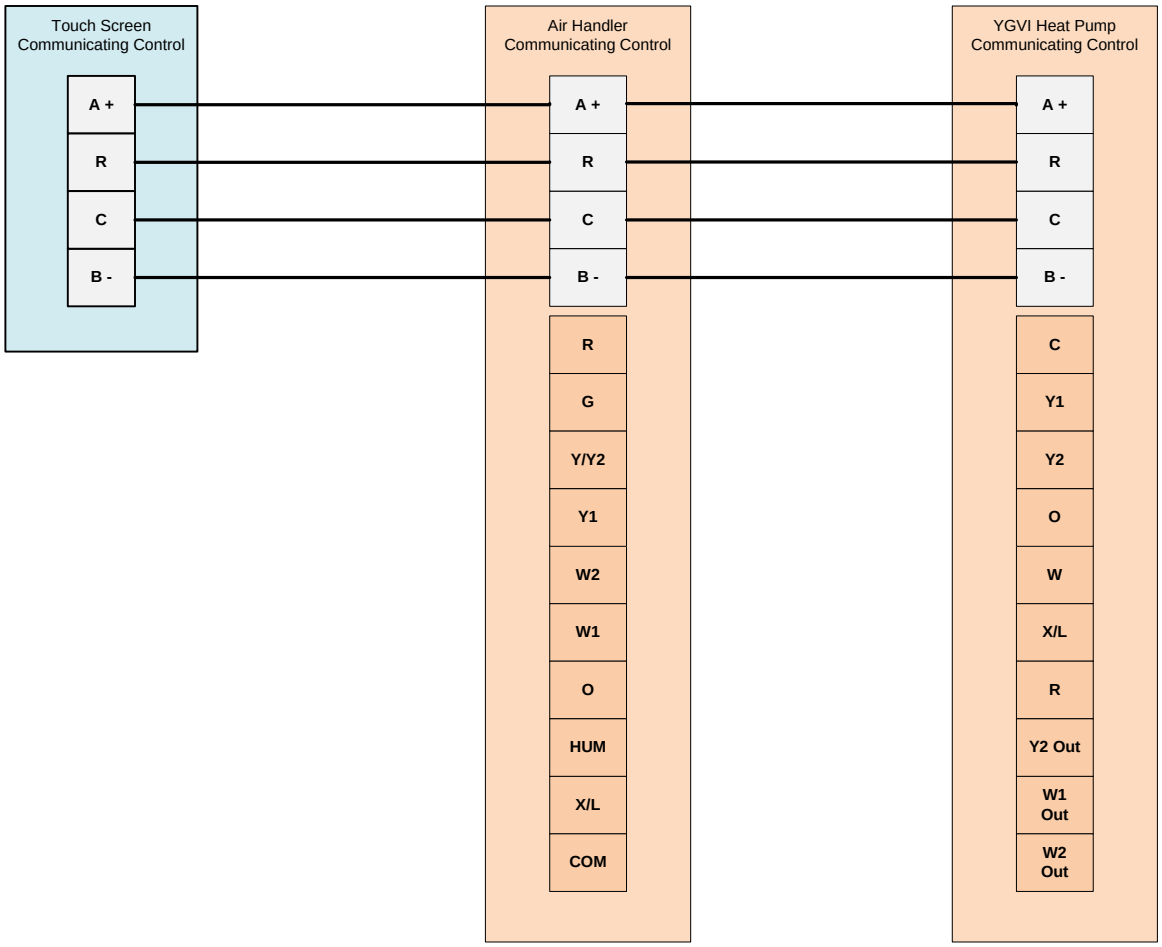
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

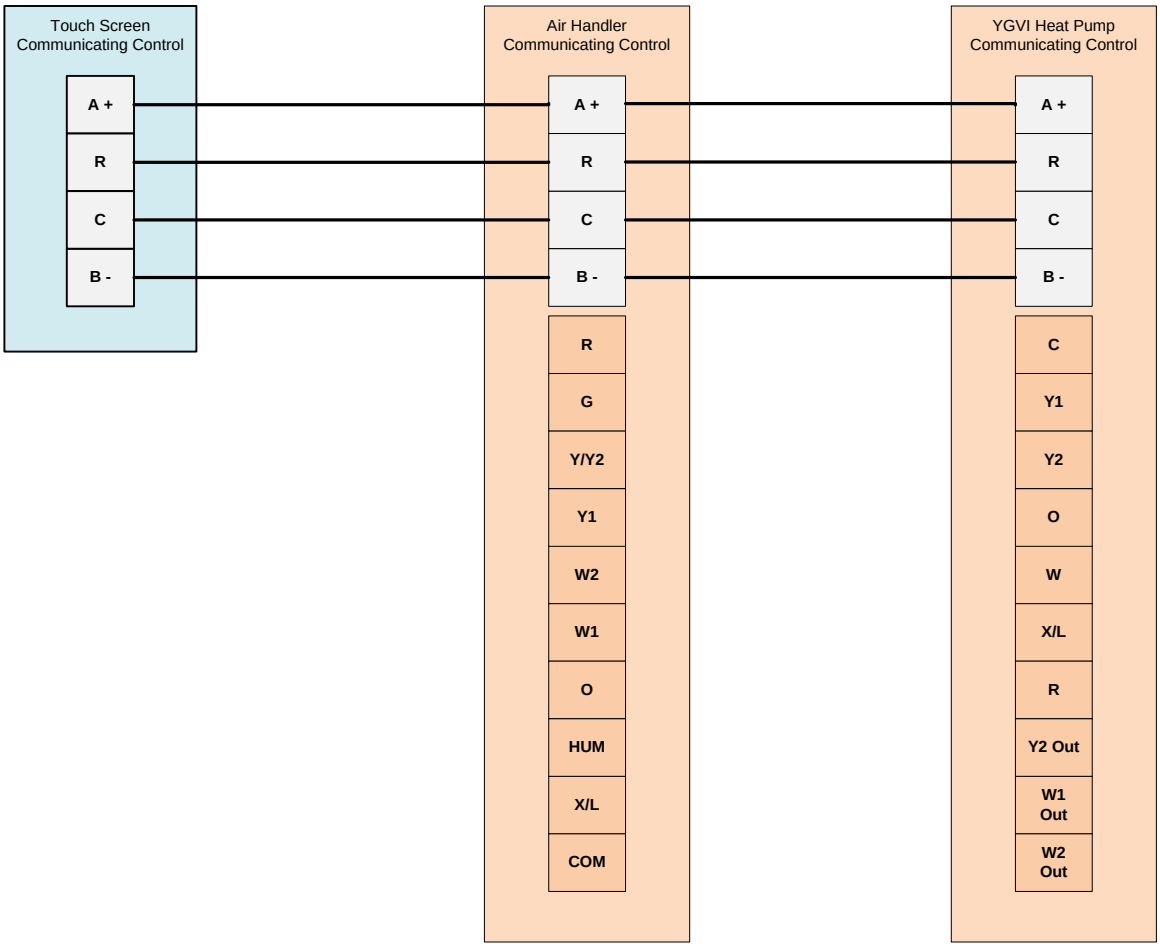
HP 23	V/S Air Handler – Single Stage Heat Pump (Hot HP)



Hum Stat Jumper must be set to YES
Heat-No Heat Jumper must be set to NO HEAT
Mode Jumper must be set to HP
Same as HP7 but with no electric heat.

Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to OFF

HP 10	V/S Air Handler – Single Stage Heat Pump



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

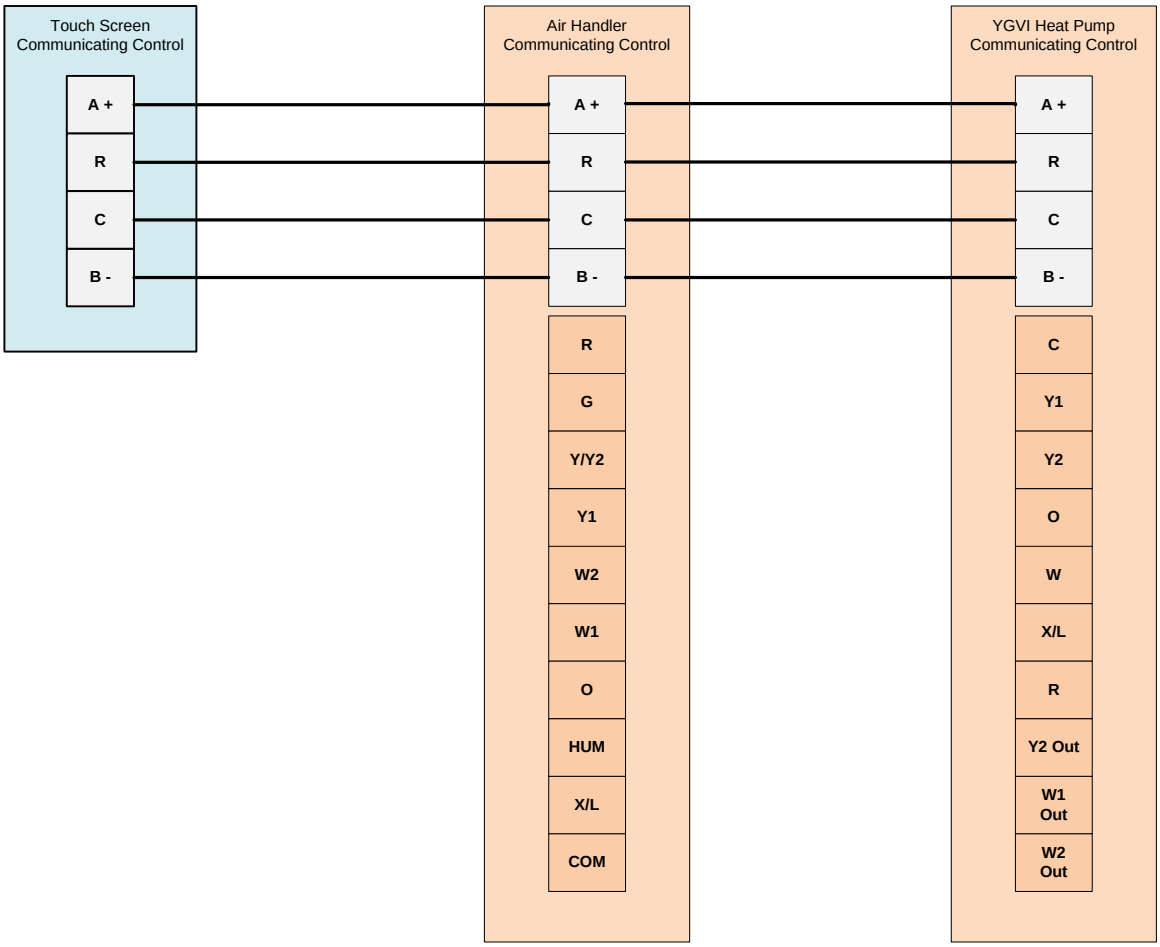
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 11 V/S Air Handler – Single Stage Heat Pump



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

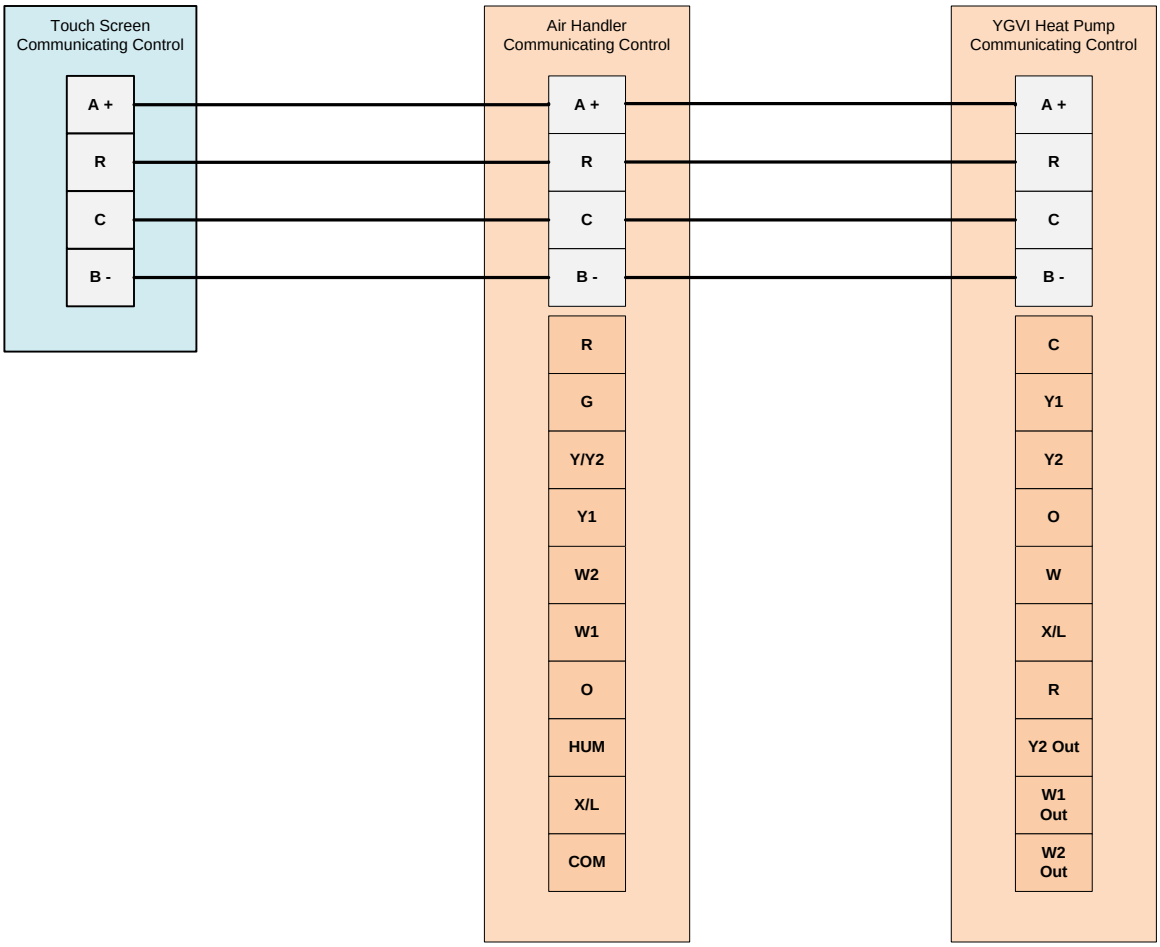
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 12 V/S Air Handler – Single Stage Heat Pump



Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

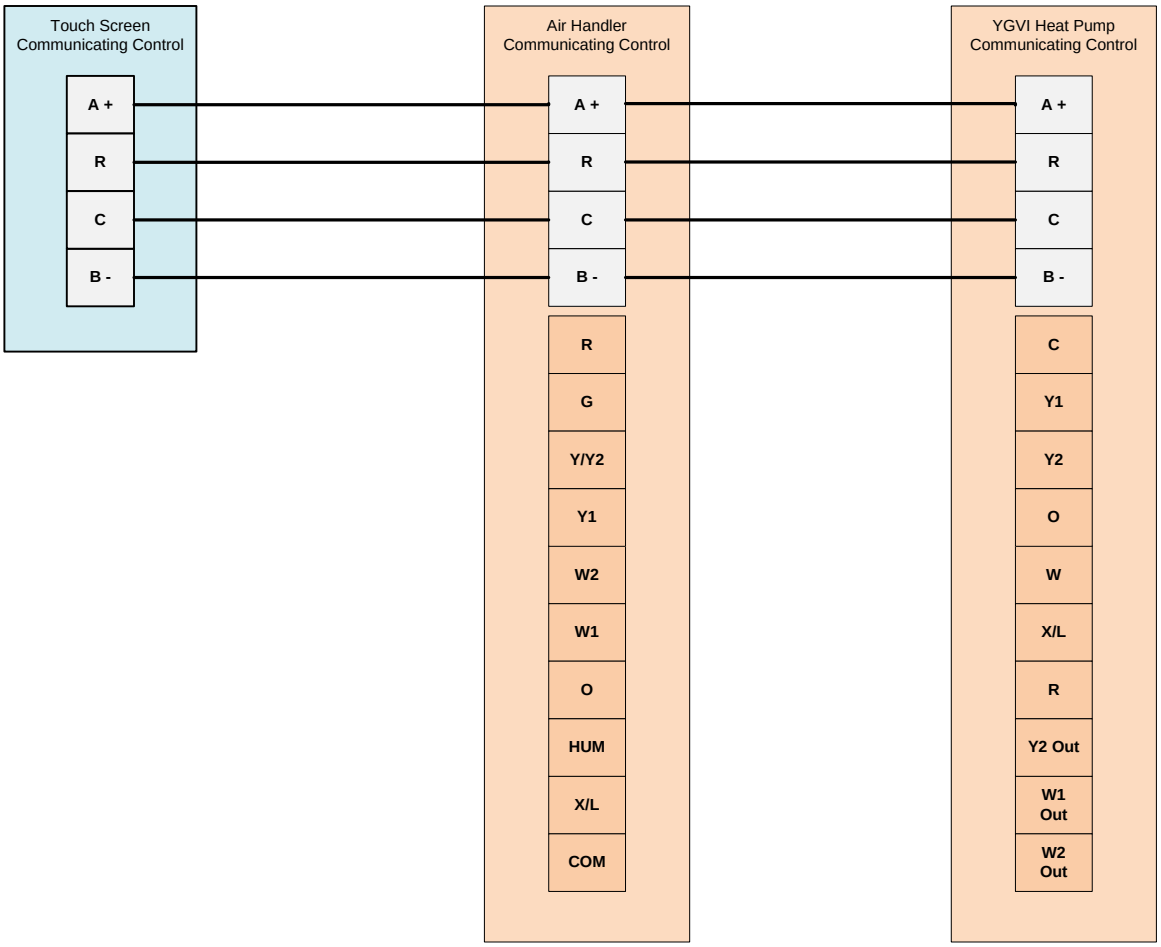
Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to HP

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

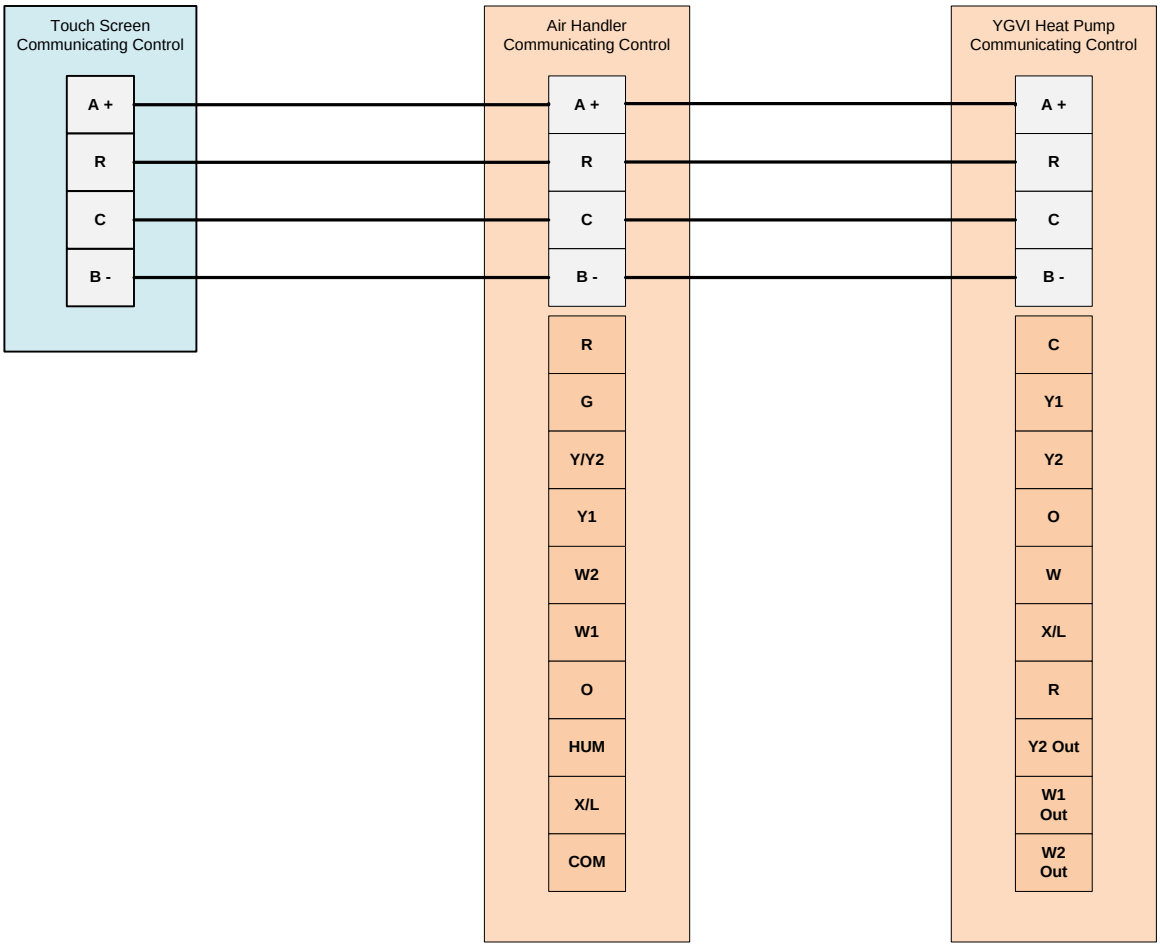
HP 24	V/S Air Handler – Single Stage Heat Pump



Hum Stat Jumper must be set to YES
Heat-No Heat Jumper must be set to NO HEAT
Mode Jumper must be set to HP
Same as HP10 but with no electric heat.

Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to OFF

HP 25	V/S Air Handler (AHV) – Two Stage Heat Pump (Hot HP)



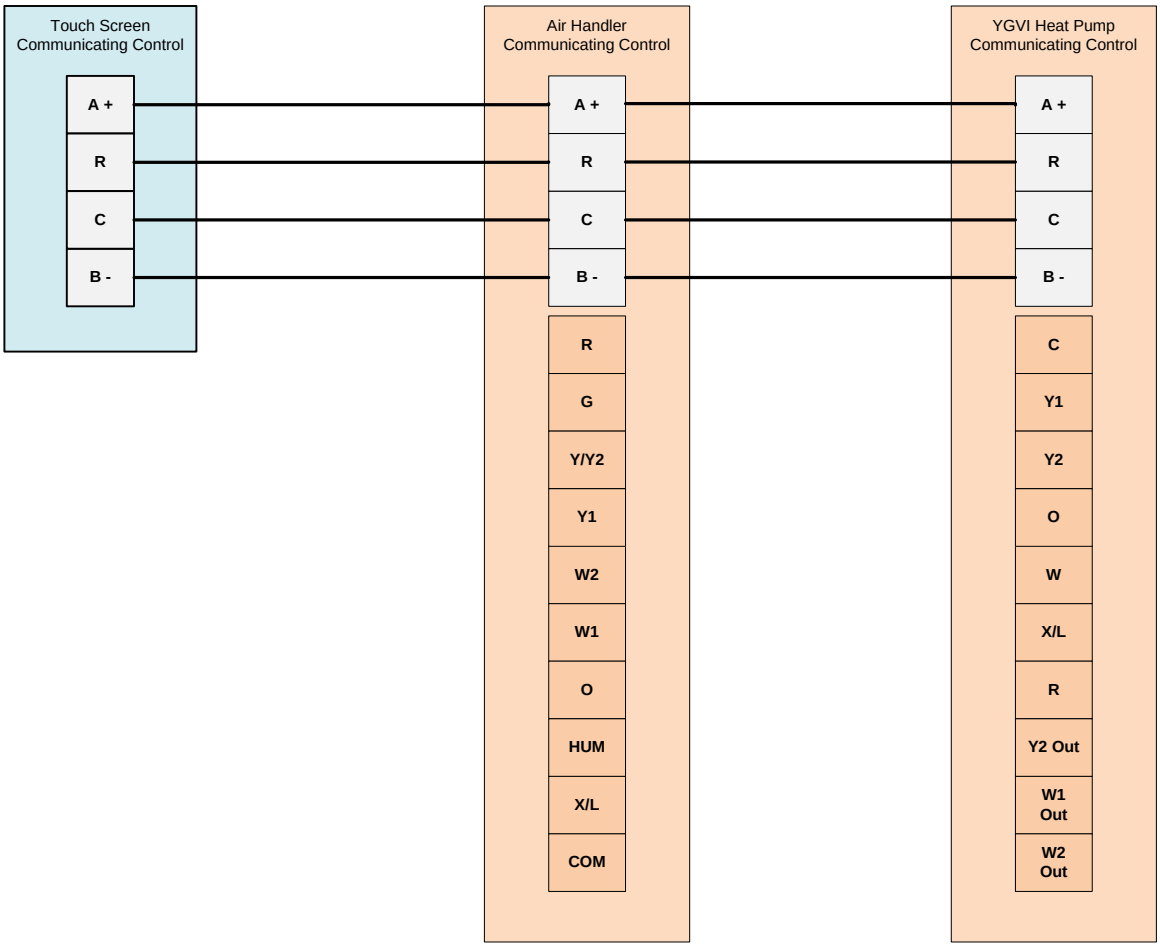
Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 26 V/S Air Handler (AHV) – Two Stage Heat Pump (Hot HP)



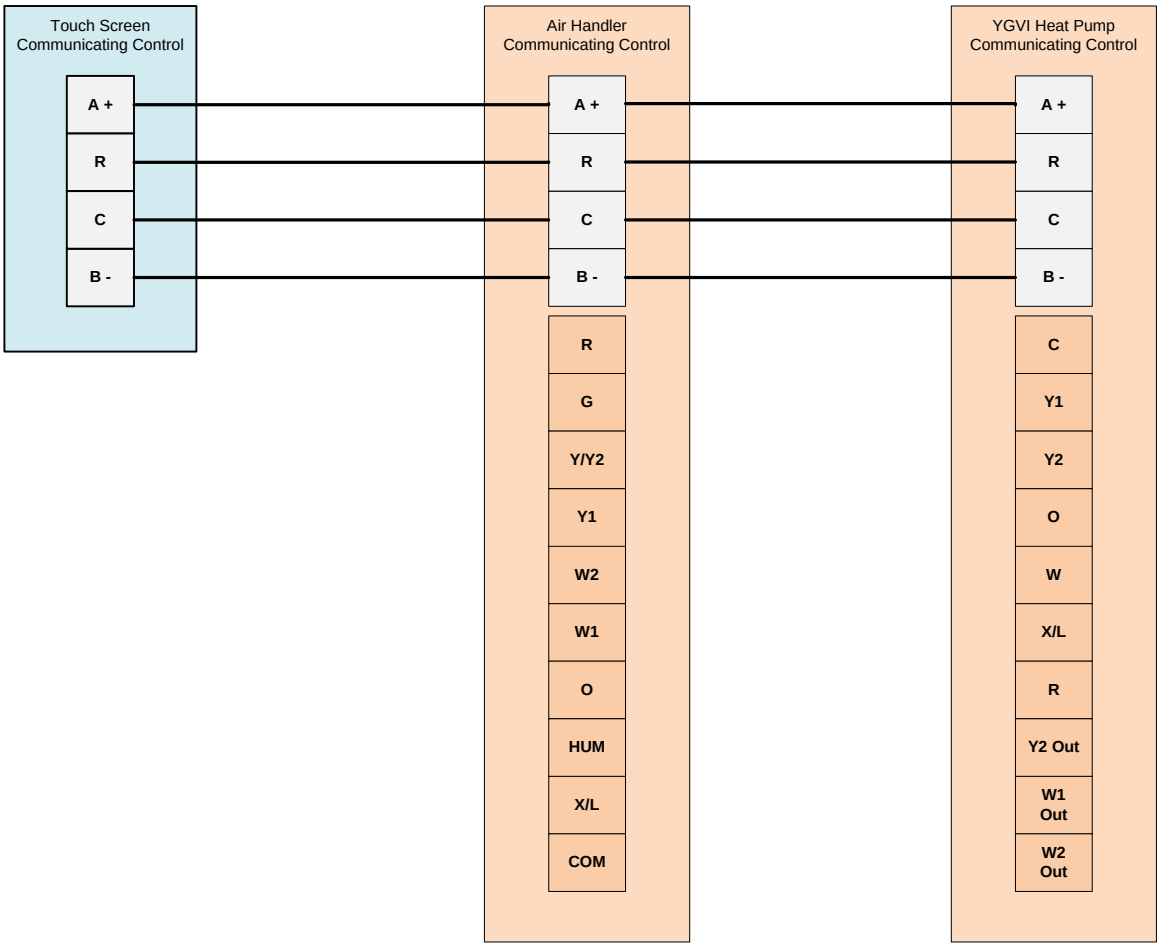
Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 27 V/S Air Handler (AHV) – Two Stage Heat Pump (Hot HP)



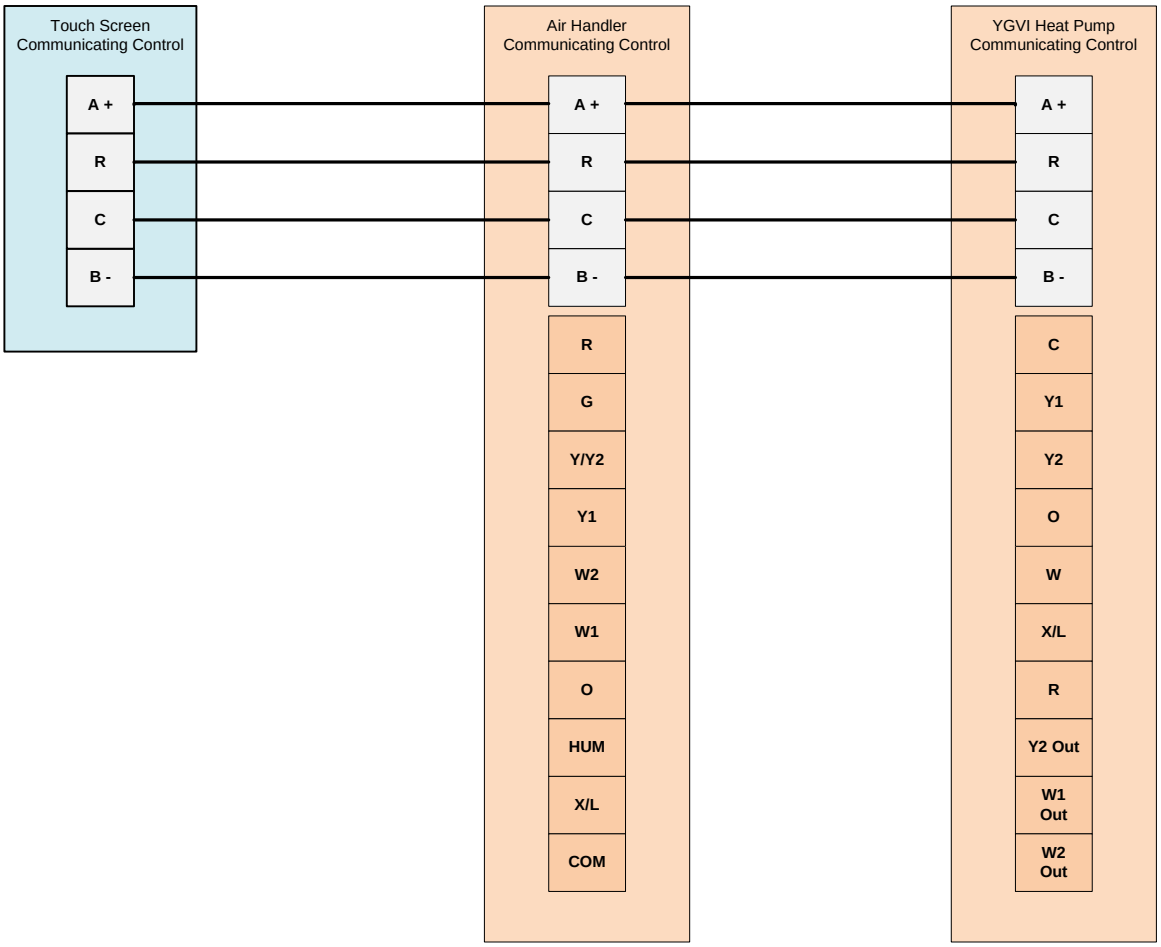
Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 37	V/S Air Handler (AHV) – Two Stage Heat Pump (Hot HP)

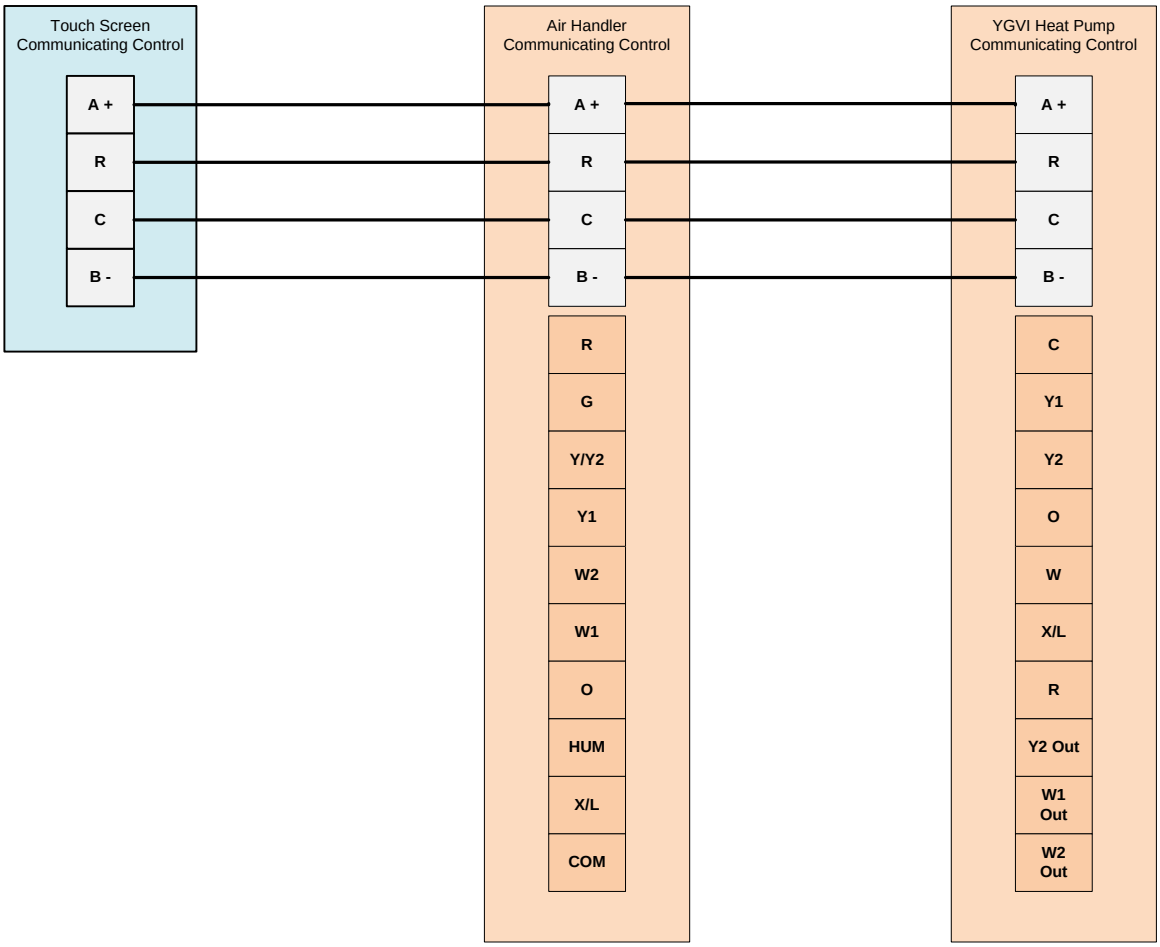


Same as HP25 but with no electric heat.

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 28 V/S Air Handler (AHV) – Two Stage Heat Pump



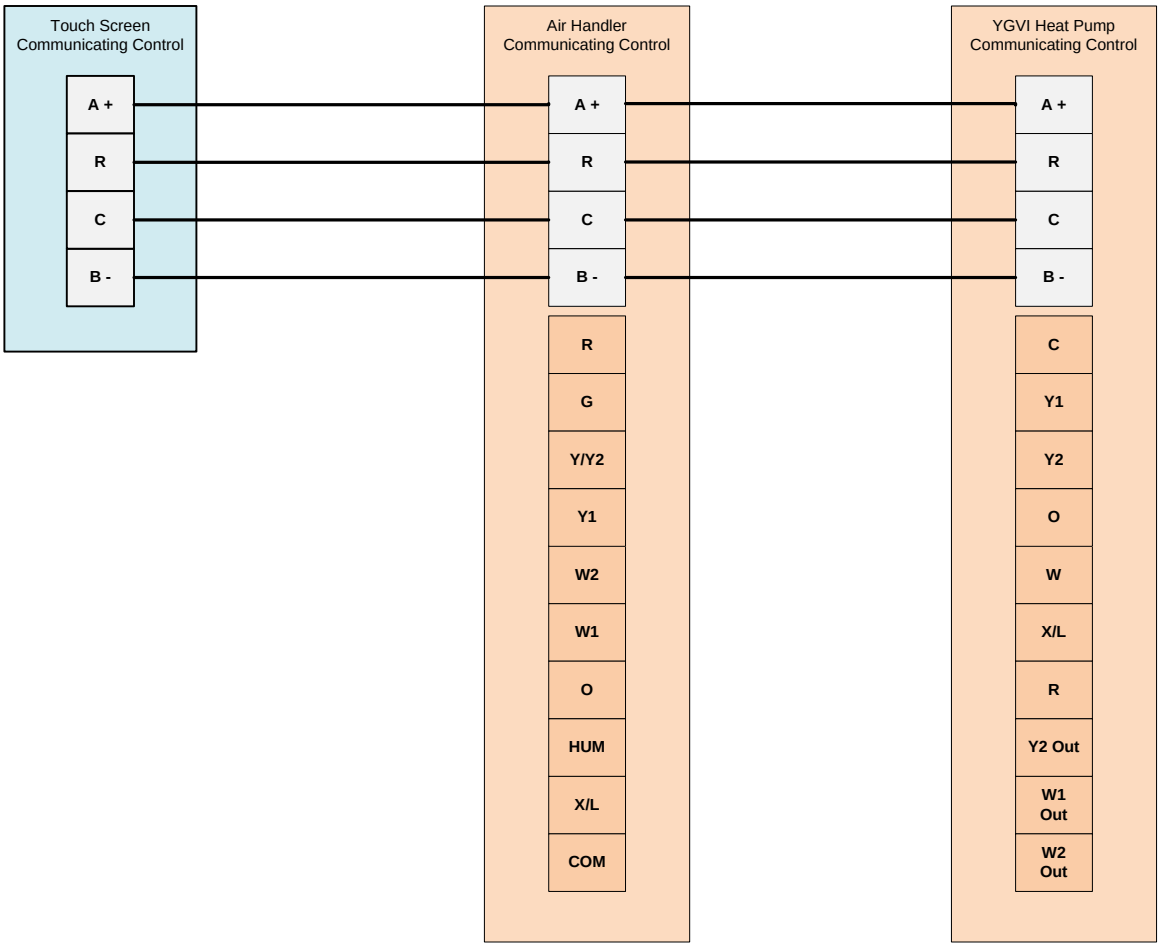
Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 29 V/S Air Handler (AHV) – Two Stage Heat Pump



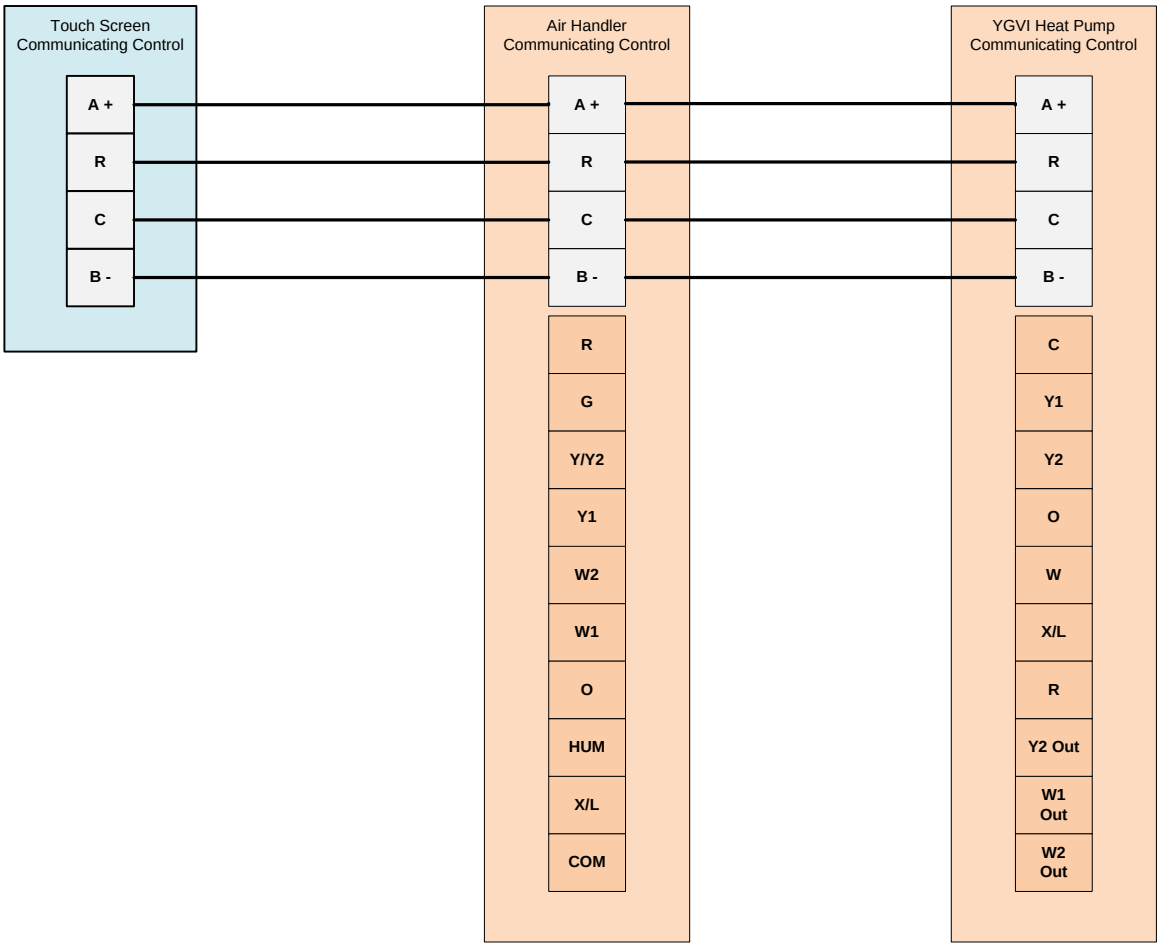
Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 30 V/S Air Handler (AHV) – Two Stage Heat Pump



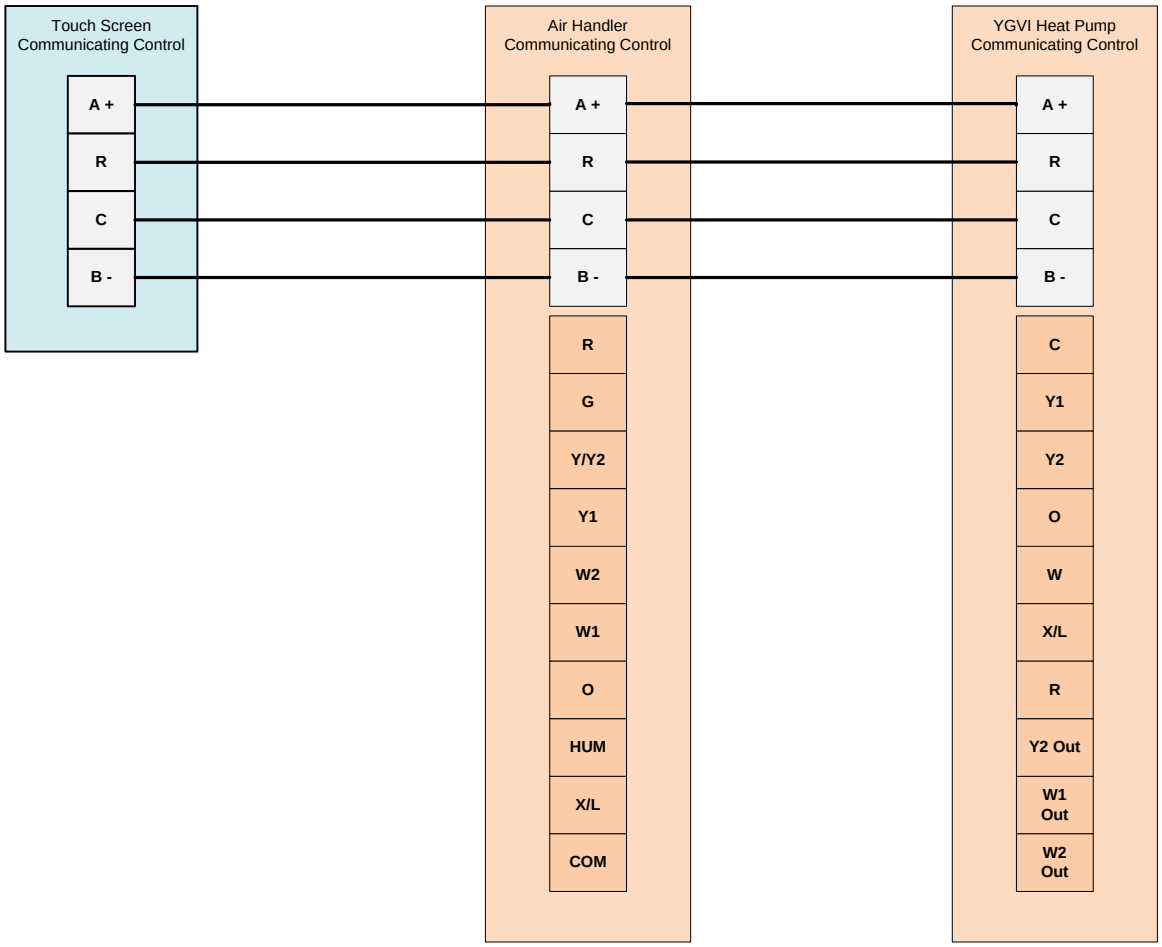
Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 38	V/S Air Handler (AHV) – Two Stage Heat Pump

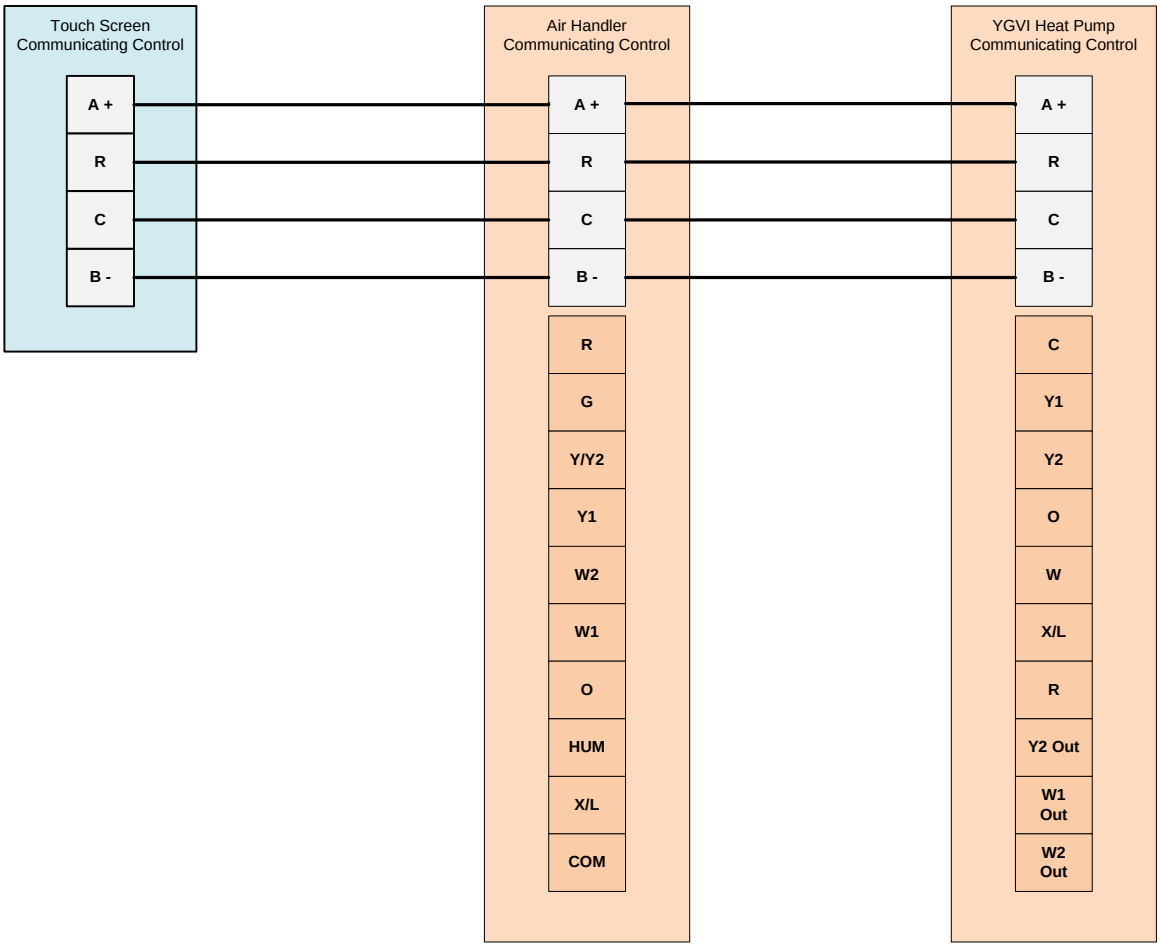


Same as HP28 but with no electric heat.

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 31	V/S Air Handler (AHV) – Single Stage Heat Pump (Hot HP)



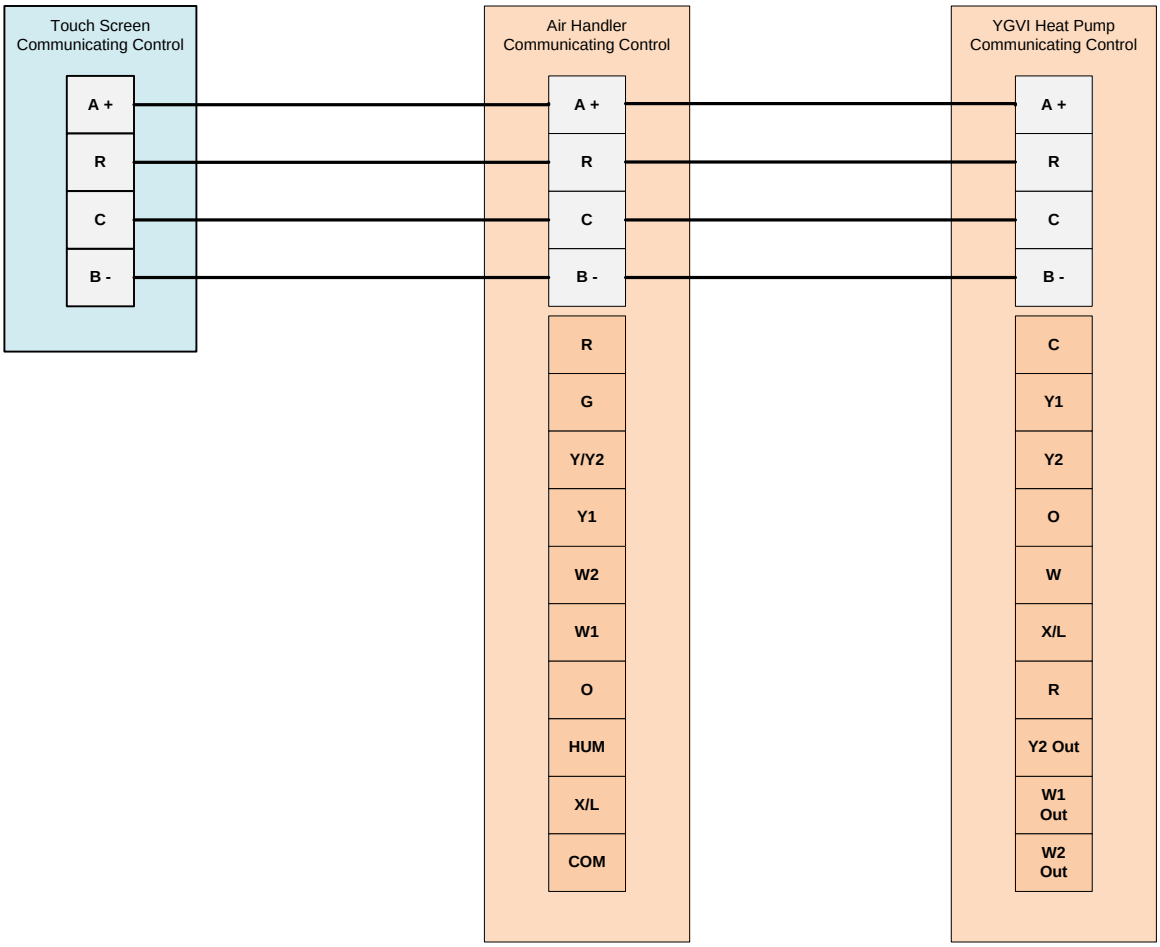
Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 32 V/S Air Handler (AHV) – Single Stage Heat Pump (Hot HP)



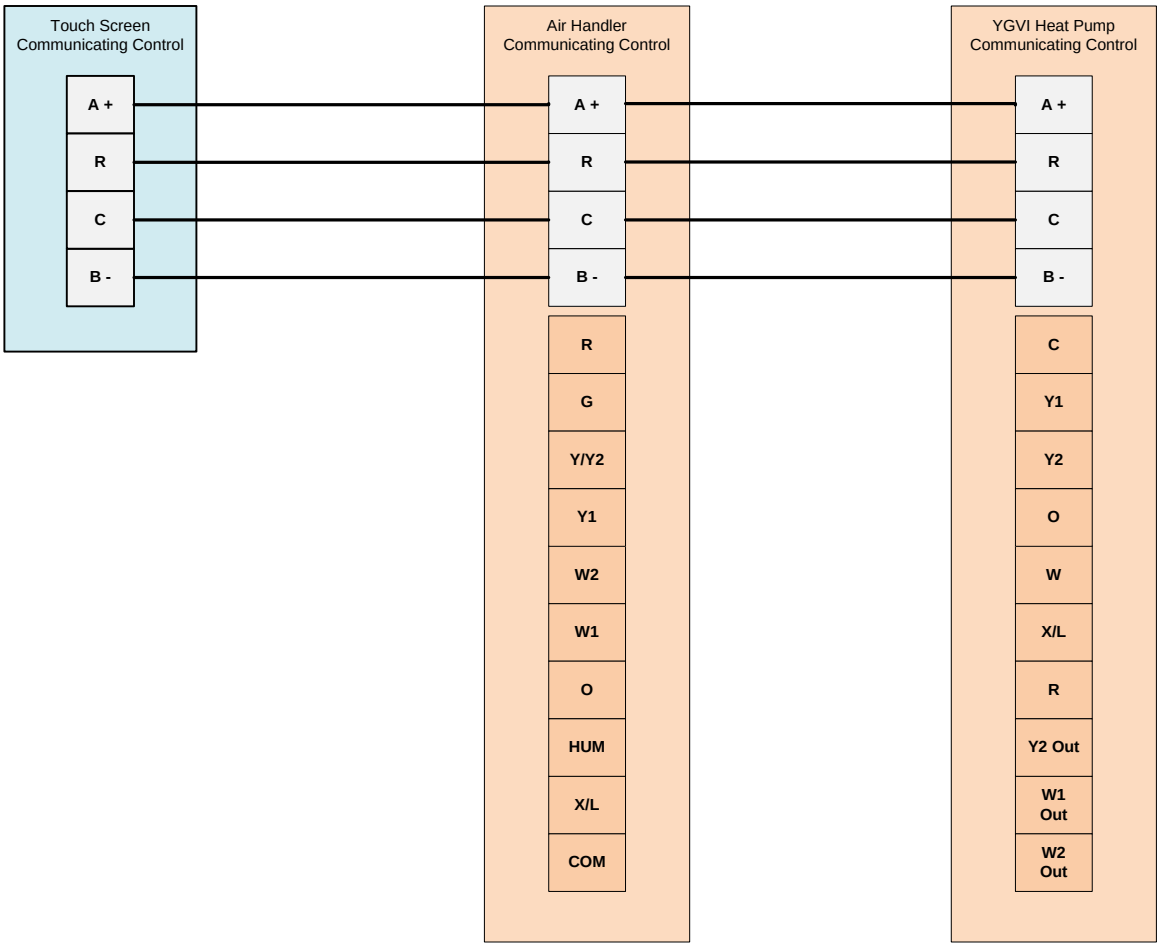
Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 33 V/S Air Handler (AHV) – Single Stage Heat Pump (Hot HP)



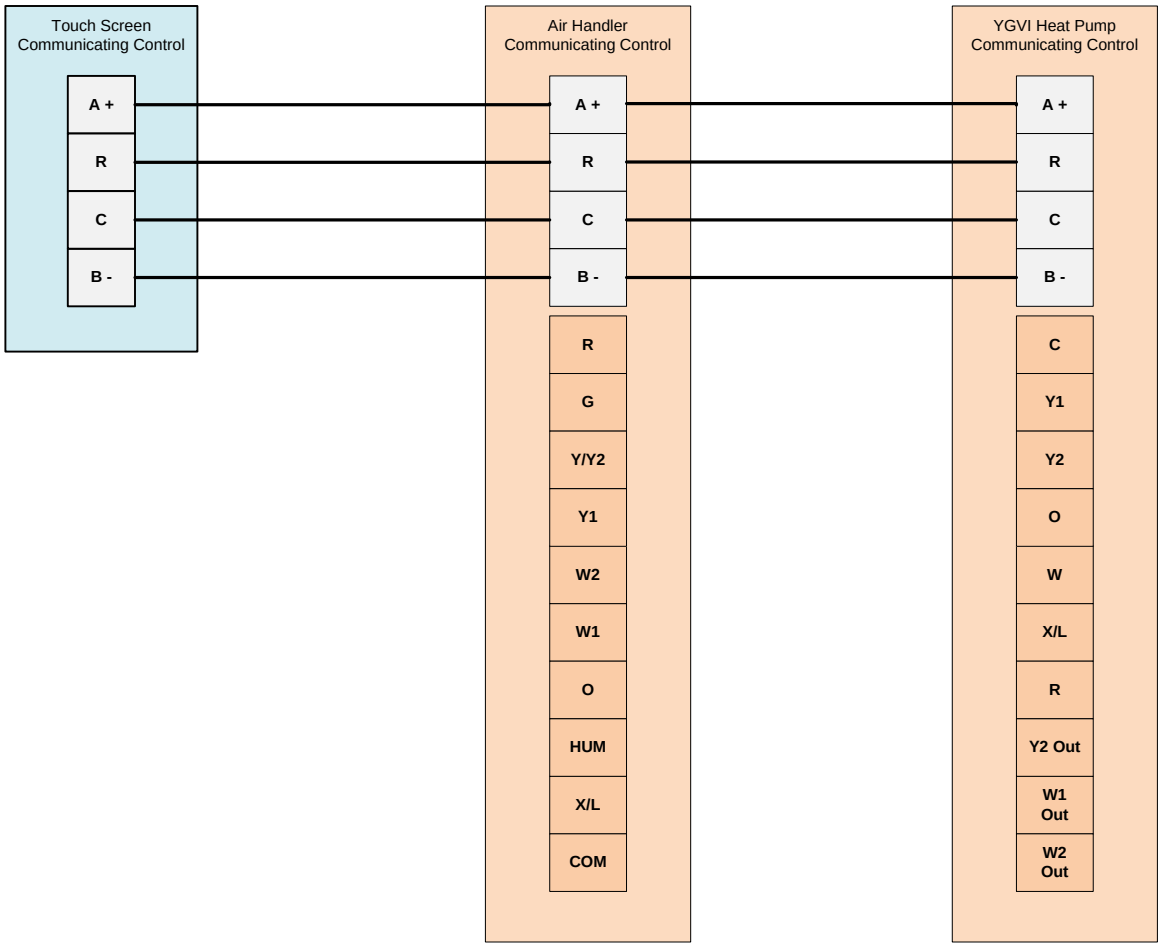
Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 39	V/S Air Handler (AHV) – Single Stage Heat Pump (Hot HP)

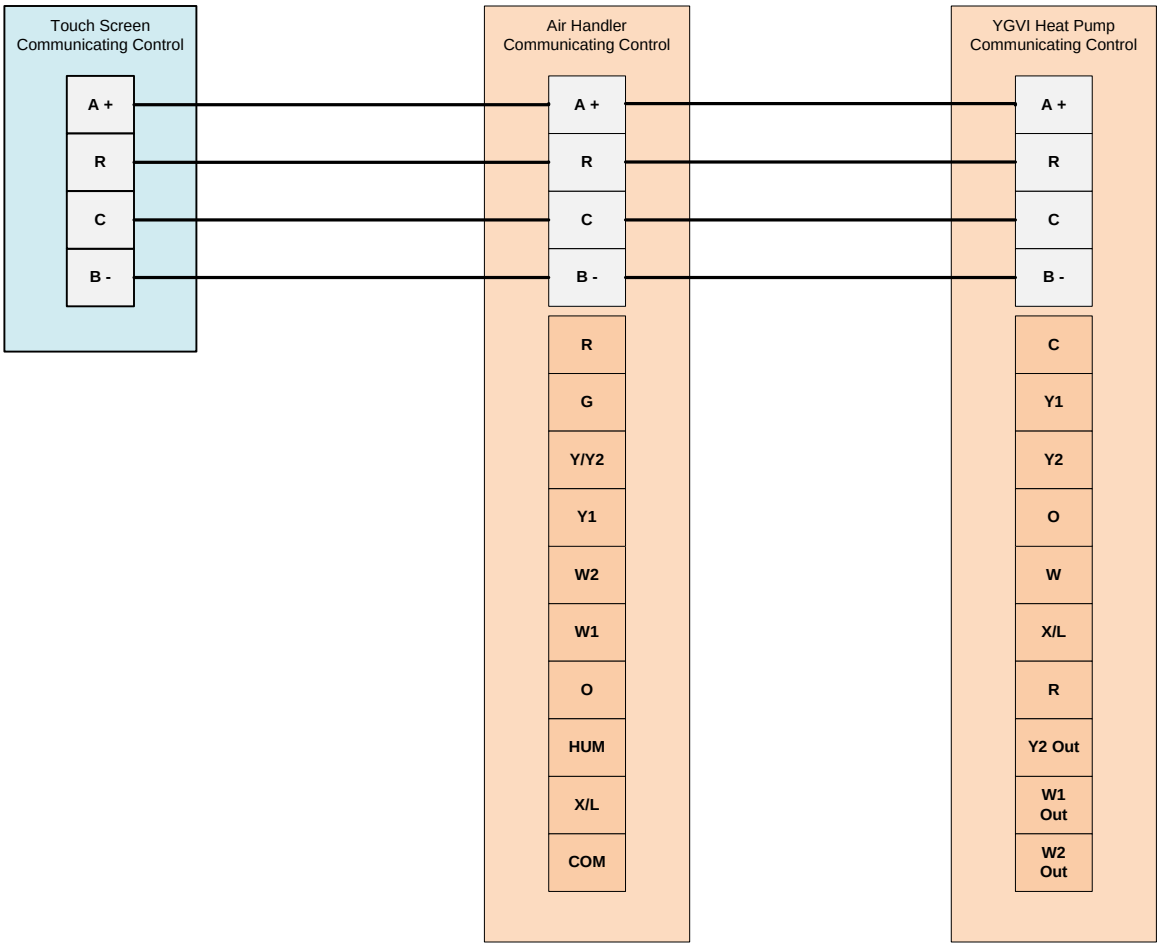


Same as HP31 but with no electric heat.

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to OFF

HP 34 V/S Air Handler (AHV) – Single Stage Heat Pump



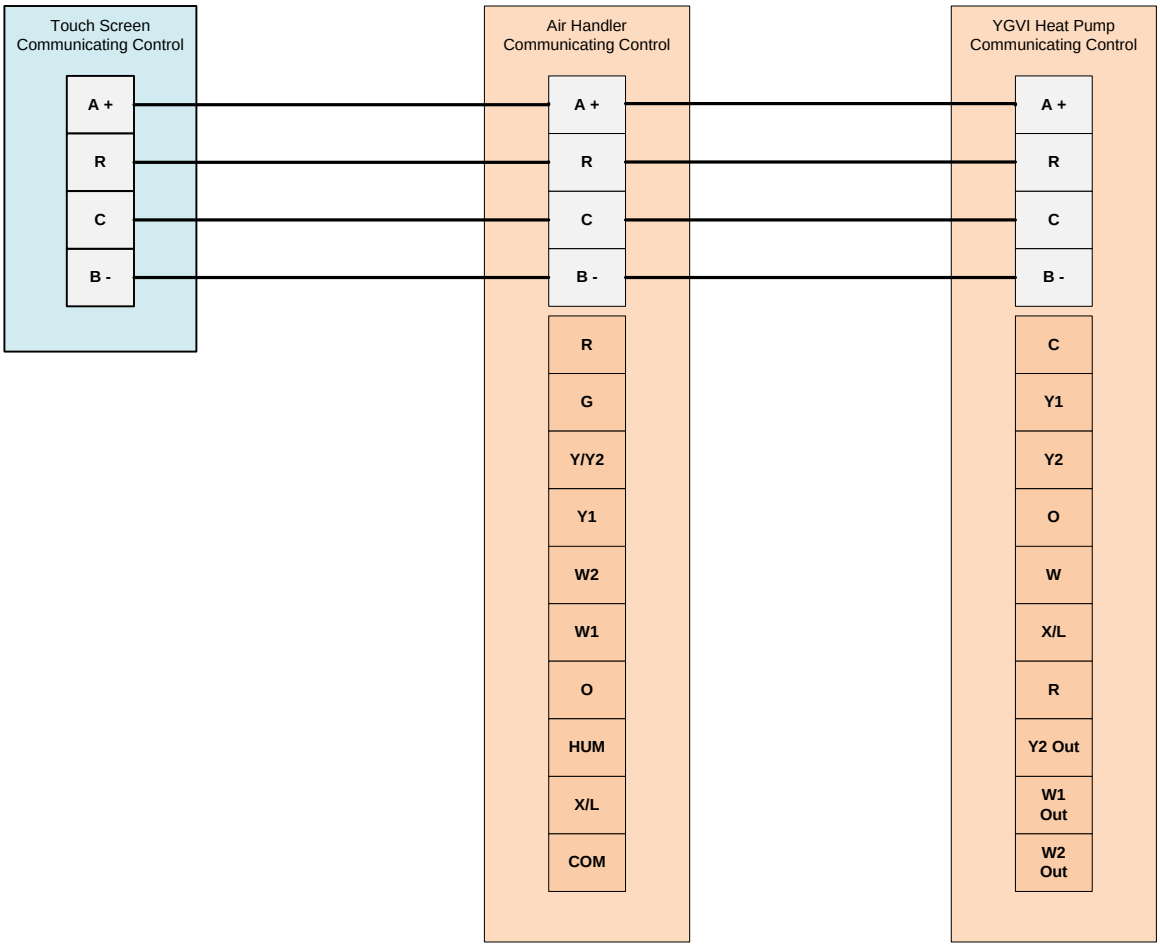
Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 35 V/S Air Handler (AHV) – Single Stage Heat Pump



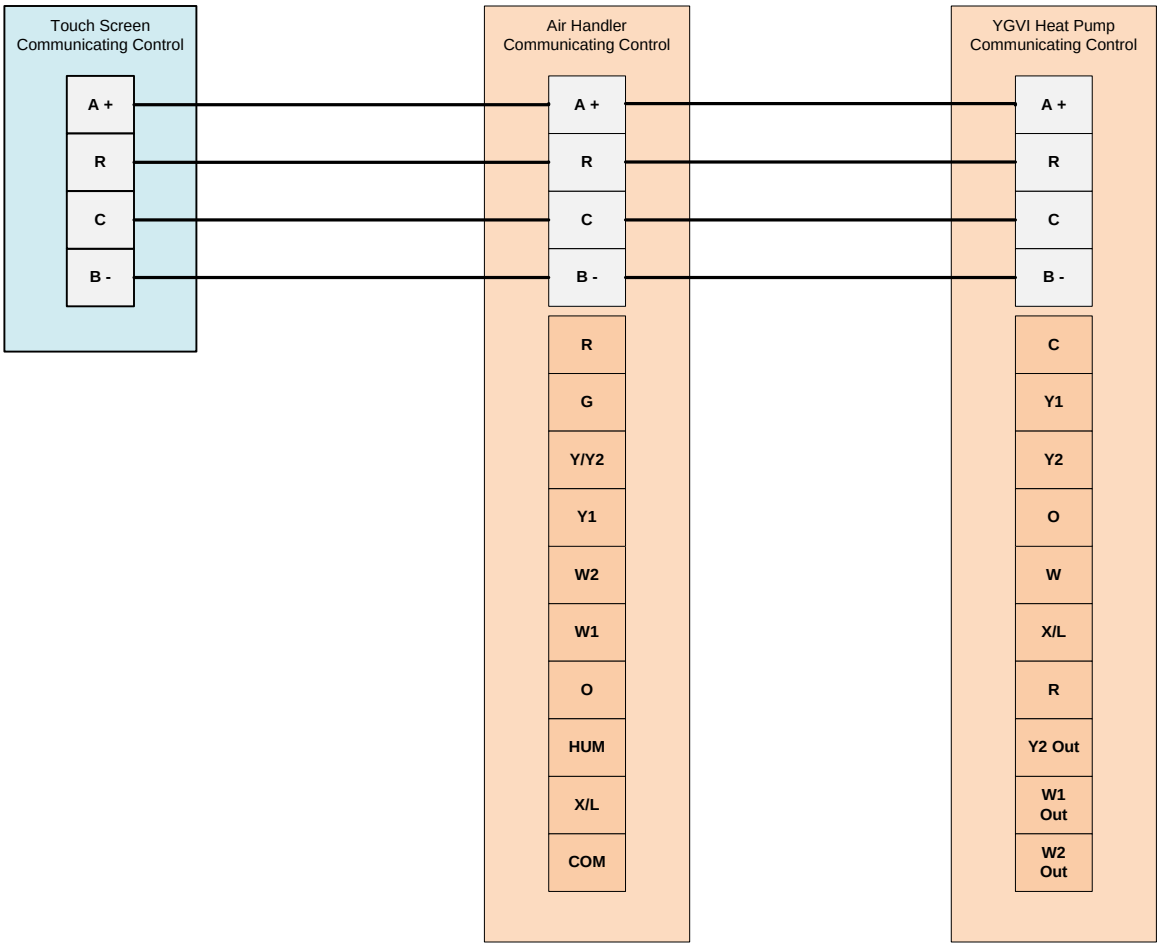
Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 36 V/S Air Handler (AHV) – Single Stage Heat Pump



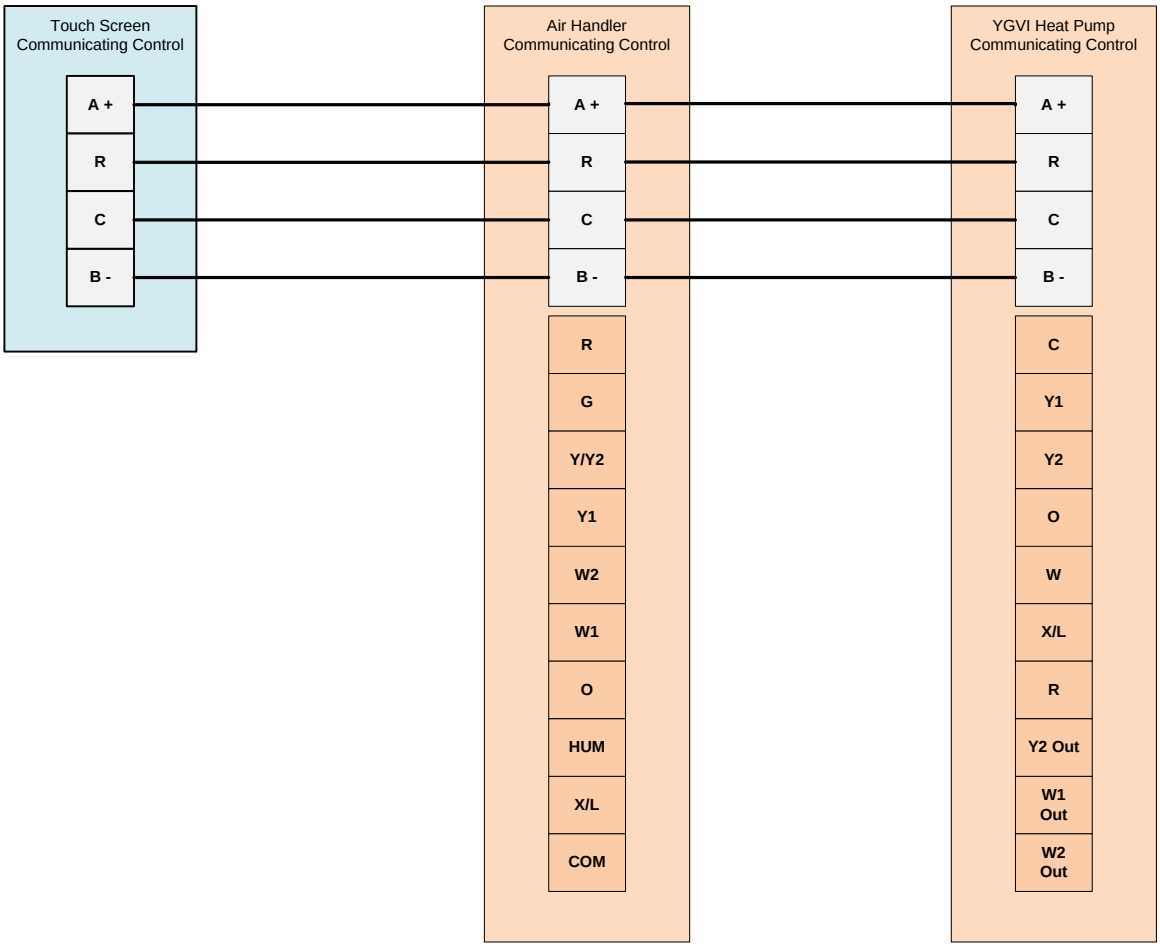
Air Handler Heat Kit Staging:
1st stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 40 V/S Air Handler (AHV) – Single Stage Heat Pump



Air Handler Heat Kit Staging:
1st stage=W1+W2

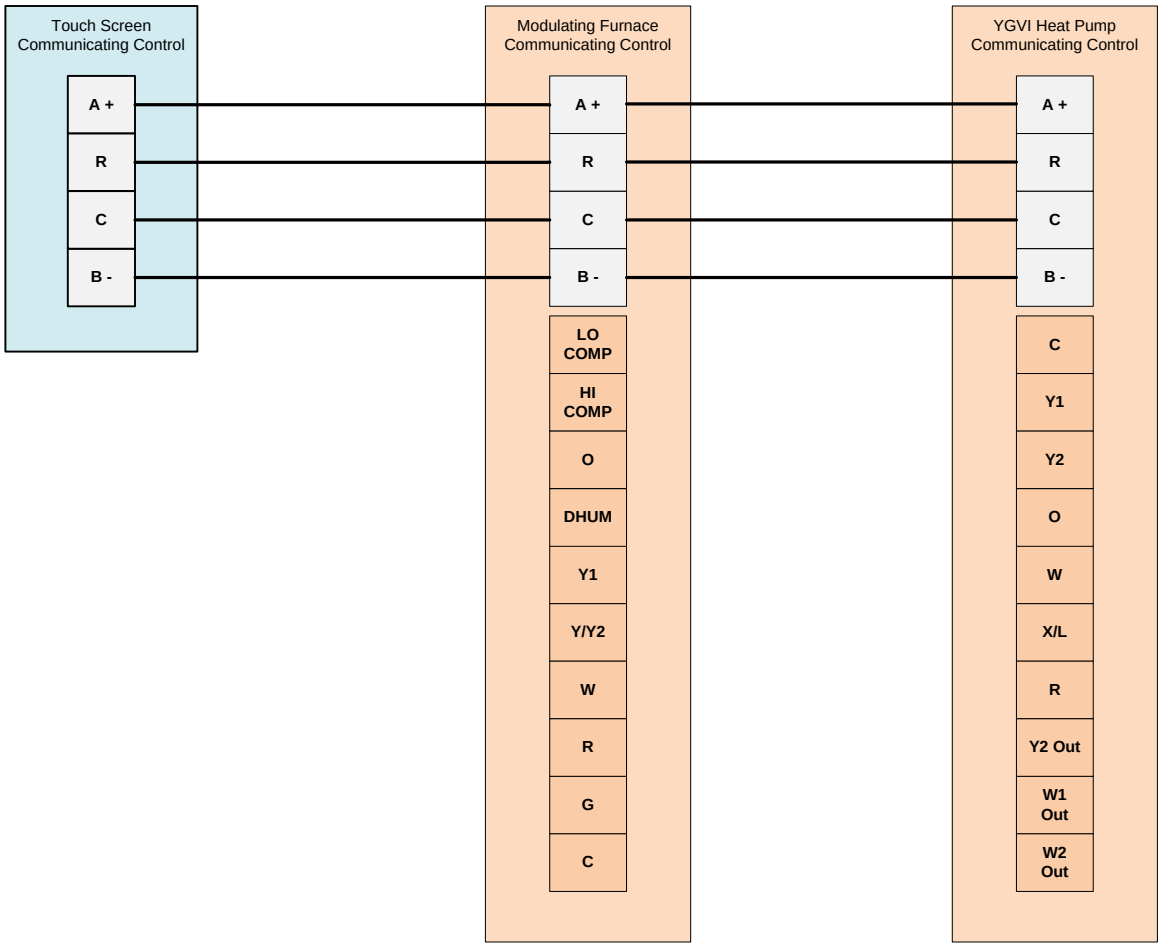
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Same as HP34 but with no electric heat.

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

HP 13	Modulating Furnace – Two Stage Heat Pump (Hot HP)

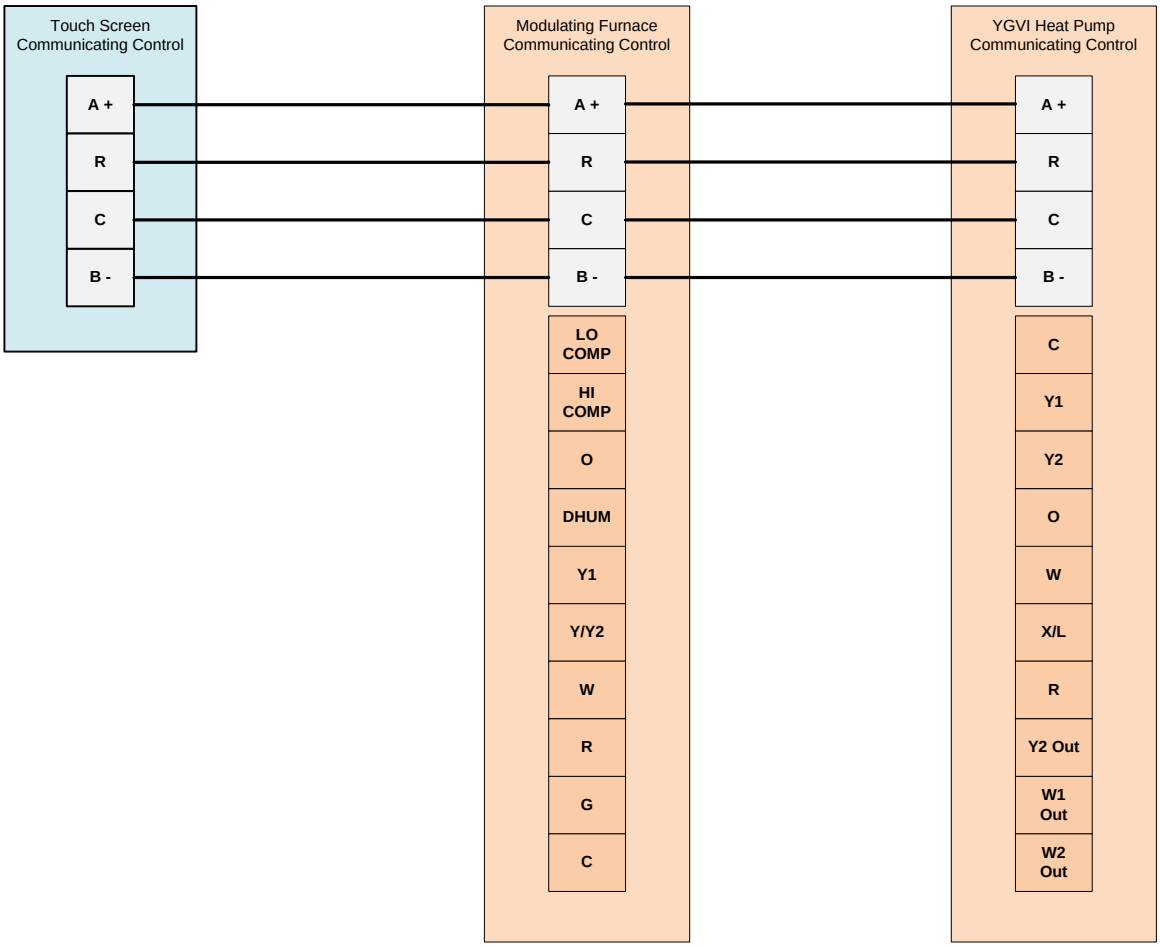


Heat Pump Jumper must be set to YES

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to ON

HP 14	Modulating Furnace – Two Stage Heat Pump (Hot HP)



Required Items for Bonnet Sensor Functionality
Bonnet Sensor: S1-37309243000
Bonnet Sensor Connector: S1-02544078000

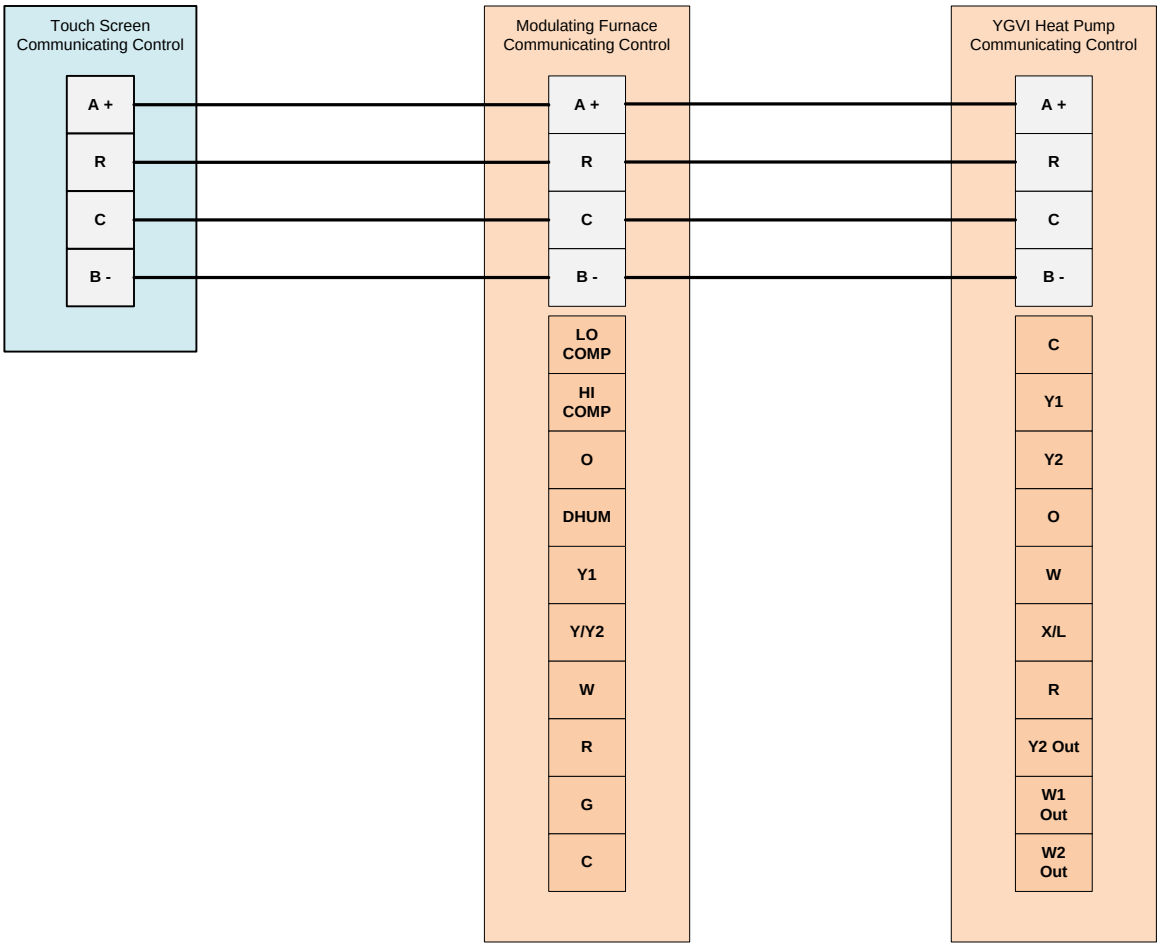
Heat Pump Jumper must be set to YES

Bonnet sensor must be connected to the A-coil temperature sensor of the furnace control.

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to ON

HP 15	Modulating Furnace – Two Stage Heat Pump

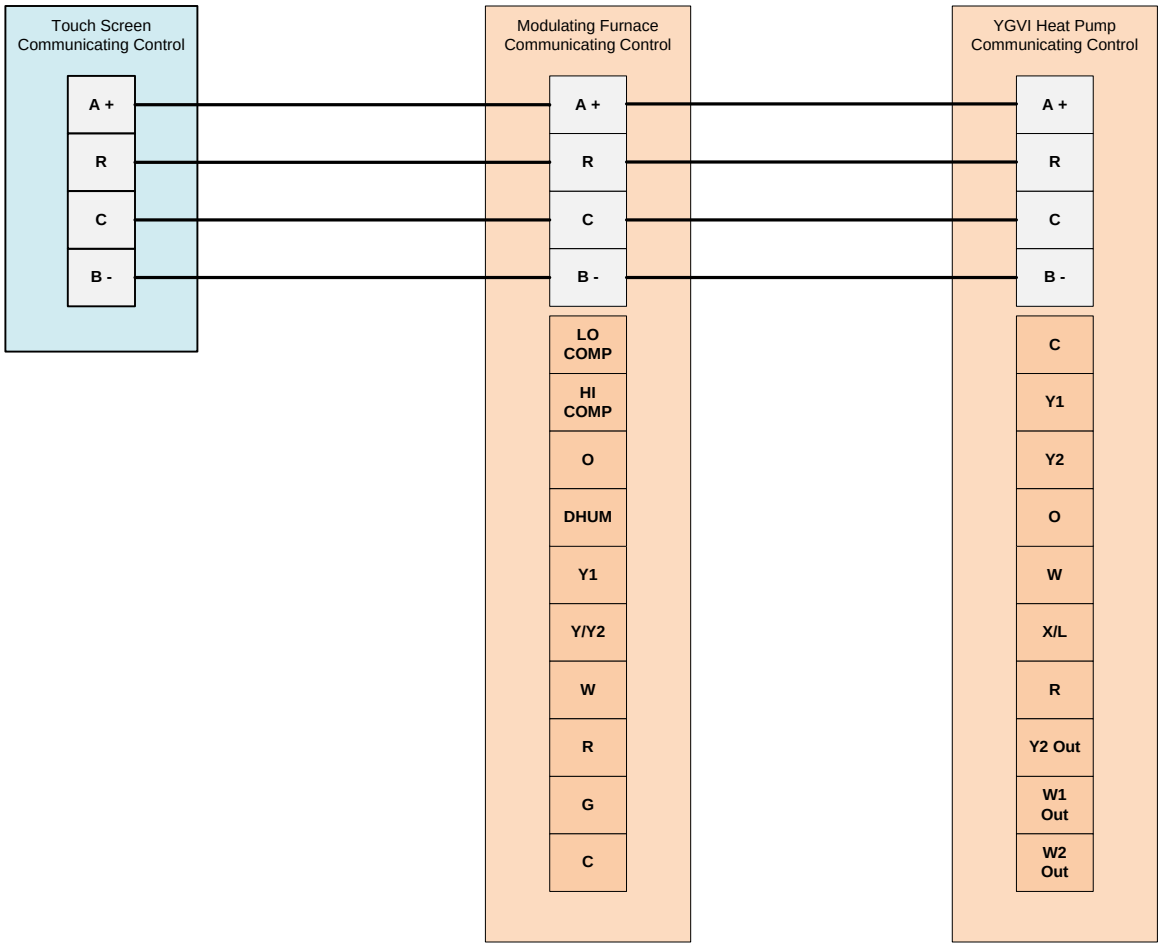


Heat Pump Jumper must be set to YES

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to ON

HP 16	Modulating Furnace – Two Stage Heat Pump



Required Items for Bonnet Sensor Functionality
Bonnet Sensor: S1-37309243000
Bonnet Sensor Connector: S1-02544078000

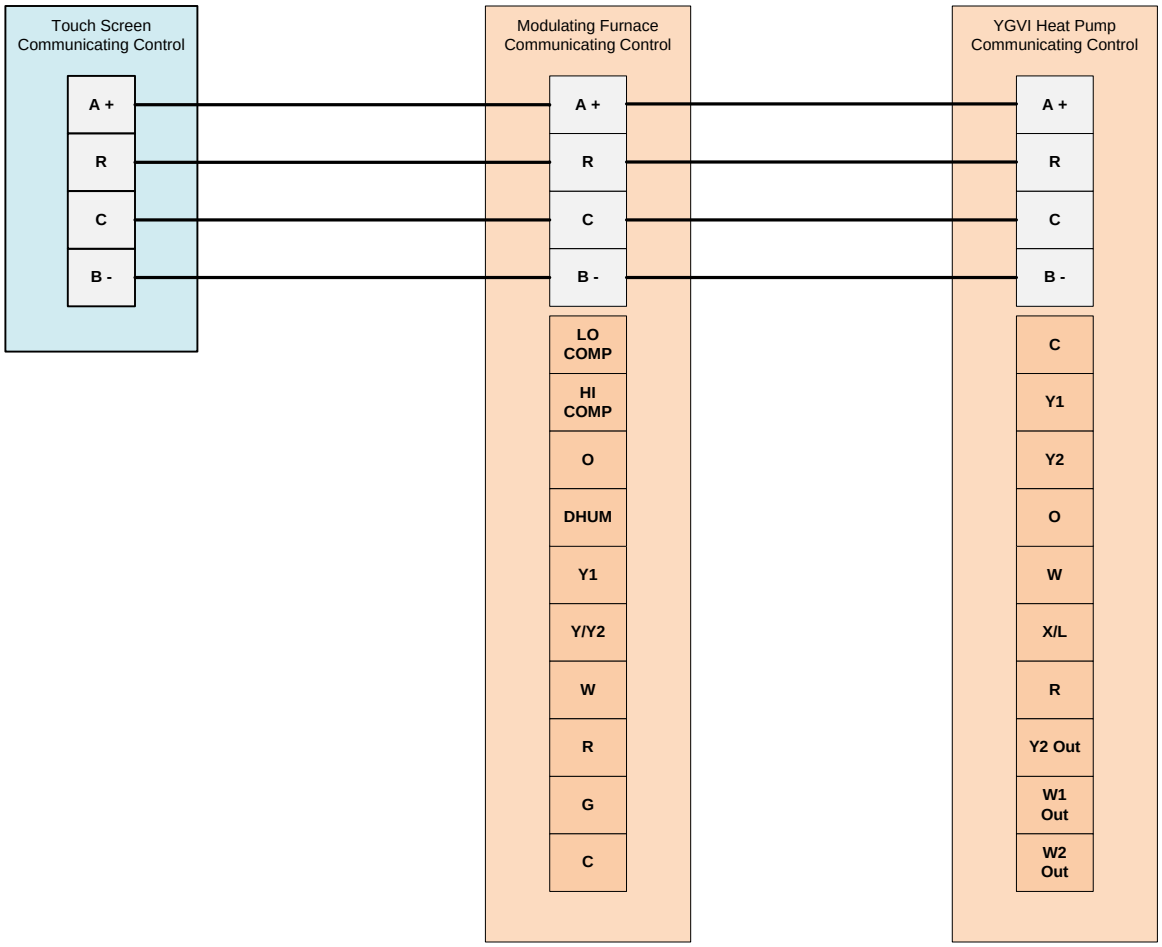
Heat Pump Jumper must be set to YES

Bonnet sensor must be connected to the A-coil temperature sensor of the furnace control.

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to ON

HP 17	Modulating Furnace – Single Stage Heat Pump (Hot HP)

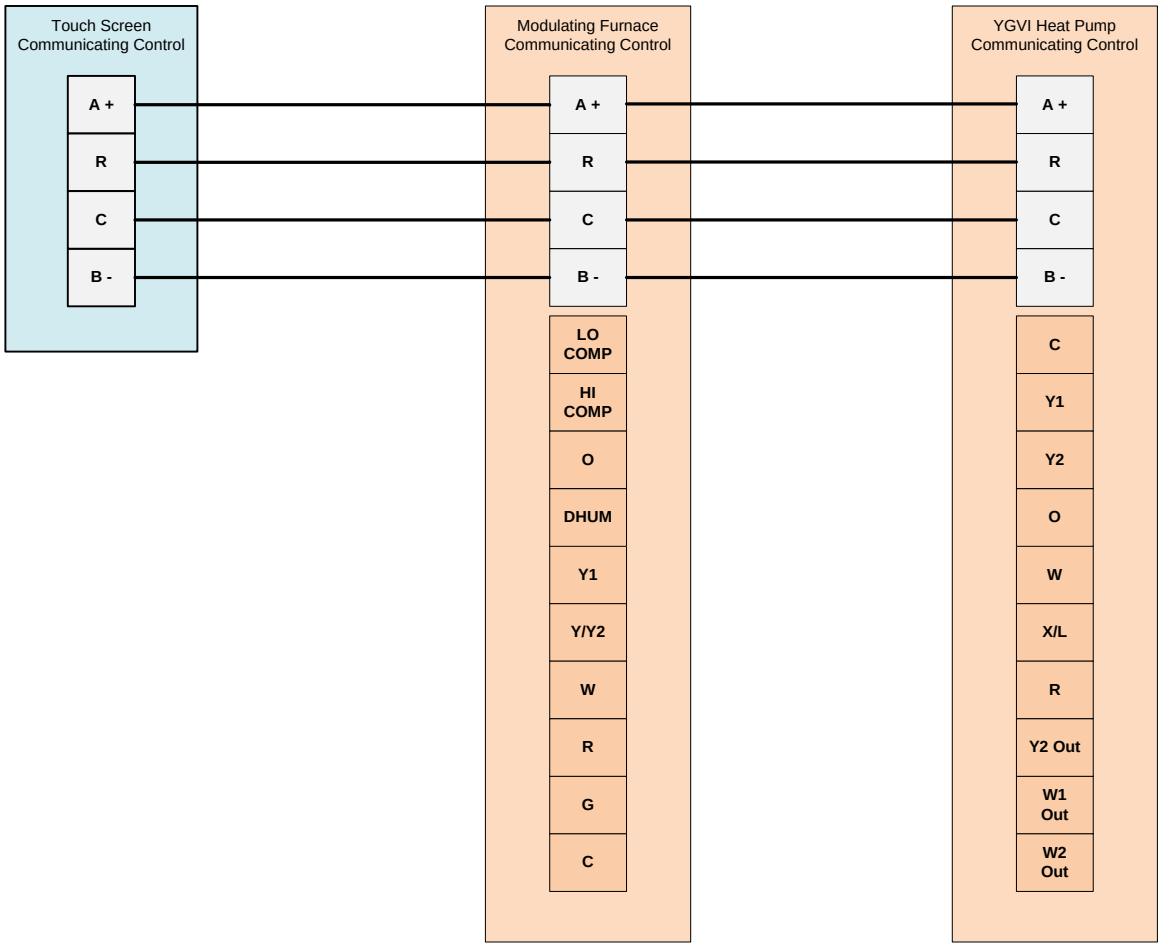


Heat Pump Jumper must be set to YES

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to ON

HP 18	Modulating Furnace – Single Stage Heat Pump (Hot HP)



Required Items for Bonnet Sensor Functionality
Bonnet Sensor: S1-37309243000
Bonnet Sensor Connector: S1-02544078000

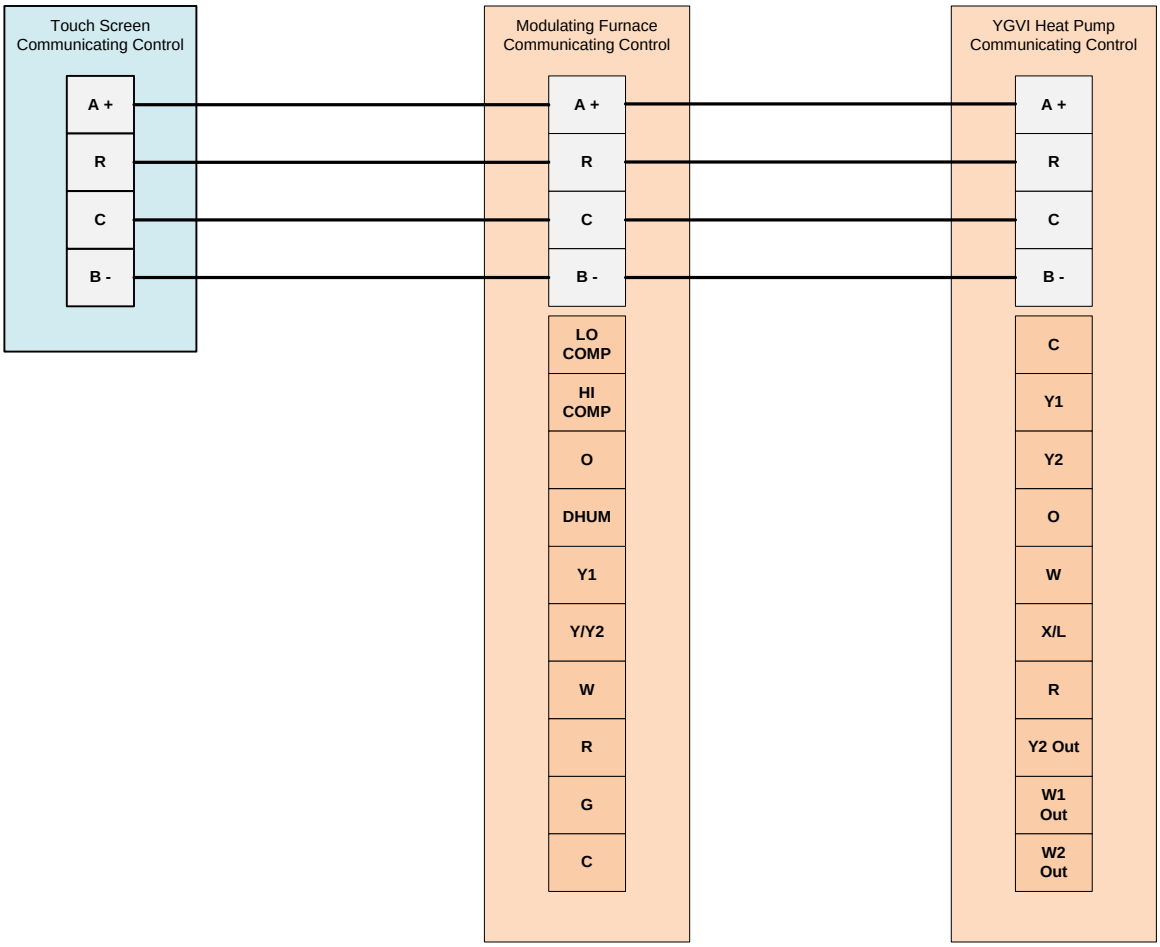
Heat Pump Jumper must be set to YES

Bonnet sensor must be connected to the A-coil temperature sensor of the furnace control.

Hot Heat Pump Jumper must be set to ON

FFuel Jumper must be set to ON

HP 19	Modulating Furnace – Single Stage Heat Pump

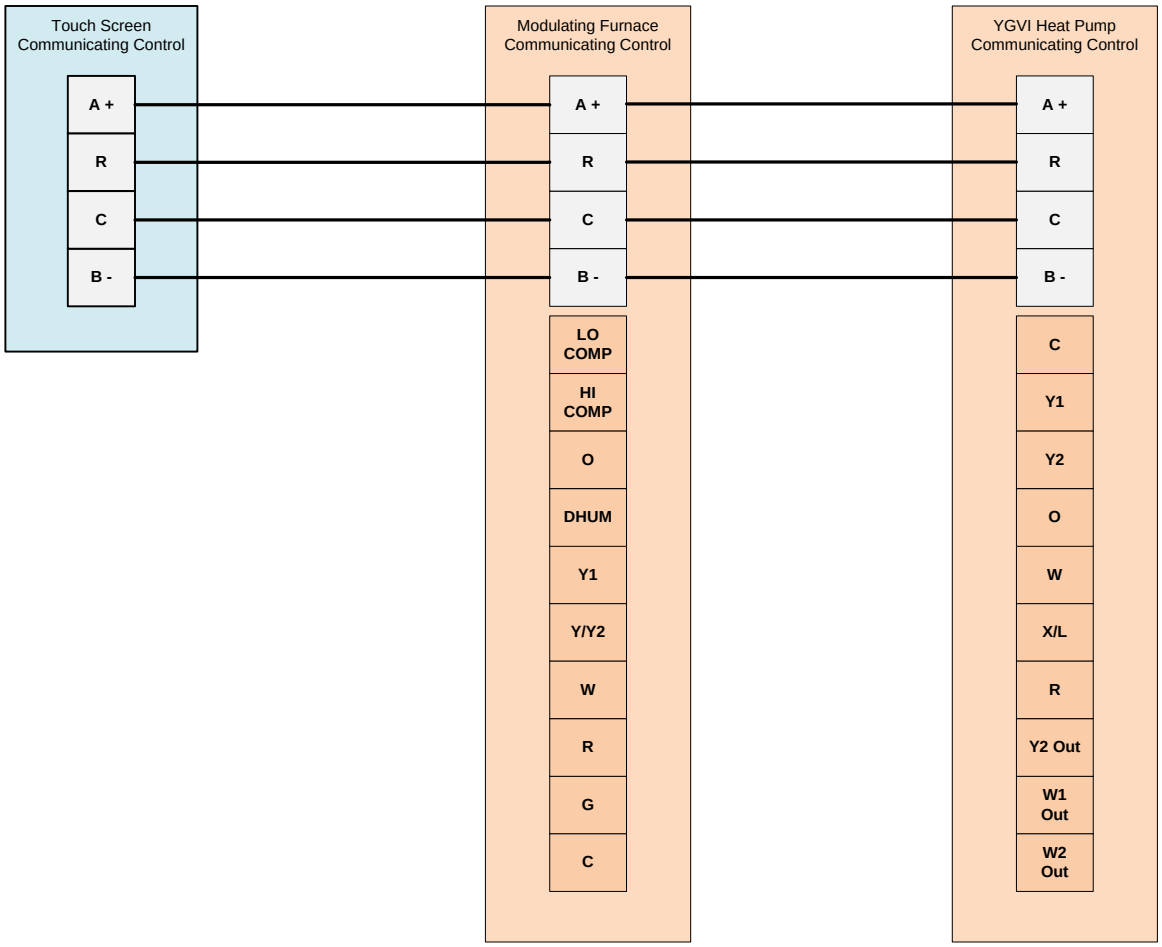


Heat Pump Jumper must be set to YES

Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to ON

HP 20	Modulating Furnace – Single Stage Heat Pump



Required Items for Bonnet Sensor Functionality
Bonnet Sensor: S1-37309243000
Bonnet Sensor Connector: S1-02544078000

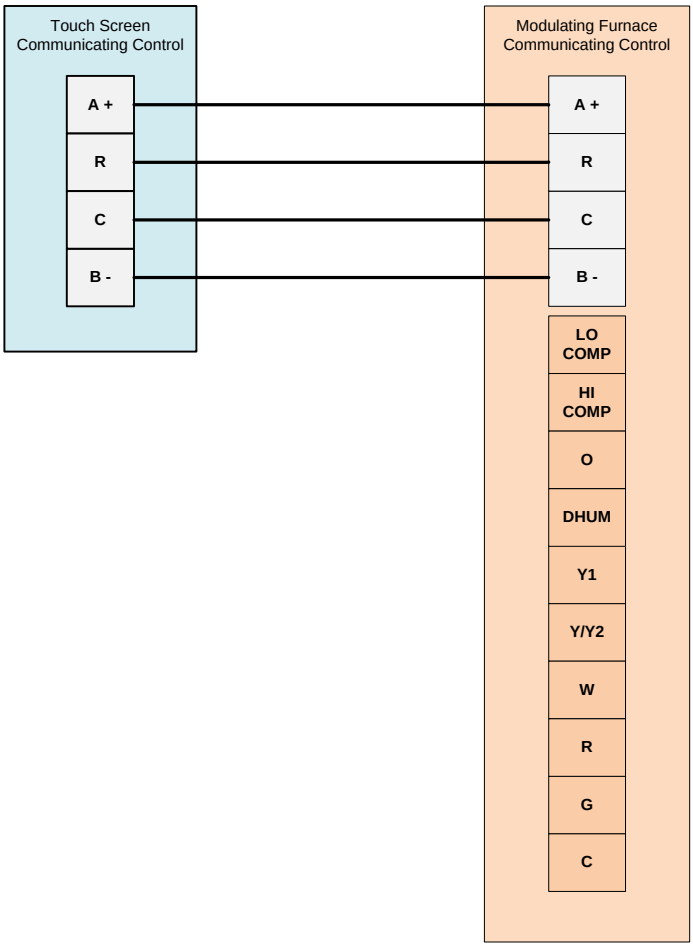
Heat Pump Jumper must be set to YES

Bonnet sensor must be connected to the A-coil temperature sensor of the furnace control.

Hot Heat Pump Jumper must be set to OFF

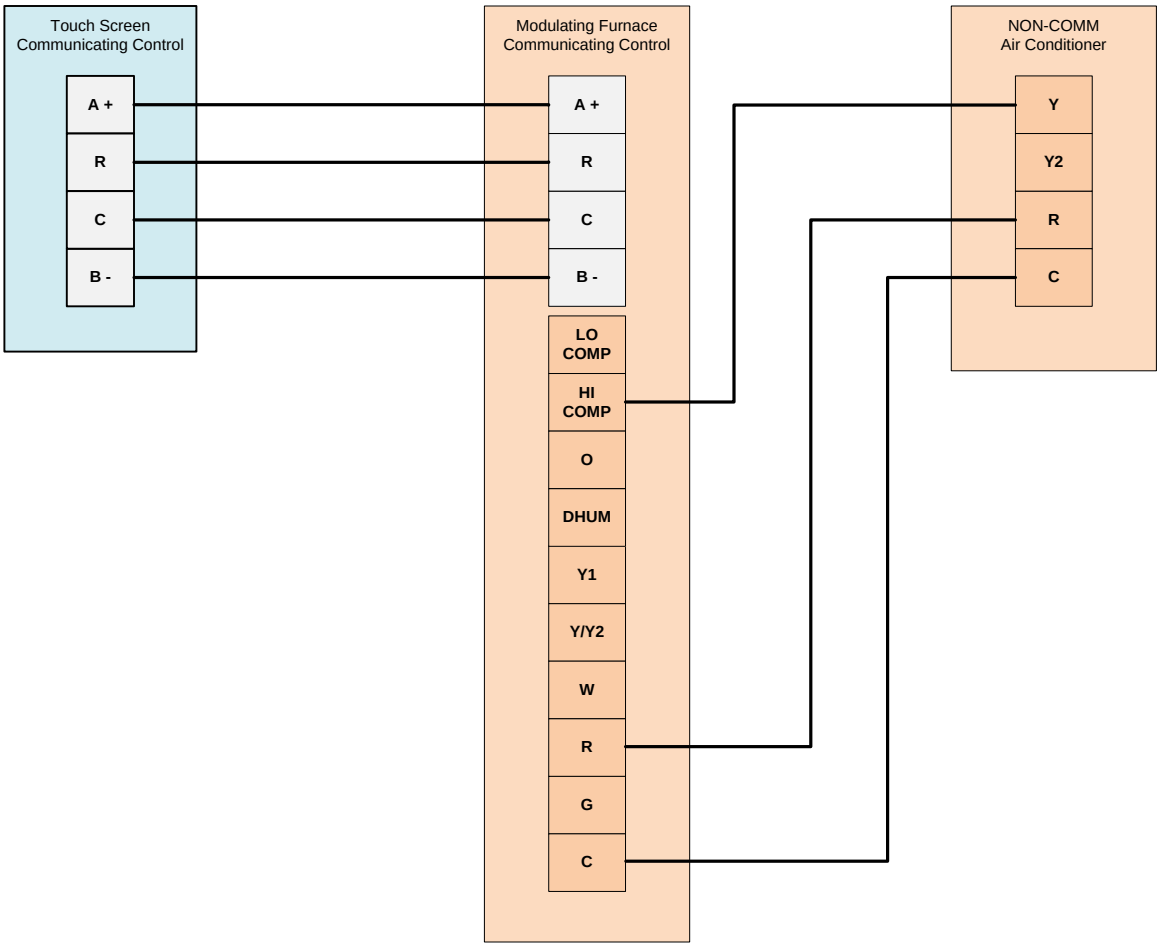
FFuel Jumper must be set to ON

AC 19	Modulating Furnace – No OD Unit Installed



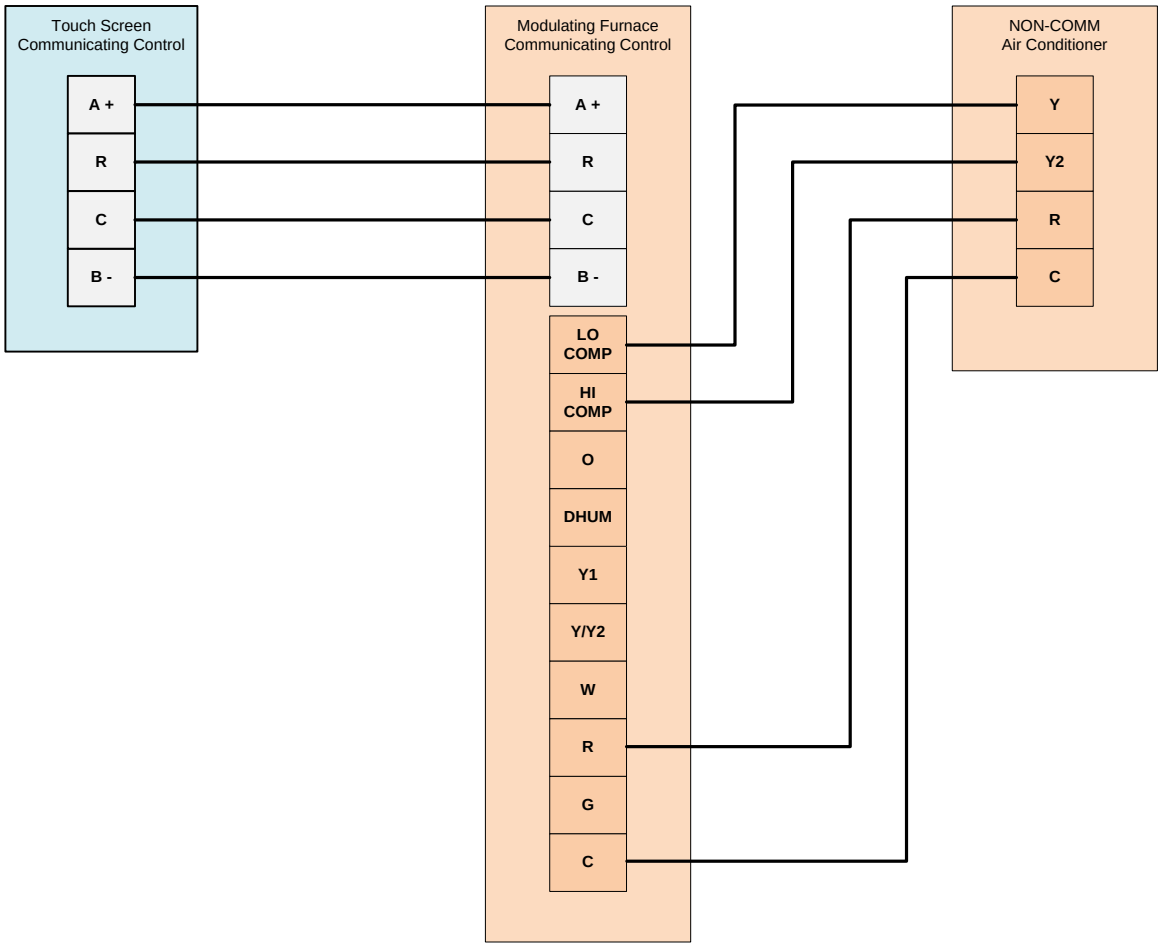
Heat Pump Jumper must be set to NO

AC 1	Modulating Furnace – Single Stage AC (Conventional Wiring)



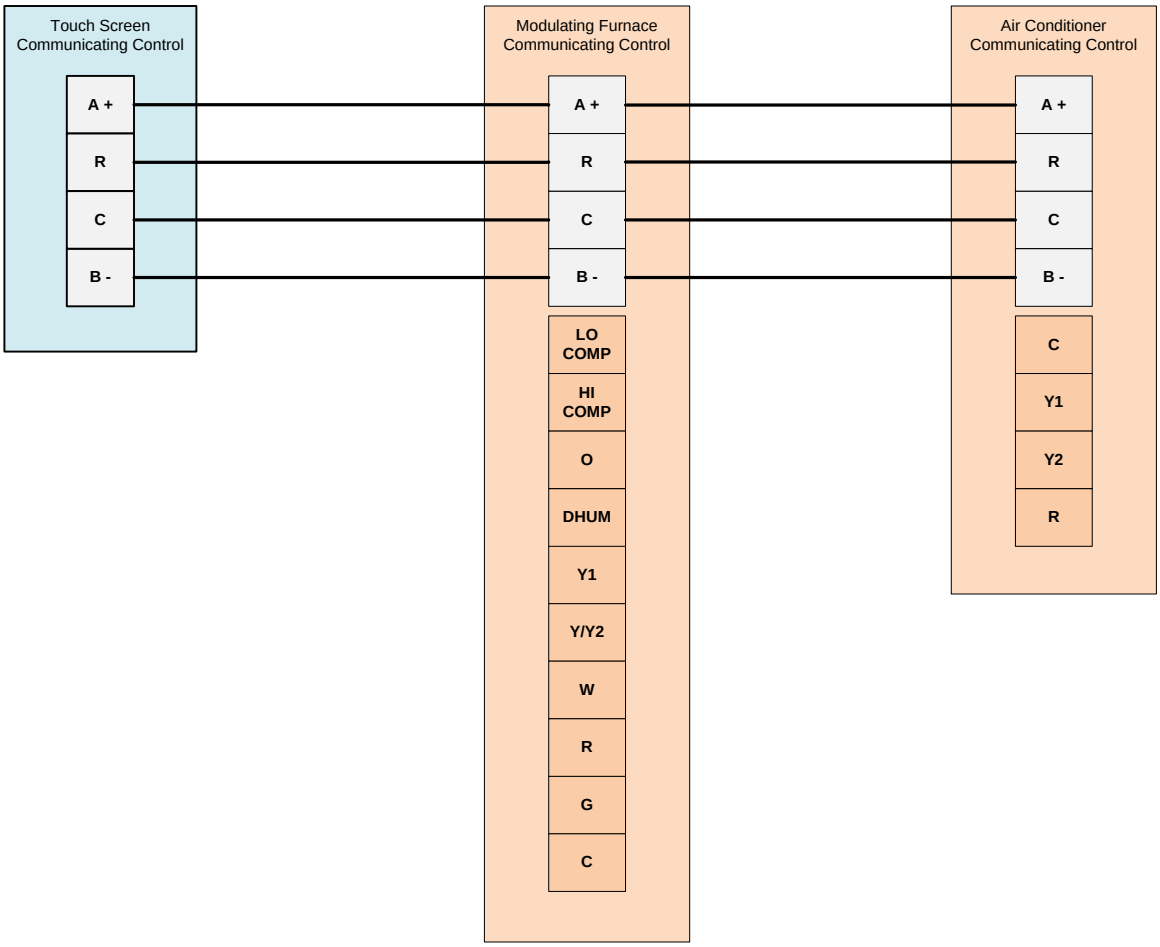
Heat Pump Jumper must be set to NO

AC 5	Modulating Furnace – Two Stage AC (Conventional Wiring)



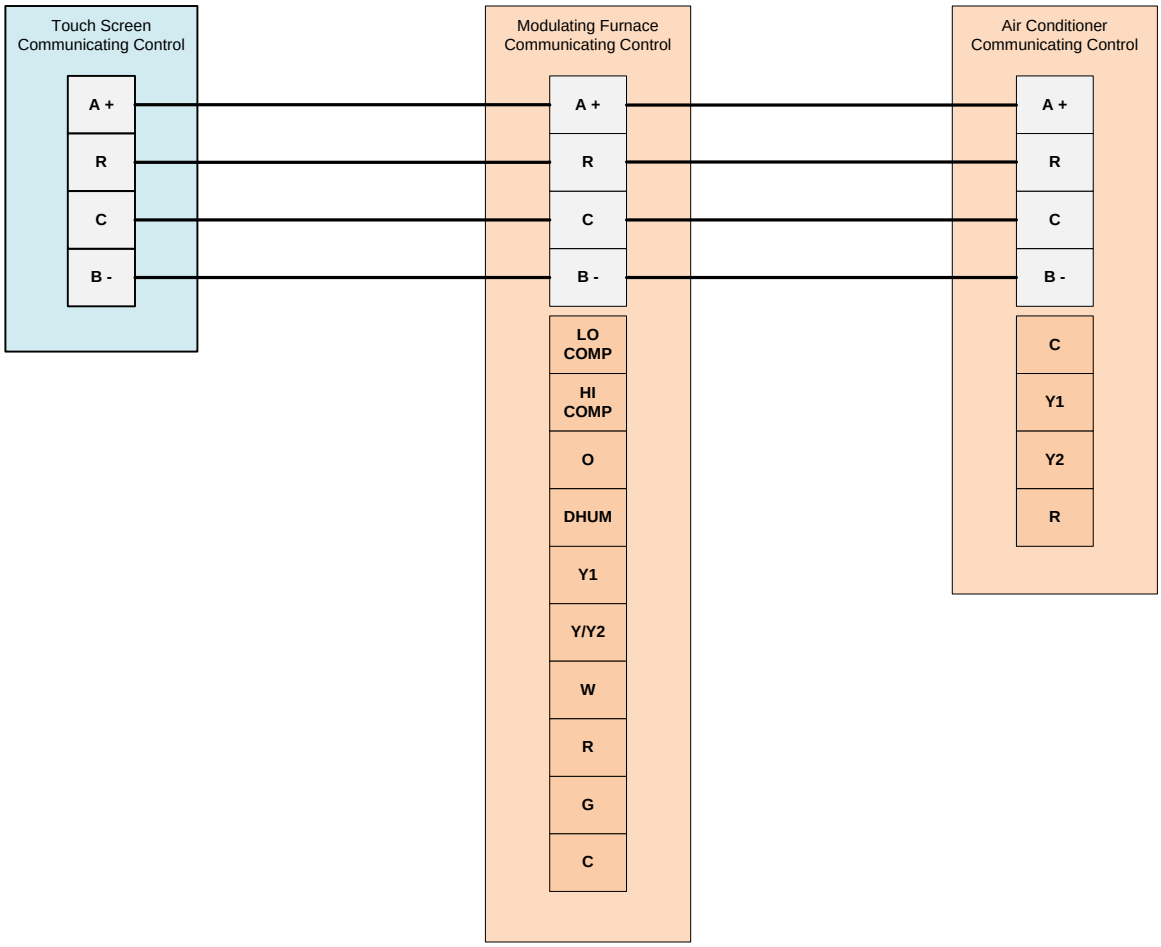
Heat Pump Jumper must be set to NO

AC 2 Modulating Furnace – Single Stage AC



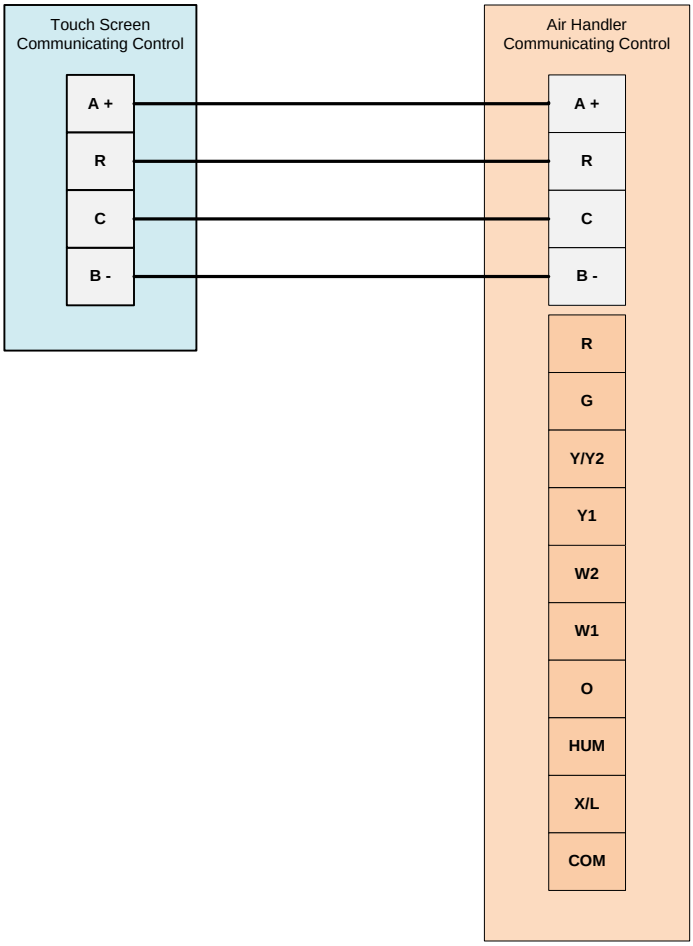
Heat Pump Jumper must be set to NO

AC 8 Modulating Furnace – Two Stage AC



Heat Pump Jumper must be set to NO

AC 20 V/S Air Handler – No OD Unit Installed



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

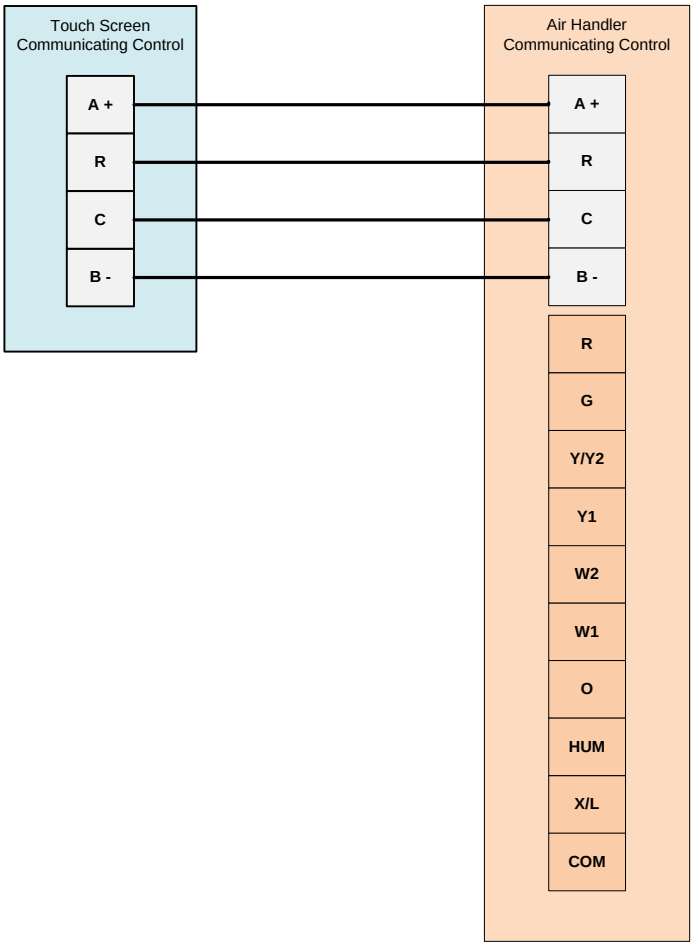
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to A/C

AC 21 V/S Air Handler – No OD Unit Installed



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

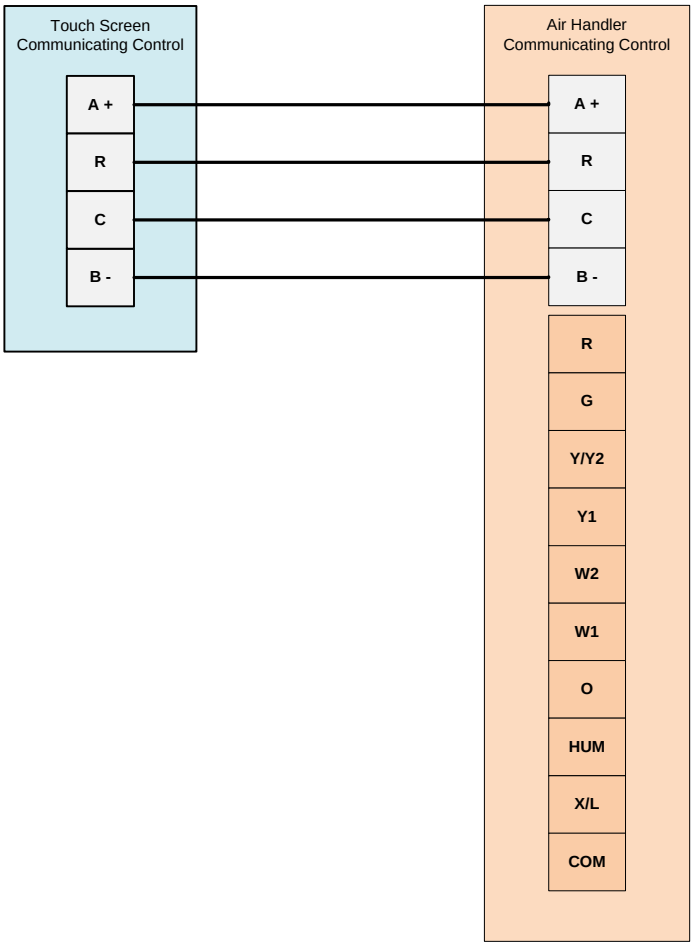
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to A/C

AC 22	V/S Air Handler – No OD Unit Installed



Air Handler Heat Kit Staging:
1st stage=W1+W2

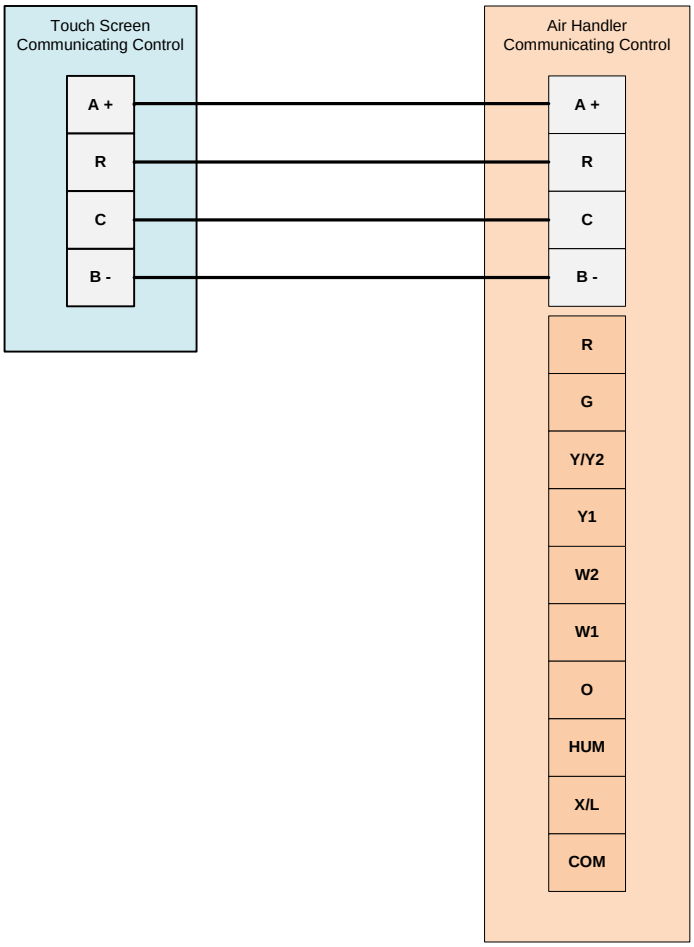
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

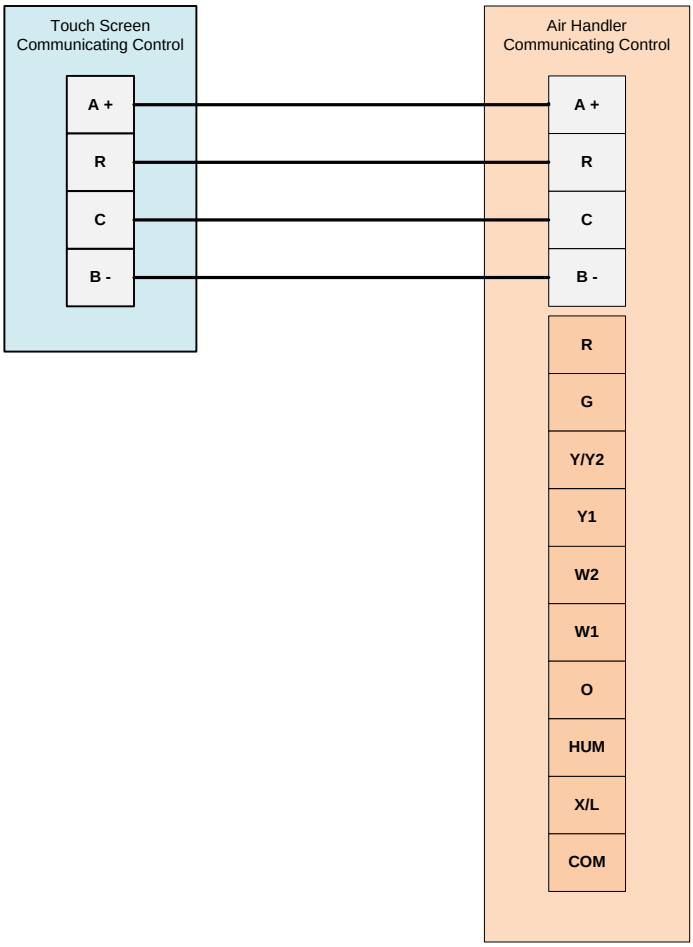
Mode Jumper must be set to A/C

AC 23	V/S Air Handler – No OD Unit Installed



Hum Stat Jumper must be set to YES
Heat-No Heat Jumper must be set to NO HEAT
Mode Jumper must be set to A/C
Same as AC20 but with no electric heat.

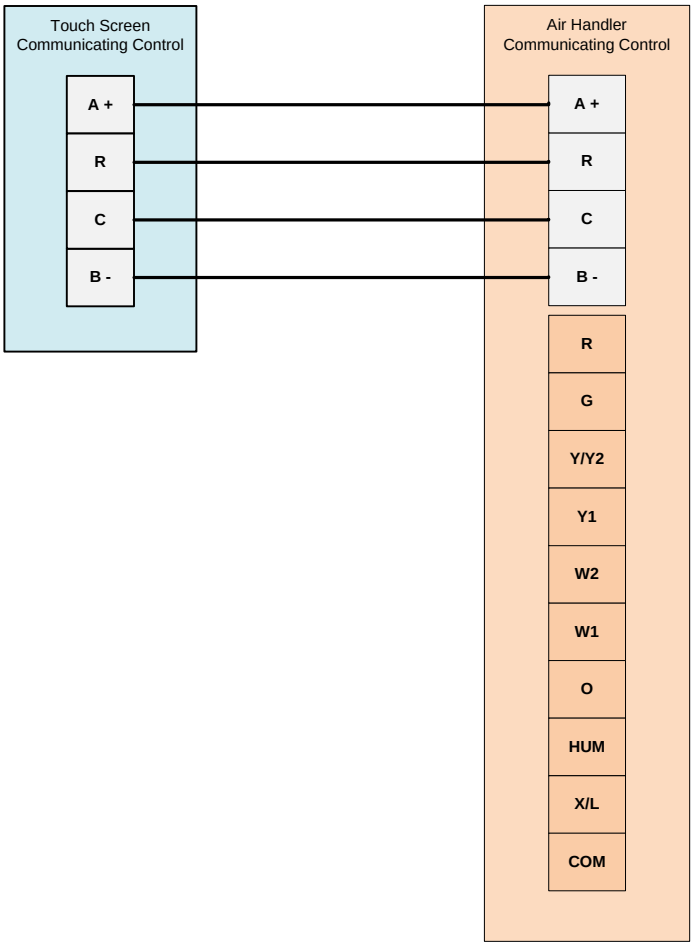
AC 32 V/S Air Handler (AHV) – No OD Unit Installed



Air Handler Heat Kit
Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

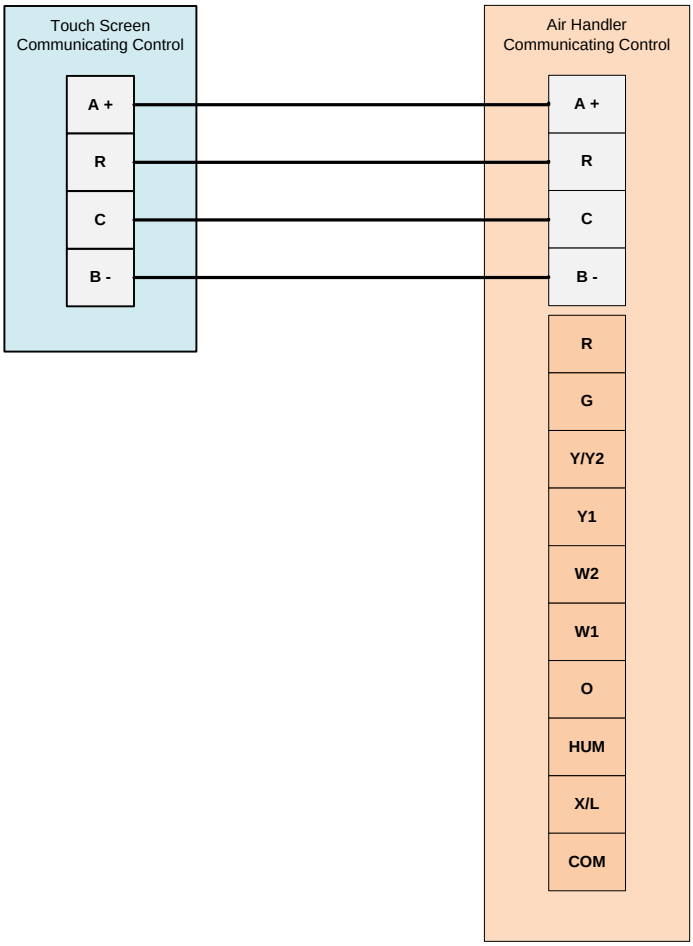
AC 33 V/S Air Handler (AHV) – No OD Unit Installed



Air Handler Heat Kit
Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

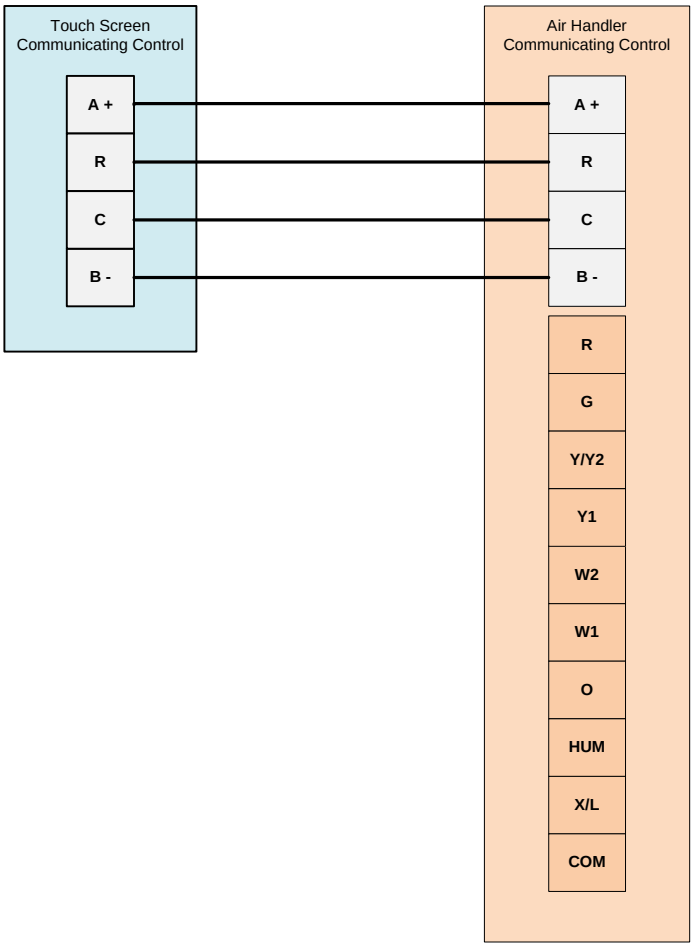
AC 34 V/S Air Handler (AHV) – No OD Unit Installed



Air Handler Heat Kit Staging:
1st stage=W1+W2

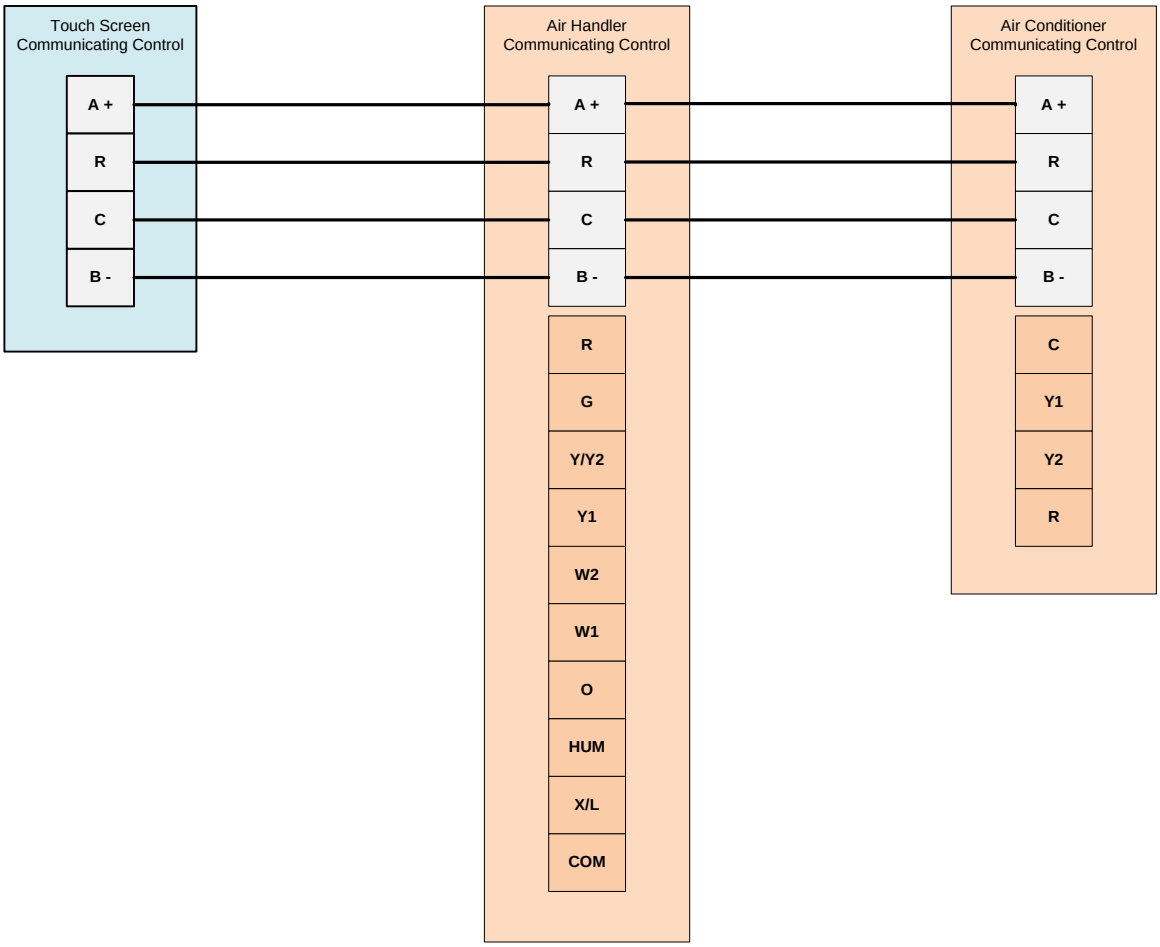
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

AC 35 V/S Air Handler (AHV) – No OD Unit Installed



Same as AC32 but with no electric heat.

AC 11 V/S Air Handler – Single Stage AC



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

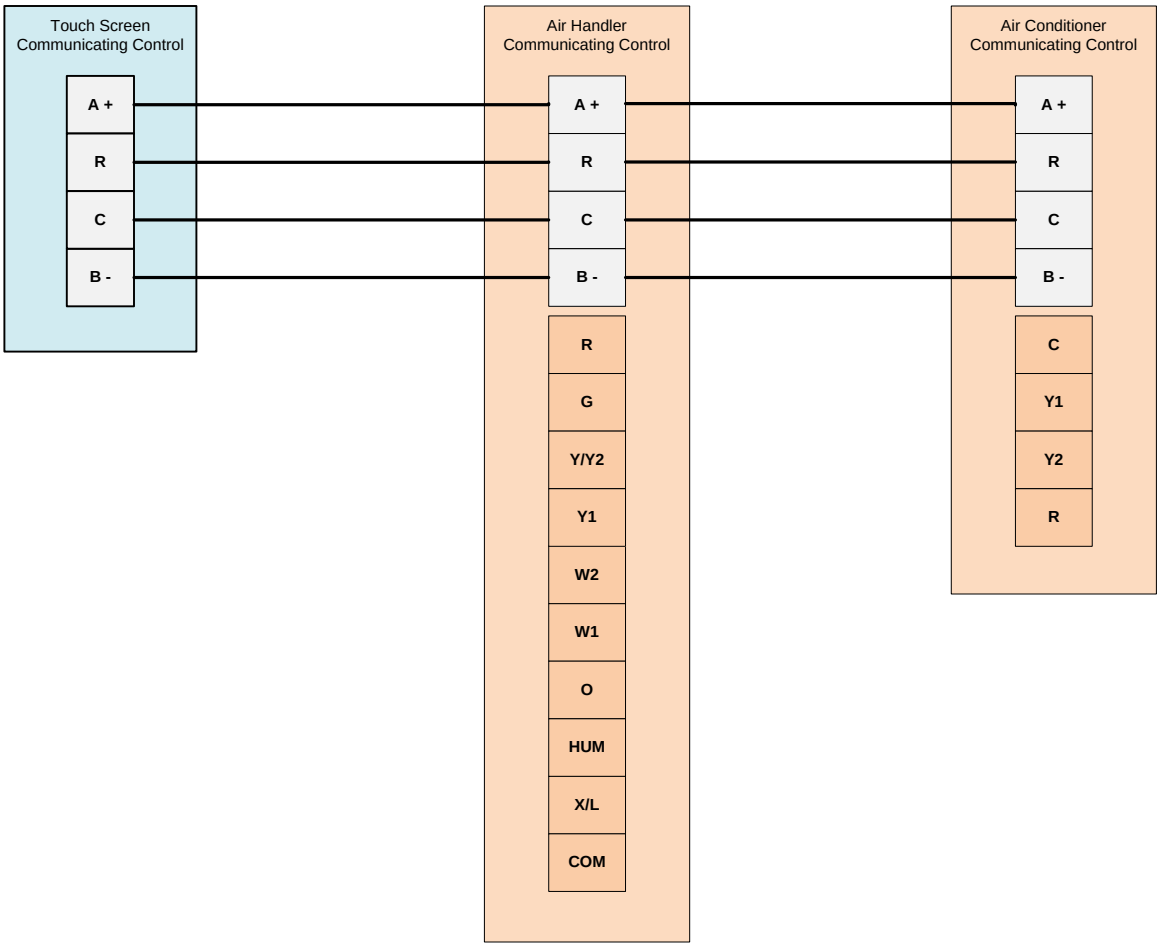
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to A/C

AC 12 V/S Air Handler – Single Stage AC



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

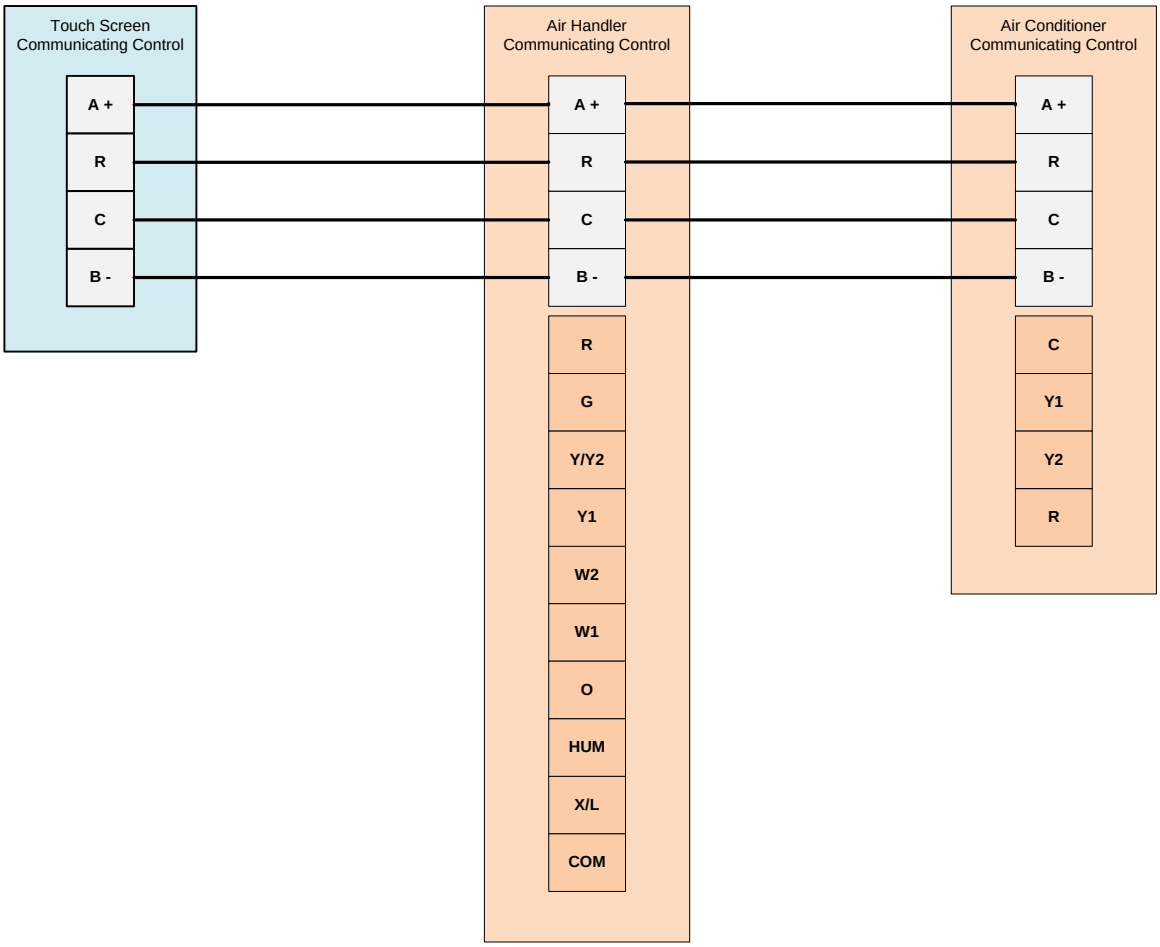
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to A/C

AC 13 V/S Air Handler – Single Stage AC



Air Handler Heat Kit Staging:
1st stage=W1+W2

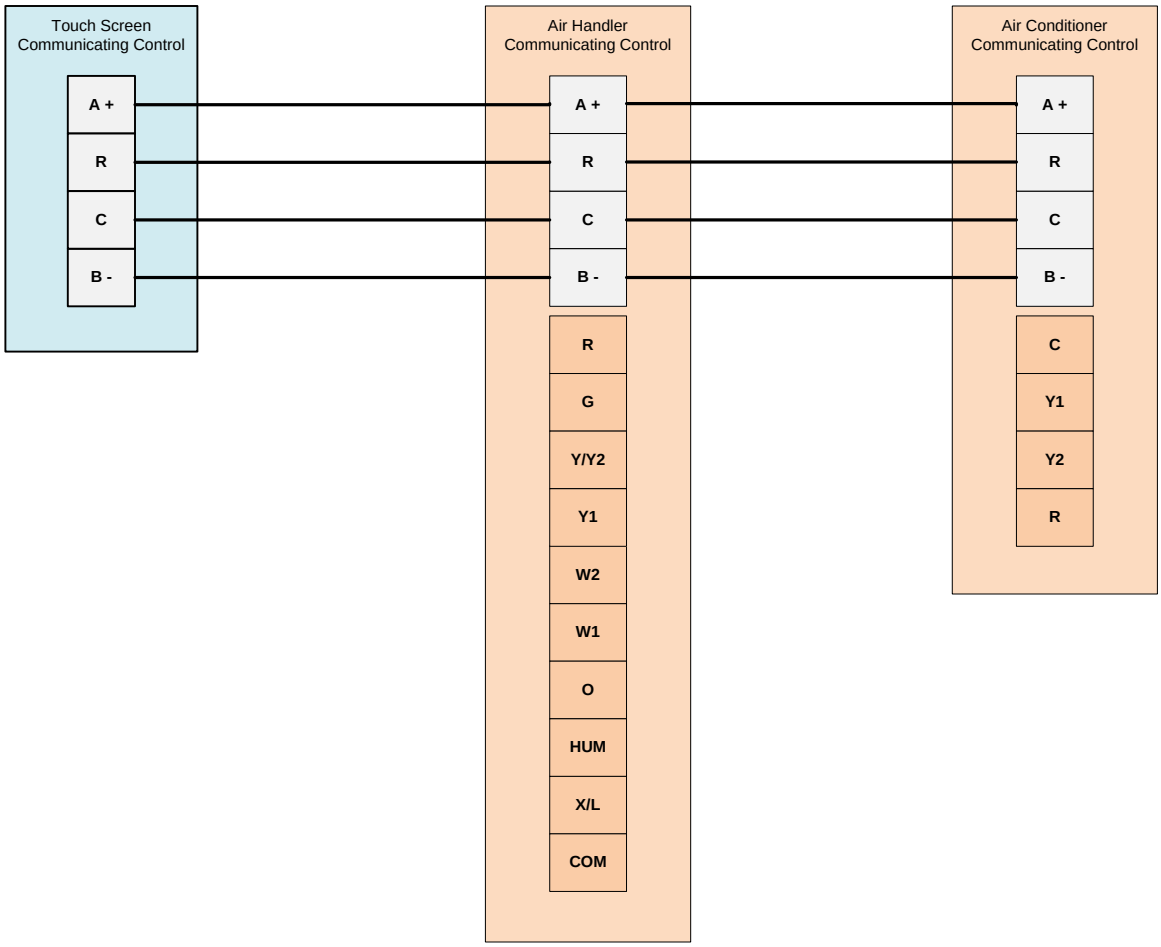
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

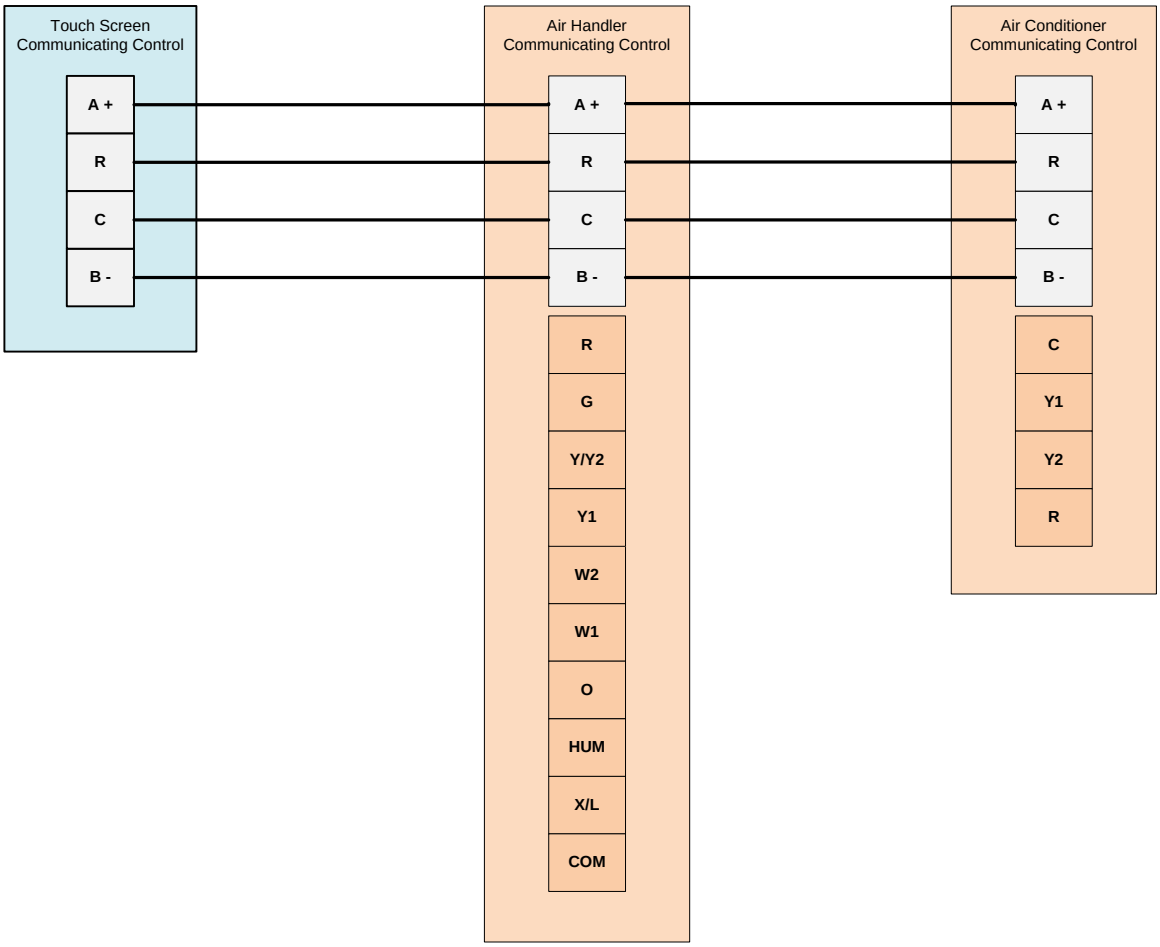
Mode Jumper must be set to A/C

AC 17	V/S Air Handler – Single Stage AC



Hum Stat Jumper must be set to YES
Heat-No Heat Jumper must be set to NO HEAT
Mode Jumper must be set to AC
Same as AC11 but with no electric heat.

AC 14 V/S Air Handler – Two Stage AC



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

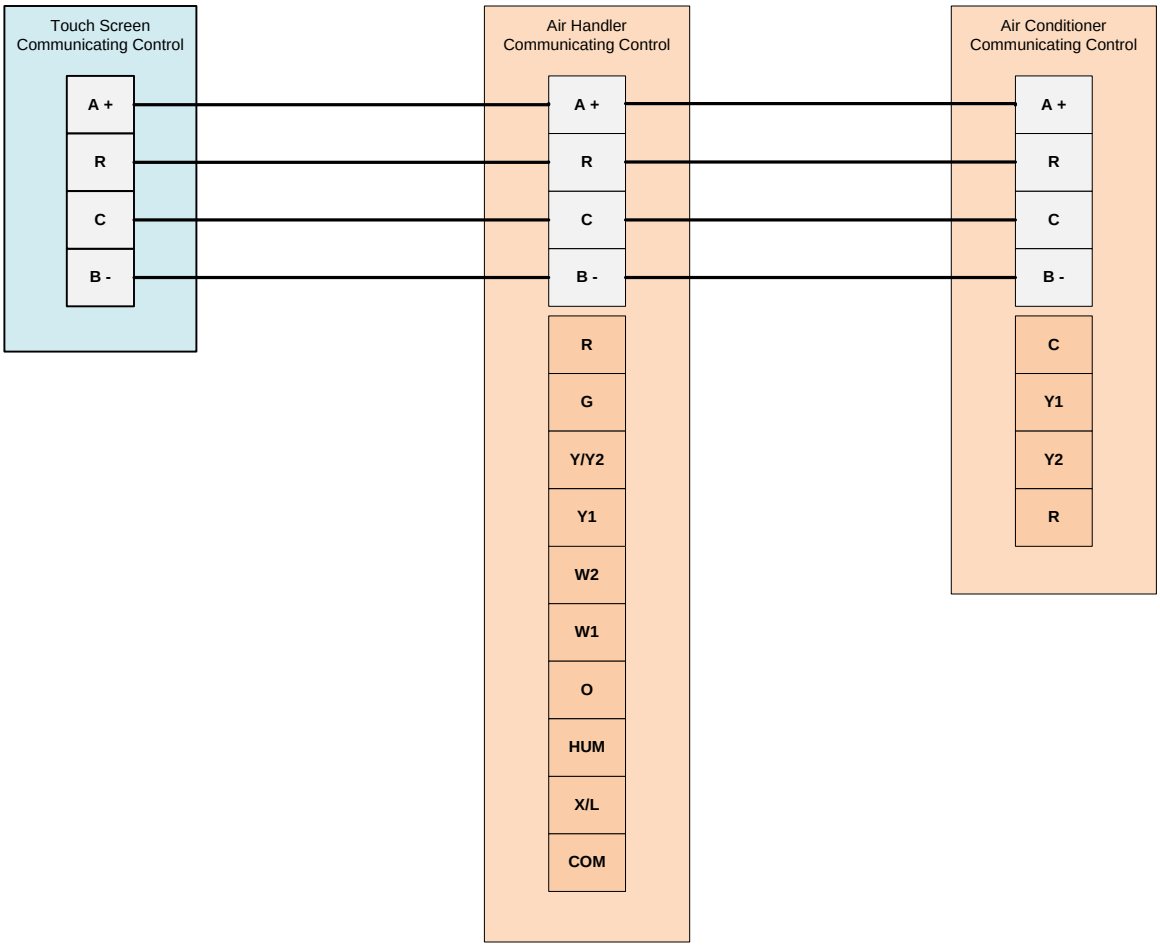
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to A/C

AC 15 V/S Air Handler – Two Stage AC



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

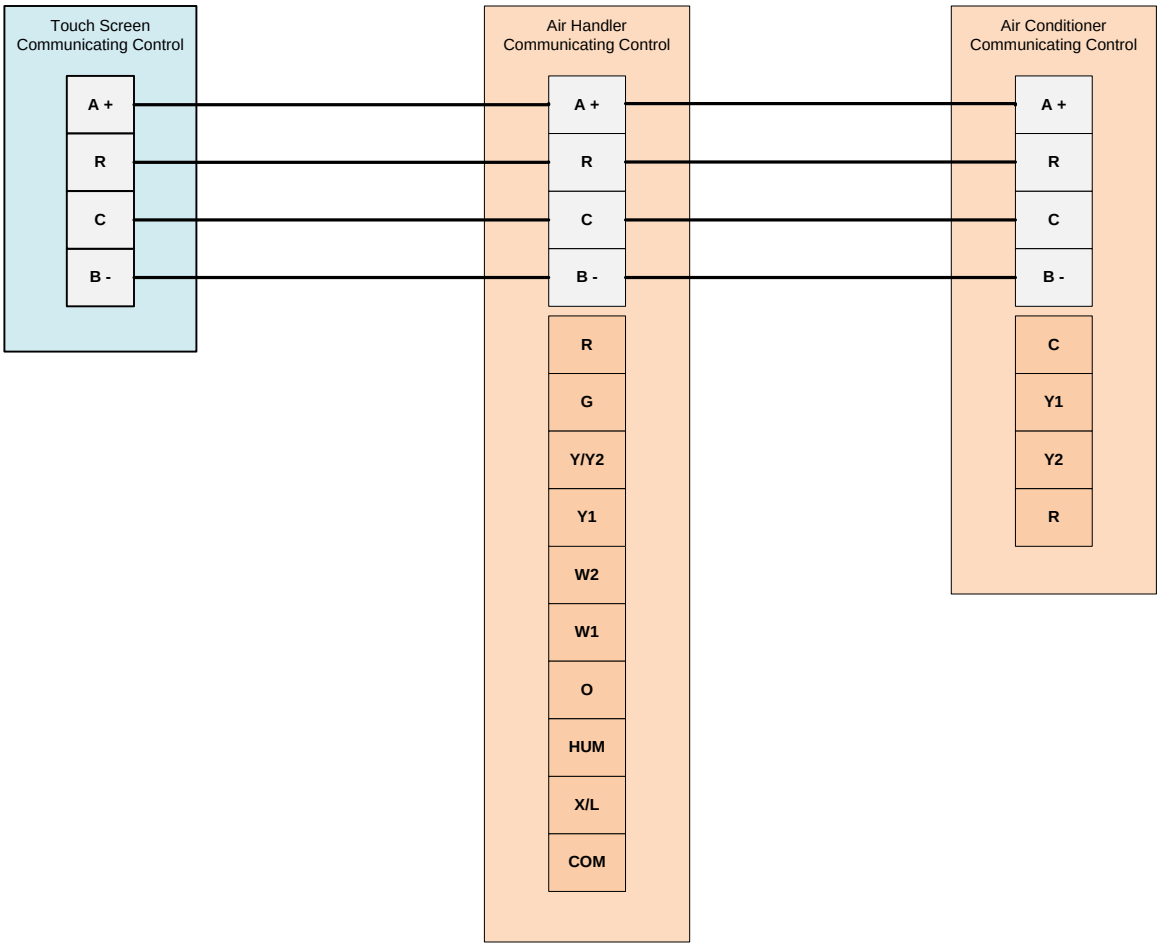
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

Mode Jumper must be set to A/C

AC 16 V/S Air Handler – Two Stage AC



Air Handler Heat Kit Staging:
1st stage=W1+W2

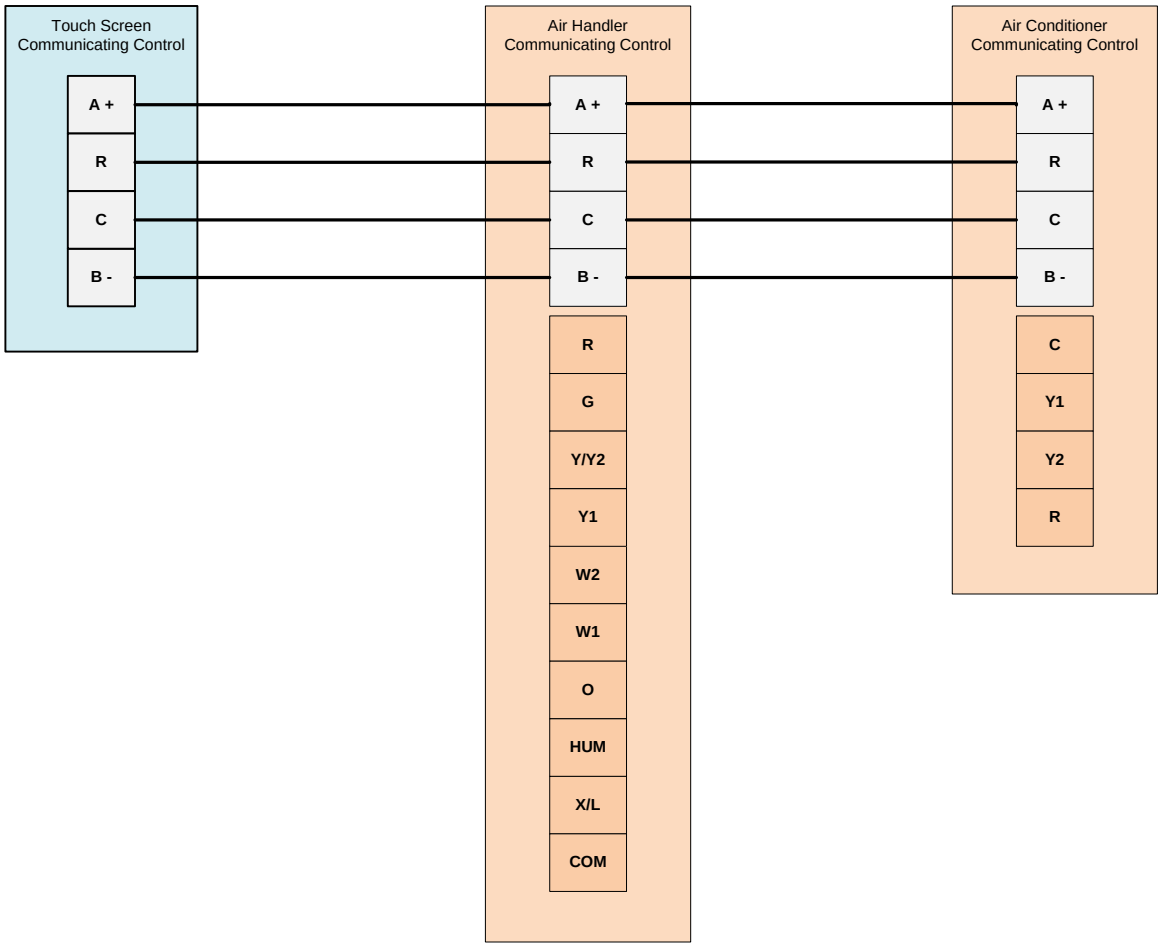
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

Hum Stat Jumper must be set to YES

Heat-No Heat Jumper must be set to HEAT

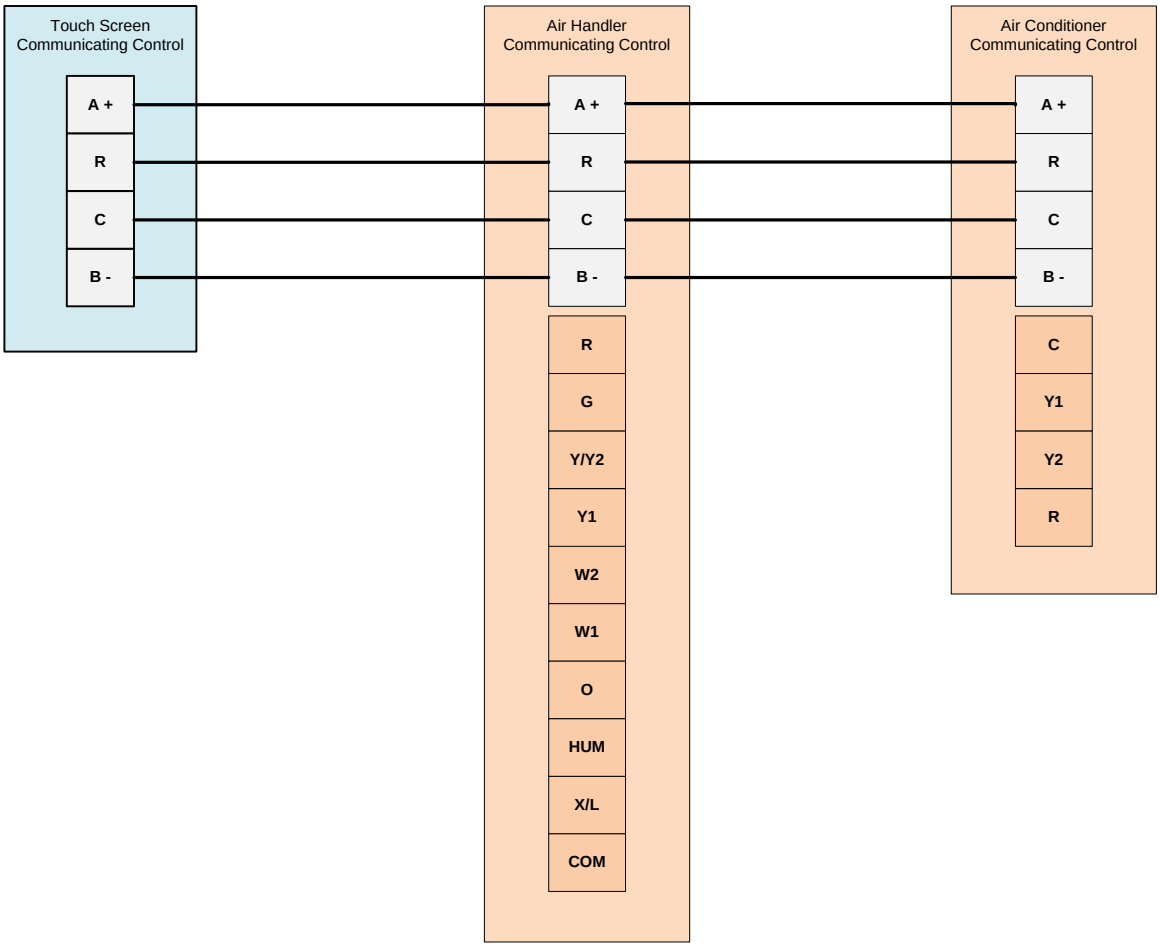
Mode Jumper must be set to A/C

AC 18	V/S Air Handler – Two Stage AC



Hum Stat Jumper must be set to YES
Heat-No Heat Jumper must be set to NO HEAT
Mode Jumper must be set to AC
Same as AC14 but with no electric heat.

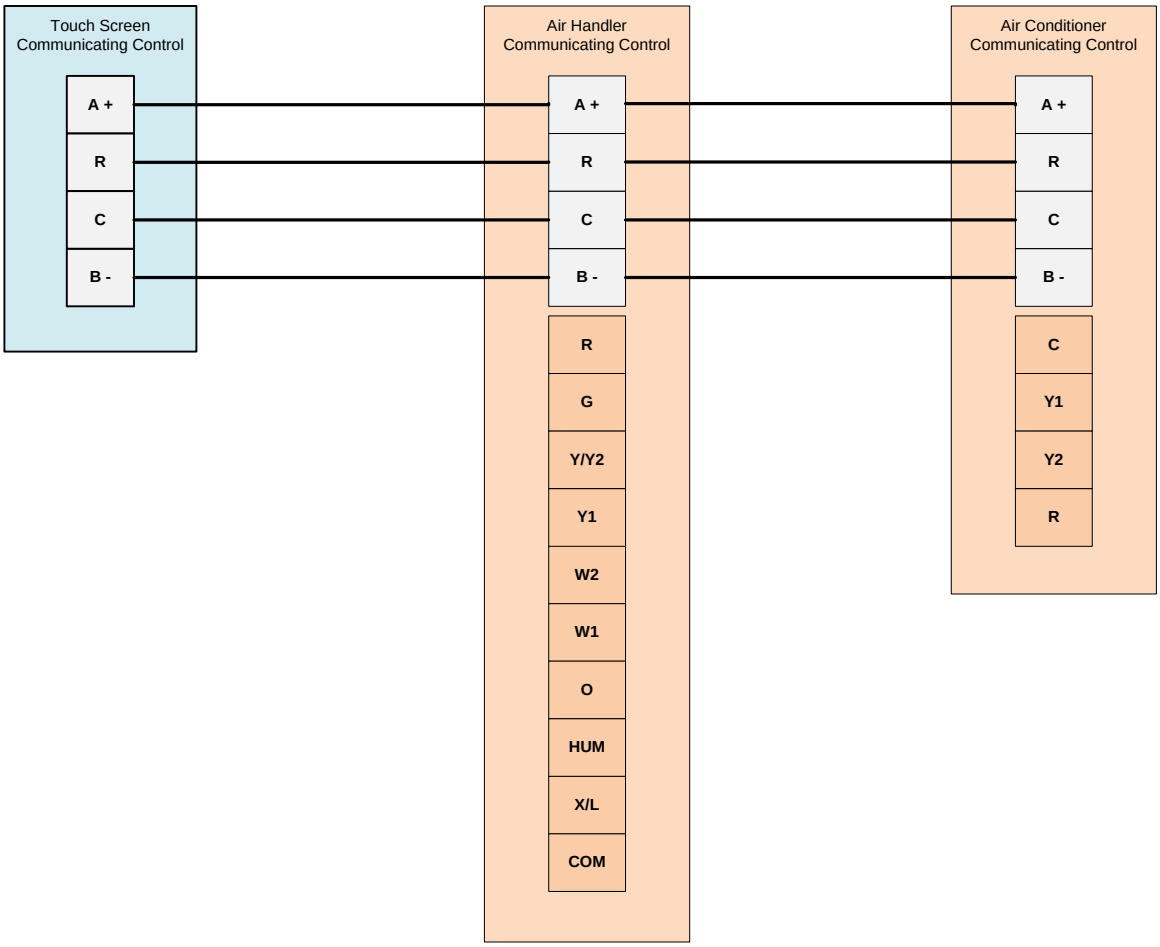
AC 24 V/S Air Handler (AHV) – Single Stage AC



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

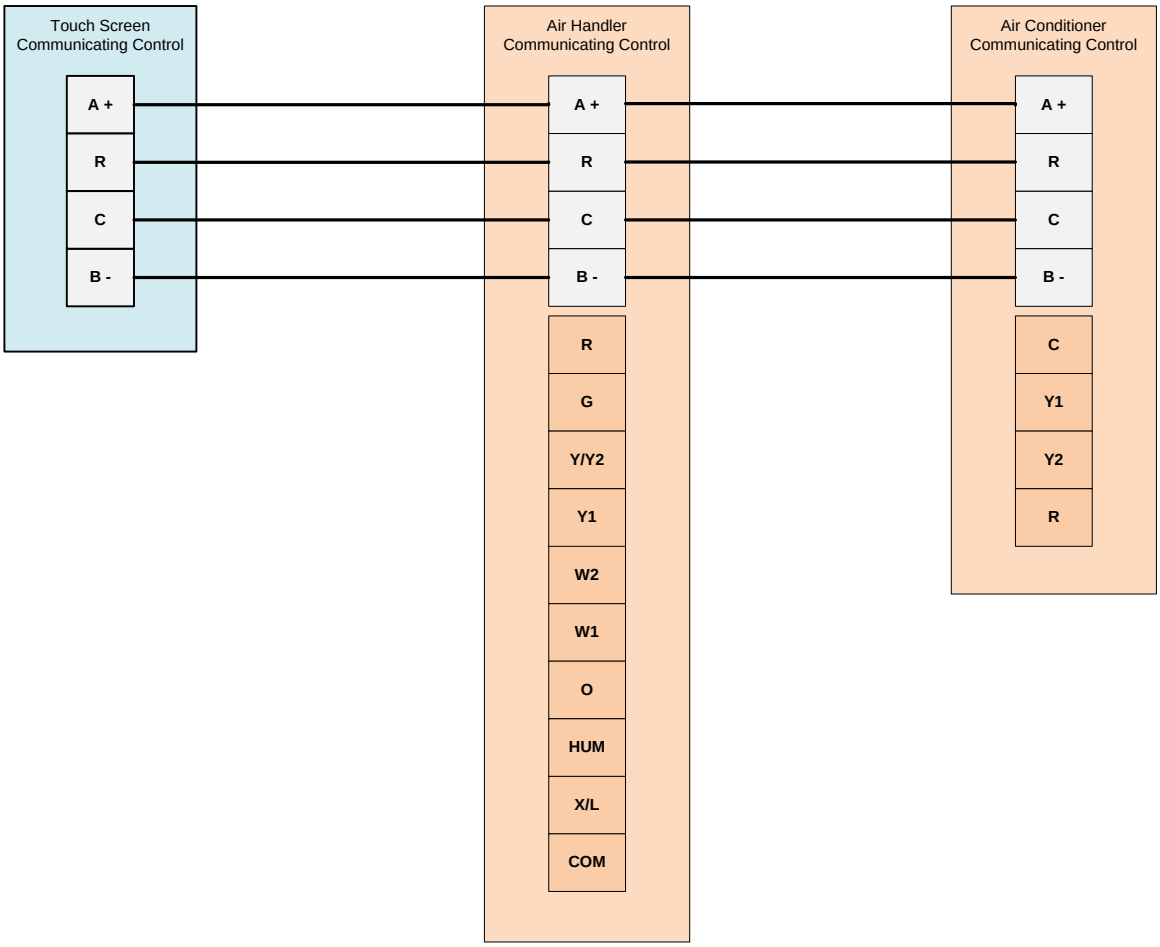
AC 25 V/S Air Handler (AHV) – Single Stage AC



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

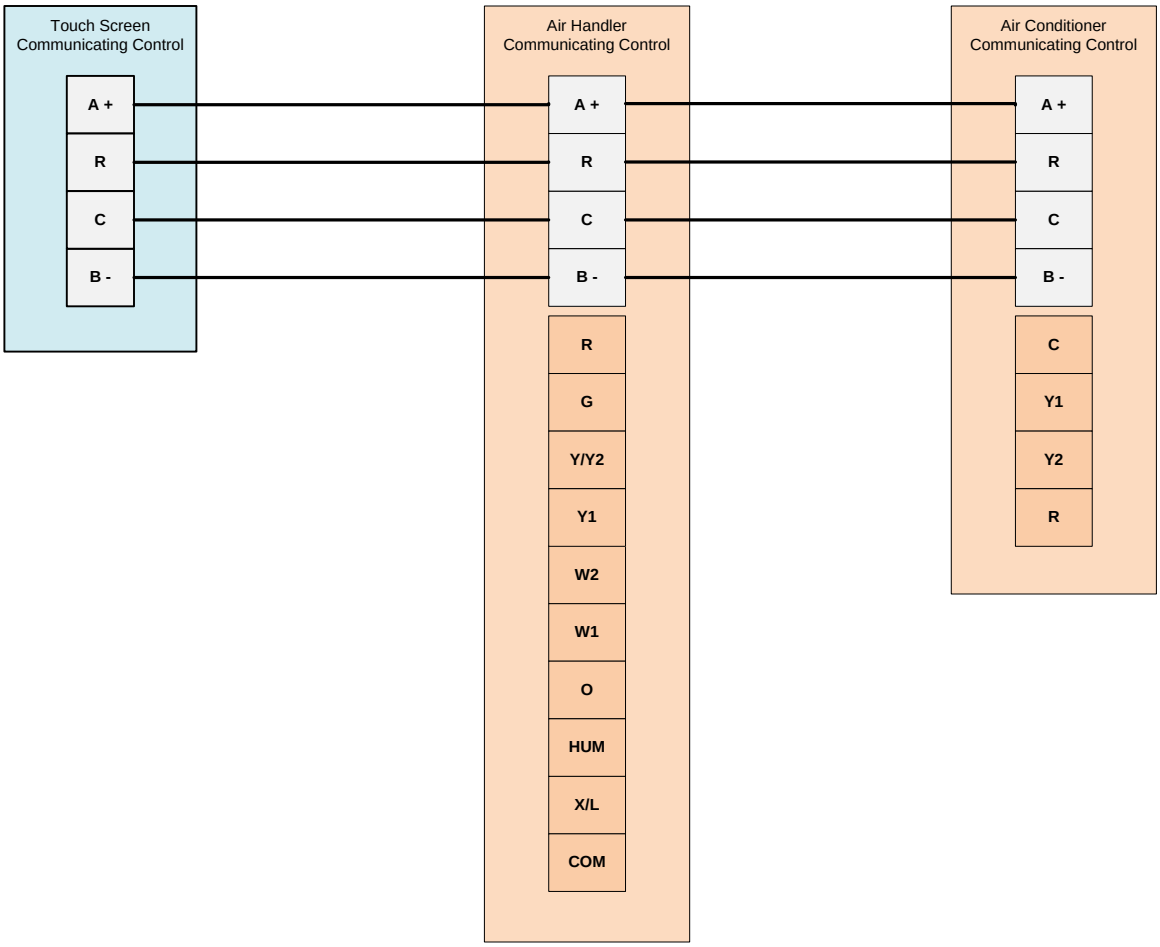
AC 26 V/S Air Handler (AHV) – Single Stage AC



Air Handler Heat Kit Staging:
1st stage=W1+W2

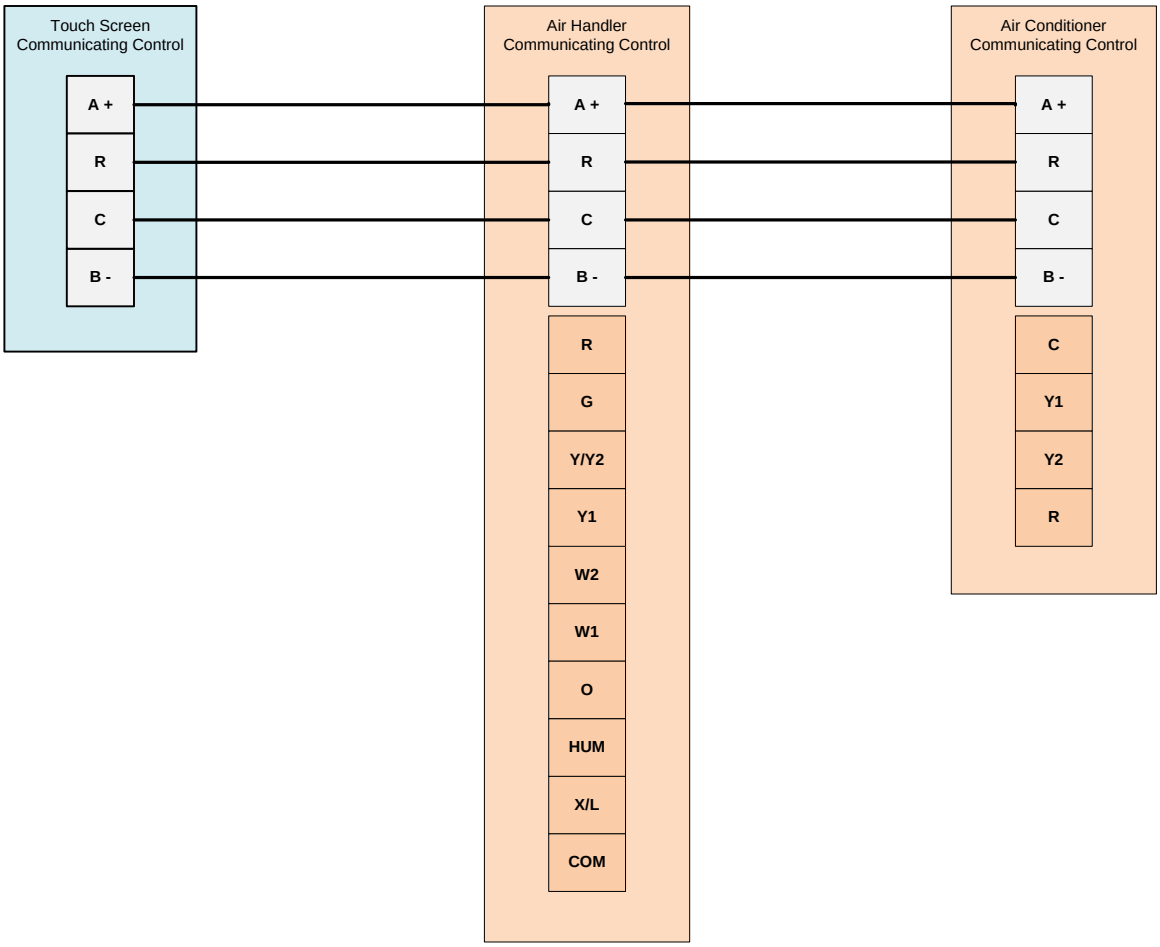
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

AC 30 V/S Air Handler (AHV) – Single Stage AC



Same as AC24 but with no electric heat.

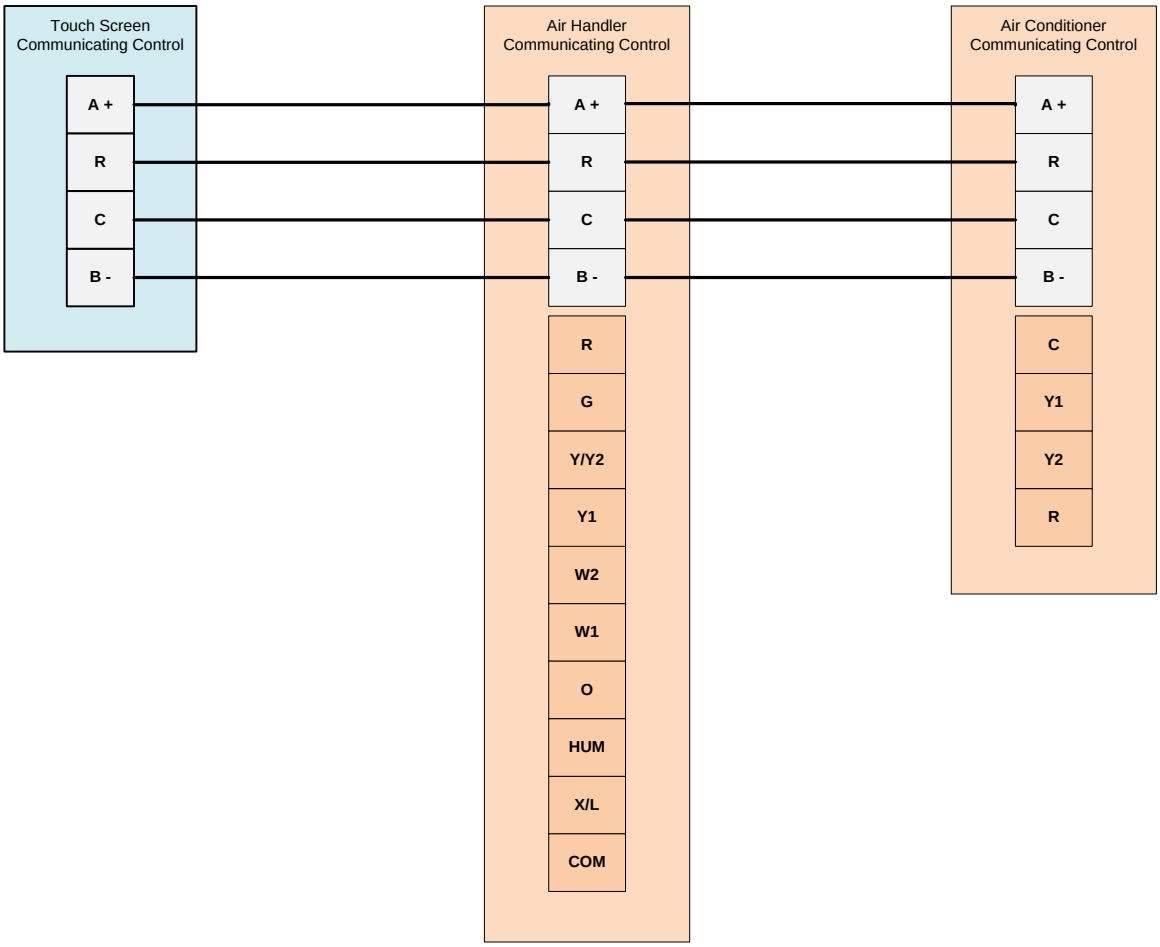
AC 27 V/S Air Handler (AHV) – Two Stage AC



Air Handler Heat Kit Staging:
1st stage=W1
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

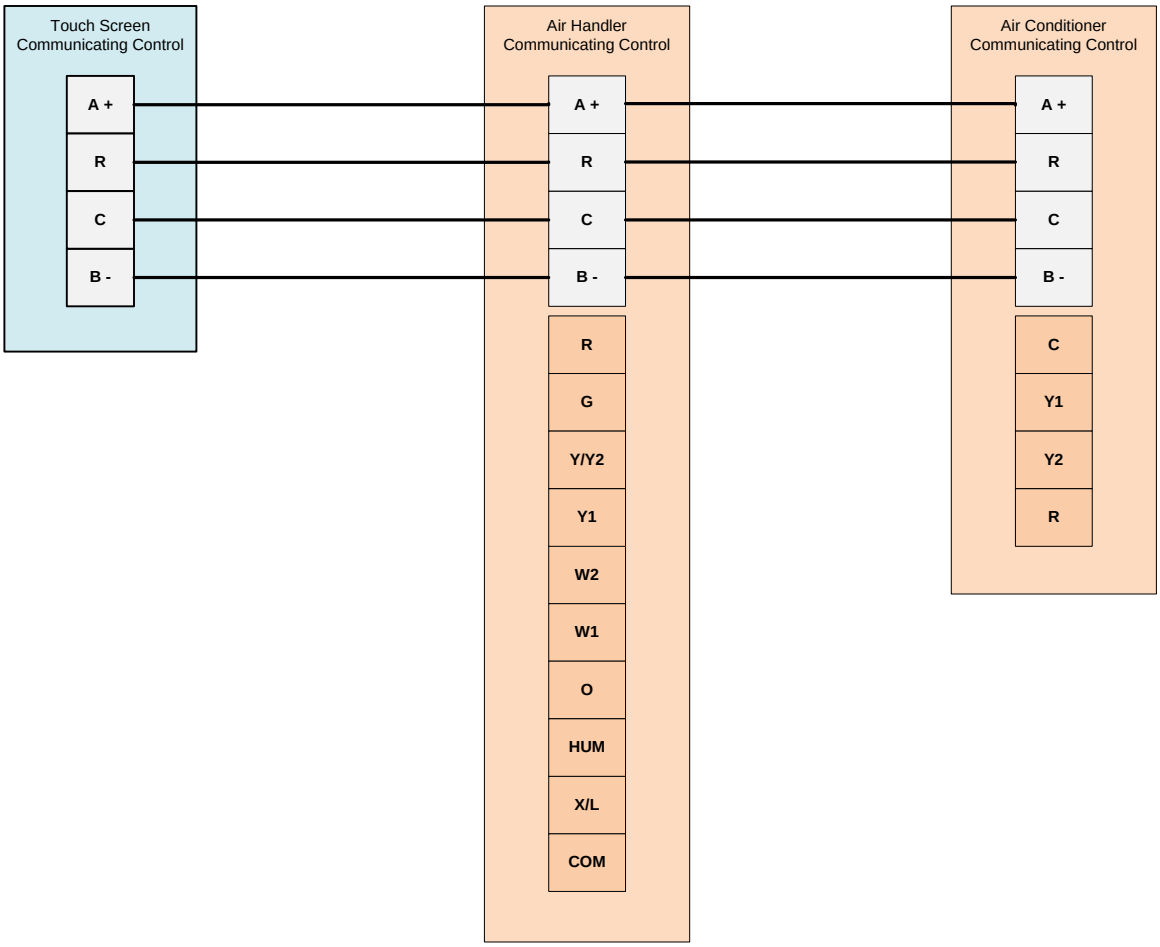
AC 28 V/S Air Handler (AHV) – Two Stage AC



Air Handler Heat Kit Staging:
1st stage=W2
2nd stage=W1+W2

Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

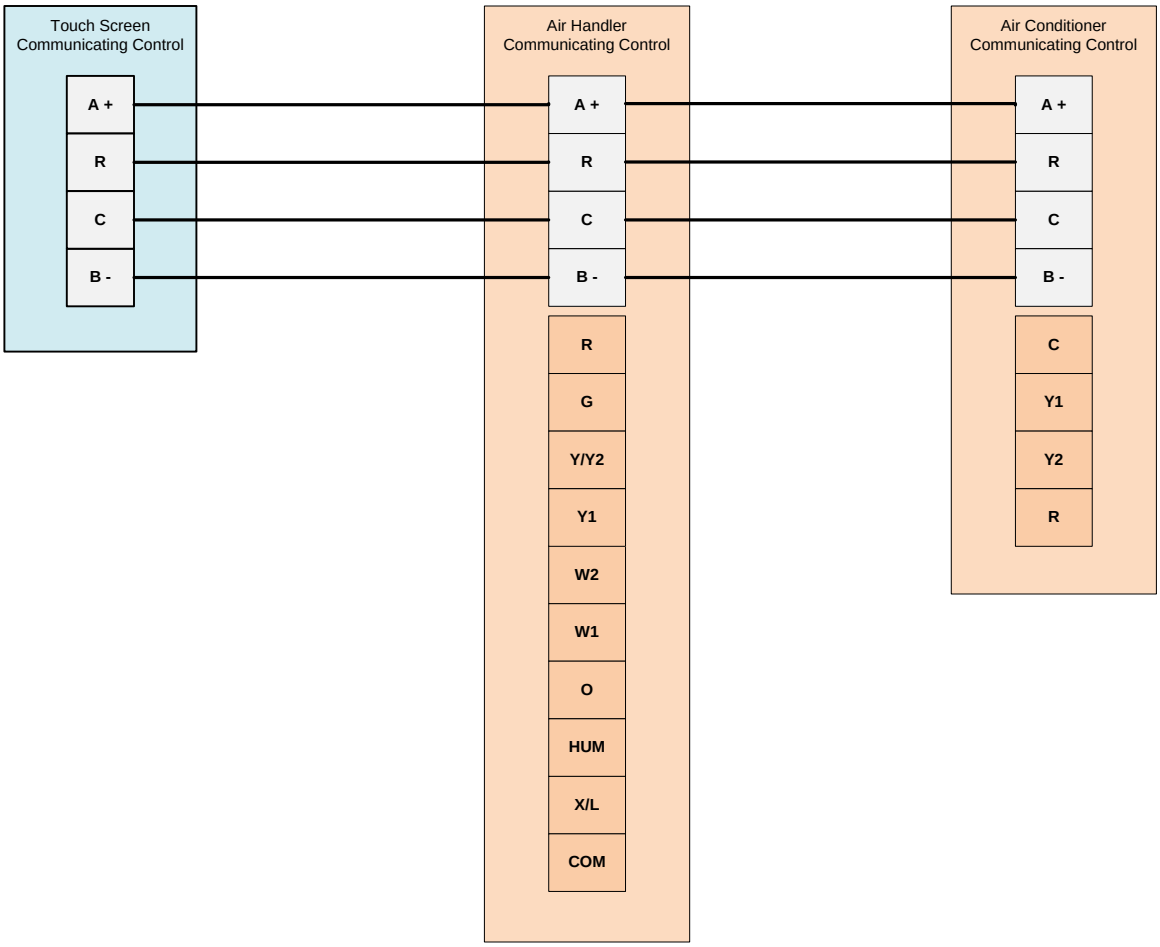
AC 29 V/S Air Handler (AHV) – Two Stage AC



Air Handler Heat Kit Staging:
1st stage=W1+W2

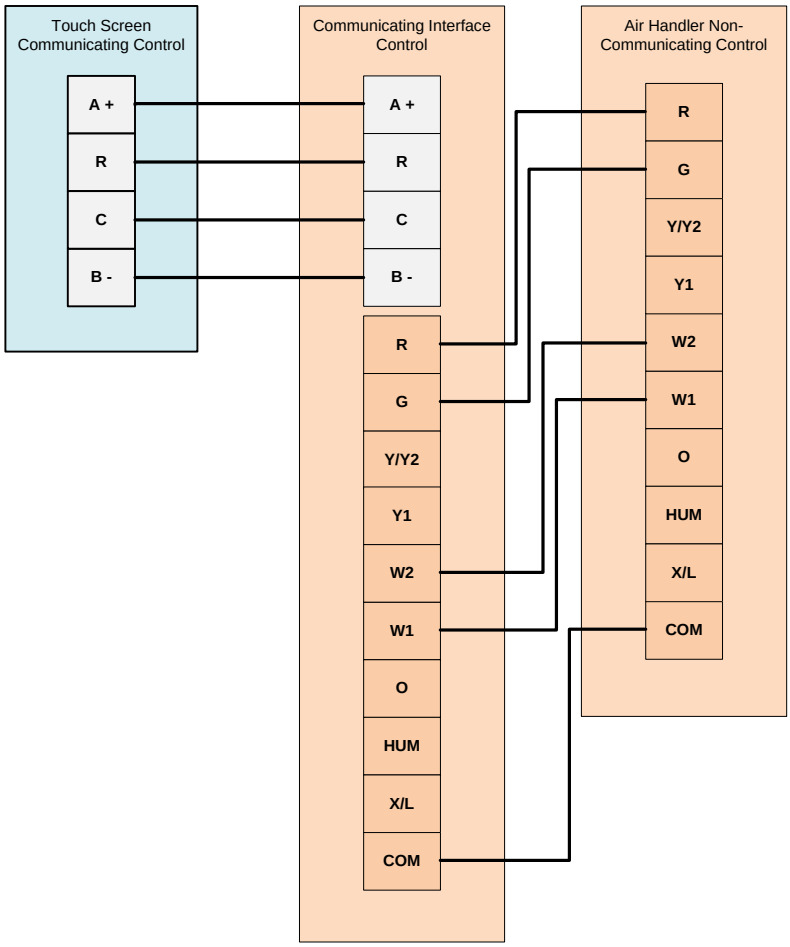
Control Input	Heat Relay Output
W1	HT1
W2	HT1 and HT2
W1 and W2	HT1, HT2 and HT3

AC 31 V/S Air Handler (AHV) – Two Stage AC

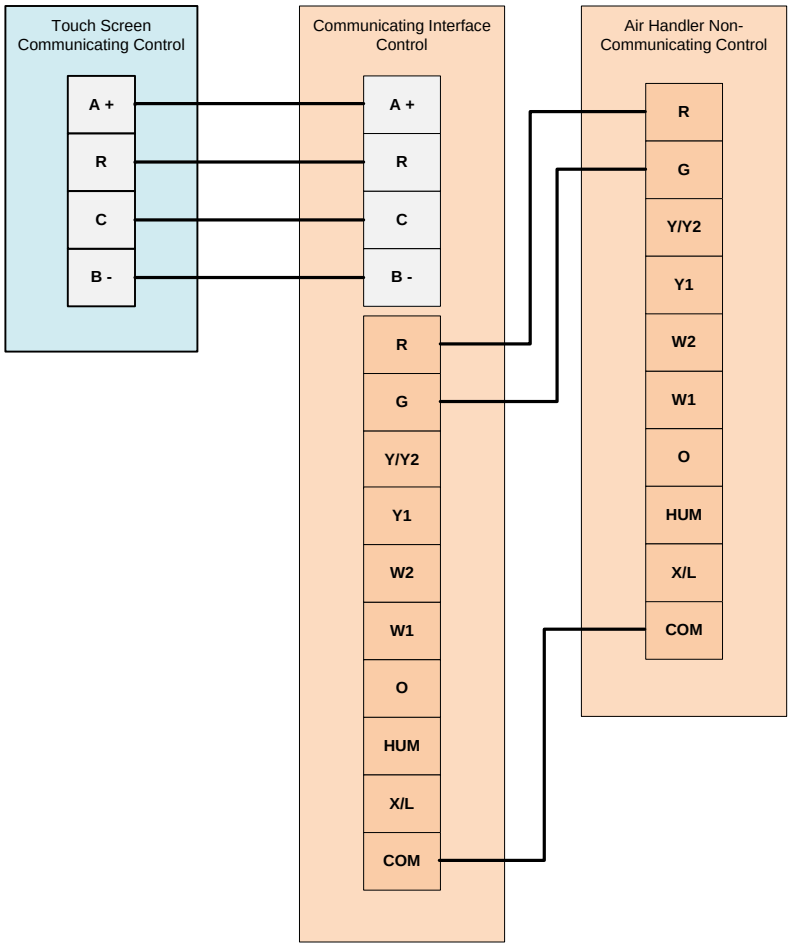


Same as AC31 but with no electric heat.

AUX39	ID Aux (AH with electric heat) – No OD Unit Installed

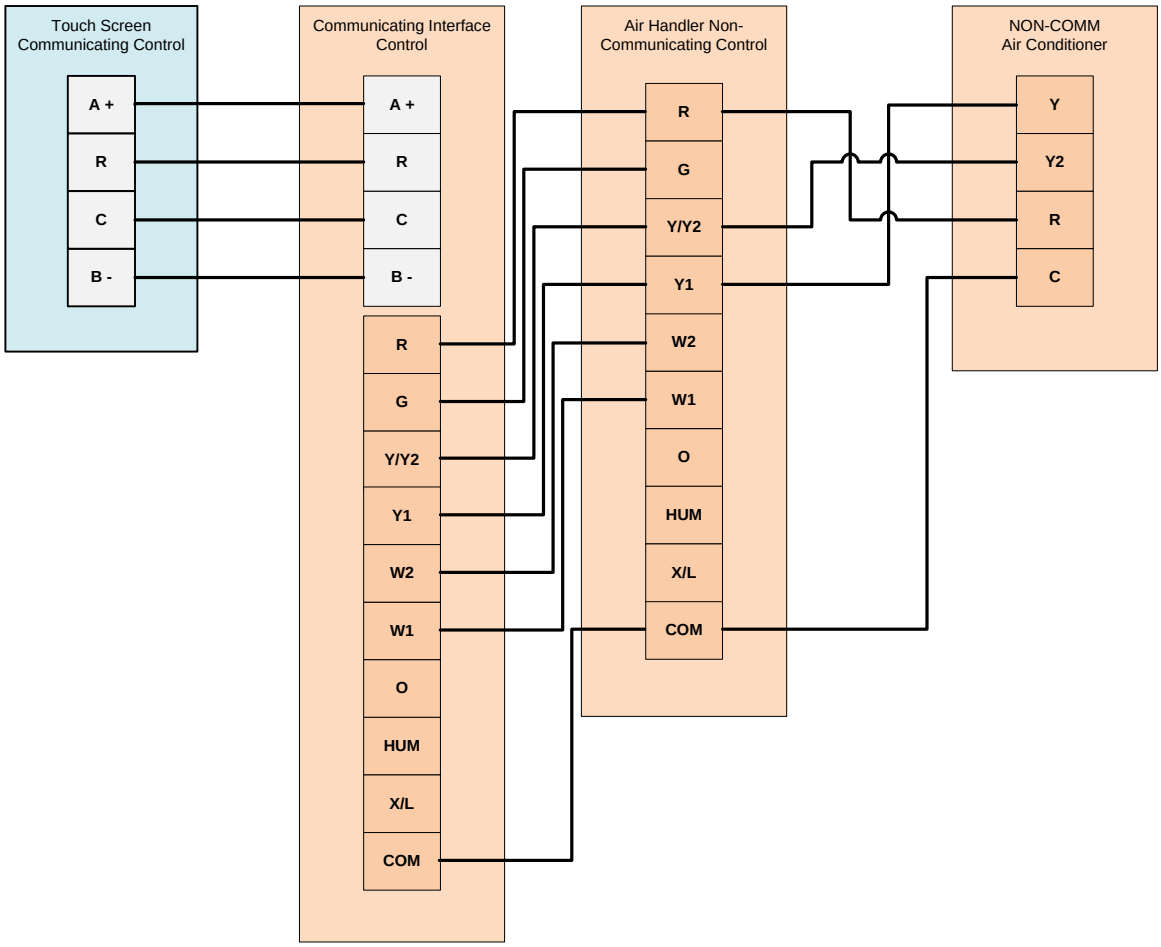


AUX40	ID Aux (AH no heat) – No OD Unit Installed

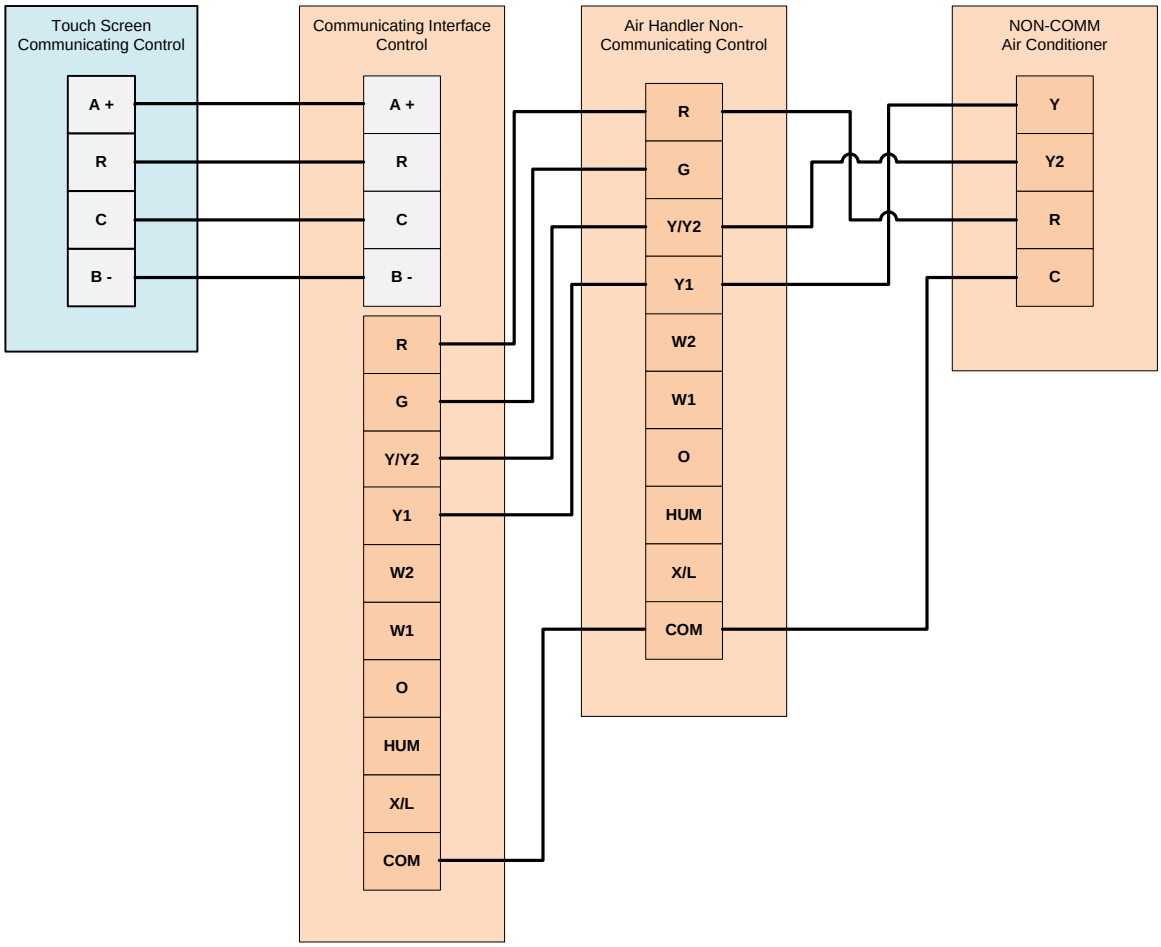


Same as AUX39 except with no electric heat.

AUX1	ID Aux (AH with electric heat) – Two Stage AC (Conventional Wiring)

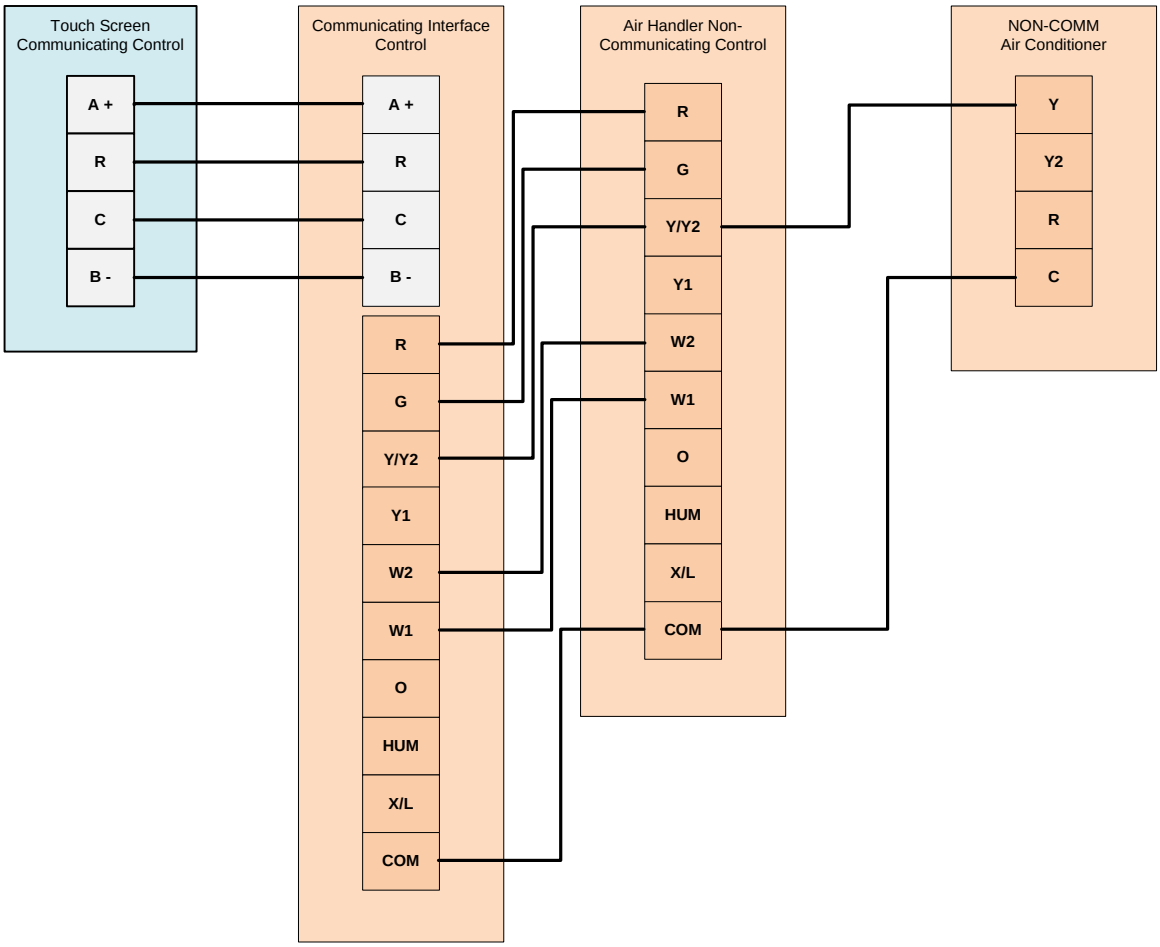


AUX11	ID Aux (AH no heat) – Two Stage AC (Conventional Wiring)

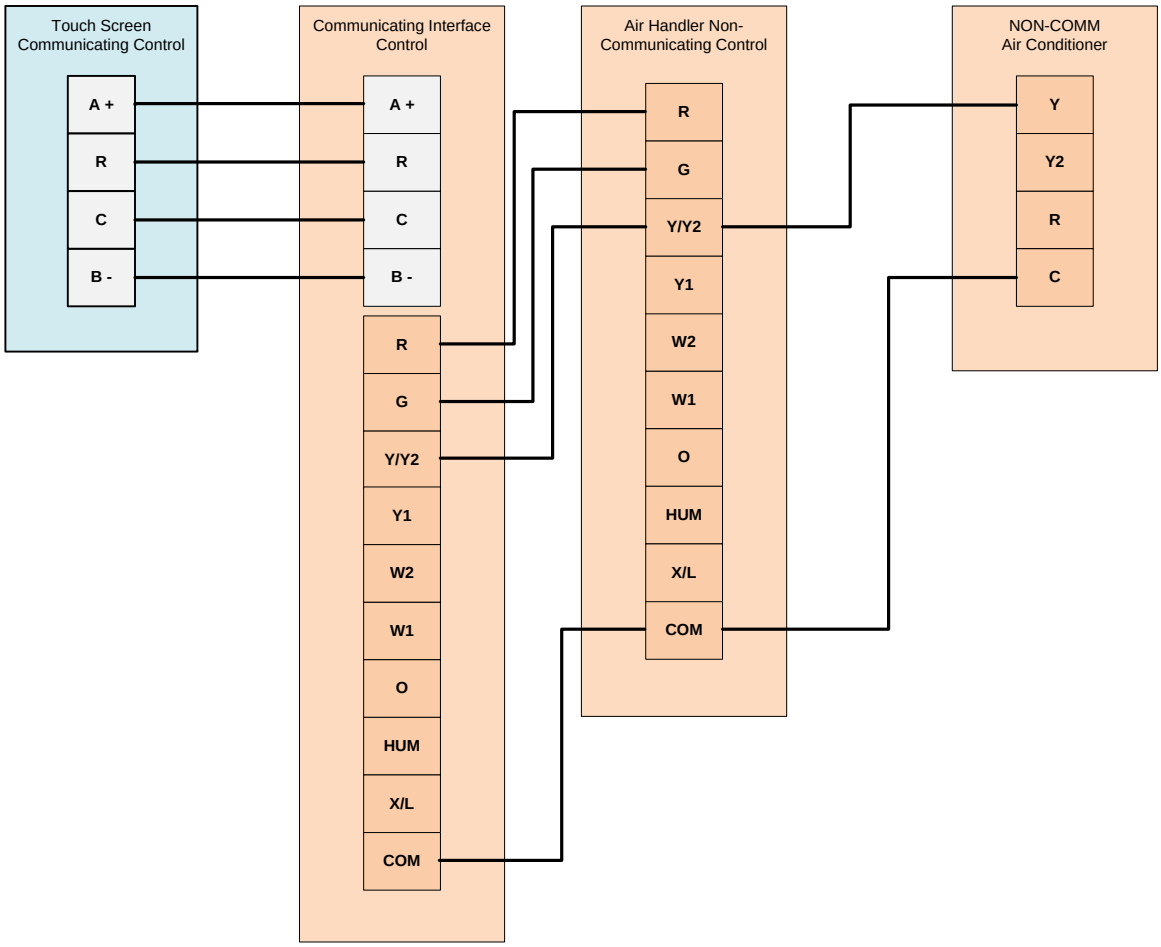


Same as AUX1 except with no electric heat.

AUX12	ID Aux (AH with electric heat) – Single Stage AC (Conventional Wiring)

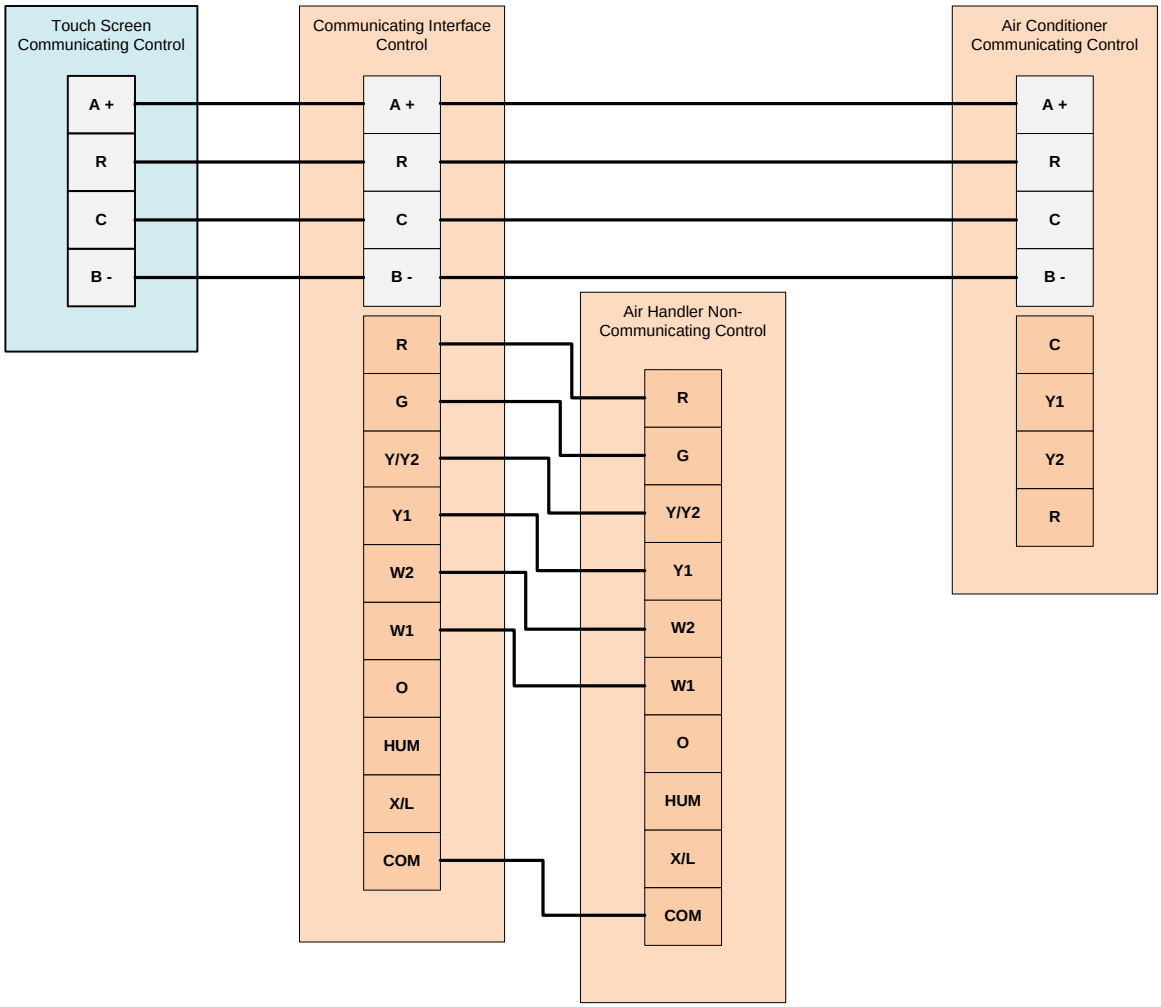


AUX13	ID Aux (AH no heat) – Single Stage AC (Conventional Wiring)

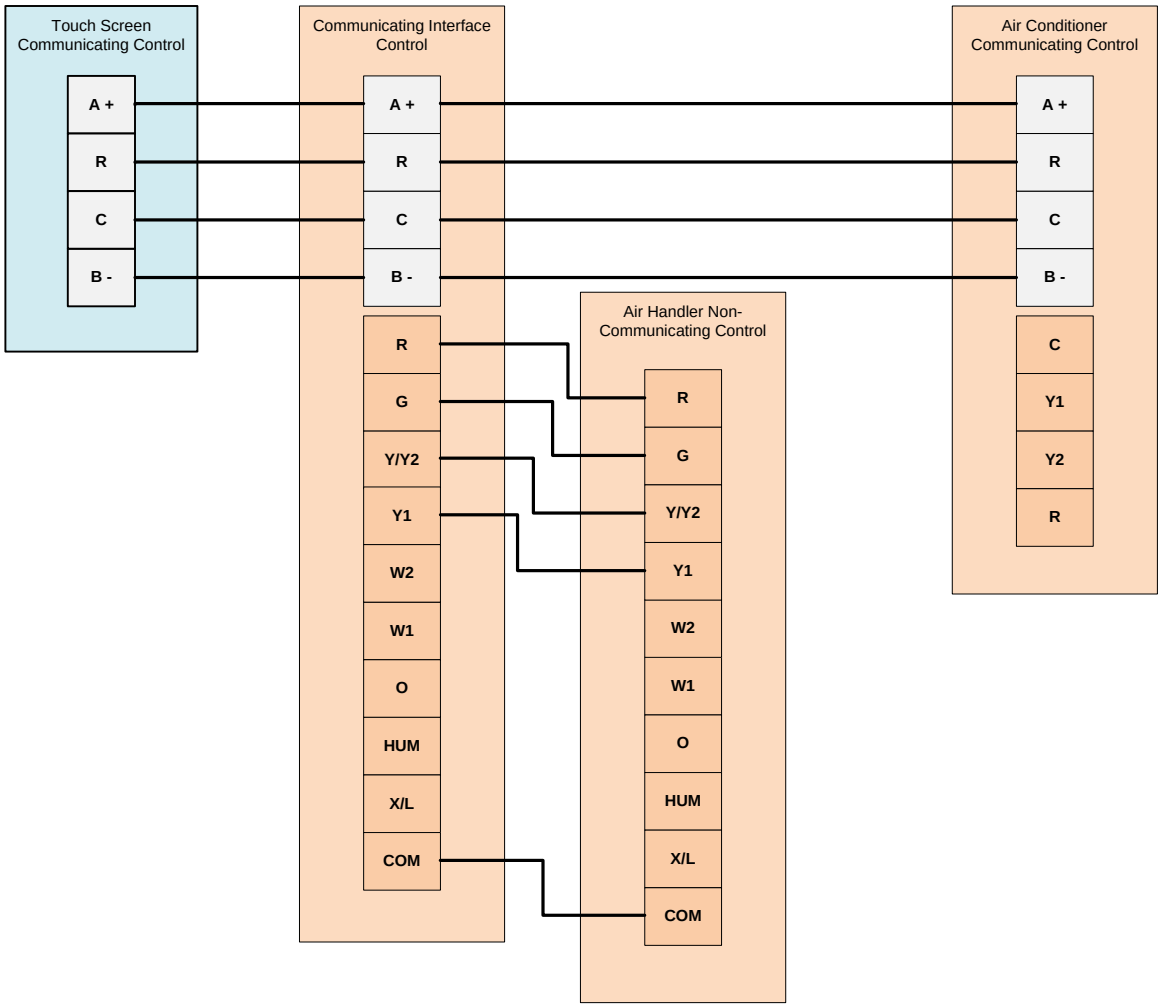


Same as AUX12 except with no electric heat.

AUX2	ID Aux (AH with electric heat) – Two Stage AC

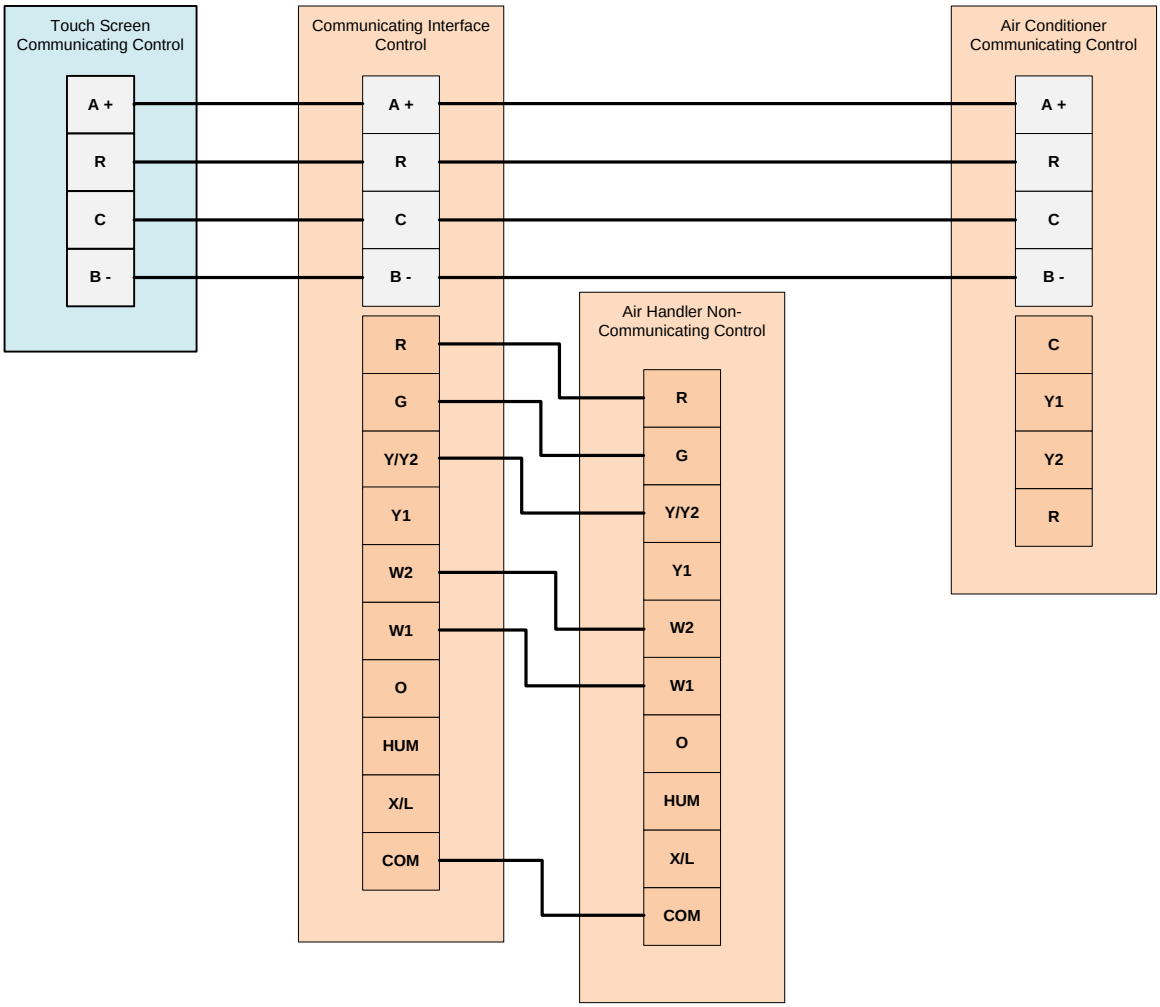


AUX14	ID Aux (AH no heat) – Two Stage AC

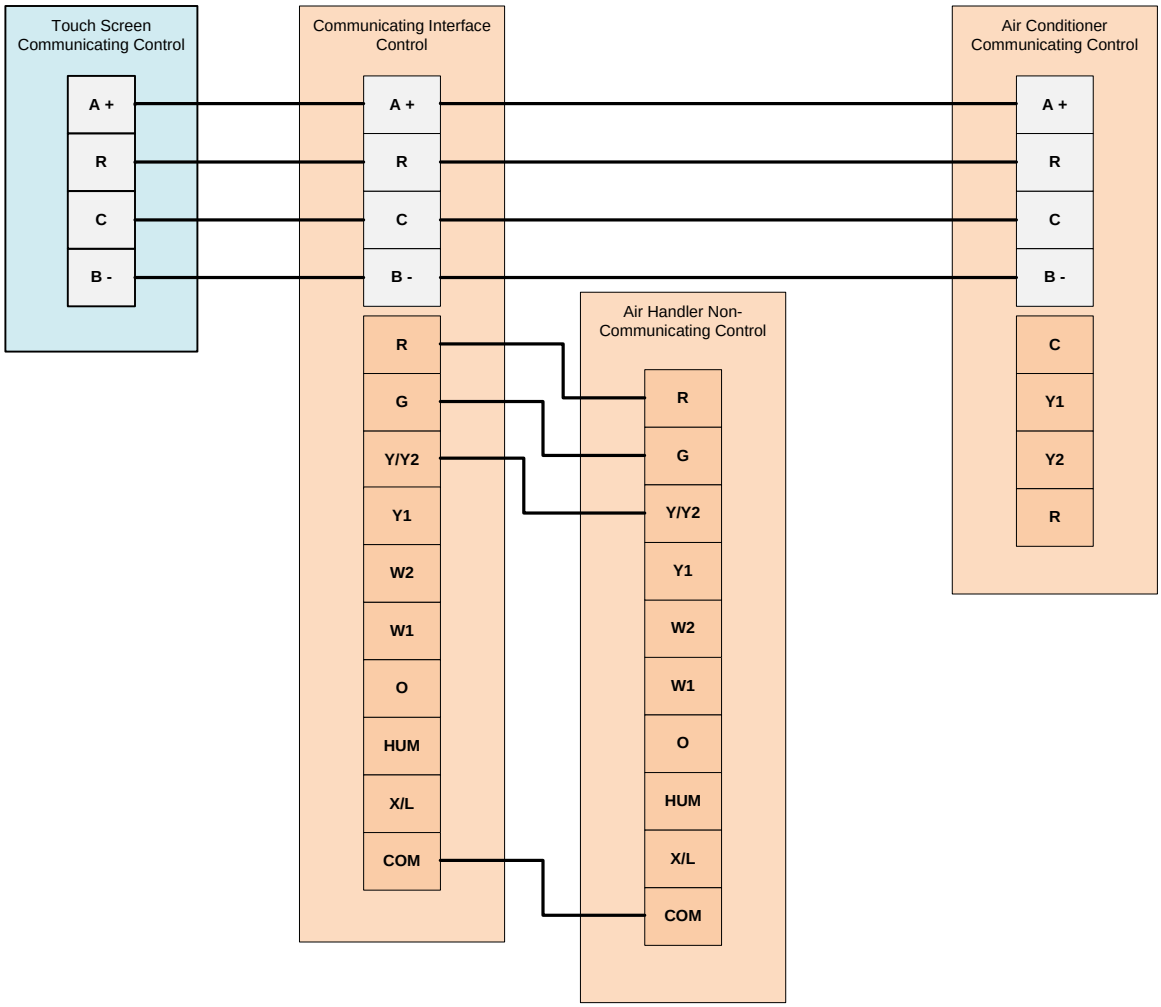


Same as AUX2 except with no electric heat.

AUX15	ID Aux (AH with electric heat) – Single Stage AC

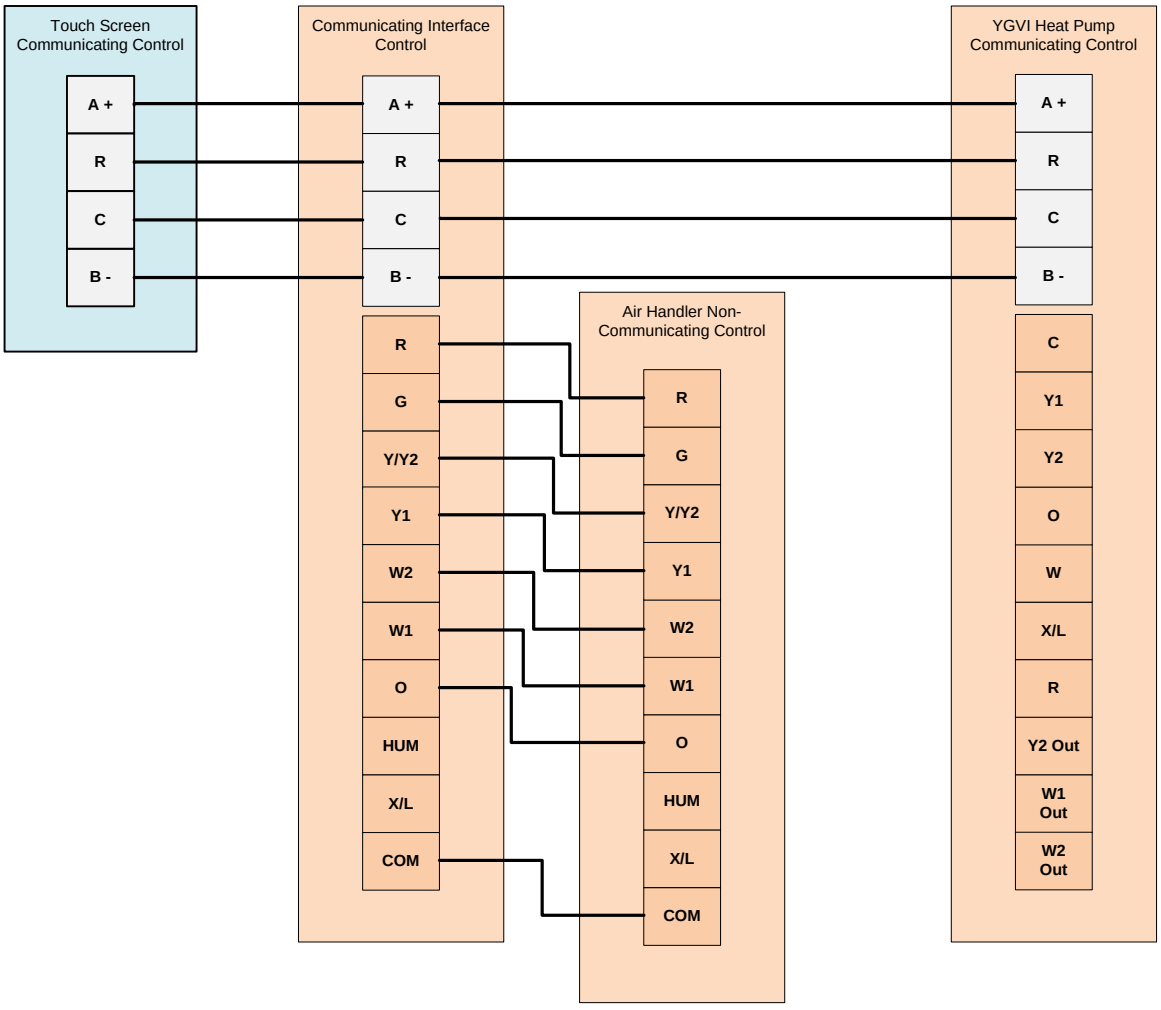


AUX16	ID Aux (AH no heat) – Single Stage AC



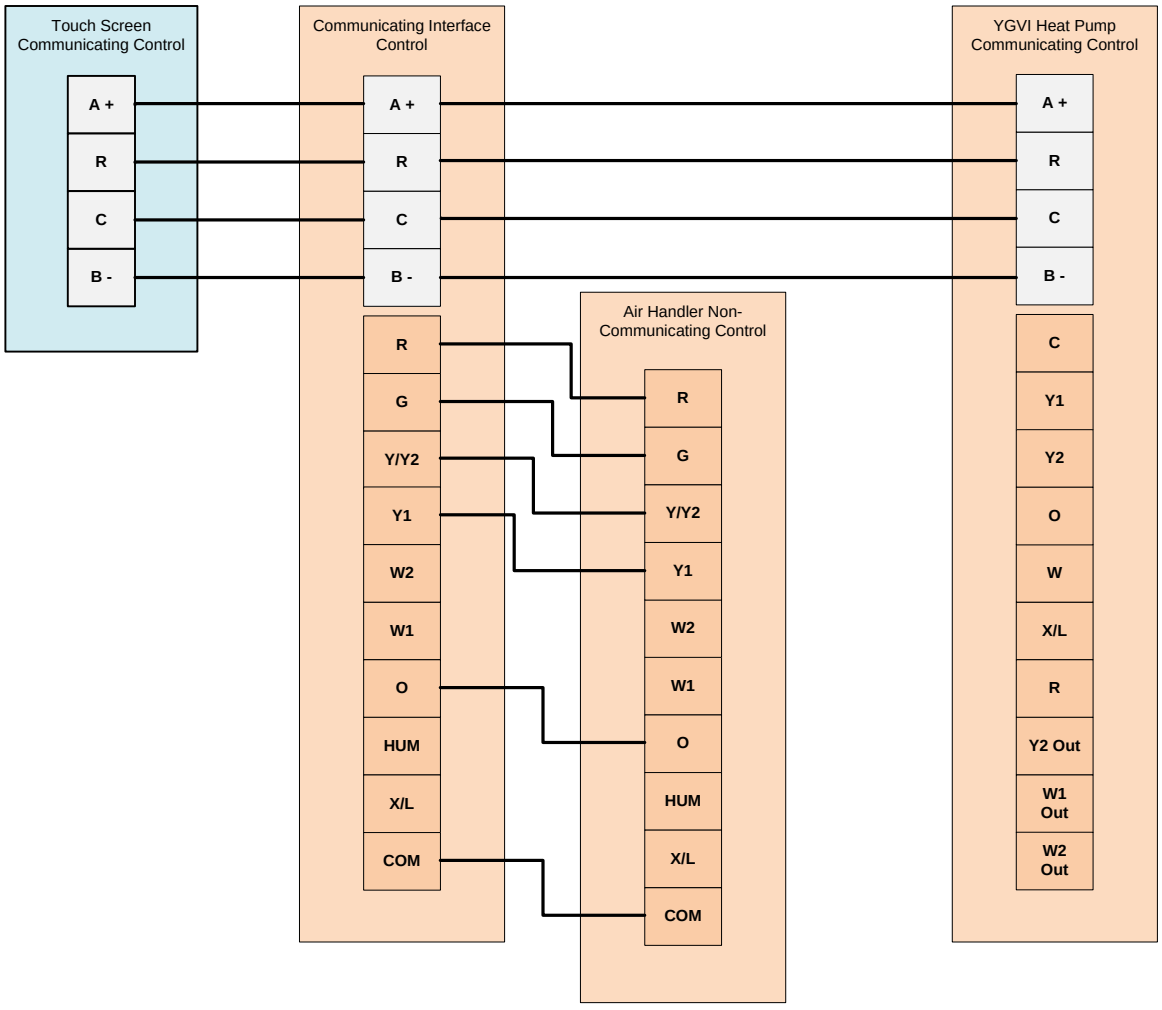
Same as AUX15 except with no electric heat.

AUX17	ID Aux (AH with electric heat) – Two Stage Heat Pump (Hot HP)



Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to OFF

AUX18	ID Aux (AH no heat) – Two Stage Heat Pump (Hot HP)

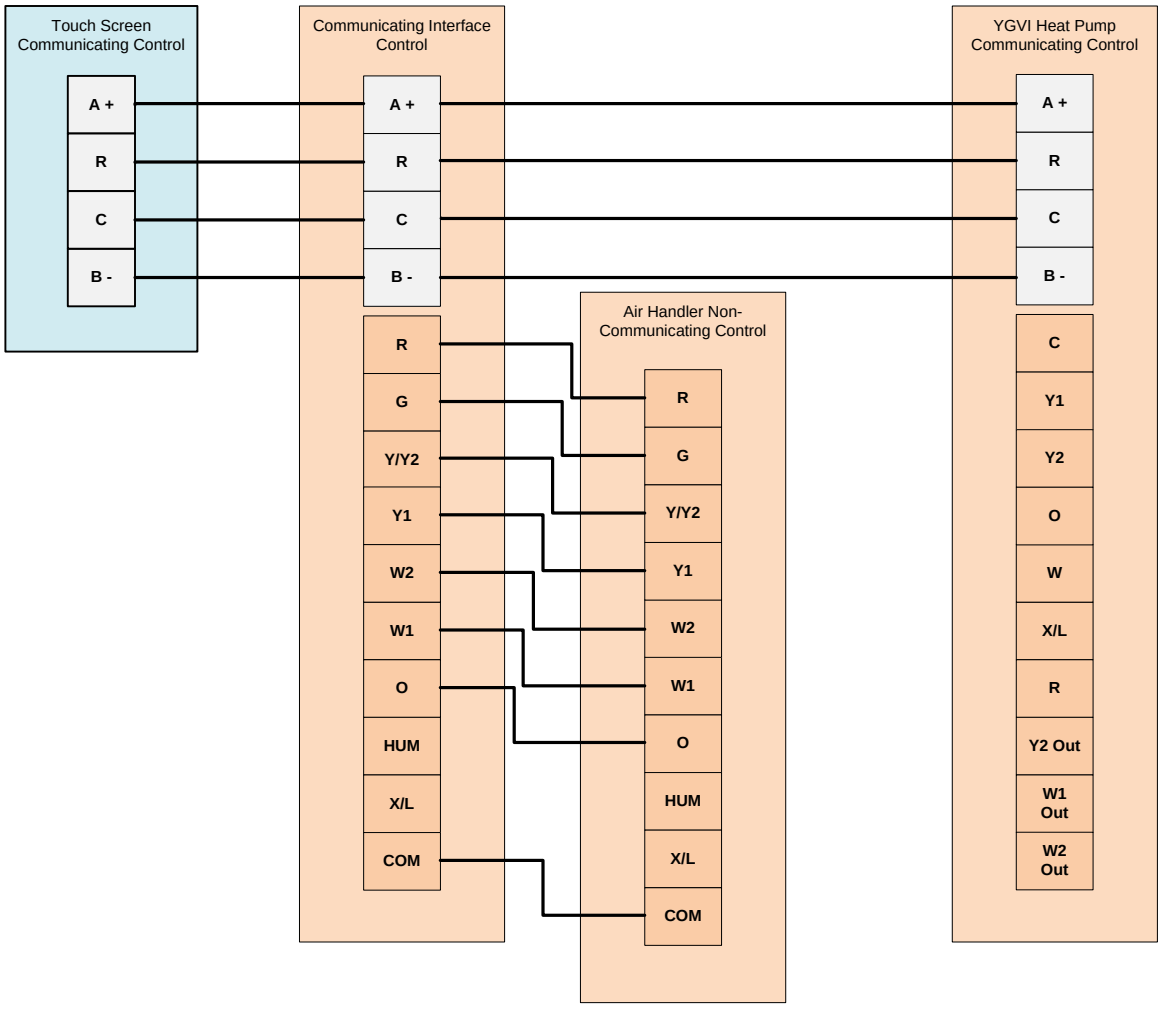


Same as AUX17 except with no electric heat.

Hot Heat Pump Jumper must be set to ON

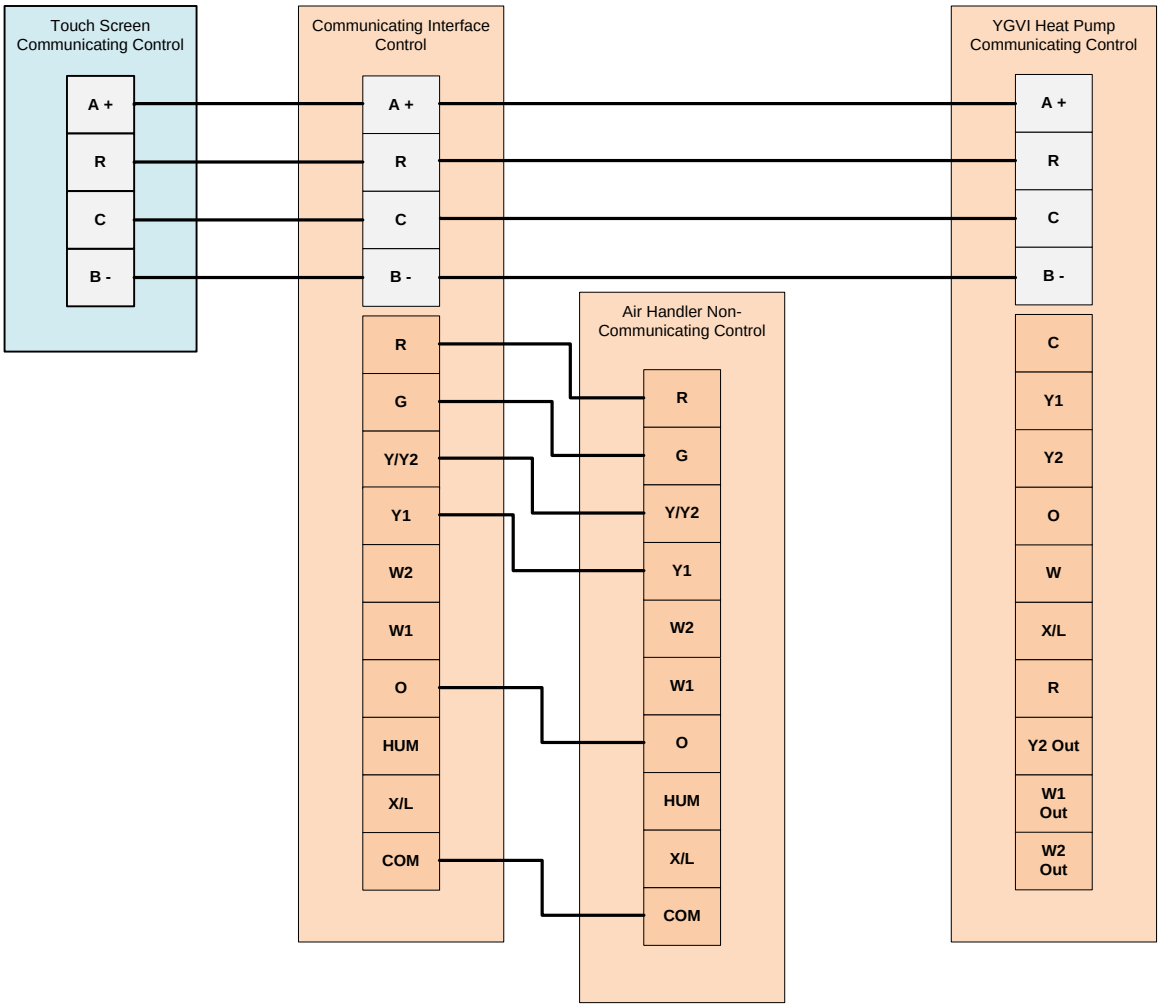
FFuel Jumper must be set to OFF

AUX19	ID Aux (AH with electric heat) – Two Stage Heat Pump



Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to OFF

AUX20	ID Aux (AH no heat) – Two Stage Heat Pump

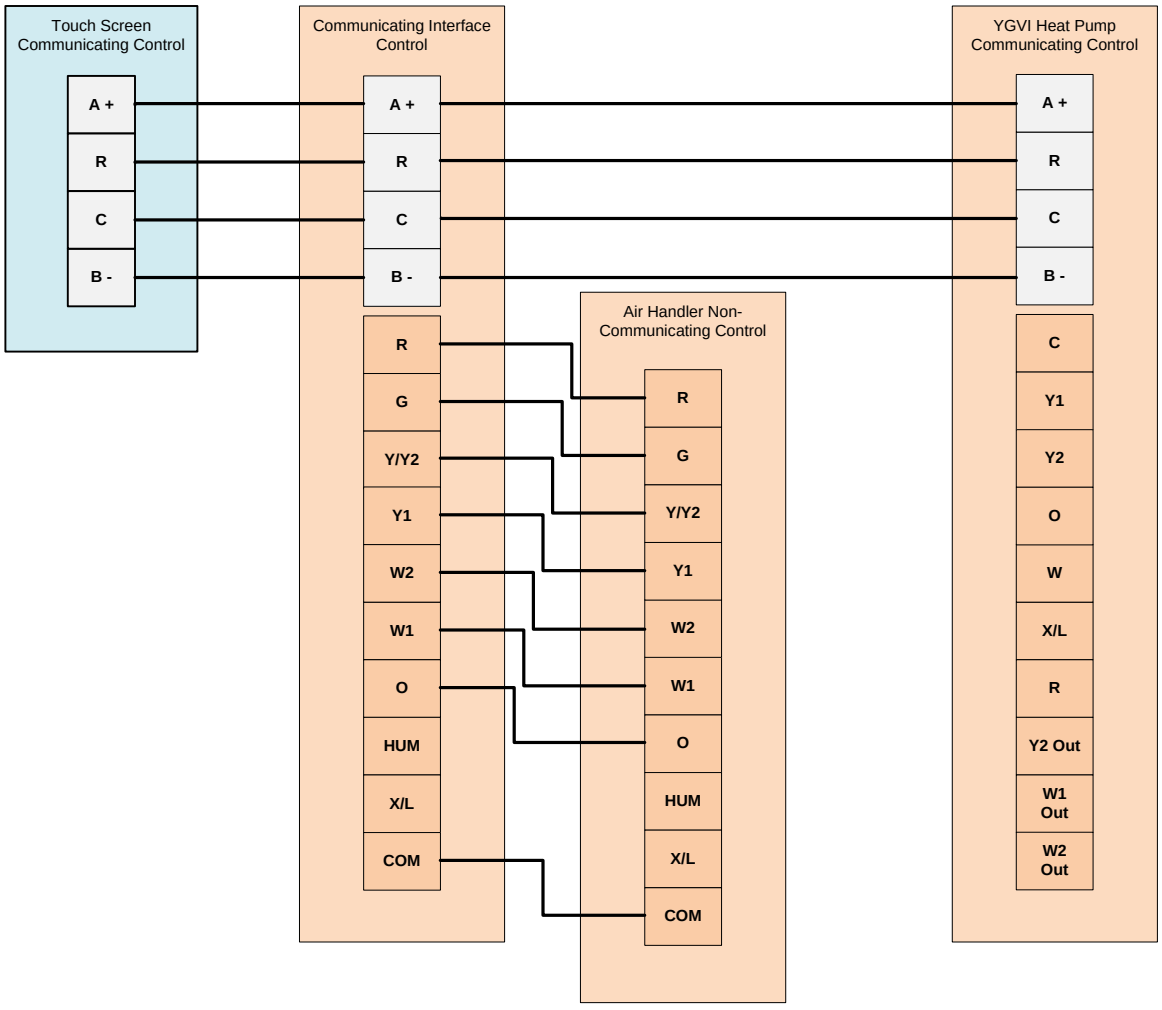


Same as AUX19 except with no electric heat.

Hot Heat Pump Jumper must be set to OFF

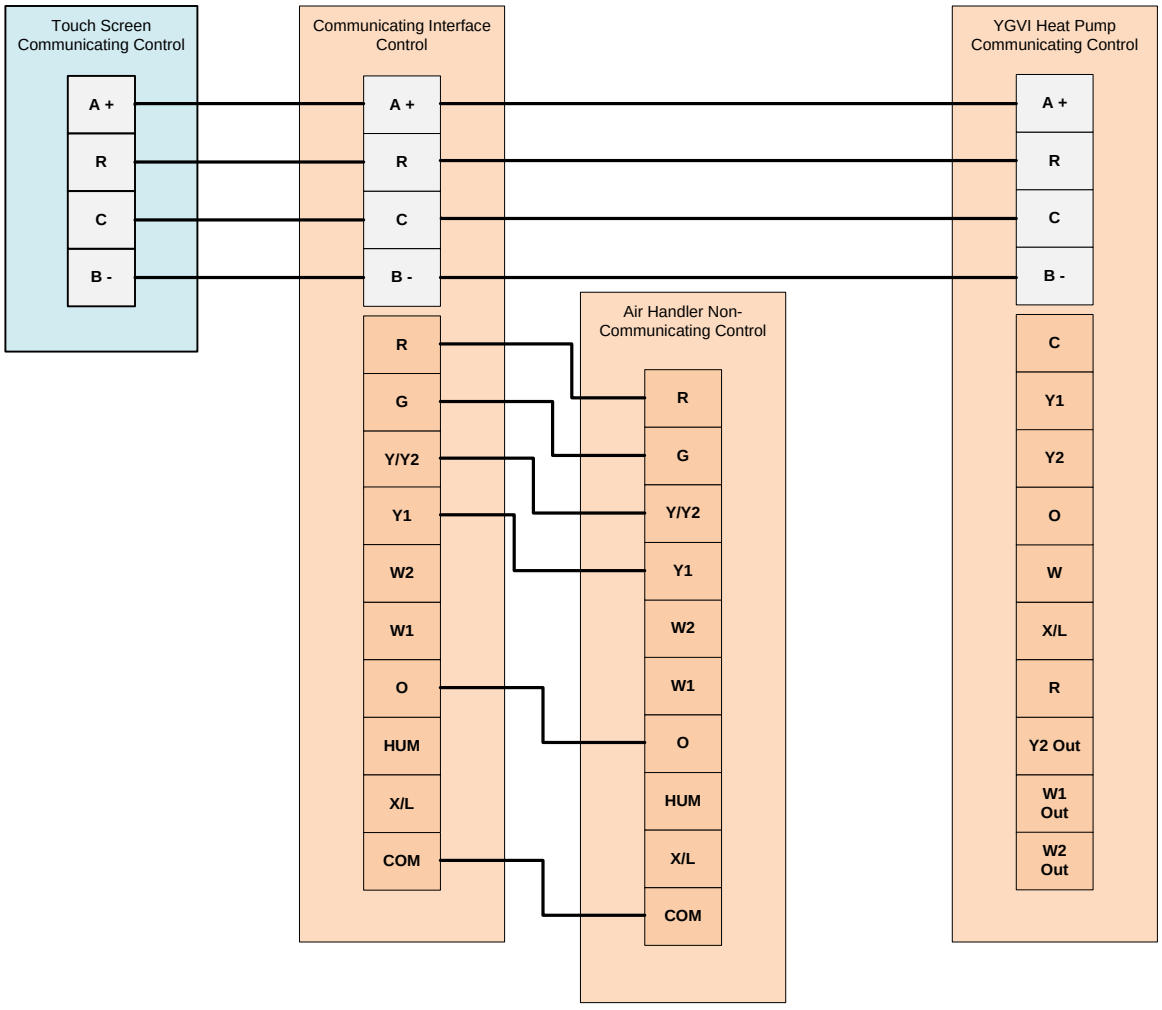
FFuel Jumper must be set to OFF

AUX21	ID Aux (AH with electric heat) – Single Stage Heat Pump (Hot HP)



Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to OFF

AUX22	ID Aux (AH no heat) – Single Stage Heat Pump (Hot HP)

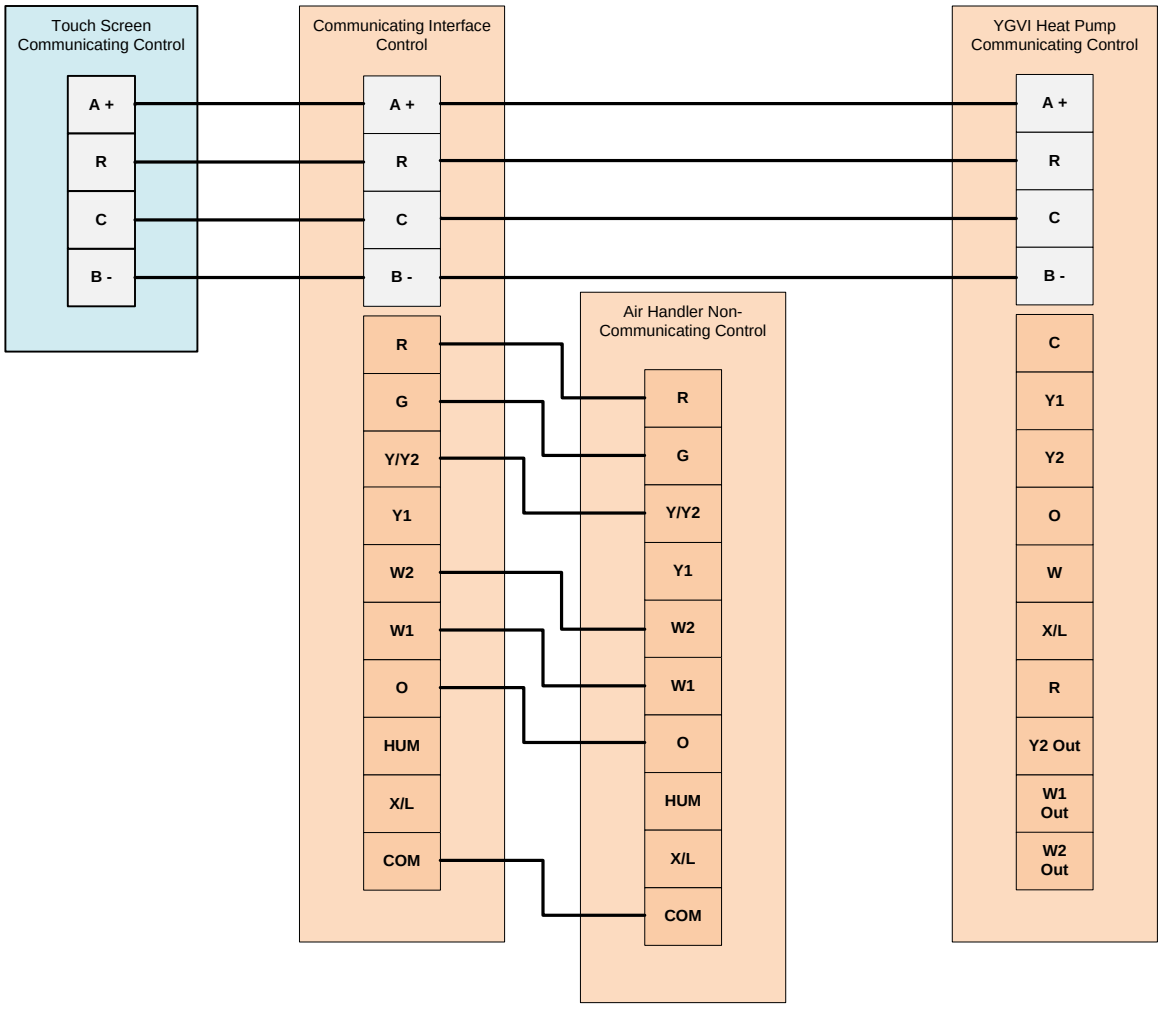


Same as AUX21 except with no electric heat.

Hot Heat Pump Jumper must be set to ON

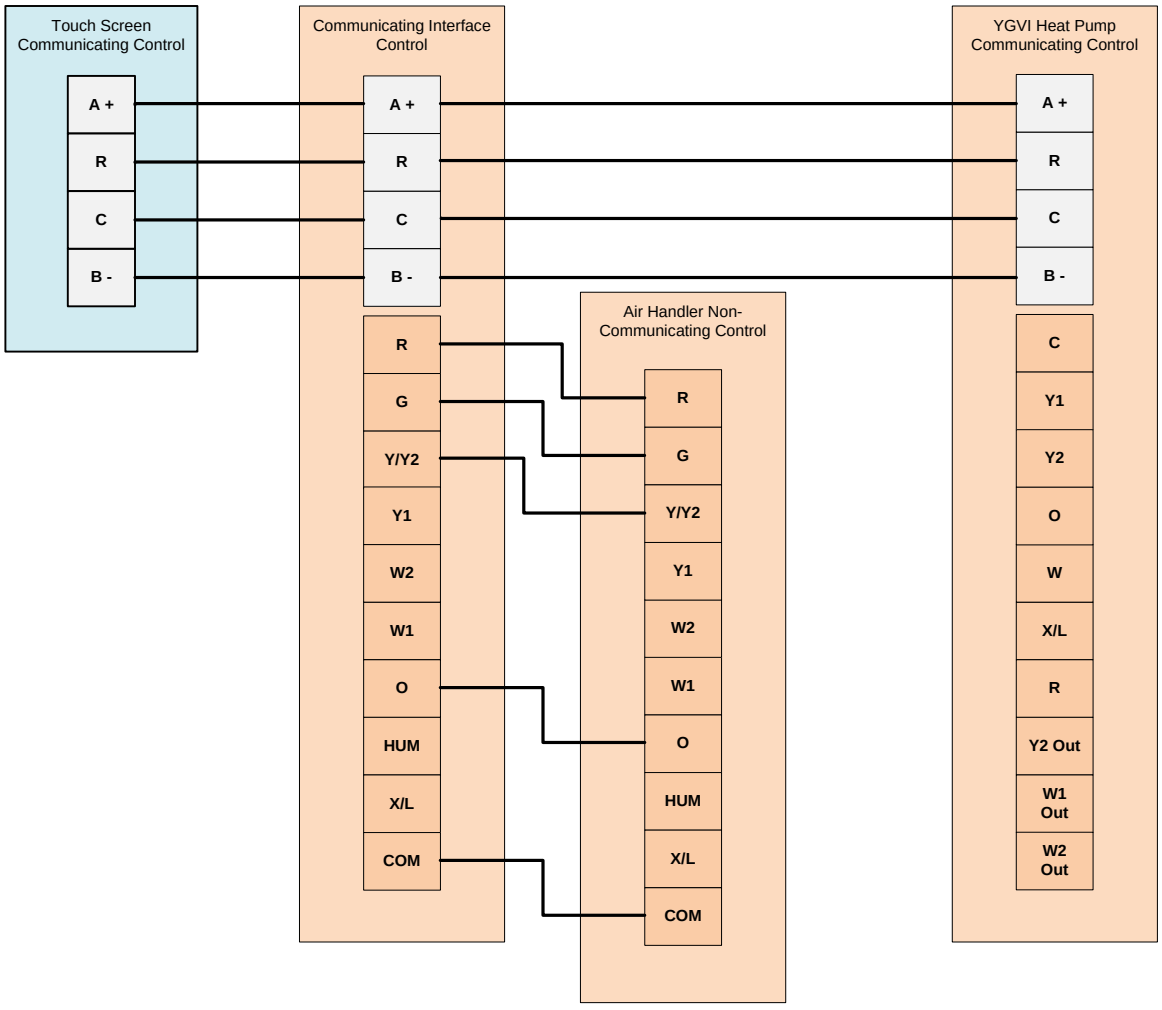
FFuel Jumper must be set to OFF

AUX23	ID Aux (AH with electric heat) – Single Stage Heat Pump



Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to OFF

AUX24	ID Aux (AH no heat) – Single Stage Heat Pump

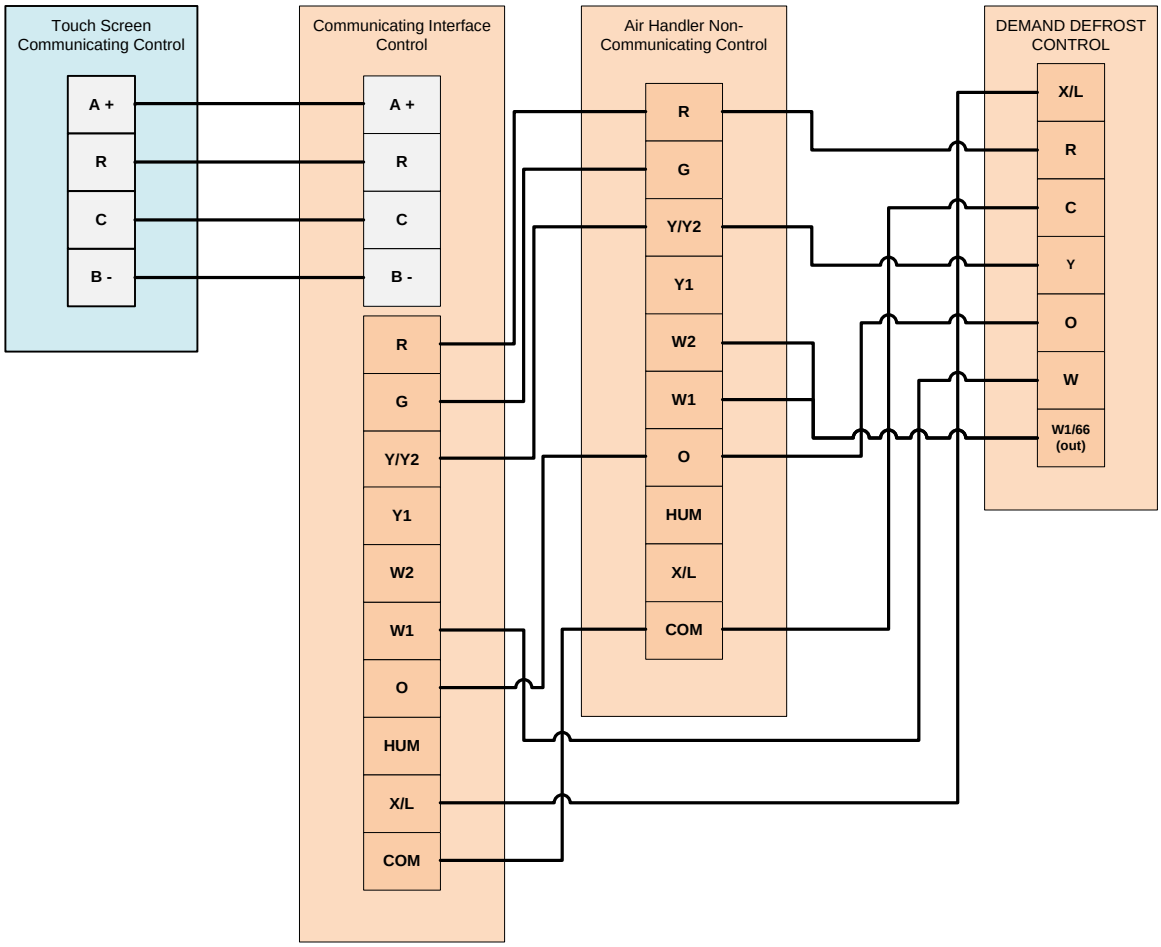


Same as AUX23 except with no electric heat.

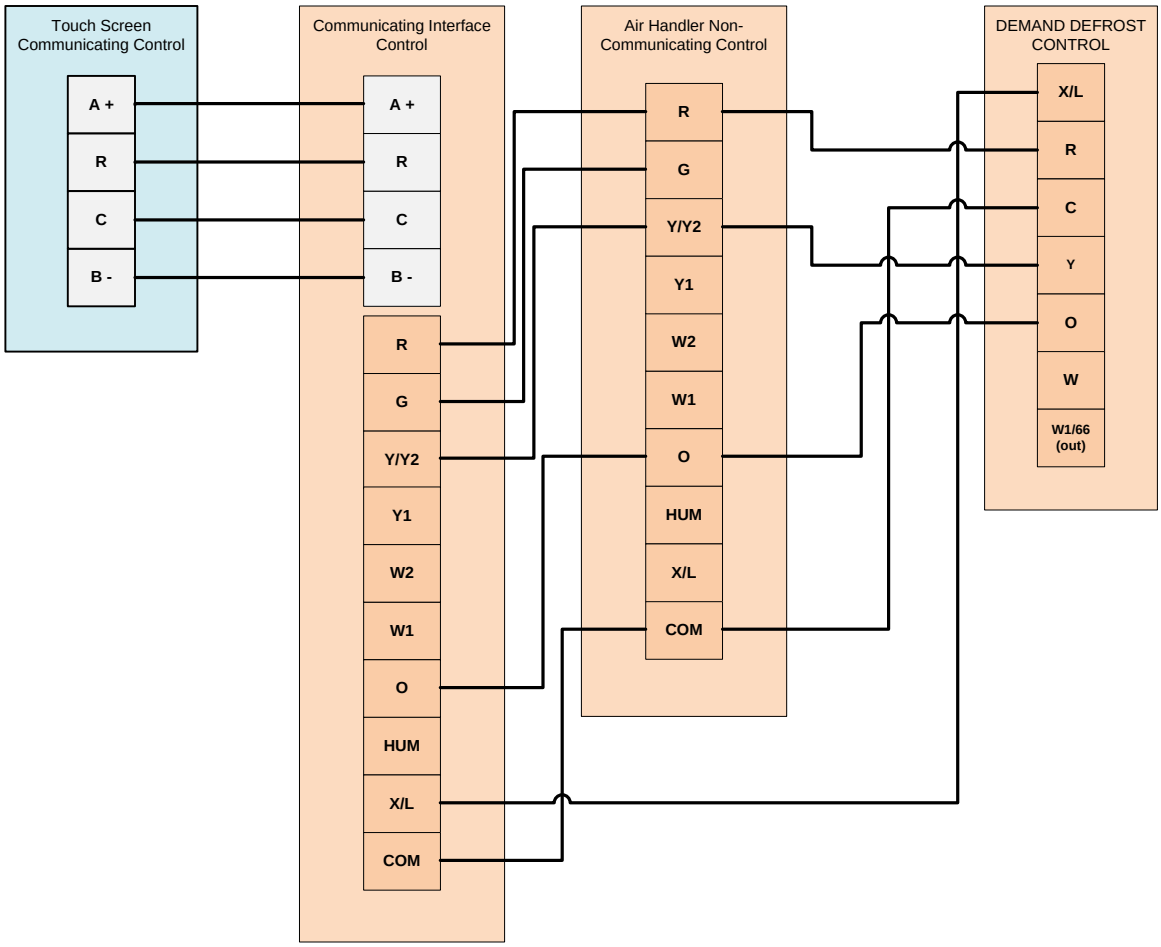
Hot Heat Pump Jumper must be set to OFF

FFuel Jumper must be set to OFF

AUX35	ID Aux (AH with electric heat) – Demand Defrost Heat Pump

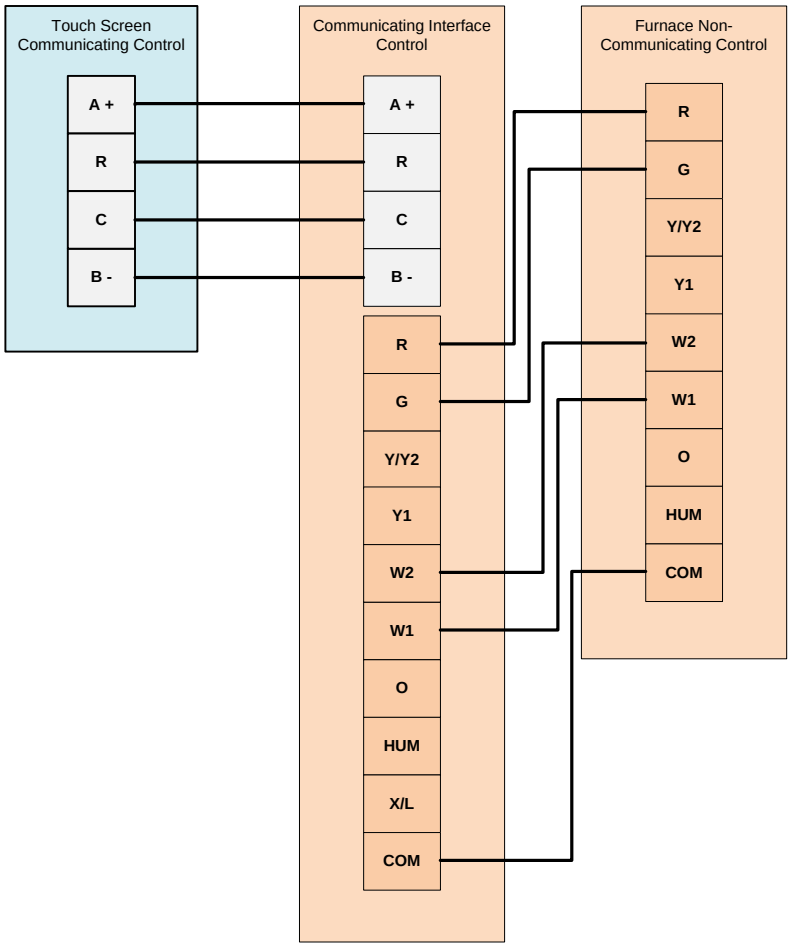


AUX36	ID Aux (AH no heat) – Demand Defrost Heat Pump

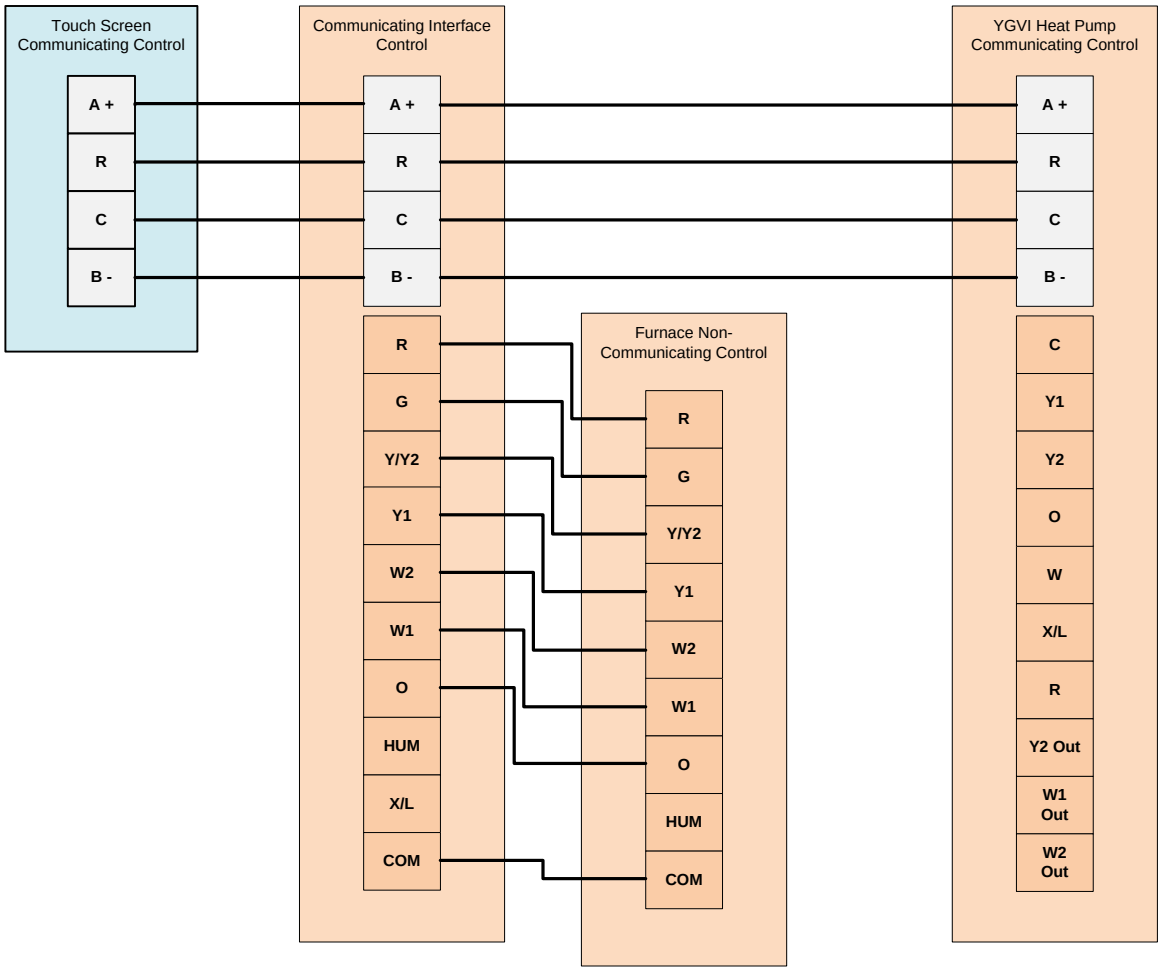


Same as AUX35 except with no electric heat.

AUX41	ID Aux (Two Stage Furnace) – No OD Unit Installed

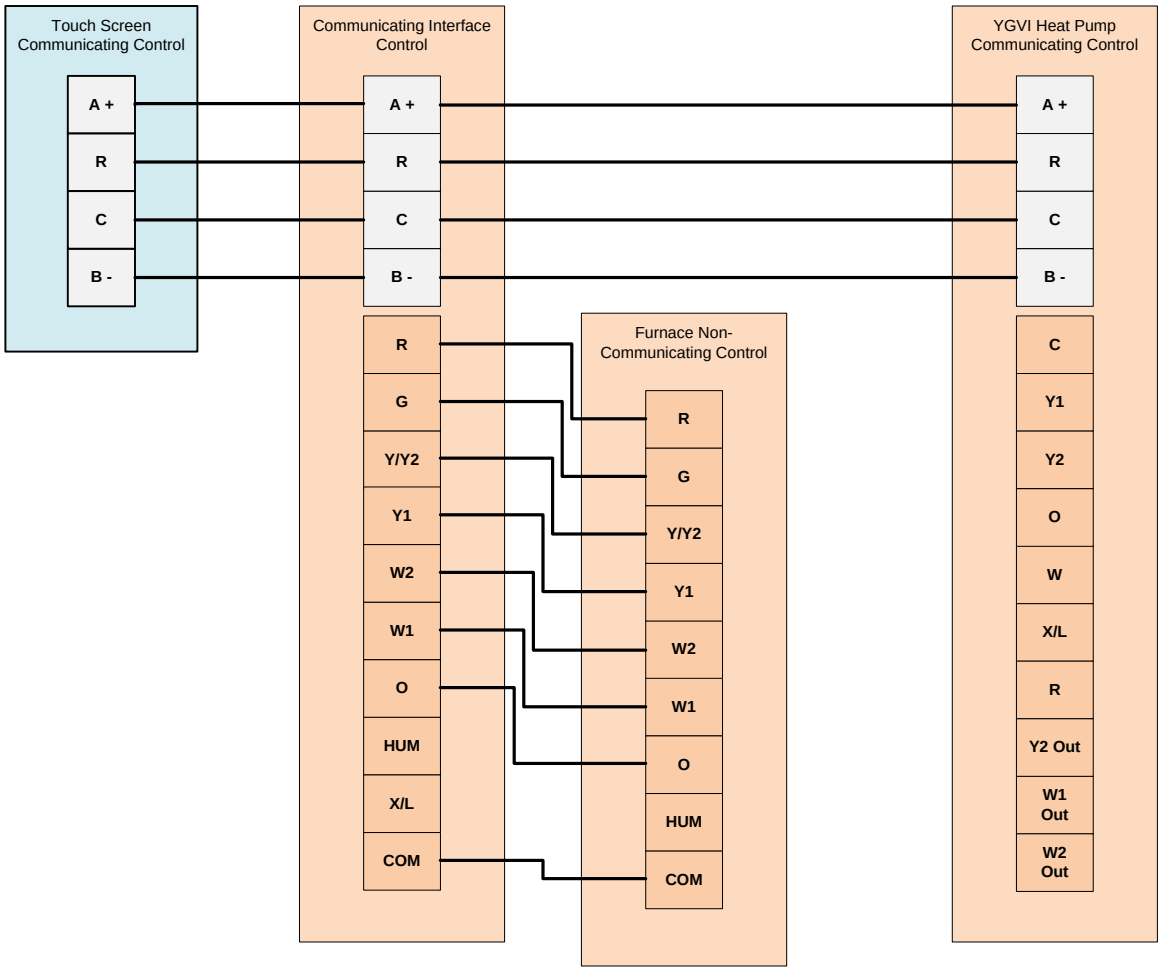


AUX10	ID Aux (Two Stage Furnace) – Two Stage Heat Pump (Hot HP)



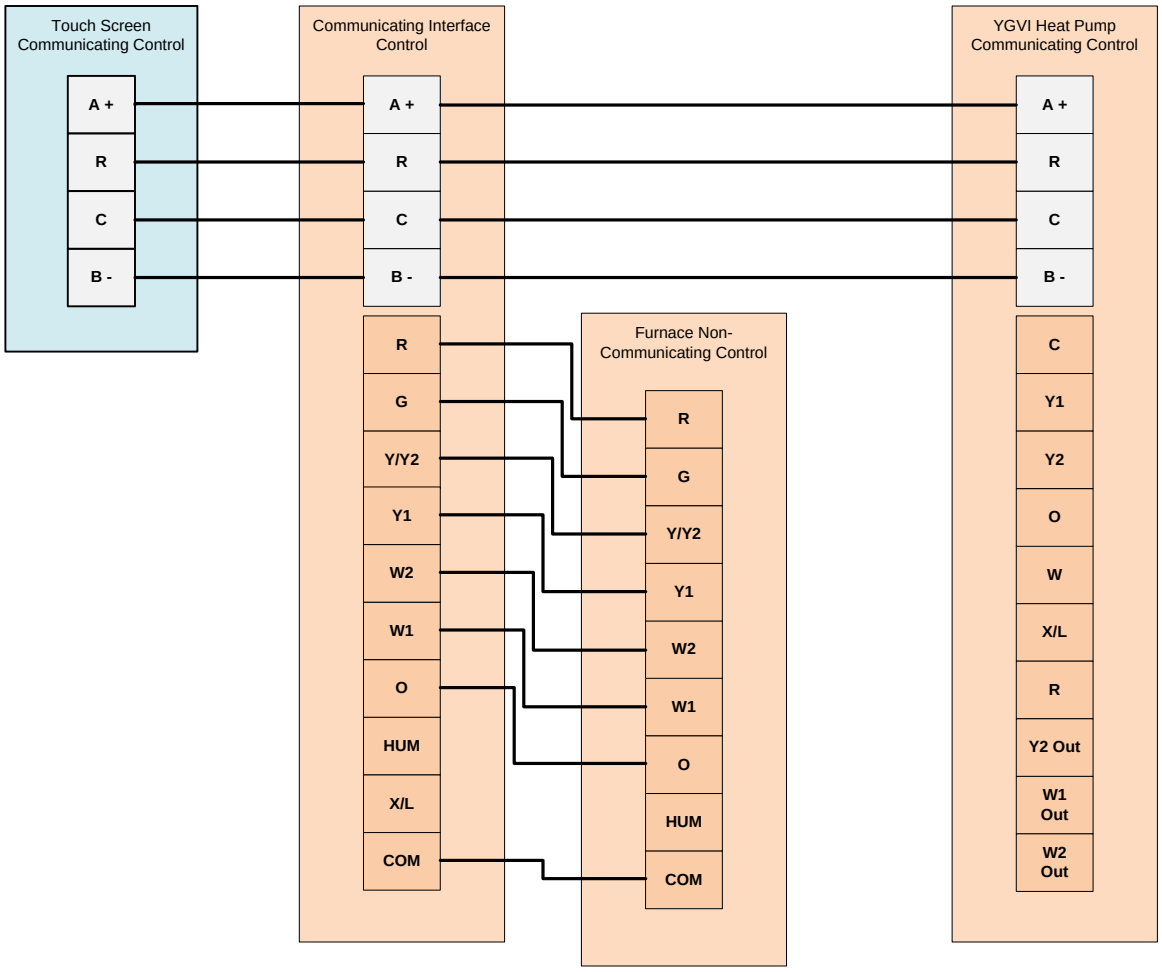
Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to ON

AUX9	ID Aux (Two Stage Furnace) – Two Stage Heat Pump



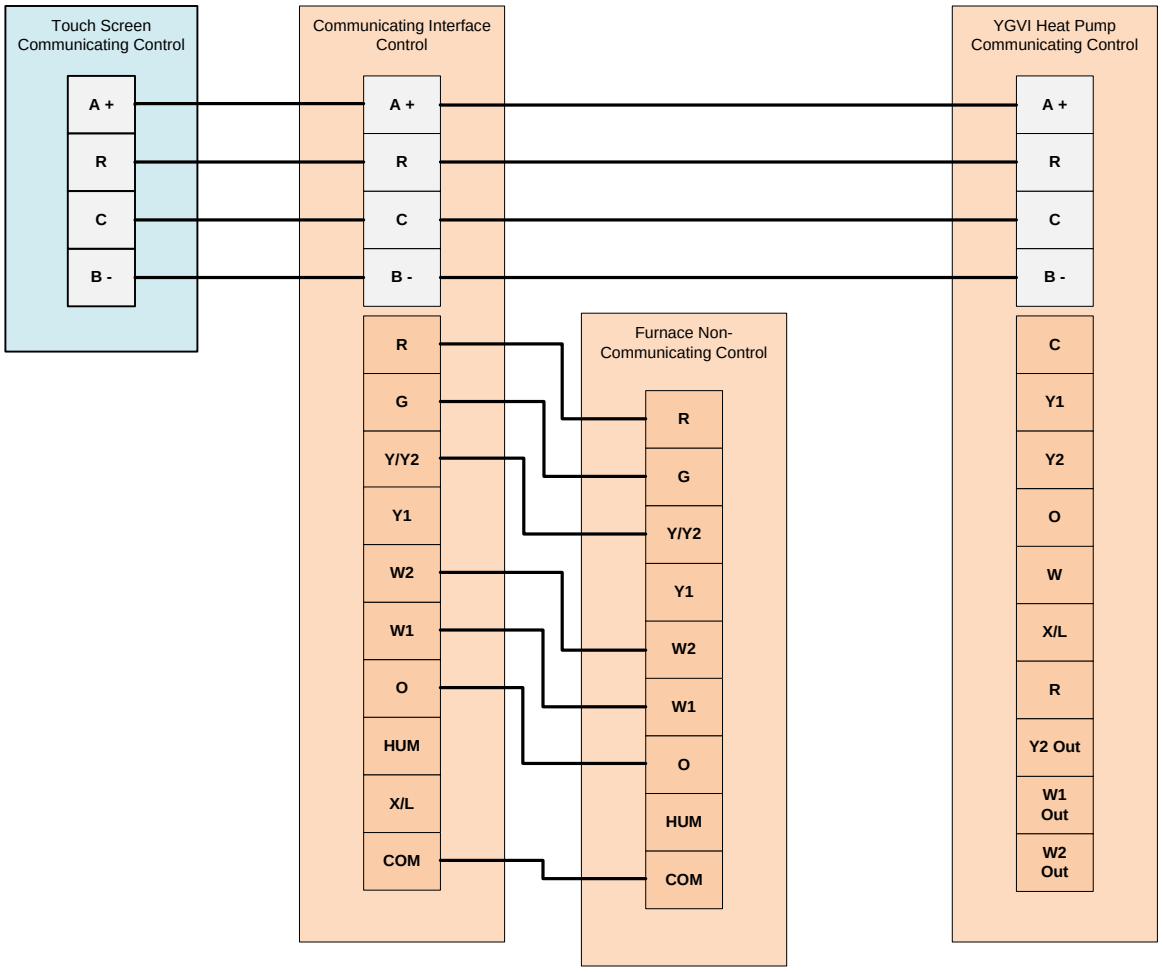
Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to ON

AUX8	ID Aux (Two Stage Furnace) – Single Stage Heat Pump (Hot HP)



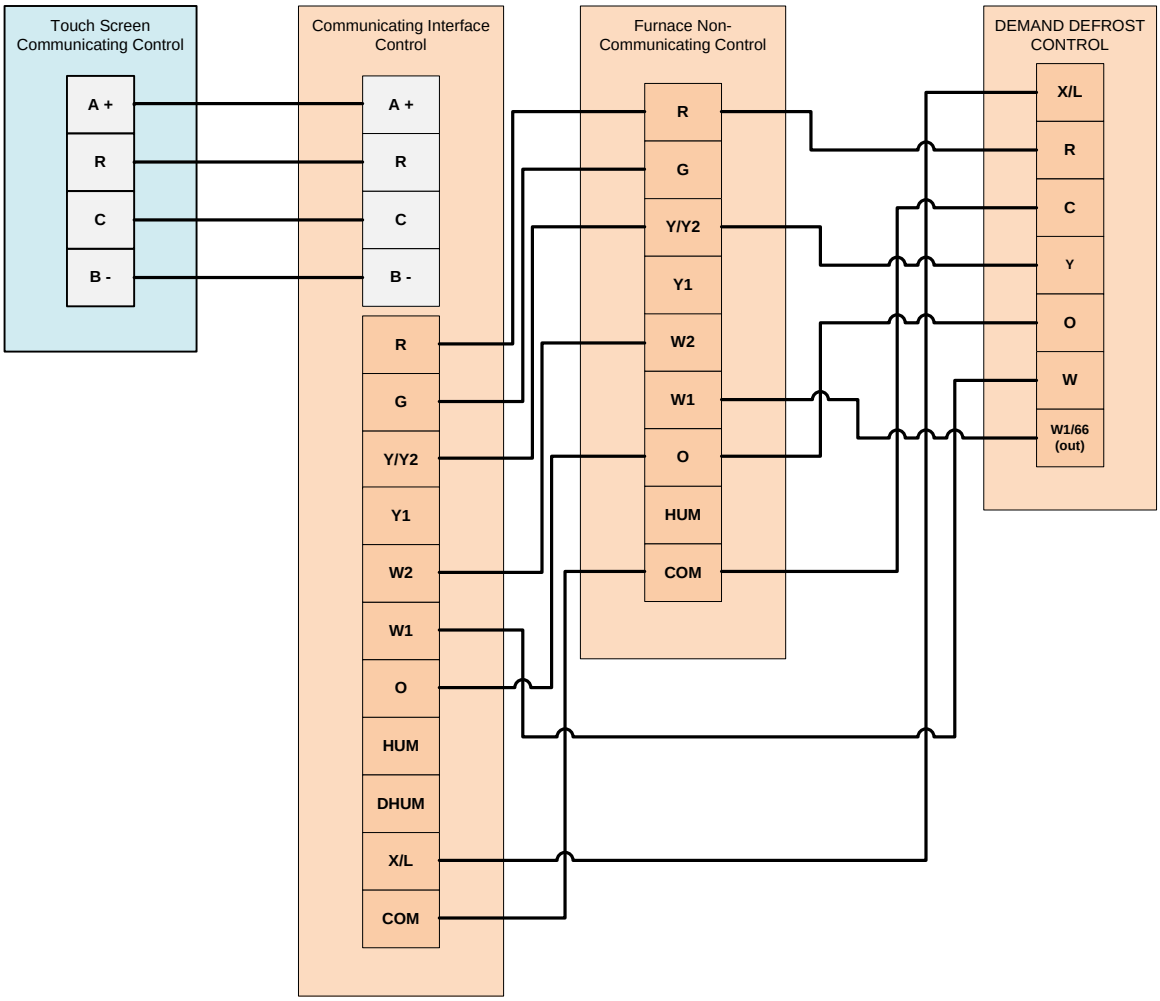
Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to ON

AUX7	ID Aux (Two Stage Furnace) – Single Stage Heat Pump

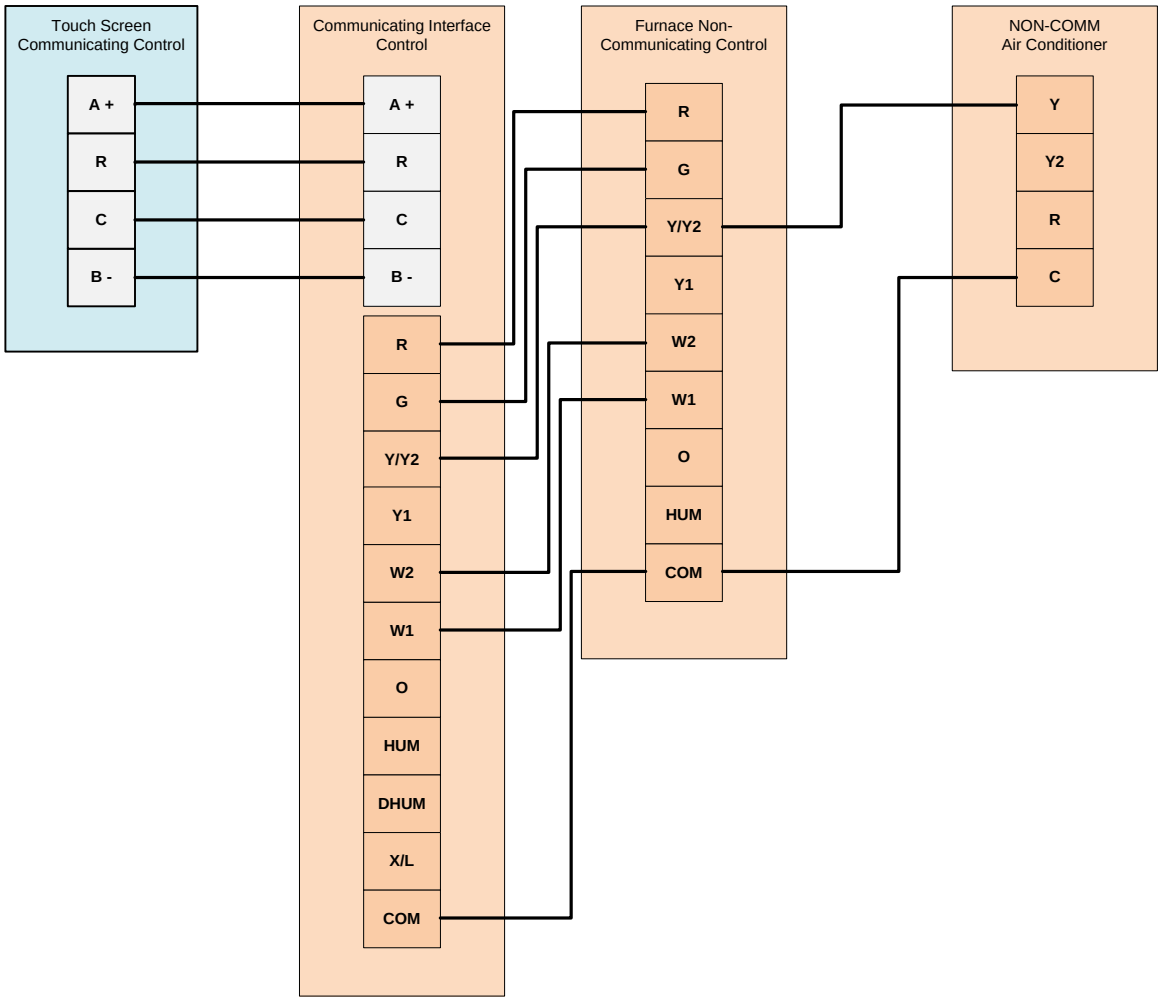


Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to ON

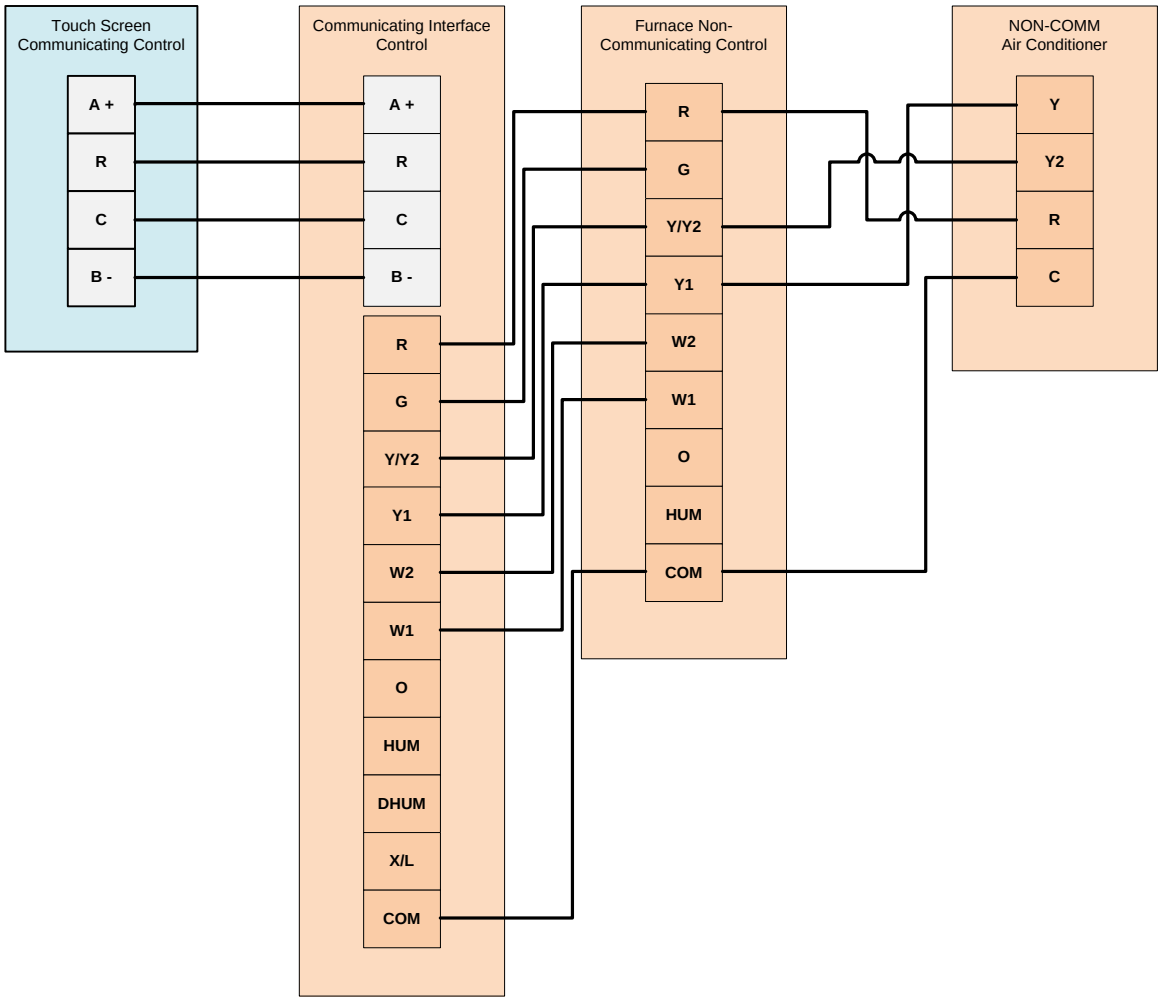
AUX37	ID Aux (Two Stage Furnace) – Demand Defrost Heat Pump



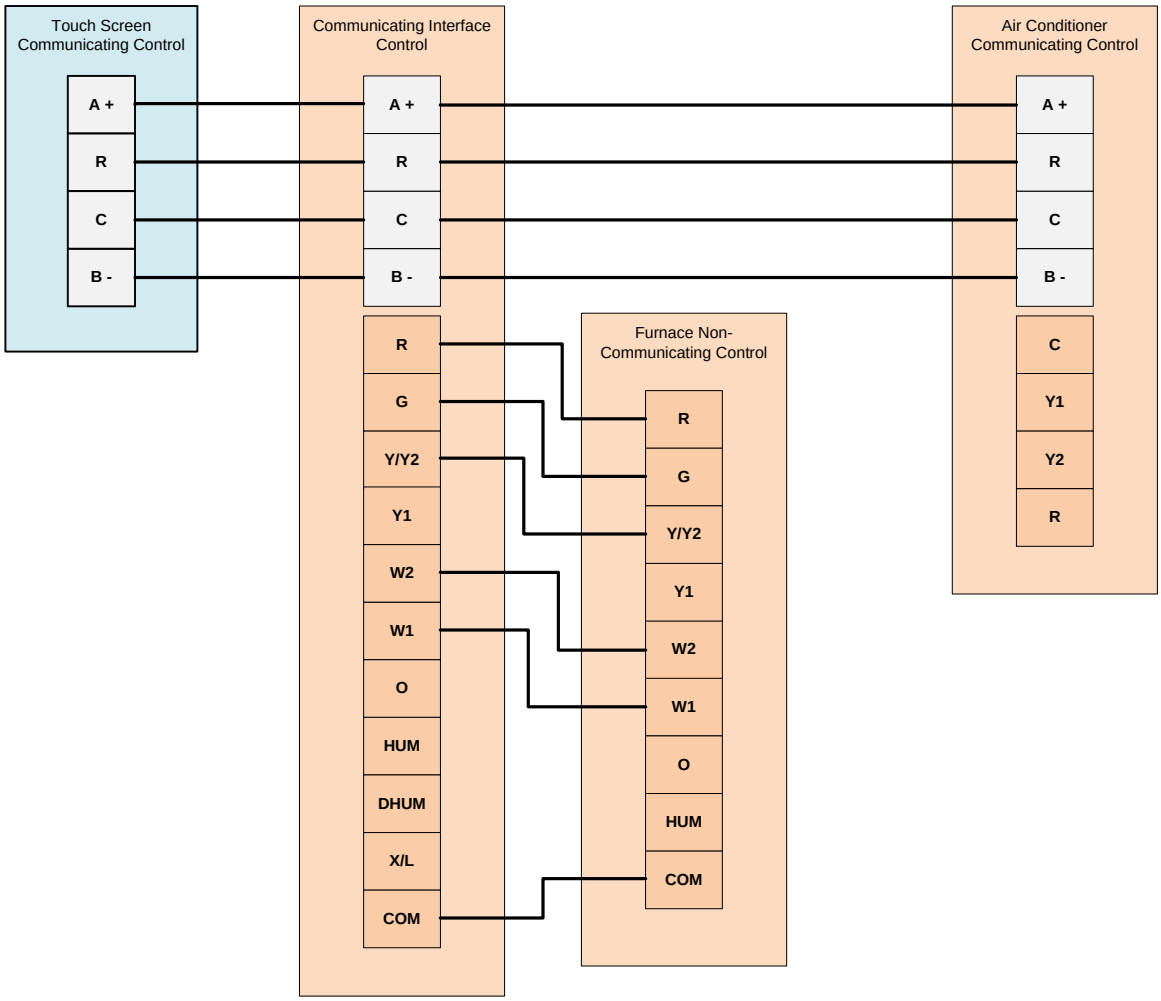
AUX25	ID Aux (Two Stage Furnace) – Single Stage AC (Conventional Wiring)



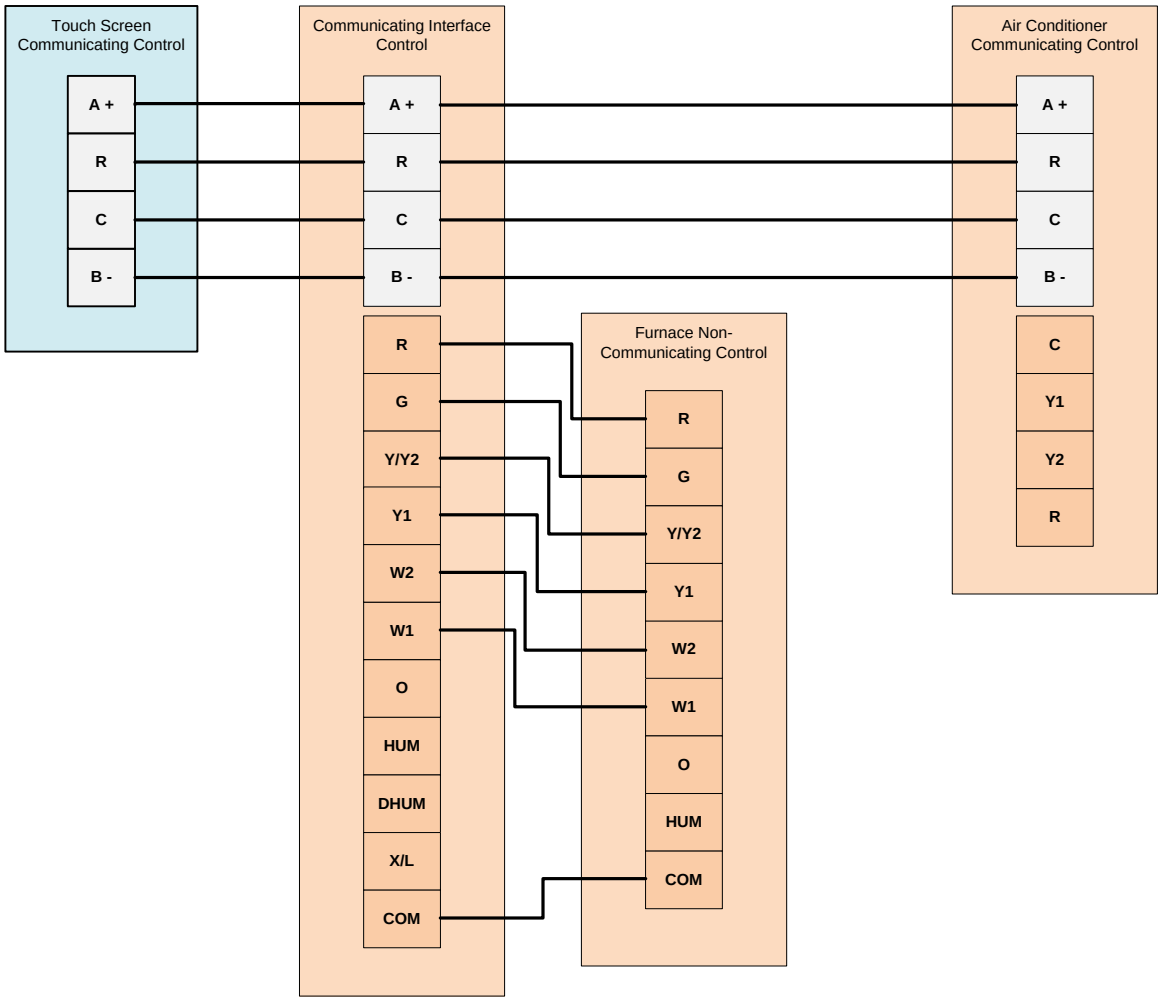
AUX26	ID Aux (Two Stage Furnace) – Two Stage AC (Conventional Wiring)



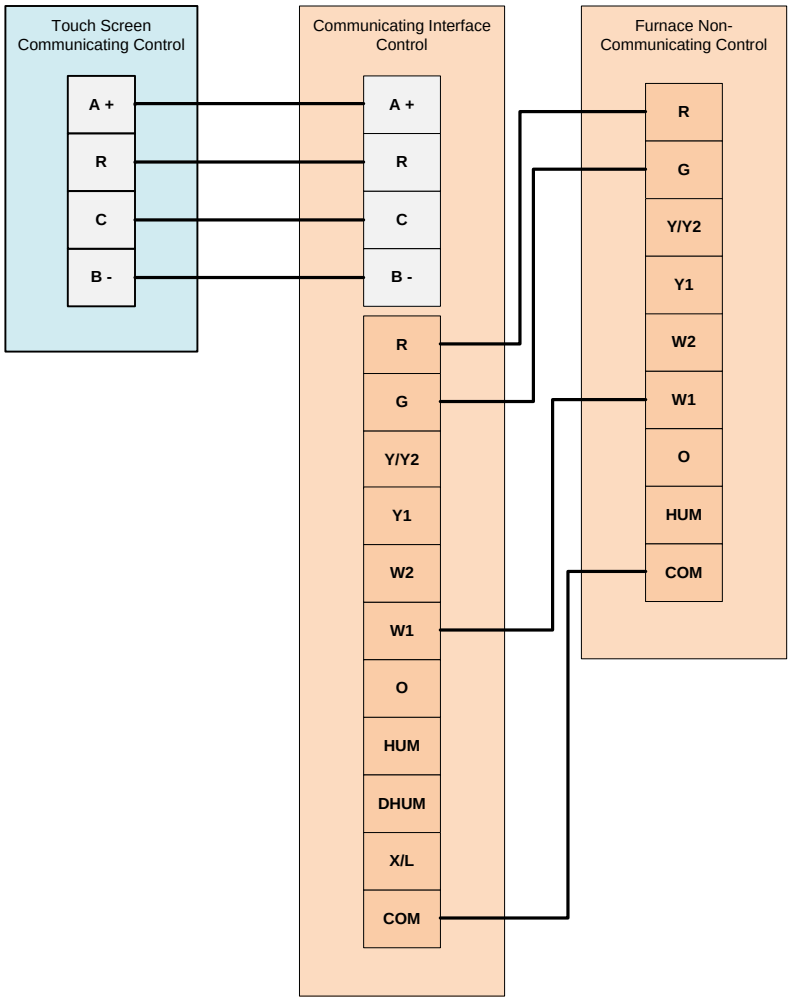
AUX5	ID Aux (Two Stage Furnace) – Single Stage AC



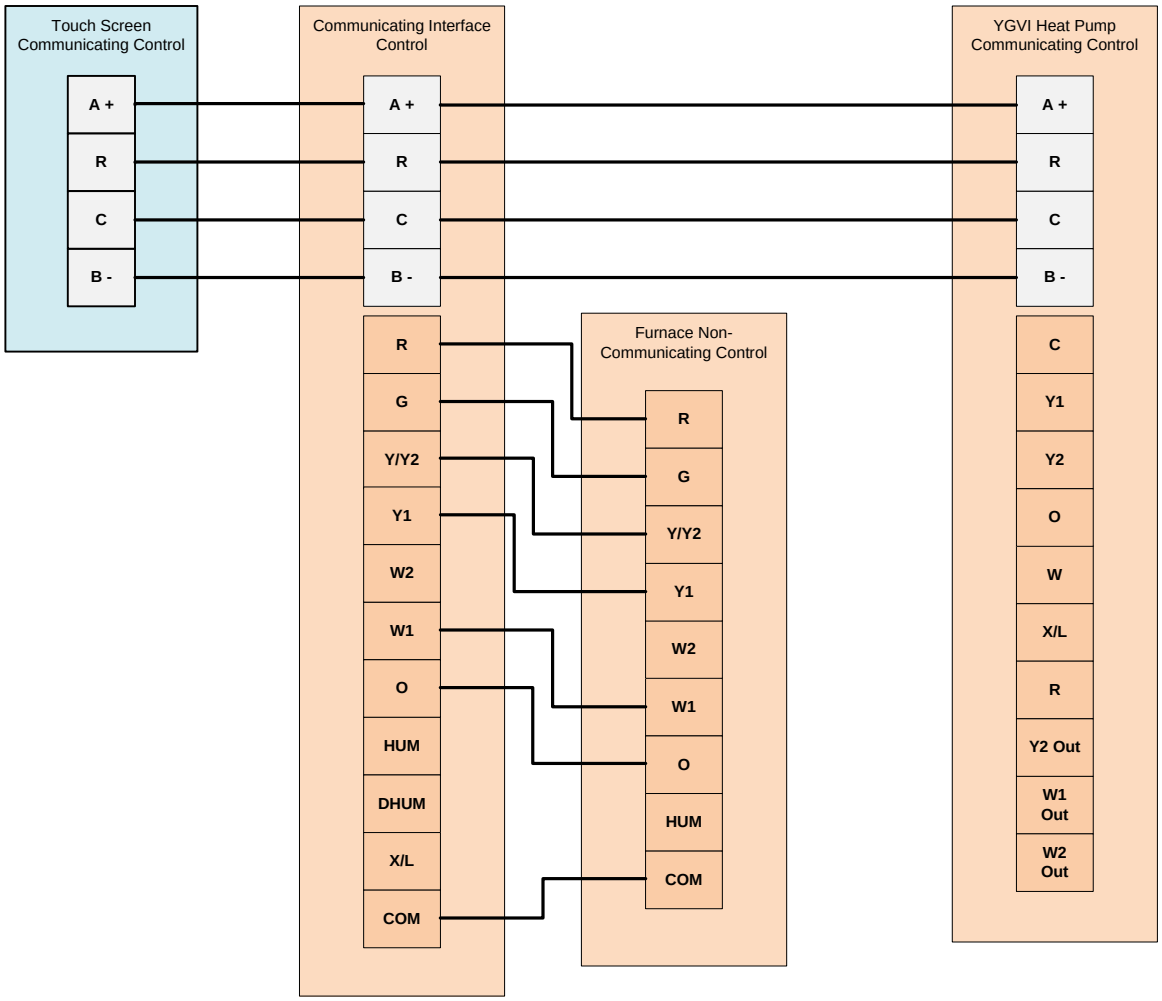
AUX6	ID Aux (Two Stage Furnace) – Two Stage AC



AUX42	ID Aux (Single Stage Furnace) – No OD Unit Installed

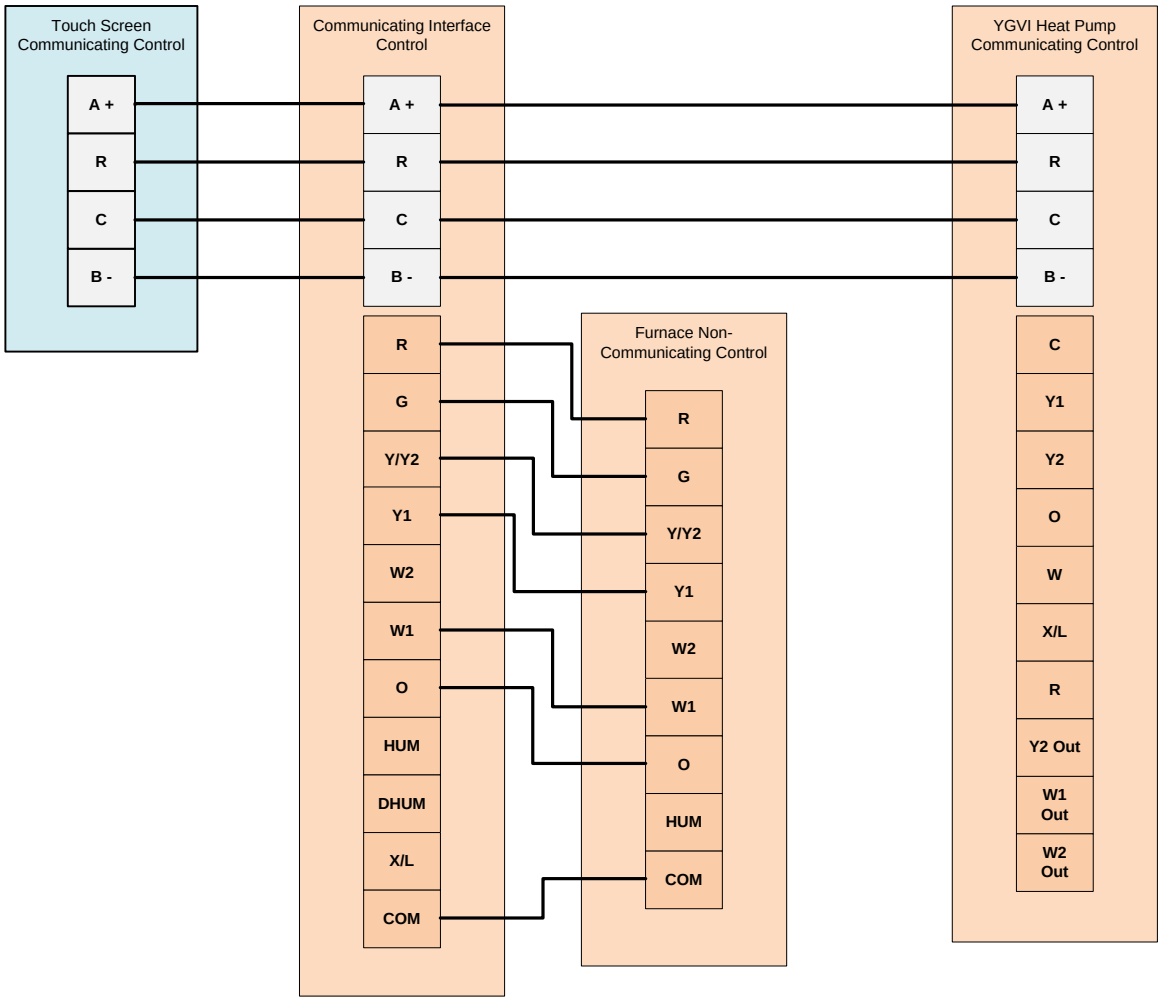


AUX27	ID Aux (Single Stage Furnace) – Two Stage Heat Pump (Hot HP)



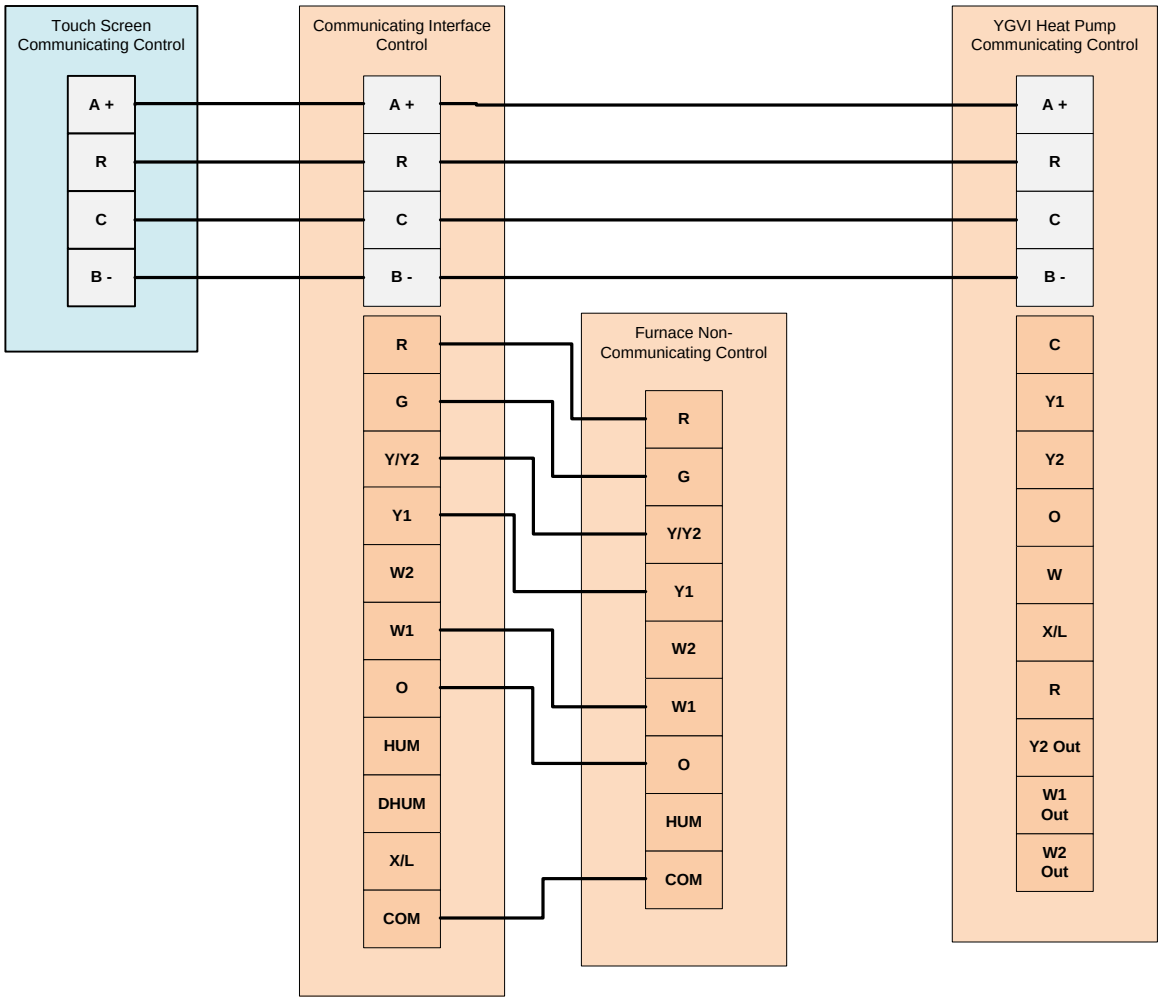
Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to ON

AUX28	ID Aux (Single Stage Furnace) – Two Stage Heat Pump



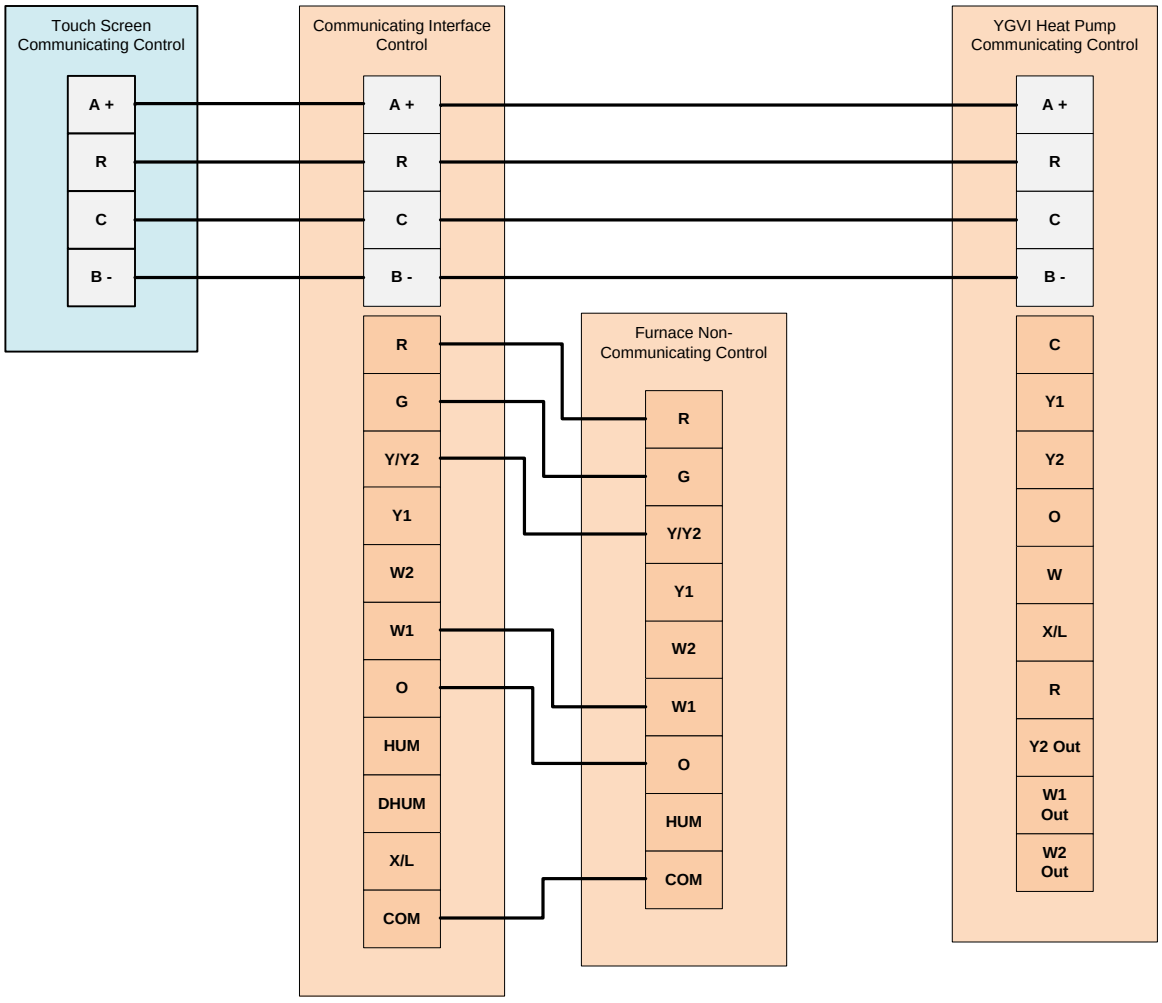
Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to ON

AUX29	ID Aux (Single Stage Furnace) – Single Stage Heat Pump (Hot HP)



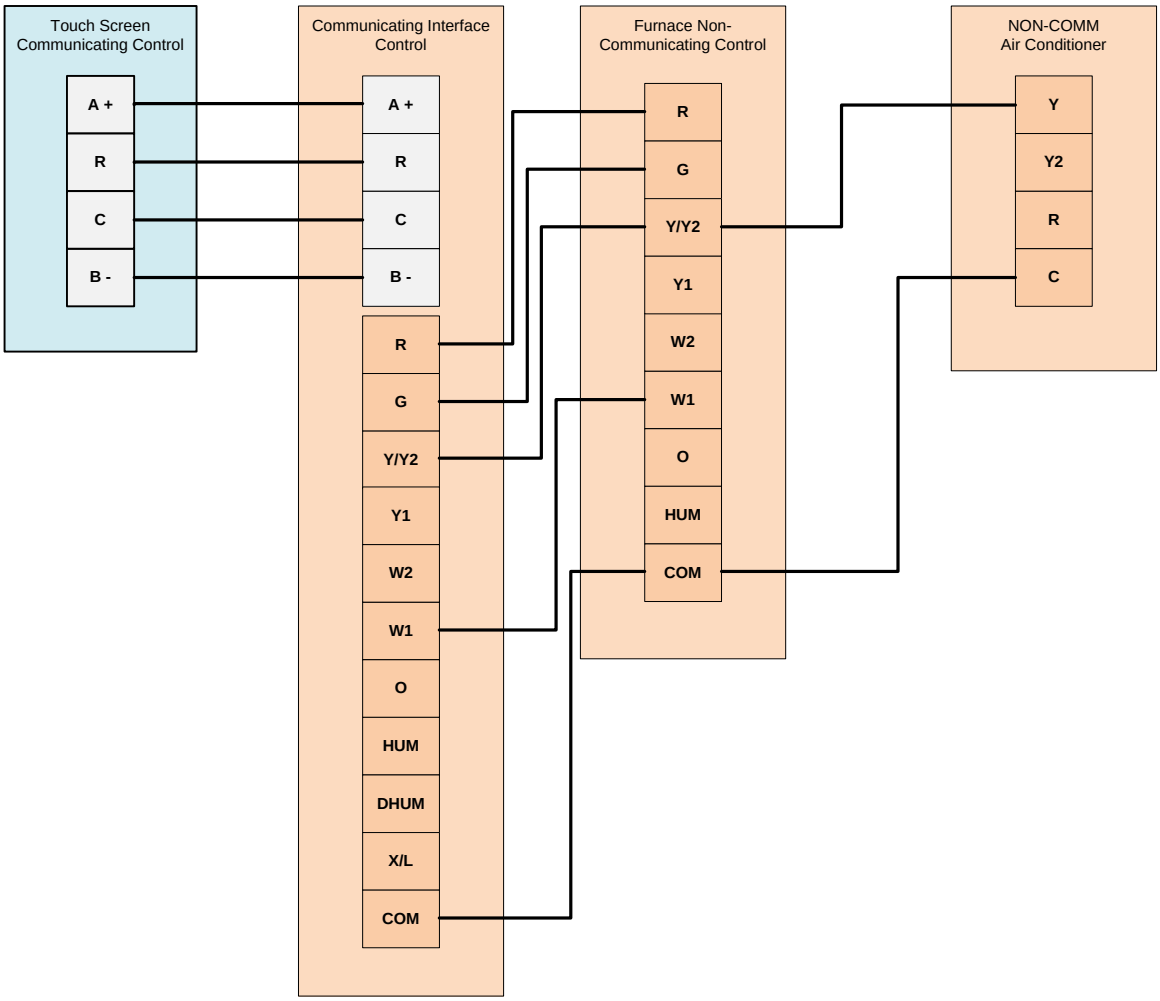
Hot Heat Pump Jumper must be set to ON
FFuel Jumper must be set to ON

AUX30	ID Aux (Single Stage Furnace) – Single Stage Heat Pump

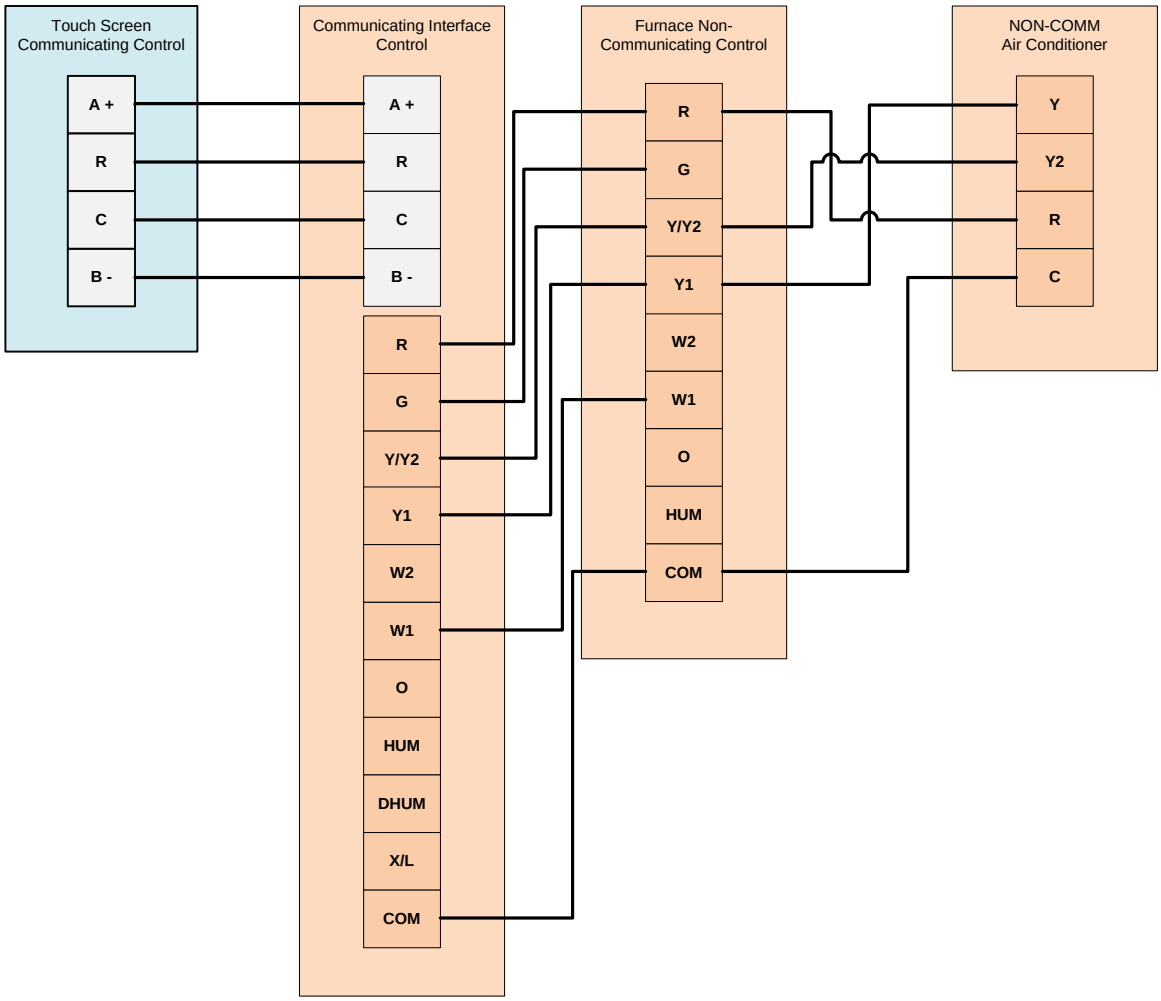


Hot Heat Pump Jumper must be set to OFF
FFuel Jumper must be set to ON

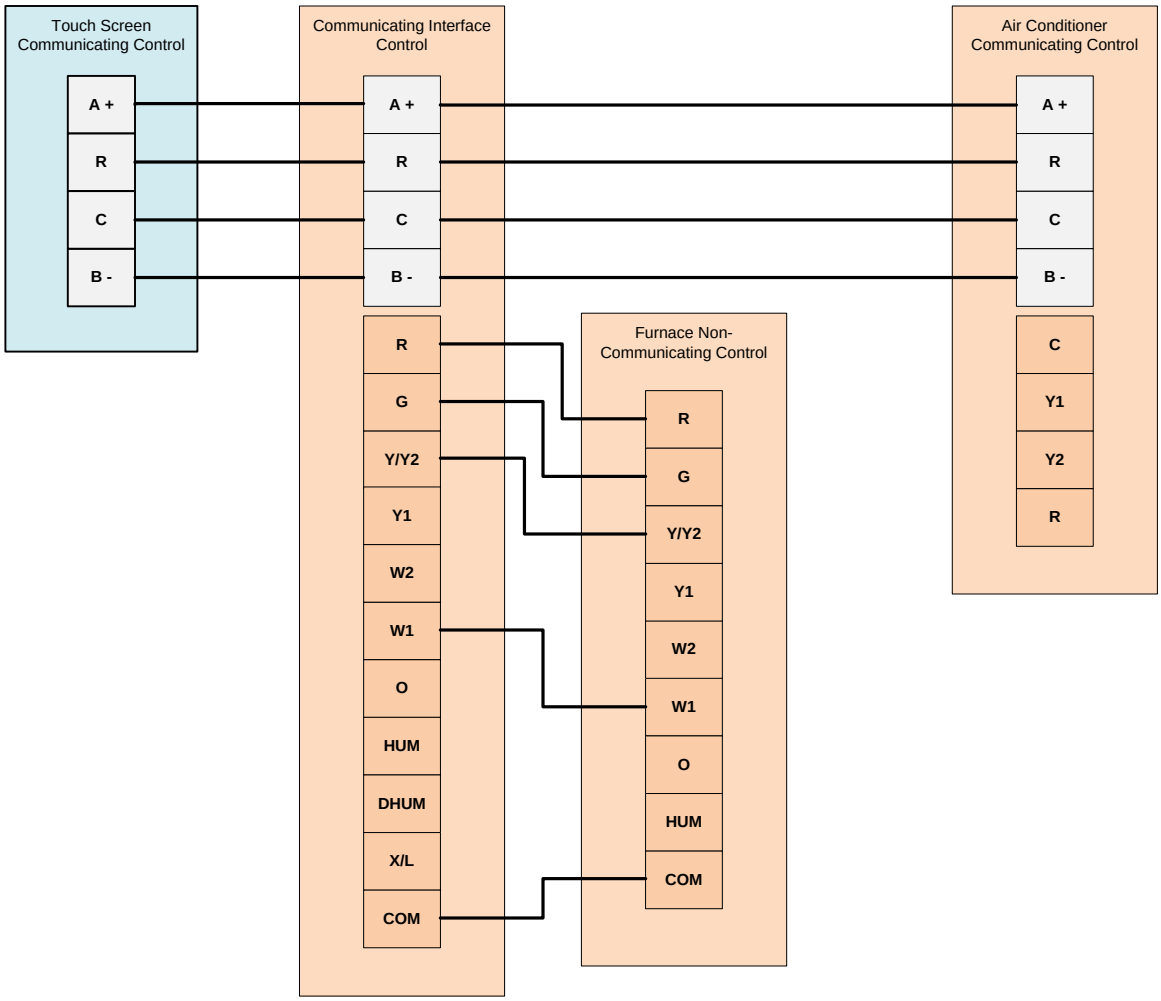
AUX31	ID Aux (Single Stage Furnace) – Single Stage AC (Conventional Wiring)



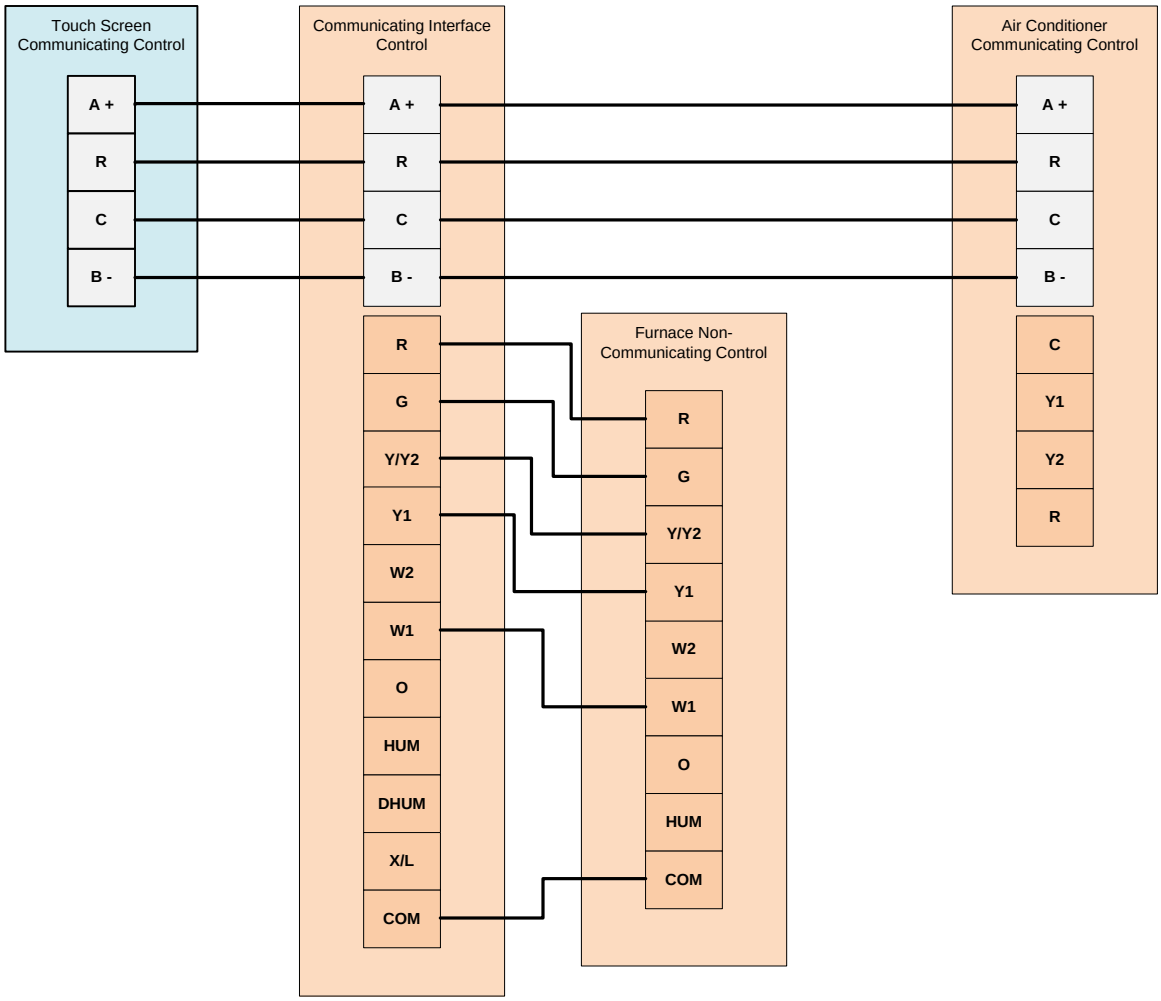
AUX32	ID Aux (Single Stage Furnace) – Two Stage AC (Conventional Wiring)



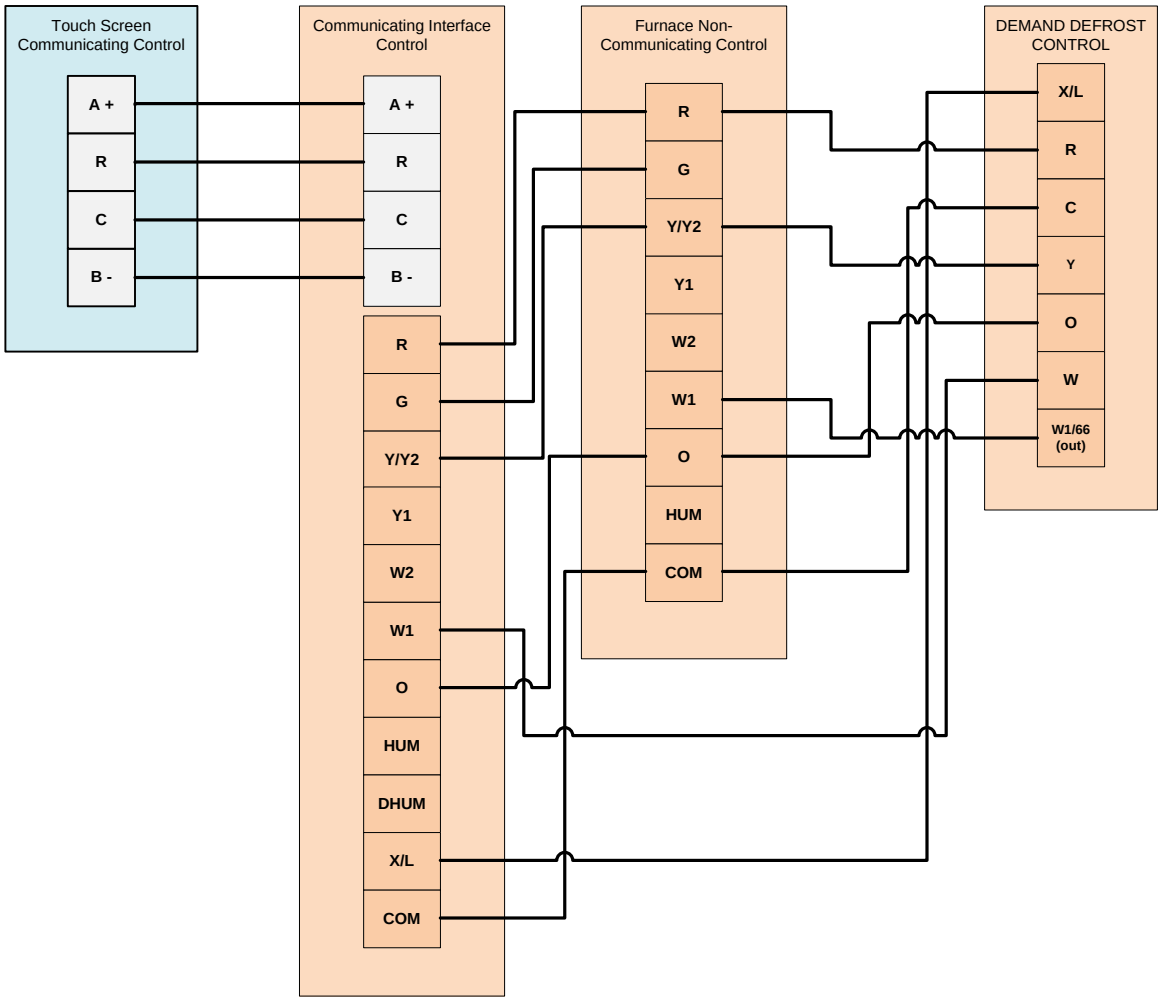
AUX33	ID Aux (Single Stage Furnace) – Single Stage AC



AUX34	ID Aux (Single Stage Furnace) – Two Stage AC



AUX38	ID Aux (Single Stage Furnace) – Demand Defrost Heat Pump



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